

**Developing and refining social norms measures for the evaluation of a school-based intervention to reduce dating and relationship violence among adolescents in England**

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I, Rebecca Nicole Meiksin, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.



## Volume I



## Abstract

### **Introduction**

Dating and relationship violence (DRV) is widespread in England. DRV is associated with increased prevalence of sexual risk behaviour and poor mental health. Interventions often aim to shift harmful social norms underpinning DRV, but lack of valid, reliable measures is a barrier.

### **Methods**

I conducted a systematic review of DRV social-norms measures. I developed three brief measures of social norms concerning DRV and gender. I refined these using cognitive testing and assessed the reliability and validity of resulting measures using student surveys in five secondary schools. I analysed qualitative data from students, staff and parents and carers in ten secondary schools to explore how social norms are implicated in DRV in England and inform further measure refinement.

### **Results**

Most of the 40 social-norms measures identified in the review were associated with DRV outcomes. Other evidence of reliability and validity was mixed and no measure was shared across studies. In cognitive testing of social-norms measures, answerability was improved where items assessed norms salient and publicly manifest among a cohesive, influential reference group. Refined measures were tested among 1,426 students (82.5% response rate). While floor-effects indicate limited sensitivity to low-to-moderate levels of the assessed constructs, all three measures were reliable and valid. Qualitative interviews suggest that DRV is sustained directly by norms tolerating controlling behaviours and inhibiting disclosure of victimisation, and indirectly via sexist norms that subjugate girls to boys and facilitate gender-based harassment and abuse.

### **Discussion**

My findings support the reliability and validity of the three tested measures of social norms, which can be incorporated into evaluations. Research to assess the measures' cross-cultural validity would contribute to improving comparability of norms across contexts. Further research should seek to develop longer-form versions with increased sensitivity for use in

epidemiological research. My findings support recommendations for improving social norms measurement in DRV research.



## Dedication

This thesis is dedicated to my Grandpap, Zvi, and to my late Grandma, Jeannine, whose work inspires me and whose love nurtures me.



*"Mother's Purse"*  
Painting by Jeannine Meiksin, circa 1959



## Acknowledgements

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*30 March 2024*



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### List of abbreviations

ALIGN: Advanced Learning and Innovation on Gender Norms

aOR: adjusted odds ratio

ATWS: Attitudes Toward Women Scale

CADRI-s: short Conflict in Adolescent Dating Relationships Inventory

CFA: confirmatory factor analysis

CFI: comparative fit index

CI: confidence interval

COSMIN: COnsensus-based Standards for the selection of health Measurement Instruments

CTS: Conflict Tactics Scale

CTT: classical test theory

SD: standard deviation

SE: standard error

DRV: dating and relationship violence

EFA: exploratory factor analysis

GBV: gender-based violence

GVHC: gender violence and health centre

HICs: high-income countries

IDACI: Income Deprivation Affecting Children Index

IPV: intimate partner violence

LINEA: Learning Initiative on Norms, Exploitation and Abuse

LMICs: low- and middle-income countries

LSHTM: London School of Hygiene & Tropical Medicine

NIHR: National Institute for Health Research

NSPCC: National Society for the Prevention of Cruelty to Children

OR: odds ratio

PRISMA: Preferred Reporting Items for Systematic Reviews and Meta-Analyses

PROMS: patient-related outcome measures

RCT: randomised controlled trial

RMSEA: root mean square error of approximation

RQ: research question

SES: socioeconomic status

SGM: sexual- and gender-minority

SRH: sexual and reproductive health

TLI: Tucker-Lewis Index

US: United States

UK: United Kingdom

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## Introduction

Interventions to prevent dating and relationship violence (DRV) among young people have long been informed by social norms approaches. That is, they often seek to change what can be thought of generally as “the often unspoken rules that govern behaviour”.<sup>6(p1)</sup> As DRV researchers Wekerle and Wolfe wrote in an early review of DRV and its prevention (1999), “...peer ‘pressure’ can be harnessed to serve prosocial ends”.<sup>7(p450)</sup> Reviews of DRV interventions since that time have reported the continued influence of social norms approaches marshalling the “power of the peer group”<sup>8(p127)</sup> to change pro-DRV and gender-inequitable norms in DRV prevention.<sup>8-13</sup> An expert consulted for one such review described this approach in practical terms: “...in any classroom of 25 kids...five or even ten of them might be at risk of an abusive relationship. The other 15 are there to keep that from happening...”<sup>8(p127)</sup>

Today, we know that interventions can reduce DRV, but we know little about what aspects make them effective and how.<sup>10,11,14</sup> Despite the ongoing incorporation of social norms approaches into DRV interventions,<sup>8-13</sup> efforts to measure whether norms that underpin DRV are changing as intended have been largely neglected. Evaluations of DRV interventions very rarely measure social norms,<sup>11,12</sup> and little guidance is available on how best to do so. Consequently, despite widespread acknowledgement of the importance of social norms to DRV outcomes, we do not know whether changing social norms plays a role in effective DRV interventions, or whether failure to do so helps to explain why many<sup>11</sup> DRV prevention interventions fail.

This thesis aims to address these gaps, informed by advancements in social norm theory and measurement over the last decade. Drawing on a conceptualisation of social norms stemming from social psychology, which has been particularly influential in the areas of gender-based violence (GBV) and adolescent sexual and reproductive health (SRH), I distinguish in this thesis between social norms concerning perceptions about what behaviours are (1) typical (descriptive norms), and (2) socially acceptable (injunctive norms) within a social group.<sup>6,15</sup>

Using this framework, I developed social norms measures for use in Project Respect, a study to optimise and pilot a new DRV intervention for secondary school students in England. Drawing on data from this study, I tested three brief measures of DRV and gender norms among adolescents in England. Based on these findings, I offer the first set of evidence-based recommendations to improve social norms measurement in DRV research.

### Structure of thesis

Chapter 1 of this thesis defines DRV and introduces it as a public health problem, providing an overview of its epidemiology and impacts. The chapter then reviews approaches to DRV prevention and the evidence base for interventions, which are often framed in terms of targeting social norms that contribute to DRV. It concludes with a discussion of the limitations to the available evidence base for prevention, which include a gap in evaluating the role of norms change in DRV prevention. Chapter 2 introduces social norms theory, details relationships between norms and DRV and summarises promising approaches to reducing DRV by shifting social norms. It highlights limitations to existing approaches to social norms measurement in DRV research, which hamper efforts to assess the role of social norms in mediating intervention impact. My thesis seeks to address these gaps by drawing on data from the pilot trial of Project Respect, a school-based DRV intervention in England. Chapter 2 closes with my thesis aim, objectives and research questions. Chapter 3 summarises the methods and findings of Project Respect and then outlines my role as research fellow on that pilot trial. The chapter then presents an overview of the methods for my thesis research and concludes with a section on reflexivity and consideration of my positionality.

Chapters 4, 5, 6 and 7 each report on the methods for one component of my research and present results within published peer-reviewed papers or (where not yet published) in paper-style. Chapter 4 presents a systematic review of measures of social norms relating to DRV and to gender used in DRV research. Chapter 5 presents qualitative research with young people in England to inform the development of survey measures of gender and DRV social norms. Chapter 6 presents reliability and validity testing of three new and adapted measures of DRV

and gender norms piloted with young people in England. Chapter 7 presents qualitative research with young people in England to explore relationships between social norms and DRV in their accounts.

Chapter 8, the discussion chapter, summarises and contextualises findings from chapters 4, 5, 6 and 7; considers limitations to the thesis research; and addresses implications for research and practice.



## Chapter 1. Dating and relationship violence

This chapter begins with an introduction to dating and relationship violence (DRV) and provides an overview of its prevalence, sociodemographic patterning and impacts. It next presents an overview of modifiable risk and protective factors followed by a review of approaches to DRV prevention, which often aim to change social norms relating to DRV and to gender that underpin DRV. The chapter then reviews the evidence supporting existing DRV interventions. It concludes with a discussion of limitations to the evidence base for prevention, highlighting incongruence between the high level of attention that is given to social norms in the framing of DRV interventions and the lack of rigorous research empirically examining their role in DRV prevention.

### 1.1. Introduction to DRV

DRV<sup>16</sup> refers to intimate partner violence (IPV) involving a young person, defined in this thesis as a person aged 10-19 years.<sup>a17</sup> DRV comprises abuse by a current or former intimate partner,<sup>18,19</sup> including physical violence, stalking, psychological aggression, threats, controlling behaviours, economic abuse and coerced, non-consensual or abusive sexual activities.<sup>16,20</sup> Globally, DRV is widespread<sup>21-25</sup> and associated with a host of subsequent health problems.<sup>26</sup> Among girls ages 15-19, it is the third leading risk factor for death and the fourth for disability-adjusted life years, increasing in rank from the fifth leading cause in both measures from 1990 to 2013.<sup>27</sup> Despite the proliferation of DRV prevention interventions, particularly in North America,<sup>8</sup> and a rapidly expanding body of reviews synthesising evidence on DRV prevention,<sup>7-14,22,28-32</sup> existing interventions demonstrate uneven success in reducing incidents of DRV and relatively little is known about effective approaches to prevention.<sup>10,11</sup>

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<sup>a</sup> The age range of 10-19 years comes from the World Health Organization's definition of adolescence.<sup>17</sup> However, studies vary in the age ranges they use to define or research DRV. Where I report DRV data that uses an age range falling outside of 10-19 years in my Introduction, Methods and Discussion chapters I note this. The results of my thesis research, reported in my Results chapters, relate to DRV within the age range of 10-19 years.

## 1.2. DRV prevalence

Systematic review evidence suggests that DRV is widespread.<sup>21,22,25</sup> Though rates of each DRV type vary widely by study, prevalence patterns tend to be consistent across North America and Europe with psychological DRV the most frequently reported, followed by physical and then sexual DRV.<sup>22</sup> Young people who report experiencing DRV often report multiple types.<sup>22</sup> Girls and boys report similar rates of psychological and physical DRV victimisation while girls tend to report higher rates of sexual DRV victimisation.<sup>b,c,22</sup> This reflects the findings of Wincentak et al.'s 2017 meta-analytic review of 101 DRV studies among participants aged 13 to 18 years.<sup>25</sup> While noting high variability across studies, the reviewers report victimisation prevalence estimates of 21% for physical DRV victimisation among girls and boys and, for sexual DRV victimisation, 14% among girls and 8% among boys. Research in the United States (US) with students in grades 8 and 9 (typically aged 13-15 years) suggests that girls tend to report experiencing higher levels than boys of severe physical DRV victimisation.<sup>33</sup> Wincentak et al. estimate prevalence of physical DRV perpetration to be 25% among girls and 13% among boys, and they estimate prevalence of sexual DRV perpetration to be 3% among girls and 10% among boys.<sup>25</sup>

DRV has historically received little attention in the United Kingdom (UK) but is gaining recognition.<sup>16,19,34</sup> Surveys have increasingly examined its prevalence in UK samples.<sup>16,34-38</sup> As they do globally, estimates vary by sampling and by outcome measurement, but available UK evidence suggests that DRV is widespread.<sup>16,35,37-39</sup> In Project Respect's 2017 baseline surveys, conducted with 1,426 year 8 and year 9 students (aged 12-14 years) from five secondary schools in England, 1,022 (71.7%) reported ever having dated or been in a relationship.<sup>39</sup>

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<sup>b</sup> I primarily refer to "girls" and "boys" or "females" and "males" in this thesis and in some cases refer to DRV in heterosexual relationships. This reflects the prevailing use of binary gender and sex categories and a focus on heterosexual relationships in existing DRV research. There is a widely-acknowledged gap in DRV research on sexual- and gender-minority (SGM) young people.<sup>8,11,14</sup> As of yet, there is little evidence on causes and consequences of DRV among SGM, and little is known about effective approaches to prevention among this population.

<sup>c</sup> I primarily use gender terms in this thesis (e.g. "girl" and "boy") but use sex terms (i.e. "female" and "male") where it is clear that sex rather than gender has been measured or where I am following the language of the authors whose work I'm reporting.

Among this dating sample, 72.8% of girls and 64.4% of boys reported psychological DRV victimisation, and 56.8% of girls and 53.4% of boys reported physical DRV victimisation.<sup>39</sup> While this survey did not measure sexual DRV, in a 2015 study in England of young people aged 14-17, 41% of girls and 14% of boys who had been in a relationship reported experiencing forced or pressured sexual DRV.<sup>35</sup> A 2017 study of 16-19 year-olds in further education in England and Wales also found high DRV prevalence, with more than half of young people who had ever dated reporting psychological, physical or online sexual DRV victimisation.<sup>16</sup> Available evidence suggests that reported perpetration is similarly high. Among daters in Project Respect's baseline surveys, 57.2% of girls and 48.7% of boys reported psychological DRV perpetration and 47.3% of girls and 41.6% of boys reported physical DRV perpetration.<sup>39</sup>

### 1.3. Sociodemographic patterning of DRV

Adolescence marks the beginning of a period of heightened vulnerability to relationship violence, which when considered across the life course peaks in late adolescence and young adulthood.<sup>40,41</sup> DRV rates are higher among sexual- and gender-minority (SGM) young people than their heterosexual and cisgender peers,<sup>42-44</sup> including among young people reporting a non-heterosexual sexual identity in the UK.<sup>16</sup> Evidence on patterning of DRV by ethnicity is mixed,<sup>45,46</sup> including in the UK where the significance and direction of this relationship varies by gender, age, DRV type and outcome measure.<sup>16,34,38,39</sup> Researchers have suggested that evidence on the relationship between ethnicity and DRV might be limited by low representation of ethnic minorities in study samples.<sup>47</sup> An extensive, systematic review of 128 articles on risk factors for adolescent and adult relationship violence concluded that "the weight of findings" suggests that members of minoritised ethnic groups face higher risk of relationship violence but did not distinguish between adolescent and adult samples.<sup>40(p8)</sup> Evidence on the relationship between socioeconomic status (SES) and DRV is also mixed,<sup>46</sup> including in the UK where associations vary by sample and by DRV type.<sup>16,34,38,39,48</sup>

#### 1.4. Health, education and economic impacts of DRV

Romantic relationships in adolescence play an important role in shaping young people's health and development,<sup>49</sup> and evidence suggests that both experiencing and perpetrating DRV are associated with a range of subsequent negative health and socioeconomic outcomes.

DRV victimisation leads to injuries<sup>50</sup> and can lead to death. In the US, 6.9% of homicides of adolescents are committed by an intimate partner; of these, 90.0% of the victims are girls.<sup>51</sup> DRV victimisation is also associated with a range of other subsequent health problems including increased depression<sup>52</sup>, increased illicit substance use,<sup>26,52</sup> antisocial behaviour,<sup>26,52</sup> sexual risk behaviour,<sup>53,54</sup> and suicidal ideation<sup>26</sup> and attempts<sup>55</sup> among girls and boys. Girls report additional subsequent harms, including fear,<sup>34</sup> more injuries,<sup>50</sup> increased body mass index,<sup>53</sup> and for Black mothers, lower infant birthweight.<sup>53</sup> Longitudinal research suggests that partner violence can become chronic, with DRV victimisation predicting IPV victimisation<sup>49</sup> and perpetration<sup>d,56</sup> in adulthood. Evidence suggests that DRV perpetration is associated with subsequent substance use<sup>53,57</sup> and mental ill health<sup>53</sup> among males and females, including suicidal ideation which is more strongly associated with DRV perpetration among females than males.<sup>53</sup>

Few studies have examined the relationship between DRV and educational outcomes longitudinally,<sup>58</sup> but available evidence suggests that DRV victimisation is associated with worse educational outcomes among girls and boys including dropping out of school.<sup>59</sup> In a study assessing adolescent DRV victimisation using women's retrospective reporting in adulthood (i.e. at baseline), Adams et al. found that DRV was associated with lower educational attainment at baseline.<sup>60</sup> Three subsequent waves of data collection (T1-T3) assessed earnings over the next five years, and modelling found that this educational deficit contributed to a loss in both earnings and growth in earnings. Through this mediator, DRV victimisation was associated with a loss of US\$343 in earnings at T1 and with a loss of growth in earnings of US\$442 by T3.

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<sup>d</sup> Age at DRV victimisation in this analysis is not specified, but DRV was assessed the year following grades 7-12. Participants would typically have been approximately 14-20 years old.

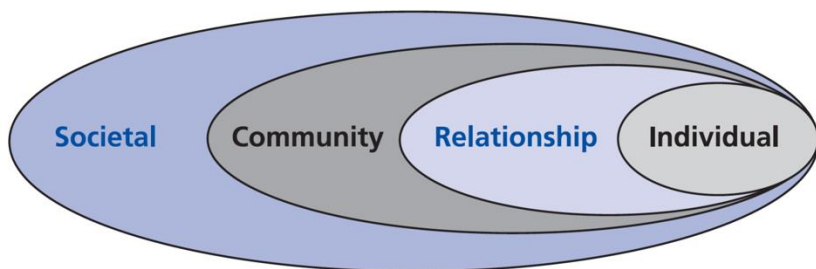
Considering costs of DRV at the national level, these have not been isolated in the UK but a 2019 Home Office report estimates the annual cost of IPV in England and Wales to be £66 billion.<sup>61</sup> These stem primarily from physical and emotional harms.<sup>61</sup> This body of evidence underscores the importance of early intervention to mitigate immediate fear, injuries and mortality caused by DRV as well as its longer-term health, educational and economic harms.

### 1.5. Intervening in adolescence to prevent DRV

As the developmental phase when young people begin to form close romantic ties<sup>62</sup> and risk of DRV emerges, adolescence is a critical intervention point to prevent DRV and mitigate its potential harms. Cognitively, adolescents are developing an understanding of risks and consequences associated with their behaviours and at this age tend to be open to learning about personal responsibility and boundaries if “delivered in a blame-free manner”.<sup>32(p139)</sup> As their interest in romance and sex increases, young people are particularly attentive to “issues involving gender, sexuality, and relationship formation” and enter a stage particularly sensitive to the development of attitudes and beliefs relating to “interpersonal relationships and the abuse of power and control.”<sup>62(p362)</sup> Dating norms governing romantic and sexual relationships are most “malleable” as young people first begin to navigate these relationships because the behaviour is new.<sup>6(p4)</sup> This section summarises modifiable risk and protective factors for DRV and then provides an overview of approaches to DRV prevention and evidence supporting these.

#### 1.5.1. Modifiable risk and protective factors for DRV

An ecological model based on “the notion of embedded levels of causality”<sup>63(p264)</sup> was popularised by Lori Heise in 1998 as a framework for conceptualising factors driving GBV.<sup>63</sup> The model is widely used and adapted to organise risk and protective factors in epidemiological research on violence in romantic and sexual relationships (e.g. Krug et al, Vézina & Hébert, Heise, and Claussen et al.).<sup>47,64–66</sup> Figure 1 depicts a simple version of this model, presented by Krug et al. in the World Health Organization’s 2002 “World report on violence and health”.<sup>66</sup>



**Figure 1. An example of a social ecological model used for conceptualising violence<sup>66</sup>**

Section 1.5.1. will review non-sociodemographic factors associated with DRV as these are, at least theoretically, modifiable to reduce DRV. I organise these in terms of individual, relationship, community (family and peer) and societal factors, reflecting the categories shown in Figure 1.

An extensive body of research, including several meta-analytic reviews published since 2017, have identified a wide array of modifiable factors significantly associated with DRV. Meta-analyses by Garthe et al., 2017<sup>67</sup> and Hébert et al., 2017<sup>68</sup> examine factors associated with DRV victimisation among adolescents, focusing respectively on peer factors and on individual, family and peer factors. Two papers by Spencer et al., 2020 and 2021, present findings from meta-analyses exploring risk and protective factors<sup>e</sup> across ecological levels for physical DRV victimisation<sup>69</sup> and perpetration<sup>70</sup> among US adolescents. A meta-analytic review by Park and Kim, 2018 examines family and community risk and protective factors for DRV in research among adolescents and/or young adults.<sup>71</sup> Each of these reviews draws on data from many individual studies (ranging from 27 studies in reviews by Garthe et al.<sup>67</sup> and Park and Kim<sup>71</sup> and 87 in the review by Hébert et al.<sup>68</sup>), which can improve the process of estimation and increase

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<sup>e</sup> This thesis uses the terms ‘risk factors’ and ‘protective factors’ to refer to factors associated with increased and decreased likelihood of reporting DRV outcomes, respectively. This is to align with existing literature, which tends to use these terms whether or not existing research has established a causal link between these factors and DRV.

the power to detect significant relationships that individual studies might be too small to detect.<sup>f</sup>

While these studies provide valuable syntheses of a broad range of literature, however, they should be read with a note of caution due to high levels of heterogeneity across individual studies.<sup>67,68,71</sup> Furthermore, authors of reviews of factors associated with DRV note that the evidence base is limited by the cross-sectional nature of most relevant studies, which precludes determining whether identified factors are causally linked to DRV; and if so, whether they contribute to or are consequences of DRV.<sup>40,67,69,70</sup> Meta-analytic reviews by Garthe et al., Hébert et al. and Spencer et al. include both cross-sectional and longitudinal studies but do not differentiate by study type in their main analyses.<sup>g</sup> To explore differences between the estimates derived from cross-sectional and longitudinal studies, Hébert et al. conducted a moderation analyses by study design, the results of which are reported in Section 1.5.1.5., “Key DRV risk factors highlighted in meta-analytic reviews” below.

A number of other systematic reviews have further synthesised quantitative research on factors associated with DRV (e.g., Capaldi et al., 2012; Clausson et al., 2022; Johnson et al., 2015; Leen et al., 2013; Malhi et al., 2020; Vagi et al., 2013; and Vézina and Hébert, 2007).<sup>22,40,47,64,72–74</sup> Like meta-analytic reviews, these are also based on the results of systematic searches of the DRV literature. Their findings supplement the evidence base from meta-analytic reviews by reporting on factors that are associated with DRV but have not been sufficiently extensively researched for inclusion in meta-analyses. While most of these non-meta-analytic reviews synthesise both cross-sectional and longitudinal research, they often distinguish between these in the presentation of their results. Vagi et al.’s review of factors associated with DRV

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<sup>f</sup> Garthe et al.,<sup>67</sup> Hébert et al.<sup>68</sup> and Spencer et al.<sup>69,70</sup> each draw on at least two, and for most factors many more, estimates from independent samples to arrive at each of their estimates. Park and Kim do not report on the number of estimates included in the meta-analyses for each of the 17 factors on which they report.<sup>71</sup> However, they report that these analyses draw on 139 correlates of DRV victimisation and 131 correlates of DRV perpetration from 27 included studies in total.

<sup>g</sup> Park and Kim do not report on whether the studies included in their meta-analytic review are cross-sectional or longitudinal.

perpetration includes only longitudinal studies, focusing on factors that have been shown to precede DRV temporarily.<sup>74</sup> While this temporal relationship is not sufficient for establishing causality, the authors argue that factors that are both associated with and precede DRV perpetration “represent the best available targets for prevention programs” at the time of their review.<sup>74(p634)</sup>

Like Park and Kim’s meta-analytic review, reviews of factors associated with DRV often aggregate studies of both adolescents and young adults.<sup>47,71,72,74</sup> Relationships in these developmental stages tend to be more similar to each other than to those of older adults; the latter are more likely to have long relationships, cohabit, marry and have children together.<sup>72</sup> Meta-analytic evidence on modifiable individual, family and peer factors suggests that the risk profiles are nearly identical for adolescent and young adults, providing empirical evidence in support of this approach.<sup>68</sup>

The following sections (Sections 1.5.1.1. to 1.5.1.6.) summarise available meta-analytic evidence on factors associated with DRV.<sup>67-71</sup> This is supplemented with further evidence from non-meta-analytic systematic reviews<sup>22,40,47,72-74</sup> and draws on evidence from individual studies not included in these reviews where these add further insights to the review evidence.<sup>75-82</sup> They then present a summary of meta-analytic evidence about factors with the strongest relationship to DRV, followed by a summary of available evidence on DRV risk factors from UK studies. Moderation analyses in meta-analytic reviews tend to find little difference in DRV risk factors by sex or gender,<sup>67,69,71</sup> but where studies report differences in the significance of associations by sex or gender I note this. Finally, in these sections I provide effect estimates where these report on moderation analyses that statistically compare the relative importance of different risk and protective factors and where these report on UK research. As noted above, findings from meta-analytic reviews combine data from cross-sectional and longitudinal studies. Other findings presented in these sections are based on cross-sectional studies unless otherwise specified.



#### *1.5.1.1. Individual factors*

Evidence from meta-analyses suggests that DRV is associated with experience of other forms of abuse, with health behaviours and with personal characteristics; and that DRV victimisation and perpetration share several common risk factors. Other systematic reviews and individual longitudinal studies extend this research.

#### **DRV victimisation and perpetration**

Studies identify several individual-level factors associated with both DRV victimisation and DRV perpetration. Among girls and boys, meta-analyses find that childhood maltreatment is associated with DRV victimisation among adolescents<sup>68</sup> and with DRV perpetration in a combined sample of adolescents and unmarried young adults.<sup>71</sup> Both depression and externalising behaviours are also associated with physical DRV victimisation and perpetration in meta-analyses.<sup>69,70</sup> Further evidence on behavioural factors come from non-meta-analytic systematic reviews, which identify associations between externalising problems and both boys' DRV perpetration<sup>22</sup> and adolescent girls' and young women's DRV victimisation.<sup>47</sup>

Considering health-related behaviours, in Spencer et al.'s meta-analyses focusing on physical DRV, adolescents who use substances and report risky sexual behaviours are more likely to report physical DRV victimisation and perpetration.<sup>69,70</sup> This research also finds that pro-violence attitudes are associated with physical DRV victimisation and perpetration.<sup>69,70</sup> Other studies examine relationships between personal attitudes and DRV outcomes in more depth. Systematic reviews report relationships between specifically pro-DRV attitudes and both DRV victimisation and perpetration.<sup>22,47</sup> While some research supports a longitudinal relationship between such attitudes and subsequent DRV, findings are inconsistent.<sup>22</sup> Studies do show that the pattern of relationships between DRV attitudes and outcomes can differ for attitudes towards girls' versus boys' perpetration of DRV and by respondent gender.<sup>22,75</sup> Considering views on gender, boys who hold more gender-equitable attitudes or are less supportive of traditional gendered expectations are significantly less likely to perpetrate DRV.<sup>73,80,81</sup> Longitudinal research by Reyes et al. on adolescent male DRV perpetration suggests that DRV

and gender attitudes might interact to influence DRV outcomes.<sup>82</sup> Their research finds that the relationship between gender-inequitable attitudes and DRV perpetration is attenuated by anti-DRV attitudes: gender-inequitable views are associated with DRV perpetration among boys with high but not low tolerance of DRV.<sup>82</sup>

### **DRV victimisation**

Exploring the relationship between child maltreatment and adolescent DRV victimisation in more depth, Hébert et al.'s meta-analysis finds significant associations with experiences of child sexual abuse, psychological abuse, physical abuse and neglect.<sup>68</sup> Considering health and behavioural factors, Spencer et al.'s meta-analysis focusing on physical DRV victimisation identifies associations with disordered eating and suicide attempts as well as carrying a weapon, while adolescents with good physical health are less likely to report physical DRV victimisation in their analysis.<sup>69</sup> Their work also suggests that modifiable personal characteristics might play a role in DRV risk: communication skills and self-esteem are associated with less physical DRV victimisation.<sup>69</sup>

### **DRV perpetration**

In Spencer et al.'s meta-analysis, anger, delinquency and controlling behaviours all show a significant relationship to physical DRV perpetration while conflict resolution skills and responsibility are associated with less of this type of perpetration.<sup>70</sup> Disaggregated findings from non-meta-analytic systematic reviews provide some further insights. This research suggests that several individual-level DRV risk factors predict DRV perpetration longitudinally: mental health difficulties (depression, anxiety and emotional distress), substance use, risky sexual behaviour, and a history of aggression or anti-social behaviour.<sup>22,40,74,77</sup> Leen et al.'s review further identifies internalisation (withdrawal, somatic complaint, anxiety, depression, obsession and compulsion) as a risk factor for girls' DRV perpetration.<sup>22</sup>

### *1.5.1.2. Relationship factors*

Meta-analytic and other systematic reviews identify several characteristics of young people's intimate partners and relationships that are associated with increased DRV victimisation and perpetration.

#### **DRV victimisation and perpetration**

Meta-analysis by Spencer et al. finds associations between DRV victimisation and DRV perpetration, as well as associations between different types of DRV.<sup>69,70</sup> Specifically, adolescents are more likely to report physical DRV victimisation if they also report DRV perpetration, or victimisation from other types of DRV.<sup>69</sup> In parallel, adolescents are more likely to report physical DRV perpetration if they also report DRV victimisation or other types of DRV perpetration.<sup>70</sup>

#### **DRV victimisation**

In their systematic review of risk factors among adolescent girls and young women Vézina and Hébert report that having an older partner is associated with DRV victimisation.<sup>47</sup> Their findings also suggest that dyadic power dynamics might help to explain this relationship, considering evidence that adolescent girls and young women who perceive that their partner has more control in the relationship are more likely to report DRV victimisation.<sup>47</sup>

#### **DRV perpetration**

Evidence from non-meta-analytic systematic reviews highlights characteristics of intimate relationships that are associated with DRV. Longitudinal research suggests that conflict and hostility within adolescent relationships (assessed at 14-19 years) are associated with subsequent physical DRV perpetration (assessed at age 15-20 years).<sup>74</sup> Considering partner characteristics, evidence from DRV research among gang members suggests that boys in age-disparate relationships with younger female partners are more likely to perpetrate DRV than are boys who are younger than or closer in age to their partners.<sup>73</sup>

### *1.5.1.3. Community factors*

Several meta-analytic reviews have examined relationships between family- and peer-related factors and DRV outcomes, and this work is extended by other systematic reviews and by individual studies exploring these factors. This research suggests that family relationships, parenting practices, peers' behaviours and views and young people's perceptions of what their peers think and do are associated with DRV, as are young people's experience with their peers outside of intimate relationships.

## **Family factors**

### DRV victimisation and perpetration

Adolescents who witness IPV between their parents are more likely to report both victimisation<sup>69</sup> and perpetration<sup>70</sup> in Spencer et al.'s meta-analyses. In their meta-analysis of adolescent and young adult research, Park and Kim find that family relationship problems and reporting fear of family violence are also associated with both DRV victimisation and perpetration.<sup>71</sup> Their review also presents aggregate indicators of 'positive' and 'negative' parenting.<sup>71</sup> Positive approaches include parental warmth, monitoring, support and communication, while negative approaches comprise harsh or inconsistent discipline, harsh or hostile parenting, negative interactions, parent-child boundary violations and low trust or support.<sup>71</sup> Young people reporting negative parenting have higher levels of DRV victimisation and perpetration while positive parenting is associated with lower levels of both.<sup>71</sup>

### DRV victimisation

Considering specific parenting practices, meta-analytic reviews suggest that parental support<sup>68,69</sup> and monitoring<sup>68</sup> are associated with less adolescent DRV victimisation.

### DRV perpetration

Meta-analytic reviews suggest that parental separation (not living together, or divorcing)<sup>71</sup> and child abuse victimisation within the family are both associated with DRV perpetration.<sup>70</sup>

Multiple longitudinal studies suggests that problems within parental relationships<sup>h</sup> (parental marital conflict and exposure to parental IPV) and poor parenting practices<sup>i</sup> (low parental monitoring and harsh or unskilled parenting) are associated with subsequent DRV perpetration.<sup>74</sup>

## **Peer factors**

### DRV victimisation and perpetration

Meta-analytic reviews find that adolescents reporting peers' aggressive and antisocial behaviour or DRV among their peers are more likely to report their own DRV victimisation or perpetration,<sup>67</sup> as are adolescents and young adults reporting deviant peers.<sup>71</sup> Experience with other types of peer abuse are also associated with increased DRV. Meta-analytic evidence suggests that adolescents and young adults who report bullying (a combined indicator of victimisation and perpetration)<sup>71</sup> and adolescents who are violent towards their peers<sup>69,70</sup> report higher levels of both DRV victimisation and perpetration. Conversely, peer relationships might also play a protective role. Park and Kim's meta-analytic review found higher friendship quality to be associated with lower levels of adolescent and young adult DRV victimisation and perpetration.<sup>71</sup> As individual studies increasingly examine relationships between friends' attitudes towards DRV and DRV outcomes, some are finding cross-sectional associations between friends' approval of DRV, and DRV victimisation<sup>76,78</sup> and perpetration.<sup>83</sup>

### DRV victimisation

Considering relationships between DRV victimisation and other forms of abuse among young people, peer victimisation<sup>67,68</sup> and peer sexual harassment<sup>68</sup> are associated with increased DRV victimisation while peer support is associated with less DRV victimisation<sup>68</sup> among adolescents in meta-analyses. Vézina and Hébert highlight a potential relationship between friends' attitudes towards violence, and adolescent girls' and young women's DRV victimisation in their non-meta-analytic systematic review.<sup>47</sup> These findings are supported by longitudinal research

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<sup>h</sup> Based on three studies reported by Vagi et al.<sup>74</sup>

<sup>i</sup> Based on three studies reported by Vagi et al.<sup>74</sup>

suggesting that friends' involvement in DRV predicts subsequent DRV victimisation among girls.<sup>33</sup>

### DRV perpetration

Non-meta-analytic systematic reviews report on longitudinal research identifying bullying and friends' DRV involvement as risk factors for subsequent DRV perpetration. In their systematic review of literature on boy's DRV perpetration, Malhi et al. report research suggesting that bullying is associated with subsequent DRV perpetration among boys.<sup>73</sup> In their review of longitudinal risk factors for DRV perpetration, Vagi et al. report that having friends who have experienced DRV is associated with subsequent DRV perpetration among girls while having friends who have perpetrated DRV is associated with DRV perpetration both among boys and in a combined sample of girls and boys.<sup>74</sup>

#### *1.5.1.4. Societal factors*

Evidence from systematic reviews suggests that young people's DRV risk is associated with characteristics of their social system, referred to here as societal factors. These findings are extended by findings from other systematic reviews and from individual cross-sectional and longitudinal studies. Evidence at this level of the social-ecological model tends to focus on associations between neighbourhood and school factors and DRV outcomes.

### DRV victimisation and perpetration

In their meta-analytic review, Park and Kim report that a measure combining neighbourhood hazards and ethnic heterogeneity is associated with adolescent and young adult DRV victimisation and perpetration, but they do not disaggregate findings for these two disparate neighbourhood characteristics.<sup>71</sup> Other research suggests that young people's relationship to and perceptions of their school also appear to play a role in DRV risk. Other systematic reviews report that a sense of attachment to school is associated with less subsequent DRV perpetration<sup>74</sup> and with less DRV victimisation among girls and young women.<sup>47</sup> Conversely, school-level bullying victimisation,<sup>79</sup> and rating the school low on safety, connectedness and

maintenance,<sup>73</sup> are positively associated with DRV victimisation among US adolescents and with DRV perpetration among boys in South Africa, respectively.

### DRV victimisation

In the meta-analysis conducted by Spencer et al. neighbourhood disorganisation is associated with higher levels of physical DRV victimisation among adolescents.<sup>69</sup> Other studies provide further insights into relationships between neighbourhood and school environments and DRV victimisation. Some research suggests an association between neighbourhood violence and more DRV victimisation among girls and young women.<sup>47</sup> Longitudinal research finds that the school environment interacts with family-level factors to influence subsequent DRV risk: among girls, family disadvantage is more strongly associated with subsequent DRV victimisation in “more economically advantaged” schools.<sup>40(p10)</sup> Evidence from a large cross-sectional survey of more than 100,000 adolescents in California schools also suggests that associations between school-level factors and DRV victimisation can be attenuated by other school-level factors.<sup>79</sup> Among students who were in a relationship in the previous year, school-level school connectedness, caring relationships with school staff, opportunities for participation and a sense of safety in school were associated with lower DRV victimisation.<sup>79</sup> These relationships (with the exception of opportunities for participation), however, were moderated by school-level bullying victimisation; for example, school connectedness was more strongly associated with lower DRV victimisation in schools with lower levels of bullying victimisation.<sup>79</sup>

### DRV perpetration

Park and Kim’s meta-analysis suggests that young people who report positive neighbourhood characteristics like support, monitoring and collective efficacy are less likely to perpetrate DRV.<sup>71</sup> Evidence from the same review links the school environment to DRV outcomes, identifying an association between a composite factor of school attachment, support and attainment with less DRV perpetration.<sup>71</sup>

Considering further evidence from non-meta-analytic studies, longitudinal research finds that school-related factors interact with individual- and family-level factors to influence subsequent DRV risk.<sup>40</sup> School bonding (assessed in terms of feeling like school is like a family) decreases girls' risk but increases boys' risk of subsequently perpetrating a combination of peer violence and DRV versus peer violence alone.<sup>40,84</sup> School-related factors have also been found to moderate the relationship between family violence and subsequent DRV perpetration differently by a combination of ethnic group and sex.<sup>40</sup> In a US longitudinal study assessing DRV between ages 16 and 20 years among African American, Hispanic and White/other ethnic groups, lack of school safety exacerbated the relationship between parental IPV and subsequent perpetration among African-American males only.<sup>40,85</sup> Early school involvement, on the other hand, had this effect among Hispanic females only.<sup>40,85</sup>

#### *1.5.1.5. Key DRV risk factors highlighted in meta-analytic reviews*

Several meta-analytic reviews report moderation analyses, enabling comparisons of effect sizes across study designs, outcome measures, participant characteristics and risk and protective factors. Concerning study methods, Hébert et al. (whose moderation analyses include both adolescent and young adult samples) report that effect sizes for DRV victimisation are attenuated for some risk factors in longitudinal versus cross-sectional studies.<sup>68</sup> They also report that effects can be moderated by DRV type and by the instrument and approach (binary versus continuous) used to measure DRV outcomes.<sup>68</sup> Several reviews examined effect modification by gender, and the vast majority of these analyses identify no significant differences.<sup>67,69,71</sup> Where they do find differences, reviewers report that physical abuse is more strongly associated with DRV victimisation among girls ( $r=0.12$ ) than boys ( $r=0.07$ ),  $Q_B(1)=4.25$ ,  $p=0.39$ , and that sexual harassment is also more strongly associated with DRV victimisation among girls ( $r=0.26$ ) than boys ( $r=0.14$ ),  $Q_B(1)=6.72$ ,  $p=0.010$ .<sup>68</sup> Other gender differences are reported for depression, which is more strongly associated with physical DRV perpetration among girls ( $r=0.11$ , 95%CI=0.07, 0.14) than boys ( $r=0.03$ , 95%CI=-0.01, 0.06) and controlling behaviours, which are more strongly associated with physical DRV perpetration among boys ( $r=0.28$ , 95%CI=0.14, 0.40 versus 0.09, 95%CI=-0.03, 0.22).<sup>70</sup>



Evidence is mixed on risk factors with the strongest relationship to DRV. Hébert et al. report no significant difference between the 12 child maltreatment, peer and parenting risk factors identified in their study,<sup>68</sup> but other meta-analytic reviewers highlight the comparative strength of a number of factors.<sup>67,69,71</sup> Factors that Spencer et al. highlight as most strongly associated with both physical DRV victimisation<sup>69</sup> and perpetration<sup>70</sup> at the individual level include substance use ( $r=0.55$ , 95%CI=0.47-0.63 substance use and victimisation;  $r=0.09$ , 95%CI=0.02-0.17 alcohol use and perpetration), risky sexual behaviours ( $r=0.34$ , 95%CI=0.24-0.44 victimisation;  $r=0.16$ , 95%CI=0.08-0.23 perpetration) and some mental health challenges ( $r=0.30$ , 95%CI=0.28-0.32 suicide attempts and victimisation;  $r=0.30$ , 95%CI=0.25, 0.36 disordered eating and victimisation;  $r=0.08$ , 95%CI=0.04-0.12 depression and perpetration). They further identify weapon-carrying as among the strongest individual risk factors for physical DRV victimisation ( $r=0.31$ , 95%CI=0.22-0.39)<sup>69</sup> and externalising behaviours ( $r=0.33$ , 95%CI=0.18-0.46), pro-violence attitudes ( $r=0.19$ , 95%CI=0.14, 0.24) and delinquency ( $r=0.06$ , 95%CI=0.00-0.11) as the strongest at this level for perpetration.<sup>70</sup> At the relationship level, Spencer et al.'s research suggests that DRV victimisation and perpetration and different types of DRV are closely associated with each other. They highlight emotional DRV victimisation as an important risk factor for physical DRV, both in terms of victimisation ( $r=0.51$ , 95%CI=0.42-0.59)<sup>69</sup> and perpetration ( $r=0.49$ , 95%CI=0.37, 0.59).<sup>70</sup> They further highlight physical DRV perpetration ( $r=0.66$ , 95%CI=0.61, 0.70) and sexual DRV victimisation ( $r=0.53$ , 95%CI=0.45-0.59) as important risk factors for physical DRV victimisation.<sup>69</sup> At this level they identify physical DRV victimisation ( $r=0.66$ , 95%CI=0.56, 0.74), emotional DRV perpetration ( $r=0.37$ , 95%CI=0.30, 0.63) and past physical DRV perpetration ( $r=0.41$ , 95%CI=0.27, 0.53) as the factors most strongly associated with physical DRV perpetration.<sup>70</sup> Park and Kim highlight witnessing parental IPV (ES $r=0.48$ , 95%CI=0.36, 0.60), a family-level factor, for its strength of association with DRV victimisation among adolescents and young adults.<sup>71</sup> Considering peer factors, meta-analytic reviewers highlight antisocial behaviour ( $r=0.29$ , 95%CI=0.20, 0.37) for the strength of its associations with DRV victimisation and perpetration<sup>67</sup> and, among adolescents and young

adults, peer deviance ( $ESr=0.46$ ,  $95\%CI=0.39, 0.52$ ) for the strength of its association with DRV perpetration.<sup>71</sup>

#### *1.5.1.6. Modifiable risk factors identified in UK surveys*

Most evidence on modifiable DRV risk factors in the UK comes from a few cross-sectional studies.<sup>16,34,35</sup> At the individual level, victimisation is associated with ever having sent a sexually explicit image (aORs=2.91-7.97<sup>j16,35</sup>) and (for girls) with living independently (aOR=4.03,  $95\%CI=2.19, 7.41$  threatening behaviours; aOR=1.74,  $95\%CI=1.33, 2.28$  controlling behaviours).<sup>16</sup> Multivariable analyses by Barter et al. have further identified relationship, family and peer factors significantly associated with DRV risk among UK young people at the level of  $p<0.05$ .<sup>34</sup> In this research partner age, family violence and peer group violence emerge as the modifiable risk factors most strongly associated with both DRV victimisation and perpetration. Their findings suggest that at the relationship level, having a younger (compared to same-age) partner is associated with lower risk of both physical DRV victimisation (aOR=0.41) and emotional DRV perpetration (aOR=0.45) for boys while having an older (as opposed to younger) partner is associated with physical DRV victimisation for girls (aOR=4.91,  $p<0.05$ ).<sup>34</sup> At the family-level, family violence is associated with both DRV victimisation among girls (aOR=2.77 physical; aOR=1.80 emotional; aOR=2.36 sexual) and boys (aOR=2.77 sexual) and perpetration among girls (aOR=2.18 physical; aOR=3.97 sexual).<sup>34</sup> Considering peer factors, peer violence is associated with DRV victimisation among both girls (aOR=2.22 physical; aOR=2.46 emotional) and boys (aOR=2.30 physical, aOR=2.06 emotional) as well as perpetration among both girls (aOR=2.69 physical; aOR=3.83 sexual) and boys (aOR=3.12 physical; aOR=2.17 emotional; aOR=3.06 sexual).<sup>34</sup>

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<sup>j</sup> For girls/boys respectively: aOR=2.31,  $95\%CI=2.04-2.62$ /aOR=2.91,  $95\%CI=2.01-4.23$  threatening behaviours; aOR=4.25,  $95\%CI=3.43-5.26$ /aOR=2.49,  $95\%CI=2.05-3.02$  controlling behaviours; aOR=7.97,  $95\%CI=3.63-17.52$ /aOR=4.25,  $95\%CI=3.43-5.26$  online sexual violence<sup>16</sup>

## 1.6. Approaches to DRV prevention

A number of narrative and systematic reviews synthesise evidence on approaches to DRV prevention. Many focus primarily on adolescents.<sup>7,8,11,13,14,22,28–30</sup> Others include interventions targeting adolescents and young adults into their early 20s,<sup>10,12,31</sup> a reasonable approach because adolescent and young adult relationships are more similar to each other than to relationships in later adulthood.<sup>72</sup> Some discuss DRV prevention alongside broader IPV prevention.<sup>9,32</sup> Given their shared risk factors, DRV and non-partner GBV are considered together in some reviews,<sup>10–12,14,30</sup> while others focus exclusively on abuse within the context of intimate relationships.<sup>7,8,8,9,9,13,22,28,29,31,31,32</sup> Table 1 summarises the methods and key findings from 14 reviews, published between 1999 and 2024, of interventions that aim to reduce DRV. In this section I synthesise the findings of these reviews, noting where evidence comes solely from reviews that combine DRV and GBV interventions and/or interventions for adolescents and young adults.

**Table 1. Summaries of selected reviews of DRV interventions**

Year	Review	Methods	Dates of eligible reports	# of included interventions/studies/reports	Eligible design(s)	Eligible interventions	Key outcome findings	Other key findings and recommendations
1999	Wekerle <sup>7</sup>	Review (does not specify whether systematic)	1990 and later, though manual searches included journals from 1980 and later	6 interventions	Quasi-experimental and intervention-only designs	Adolescent relationship violence prevention programmes	<ul style="list-style-type: none"> <li>• Studies find evidence of impact on knowledge, attitudes about dating aggression, and behavioural intentions, maintained over short follow-up periods (e.g., 3 months)</li> <li>• Two studies found intervention participants report less perpetration than control at post-test; however, this is based on self-report and may be subject to social desirability bias</li> <li>• Unclear whether there is a short-term impact on victimisation</li> </ul>	<ul style="list-style-type: none"> <li>• Identified 4 school-based programmes, 1 community-based and 1 combined</li> <li>• Most interventions integrated feminist and social learning approaches</li> <li>• School-based programmes provided practical benefits (e.g. access to participants; space), and the benefit of staff support (e.g. programme facilitators, and guidance counsellors to address incidents and to follow up post-programme)</li> <li>• Suggests harnessing peer pressure “to serve prosocial ends” (p. 451)</li> <li>• Importance of teaching pro-social skills (e.g. assertive communication; help-seeking)</li> </ul>
1999	Wolfe <sup>32</sup>	Review (non-systematic)	N/A	N/A	N/A	Describes 2 public health models for intimate partner violence (IPV) prevention, gives examples of prevention programmes	<ul style="list-style-type: none"> <li>• Cites a 1999 review finding that school-based dating and relationship violence (DRV) prevention programmes targeting adolescents have had positive impacts on knowledge, attitudes and DRV perpetration</li> </ul>	<ul style="list-style-type: none"> <li>• Schools provide a good opportunity for IPV prevention to a wide range of young people because <ul style="list-style-type: none"> <li>○ Most children attend school</li> <li>○ Much of their social learning takes place in school, and social learning “can play a role in the development of behaviors and attitudes that</li> </ul> </li> </ul>

Year	Review	Methods	Dates of eligible reports	# of included interventions/studies/reports	Eligible design(s)	Eligible interventions	Key outcome findings	Other key findings and recommendations
						<p>being implemented and discusses evaluation results where available. Includes but does not focus exclusively on adolescent IPV.</p>	<ul style="list-style-type: none"> <li>• Evidence is limited but suggests promising strategies to prevent IPV, including school-based programmes</li> </ul>	<p>support domestic violence” (p. 138)</p> <ul style="list-style-type: none"> <li>○ Due to their influence on young people, teachers are “in an ideal position to motivate students to consider new ways of thinking and behaving.” (p. 138)</li> <li>• As identified in a 1998 review cited by the authors, universal exposure to IPV programming is important for young people because even those who will not experience IPV may have an opportunity to help prevent or stop IPV experienced by others in their communities</li> <li>• Summarising research on adolescent development, authors report that early- and mid-adolescence offer a unique opportunity for primary prevention because: <ul style="list-style-type: none"> <li>○ Adolescents are developing a greater understanding of potential risks and consequences of their behaviours</li> <li>○ “Conformity” (p. 139) to their parents’ views is gradually decreasing, and peers are becoming increasingly influential</li> </ul> </li> </ul>

Year	Review	Methods	Dates of eligible reports	# of included interventions/studies/reports	Eligible design(s)	Eligible interventions	Key outcome findings	Other key findings and recommendations
								<ul style="list-style-type: none"> <li>○ By mid-adolescence, romantic relationships become more important</li> <li>○ “Clear messages about personal responsibility and boundaries, delivered in a blame-free manner, are generally acceptable to this age group...” (p. 139)</li> <li>● Need to move beyond small, scattered local programming to comprehensive research and evaluations to support broader prevention</li> </ul>
2006	Whitaker <sup>13</sup>	Systematic review	1990 – April 2003	11 interventions (15 reports)	Comparison group (e.g., quasi-experimental, randomisation to intervention versus control, or randomisation between 2+ interventions), and pre/post designs	Interventions for the primary prevention of partner violence perpetration (initially intended to be broad, but all eligible studies targeted adolescents)	<ul style="list-style-type: none"> <li>● Of the 9 studies reporting positive outcomes, most report effects on knowledge or attitudes; unclear whether this will lead to behaviour change</li> <li>● Two programmes found positive impacts on behaviour (Safe Dates and the Youth Relationships Project)</li> </ul>	<ul style="list-style-type: none"> <li>● All interventions “had some emphasis of a feminist orientation to partner violence” (p. 159), discussing how concepts like gender norms, gender-based coercion or power and control contribute to DRV. Most were underpinned by a combination of feminist theory, either social-cognitive or cognitive-behavioural theory (NB, the narrative was unclear as to whether authors were referring to both of these, or to one or the other) and educational methods</li> <li>● All targeted middle- or high-school age students; all but one were universal and school-based interventions</li> </ul>

Year	Review	Methods	Dates of eligible reports	# of included interventions/studies/reports	Eligible design(s)	Eligible interventions	Key outcome findings	Other key findings and recommendations
								<ul style="list-style-type: none"> <li>• All interventions were delivered to mixed-sex groups</li> <li>• Interventions tended to be brief, with 6 of the 11 shorter than 5 hours, and only 2 longer than 5 hours (excluding activities outside of the structured curriculum)</li> <li>• Overall quality of evaluation designs was low, with short follow-up periods; high attrition rates; little fidelity monitoring; lack of measurement of perpetration; and it was uncommon to conduct mediator analyses</li> <li>• While DRV prevention programmes are promising for preventing IPV perpetration, "...strong conclusions about [their] effectiveness...are premature." (p. 160)</li> <li>• More work is needed to understand the mechanisms by which DRV programmes change behaviour</li> </ul>
2007	Cornelius <sup>28</sup>	Review	Not specified; studies referenced range from 1987 - 2004	11 interventions	Not specified; discusses a range of design and reporting from a report on an intervention without	Primary and secondary interventions to prevent adolescent dating violence	<ul style="list-style-type: none"> <li>• N/A; Discusses programmes, limitations to the evidence base and recommendations for future research, but does not synthesise</li> </ul>	<ul style="list-style-type: none"> <li>• Most DRV prevention programmes target secondary school-aged or university-aged young people, "usually within the school or the curriculum" (p. 366)</li> <li>• Though several programmes have been implemented since</li> </ul>

Year	Review	Methods	Dates of eligible reports	# of included interventions/studies/reports	Eligible design(s)	Eligible interventions	Key outcome findings	Other key findings and recommendations
					outcome data, to randomised controlled trials (RCTs)		existing evidence on outcomes	<p>the 1980s, many have not been evaluated to assess impact on attitudes and behaviours</p> <ul style="list-style-type: none"> <li>Limited comparability between studies which use bespoke scales, without necessarily examining reliability and validity, to measure outcomes</li> <li>Studies using self-report data to measure outcomes rarely assess social desirability; self-report data may underestimate incidence of dating violence, especially among adolescents “who may be accustomed to responding in ways in order to please a perceived authority figure” (p. 372)</li> <li>Only some programmes include/describe a skill-building component, which the review authors argue “need to be incorporated consistently and methodically” (p. 373) to change behaviour</li> <li>Future research needs to examine longitudinal behaviour change</li> </ul>
2013	Leen <sup>22</sup>	Systematic review (not described as systematic, but methods	2000 – 2011	9 interventions	Not specified; must be published in a peer-reviewed journal	“Primary” adolescent dating violence interventions for young people aged 12-18 years	<ul style="list-style-type: none"> <li>Several programmes demonstrated positive behavioural change</li> <li>Several demonstrate effects on interpersonal and</li> </ul>	<ul style="list-style-type: none"> <li>All included studies evaluated interventions in North America; none identified in Europe</li> <li>All included a focus on healthy relationship skills</li> </ul>



Year	Review	Methods	Dates of eligible reports	# of included interventions/studies/reports	Eligible design(s)	Eligible interventions	Key outcome findings	Other key findings and recommendations
		appear to be systematic. Forms part of a broader review of DRV prevalence, risk factors and intervention efficacy)				(this is how the authors describe the interventions, although the review includes both primary prevention interventions and those for young people considered to be at high risk of DRV, including those with previous DRV experience)	<p>relationship attitudes but “marginal or no behavioral change” (p. 169). Changes in attitudes alone does not necessarily lead to changes in behaviour; “The link between effecting attitudinal change and effecting behavioural change appears far from straightforward.” (p. 171)</p> <ul style="list-style-type: none"> <li>• Though there is limited evidence to make a determination, authors note that interventions that focus on awareness-raising and knowledge tend to have less success in effecting long-term behaviour change than those that focus on relationship behaviour, skills and attitudes</li> <li>• Some interventions report negative effects on DRV behaviour, though it’s unclear whether these</li> </ul>	<ul style="list-style-type: none"> <li>• Most interventions (6 of 9) were school-based and took place during scheduled lessons; another was located at a school but took place during after-school time</li> <li>• Findings on the impact of intervention delivery in groups are conflicting; it is “unclear what effects group dynamics have as a driver of attitudinal and behavioral change...” (p. 171)</li> <li>• Given that post-test intervention effects are not necessarily sustained at later follow-up, evaluations should use longer follow-up periods</li> </ul>

Year	Review	Methods	Dates of eligible reports	# of included interventions/studies/reports	Eligible design(s)	Eligible interventions	Key outcome findings	Other key findings and recommendations
							are actual DRV behaviour changes or changes in reporting	
2013	Fellmeth <sup>31</sup>	Cochrane systematic review and meta-analysis	Until 7 May 2012	38 studies (41 reports); 33 studies included in meta-analysis	RCTs, cluster RCTs and quasi-randomised studies with a control	Educational and skills-based interventions targeting adolescents and young adults (aged 12-25 years) to prevent relationship and dating violence. Studies with a wider age-range were included if at least 80% of the participants were aged 12-25 years.	<ul style="list-style-type: none"> <li>• Significant increase in knowledge about DRV (but suggest interpreting this with caution due to high heterogeneity between studies). Moderated by setting, which is correlated with age: university-based interventions more effective at increasing knowledge; effect of school- and community-based interventions on knowledge was not significant. However, because no other outcomes were moderated by setting, the authors conclude this moderation arose by chance.</li> <li>• No significant effect on episodes of DRV (whether measured using categorical or continuous data)</li> <li>• No significant effect on attitudes towards DRV or behaviour in</li> </ul>	<ul style="list-style-type: none"> <li>• All studies took place in the USA (N=37) or the Republic of Korea (N=1).</li> <li>• Most studies were in educational settings (25 in universities, 10 in high schools)</li> <li>• Outcomes did not vary by total contact hours, number of sessions or timing of outcome measurement</li> <li>• Limitation: Safe Dates not included in this review</li> <li>• Most research on impact of DRV prevention among adolescents and young adults focuses on changes in attitudes and knowledge</li> <li>• Future research should measure DRV incidence itself, and involve larger RCTs with longer follow-up periods</li> </ul>

Year	Review	Methods	Dates of eligible reports	# of included interventions/studies/reports	Eligible design(s)	Eligible interventions	Key outcome findings	Other key findings and recommendations
							DRV (e.g., not DRV itself but related behaviours), or skills related to DRV	
2014	De la Rue <sup>30</sup>	Campbell systematic review and meta-analysis	1960 – July 2013	23 studies (21 reports)	Quantitative experimental and quasi-experimental designs with a control group	School-based interventions to reduce dating and sexual violence (mental, physical, and sexual violence and coercion), implemented with students in 4 <sup>th</sup> – 12 <sup>th</sup> grade that focused on middle and high schools	<ul style="list-style-type: none"> <li>• Authors conclude that prevention programmes “show promise in increasing knowledge and awareness”, but “impacts on behaviors are less clear and indeed are often not reported” (p. 50) and that the review “did not show substantial changes in perpetration or victimization experiences” (p. 54).</li> <li>• Moderate, significant and sustained increases in DRV knowledge</li> <li>• Small but significant reductions in attitudes supportive of DRV (but decreased slightly at follow-up)</li> <li>• Large reduction in support for rape myths at post-test (but only measured in 4 studies, and unknown if sustained)</li> </ul>	<ul style="list-style-type: none"> <li>• All studies took place in the USA (N=22) or Canada (N=1)</li> <li>• Only 1 measured effect on bystander behaviour</li> <li>• Relatively few studies measured DRV perpetration and victimisation (4 and 5, respectively)</li> <li>• “Prevention programs can have a positive impact, however, the plethora of programs presented and the limited evidence to support behaviour change creates challenges in recommended specific approaches for schools” (p. 55)</li> <li>• Important for interventions to consider social context</li> <li>• Future research should use RCTs and should go beyond knowledge and attitude measures to explore changes in DRV victimisation and perpetration</li> </ul>

Year	Review	Methods	Dates of eligible reports	# of included interventions/studies/reports	Eligible design(s)	Eligible interventions	Key outcome findings	Other key findings and recommendations
							<p>at follow-up – only measured this in 1 study)</p> <ul style="list-style-type: none"> <li>• Moderate, significant increase in positive conflict management skills at post-test as measured by Conflict Tactics Scale (CTS)</li> <li>• Small but significant reduction in DRV victimisation incidence at post-test (-0.21), but not sustained at follow-up</li> <li>• No effect on DRV perpetration at post-test but small but significant decrease at follow-up</li> </ul>	
2014	De Koker <sup>29</sup>	Systematic review	(unclear; beginning of 2004?) Until end of February 2013	6 studies (8 reports)	RCTs, cluster RCTs and quasi-randomised trials	Interventions to prevent primary and secondary victimisation and perpetration of adolescent intimate partner violence, targeting young people aged 10-19 years, excluding	<ul style="list-style-type: none"> <li>• Interventions that have been effective have been based in multiple settings (both school and community), addressed relationship skills and “focused on key adults in the adolescents’ environment (such as teachers, parents, and community members)” (p. 11)</li> </ul>	<ul style="list-style-type: none"> <li>• Future research should assess differences in effects based on gender and prior experience of DRV</li> <li>• Eligible trials took place in the US, Canada and South Africa</li> </ul>

Year	Review	Methods	Dates of eligible reports	# of included interventions/studies/reports	Eligible design(s)	Eligible interventions	Key outcome findings	Other key findings and recommendations
						interventions focused on specific populations (e.g. young drug users)	<ul style="list-style-type: none"> <li>Findings suggest that “comprehensive IPV prevention interventions based in both school and community are effective in preventing IPV perpetration and victimization among adolescents” (p. 11)</li> </ul>	
2015	Stanley <sup>8</sup>	Systematic review, review of UK grey literature, and consultation with young people and experts	1990 – Feb. 2014 (March 2014 for grey lit)	Database search: 22 interventions  UK grey lit: 18 interventions	Meta-analyses, research reviews, controlled studies, before-and-after studies, independent case evaluations, qualitative and ethnographic studies	Interventions with children and young people under 18 years old to prevent them from experiencing and/or perpetrating domestic abuse (paper focuses on schools but search does not seem to have been limited to school-based programmes)	<ul style="list-style-type: none"> <li>Information-based programmes can increase short-term knowledge; less evidence that knowledge is retained in the longer term</li> </ul>	<ul style="list-style-type: none"> <li>Most programmes underpinned “by an explanation of domestic abuse that drew on social norms and feminist or gender theories and those interventions utilising the ‘bystander approach’” (p. 127)</li> <li>Most programmes targeted knowledge and awareness rather than behaviour.</li> <li>Experts discussed an aim of prevention interventions as shifting the climate; discussed “opportunities to use the power of the peer group to construct social norms that challenge domestic abuse” (p. 127)</li> <li>Identified difficulties of transferring programmes across cultures and populations</li> <li>Expert consultation identified importance of organisational readiness in schools, and importance of supporting</li> </ul>

Year	Review	Methods	Dates of eligible reports	# of included interventions/studies/reports	Eligible design(s)	Eligible interventions	Key outcome findings	Other key findings and recommendations
								<p>“across all aspects of a school’s work and curriculum...” (p. 122)</p> <ul style="list-style-type: none"> <li>• Evidence from UK grey literature and expert consultation that some teachers are not prepared (in terms of confidence or values) to deliver DRV programmes</li> <li>• There is an increasing focus on targeting boys to reduce male perpetration rather than targeting girls to reduce their victimisation (found from expert consultations)</li> <li>• In consultations, generally agreed that “messages for boys should be positively framed and should avoid a blaming approach that could provide resistance” (p. 127)</li> <li>• Some evidence of boys finding programmes to be “anti-men” or “sexist” and resisting their messages (p. 127)</li> <li>• Consultation groups emphasised lack of materials for lesbian, gay, bisexual and transgender young people</li> <li>• Consultations with young people and experts found they support the involvement of young people in designing and delivering programmes; young people emphasised the</li> </ul>

Year	Review	Methods	Dates of eligible reports	# of included interventions/studies/reports	Eligible design(s)	Eligible interventions	Key outcome findings	Other key findings and recommendations
								importance of authenticity, which this could aid
2015	Lundgren <sup>10</sup>	Review (describes search methods but review not described as systematic)	1990 and later	61 interventions	Evaluations; excluded editorials, conference abstracts and opinion pieces	Qualitative and quantitative evaluations of interventions to prevent IPV and sexual violence among young people aged 10-19 years (included studies targeting up to 26 years old); excluded programmes from higher-income countries without strong evidence	<ul style="list-style-type: none"> <li>• Evidence indicates that longer-term interventions with “repeated exposure to ideas delivered in different settings over time” (p. S49) are more effective than single awareness-raising or discussion sessions</li> <li>• School-based interventions are promising but have only been implemented in high-income countries (HICs). These should be adapted for other settings and evaluated</li> <li>• Evidence for school-based programmes to promote gender-equitable norms is considered to be emerging, because impact on experience and perpetration of violence “remains to be seen” (p. S49)</li> <li>• Gender-transformative community-based</li> </ul>	<ul style="list-style-type: none"> <li>• Most included programmes aimed to affect factors like inequitable gender norms, tolerance of sexual violence, and relationship conflict</li> <li>• Limited rigorous evidence available; there is a need for “more robust evaluation of promising interventions” (p. S44). Only 6 studies were RCTs and 8 used quasi-experimental designs.</li> <li>• Studies tend to be underpowered and not to evaluate outcomes over a period long enough to assess their effects on future perpetration and victimisation</li> <li>• There is a lack of “robust standardized measures for behavioral outcomes” (p. S44)</li> <li>• Of 61 interventions, identified only 17 in low- and middle-income countries (LMICs)</li> <li>• Studies with strong research designs are disproportionately conducted in high-income settings; need to expand the base of rigorous evidence in LMICs</li> <li>• Sexual and reproductive health outcomes not often measured</li> </ul>

Year	Review	Methods	Dates of eligible reports	# of included interventions/ studies/reports	Eligible design(s)	Eligible interventions	Key outcome findings	Other key findings and recommendations
							<p>interventions have been effective in preventing IPV and sexual violence; however, feasibility in terms of human resources and cost is unclear</p> <ul style="list-style-type: none"> <li>• Evidence suggests that parenting interventions can be effective in reducing child maltreatment, a risk factor for later IPV and sexual violence; however, no longitudinal research has been done yet to see if such programmes do affect these outcomes</li> <li>• Limited evidence suggests it is important that microfinance initiatives include educational, skills and mentoring components</li> </ul>	<ul style="list-style-type: none"> <li>• There is little evidence about the “essential elements of effective programs,” e.g. ideal dosage and whether single- or mixed-sex programming is more effective (S49)</li> </ul>
2021	McNaughton-Reyes <sup>14</sup>	Systematic review	Before 1 Jan 2020	45 studies of 52 intervention evaluations (61 reports)	Experimental and controlled quasi-experimental evaluations	DRV primary prevention programmes for young people aged 10-19 years;	<ul style="list-style-type: none"> <li>• Half of included studies reported effective victimisation and/or perpetration prevention</li> </ul>	<ul style="list-style-type: none"> <li>• The number of evaluations published from LMICs increased steeply from 2010</li> <li>• LMIC and HIC evaluations had similar follow-up periods; 56%</li> </ul>



Year	Review	Methods	Dates of eligible reports	# of included interventions/studies/reports	Eligible design(s)	Eligible interventions	Key outcome findings	Other key findings and recommendations
						also included if assessed sexual violence outcomes without specifying the context of dating/relationship	<ul style="list-style-type: none"> <li>• There was no significant difference in effectiveness by HIC/LMIC, implementation setting, study design or follow-up period</li> <li>• There was a trend towards higher effectiveness with more exposure time, but no significant difference</li> <li>• Programmes tended to be more effective in preventing perpetration than victimisation</li> <li>• Half of the effective HIC interventions reported prevention of both victimisation and perpetration among both girls and boys</li> <li>• Some evidence supports (1) use of self-defence and assertiveness training to reduce sexual victimisation among girls, and (2) programme activities triggering the</li> </ul>	<ul style="list-style-type: none"> <li>• of studies followed participants for at least 1 year post-baseline</li> <li>• Studies in LMICs were more likely than those in HICs to assess girls (45%) and victimisation (60%) only</li> <li>• Most HIC studies assessed both victimisation and perpetration outcomes (78%) and measured outcomes among both girls and boys (91%), reflecting “a more gender-neutral focus” than LMIC interventions (p. 7)</li> <li>• Most interventions were school-based and universal, not targeted</li> <li>• LMIC interventions were more likely to be gender-transformative while HIC interventions were more likely to include healthy relationship education/training</li> <li>• More research is needed to understand how DRV prevention programmes work and which programme components trigger important mechanisms</li> <li>• More research is needed on transferability of programme effects across settings and subgroups</li> <li>• More than half of the 29 evaluations of effective</li> </ul>

Year	Review	Methods	Dates of eligible reports	# of included interventions/studies/reports	Eligible design(s)	Eligible interventions	Key outcome findings	Other key findings and recommendations
							<p>mechanisms of delayed sexual debut, fewer sexual partners, reduced acceptance of DRV, gender-equitable norms, increased awareness of DRV community services, conflict management skills, and/or increased family cohesion</p> <ul style="list-style-type: none"> <li>• Sex moderated intervention effects in 25% of the studies that explored this but there was no clear pattern of this moderation</li> </ul>	<p>programmes examined moderation by subgroup but few (N=4) reported mediation analyses</p> <ul style="list-style-type: none"> <li>• Most LMIC studies took place in a few sub-Saharan African or South Asian countries; most HIC studies took place in the US</li> <li>• No interventions focused on sexual- or gender- minority young people</li> <li>• Few programmes targeted changes at the levels of community, family or peer networks</li> </ul>
2022	Lowe <sup>9</sup>	Realist review	No date restrictions reported	11 interventions (15 reports)	Intervention studies assessing impact on DRV victimisation or perpetration, supplemented by: protocols, cross-sectional studies on risk factors, qualitative studies of experiences, adult IPV prevention	Primary DRV prevention interventions in LMICs for young people aged 10-19 years, supplemented by literature on adult IPV prevention in LMICs and on implementation of adolescent health and	<ul style="list-style-type: none"> <li>• Gender-transformative content led to critical reflection on gender and violence attitudes, and on participants' own relationship behaviours, ultimately "reconceptualising what constitutes violence, and what is acceptable behaviour" (p. 15). These processes were facilitated by the</li> </ul>	<ul style="list-style-type: none"> <li>• Most interventions (64%) were school-based and most (64%) targeted both girls and boys</li> <li>• Most interventions (82%) were gender-transformative, focusing on changing gender and violence attitudes and norms. They "used participatory group-based education...for social norm change" (p. 9) with content on gender, violence, relationships and reproductive health</li> </ul>

Year	Review	Methods	Dates of eligible reports	# of included interventions/studies/reports	Eligible design(s)	Eligible interventions	Key outcome findings	Other key findings and recommendations
					studies, and reports on implementation of adolescent health and social interventions	social interventions	<p>peer-group (often single-sex) format, creating both safe spaces for discussion and opportunities for communication and interpersonal skill-building, increasing self-confidence and expanding peer networks</p> <ul style="list-style-type: none"> <li>• Most interventions (73%) showed reductions in victimisation and/or perpetration</li> </ul>	<ul style="list-style-type: none"> <li>• Though most interventions aimed to shift gender norms, they tended to measure attitudes rather than social norms</li> <li>• Improving measurement of social norms is needed for understanding mechanisms of change and long-term intervention impact</li> <li>• Further research is needed to understand the potential of gender-transformative interventions at different stages of adolescent development</li> <li>• Interventions tended to neglect drivers of DRV other than gender norms and attitudes, though mixed findings suggested that targeting other factors (e.g., girls' school attendance, agency, assertiveness) can be effective</li> </ul>
2023	Verbeek <sup>12</sup>	Systematic review	Until March 2022	15 studies of 13 interventions (17 reports)	Quantitative studies such as RCTs, quasi-experimental studies, and pre-/post-test	Group-based, facilitated, sexual and dating violence prevention programmes	<ul style="list-style-type: none"> <li>• Most significant effects were on short-term attitudes and long-term behaviours</li> </ul>	<ul style="list-style-type: none"> <li>• Programmes targeted experiences of sexual and dating violence or related attitudes or norms</li> </ul>

Year	Review	Methods	Dates of eligible reports	# of included interventions/studies/reports	Eligible design(s)	Eligible interventions	Key outcome findings	Other key findings and recommendations
					evaluations without a control group	for males <=25 years old, excluding programmes that were: single-session; treatment for perpetrators; and/or mixed-gender	<ul style="list-style-type: none"> <li>Effectiveness tended to be demonstrated more at follow-up than at direct post-test</li> </ul>	<ul style="list-style-type: none"> <li>Little is known about impact on “theoretical proxies” including norms and perceived behavioural control, which were “sparsely investigated” (p. 2899)</li> <li>Of the Theory of Planned Behaviour constructs (behaviours, attitudes, norms, perceived behavioural control, intentions), behaviours and attitudes were most assessed; social norms were assessed in only 1 study</li> <li>Studies assessed impact on perpetration and on bystander behaviour; not on victimisation</li> <li>LMIC interventions tended to be community-based, facilitated by peers or community leaders; HIC interventions tended to be school-based, facilitated by professionals or teachers</li> <li>Programmes tended to address gender and violence but not attitudes relating to masculinity</li> <li>Evaluations could be improved by matching intended and assessed outcomes (e.g. by assessing norms if they are a target of the intervention).</li> <li>Evaluations tended to assess outcomes at a single time-point</li> </ul>

Year	Review	Methods	Dates of eligible reports	# of included interventions/ studies/reports	Eligible design(s)	Eligible interventions	Key outcome findings	Other key findings and recommendations
								and might be improved by multiple and longer-term follow-ups
2024	Melendez-Torres <sup>11</sup>	Systematic review	Database inception to June 2021	107 interventions assessed in process/ implementation studies; 57 interventions assessed in outcome evaluations	RCTs, process evaluations	School-based interventions addressing DRV victimisation/ perpetration among children aged 5-18 years (review also included gender-based violence [GBV] interventions but results extracted here were disaggregated by DRV versus GBV)	<ul style="list-style-type: none"> <li>• Meta-analyses found long-term impacts on DRV victimisation and perpetration</li> <li>• Heterogeneity within and across studies; differences in effectiveness not explained by intervention type</li> <li>• Effectiveness sometimes seen in reducing DRV frequency but not prevalence</li> <li>• Found short-term improvements in DRV knowledge and in DRV and personal help-seeking attitudes</li> <li>• Effects on long-term victimisation might be improved when intervention excludes a parental component (long-term victimisation), includes “a range of opportunities for guided practice of skills and attitudes,</li> </ul>	<ul style="list-style-type: none"> <li>• Teaching about gendered aspects of DRV could alienate male staff and students</li> <li>• Few studies (N=3) reported social norms outcomes; norms outcomes were reported much less commonly than were knowledge or attitude outcomes</li> <li>• It might be that interventions impacted social norms but this was not, or not effectively, measured. Further research on measure reliability and validity “would be useful” (p. 237)</li> <li>• Violence attitudes (two studies) and gender attitudes (one study) mediated impact on DRV victimisation</li> <li>• Violence attitudes (three studies), gender stereotyping (one study) and belief in the need for help (one study) mediated impact on DRV perpetration</li> <li>• Interventions that improved DRV attitudes did not necessarily improve DRV outcomes, suggesting that attitude shifts “may not be</li> </ul>

Year	Review	Methods	Dates of eligible reports	# of included interventions/studies/reports	Eligible design(s)	Eligible interventions	Key outcome findings	Other key findings and recommendations
							<p>and interpersonal components focusing on student relationships” (long-term perpetration, p25), is single-component (short- and long-term victimisation and perpetration) and/or is multilevel; and when sample includes a higher proportion of girls (victimisation)</p> <ul style="list-style-type: none"> <li>• Interventions more effective in reducing perpetration (particularly emotional and physical) among boys than girls, and (according to 1 study) among sexual majority compared to sexual minority students</li> <li>• Mixed findings on whether interventions are more effective in reducing perpetration among those with or without a prior history of perpetration</li> <li>• Interventions might work by a “basic</li> </ul>	<p>sufficient for affecting violent behaviour” (p. 154)</p> <ul style="list-style-type: none"> <li>• Mixed findings on whether knowledge mediates impact on DRV victimisation or perpetration</li> <li>• Stakeholders noted gap in evidence on DRV among sexual- and gender- minority young people</li> <li>• Stakeholders emphasised common factors, including gender stereotypes, underlying DRV, GBV, homophobia and bullying</li> </ul>

Year	Review	Methods	Dates of eligible reports	# of included interventions/studies/reports	Eligible design(s)	Eligible interventions	Key outcome findings	Other key findings and recommendations
							safety” mechanism of communicating unacceptability of violence to increase “student capabilities and motivations concerning the unacceptability of violence” (p. 237)	

CTS=Conflict Tactics Scale

DRV=dating and relationship violence

HICs=high-income countries

IPV=intimate partner violence

LMICs=Low- and middle-income countries

RCT=randomised controlled trial

Approaches to DRV prevention vary by setting, content, duration, delivery model and target population. School- and community-based interventions are especially prominent in the review literature,<sup>7,8,11,13,22,28,30</sup> and some interventions are designed to be delivered across multiple settings.<sup>7,10,29</sup> Interventions commonly aim to foster protective social norms at the community level of the social ecological model as well as knowledge, attitudes and skills at the individual level to prevent DRV.<sup>11,22,29,30</sup> Though some DRV interventions target young people considered to be at high DRV risk, most are universal.<sup>10,13</sup> Targeted interventions can be “selective”, focusing on young people identified as having risk factors associated with DRV, or they can be “indicated”, offered to young people who have already experienced or perpetrated DRV.<sup>13(p162)</sup> Universal interventions, in contrast, are offered to everyone within a defined population (e.g., a participating school) regardless of their individual DRV risk.<sup>13</sup>

Supporting a universal approach, early DRV literature emphasises the principle that young people have an important role to play in helping to protect their peers from abuse.<sup>7,32</sup> As Werkerle and Wolfe put it, “peer ‘pressure’ can be harnessed to serve prosocial ends”.<sup>7(p450)</sup> Subsequent reviews report that DRV interventions have continued to target protective social norms as a mechanism to reduce DRV,<sup>8,11</sup> including via explicit ‘bystander’ interventions that promote prosocial actions by others at the community level of the social ecological model.<sup>8,11,86</sup> In their work on social norms and bystander behaviour among university students, Deitch-Stackhouse et al. outline five stages through which an individual must progress to intervene in violence: noticing an event, interpreting it as a problem, feeling responsible to address it, having the skills to do so, and intervening.<sup>86</sup> Alongside other factors like skills and self-efficacy,<sup>11</sup> bystander theories suggest that both individual-level attitudes and community-level social norms can influence progression through these stages.<sup>86</sup> Bystander interventions use a variety of approaches to address barriers to taking action to reduce violence.<sup>11,86</sup> Though less common than approaches targeting DRV victimisation or perpetration behaviours directly, more than 25% of interventions included in a 2024 systematic review of school-based DRV and GBV interventions used a bystander approach.<sup>11</sup>



Theoretical work on the influence of gender inequality on DRV has also long underpinned DRV interventions. In an early review of DRV prevention interventions published in 1999, Wekerle et al. report that most of the six included interventions integrated feminist and social learning approaches.<sup>7</sup> Subsequent reviews have continued to trace the influence of feminist theory and of ‘gender-transformative’ approaches – those that “seek to transform gender roles and create more gender-equitable relationships”<sup>87(p10)</sup> – promoting gender-equitable norms for DRV prevention.<sup>8,9,13,14</sup> This approach is supported by the broader GBV literature, which documents mechanisms through which gender-inequitable norms contribute to male perpetration of violence against women and girls globally.<sup>88,89</sup> In their scholarship advocating for a shift in GBV prevention towards changing inequitable gender norms, Jewkes et al. trace how social expectations of dominant forms of masculinity support IPV and non-partner sexual violence both directly and indirectly.<sup>89</sup> Most directly, these expectations support male dominance and control over women as social ideals, alongside male attributes of physical strength and toughness. Considering individual-level risk factors for GBV perpetration, Jewkes et al. outline the influence of patriarchal norms in behaviours displaying male sexual prowess (having multiple partners, engaging in transactional sex) and in male involvement in other forms of violence. Finally, they highlight that male perpetrators are more likely than other men to report depression, substance use and social or economic marginalisation, suggesting that males who “struggle to live up to a masculine ideal in other respects” are more likely to perpetrate violence against women and girls.<sup>89(p1584)</sup> Situating inequitable gender norms as an overarching influence, both direct and indirect, over GBV perpetration, this work suggests that gender-transformative interventions might usefully target perpetration itself and a number of its risk factors.<sup>89</sup>

#### *1.5.2.1. Evidence on approaches to DRV prevention*

While much work has been done to synthesise existing evidence and recent reviews report evidence of effectiveness,<sup>9,11,14</sup> prevention science in the DRV field is still at an early stage. Meta-analyses in 2013 and 2014 systematic reviews of education- and skills-based DRV interventions among adolescents and young adults<sup>31</sup> and school-based DRV and sexual violence interventions<sup>30</sup> found improvements in knowledge. However, evidence of attitude changes was

mixed and these meta-analyses found no<sup>31</sup> or little<sup>30</sup> change to DRV behaviours. A decade later, in 2024, meta-analyses in Melendez-Torres et al.'s systematic review found weak long-term impacts of school-based DRV interventions on both DRV victimisation and perpetration.<sup>11</sup> Their findings support previous narrative reviews of DRV and sexual violence interventions,<sup>14</sup> and of DRV interventions for adolescents and young adults in low- and middle-income countries (LMICs),<sup>9</sup> which found that such interventions are often effective in reducing victimisation and/or perpetration. Melendez-Torres et al.'s review suggests that interventions are more effective in reducing perpetration among boys than girls and that current interventions might be more effective for sexual-majority than sexual-minority young people.<sup>11</sup> Findings on whether interventions are more effective for participants with or without a prior history of DRV perpetration are mixed.<sup>11</sup>

Little is known, however, about how DRV interventions work, which components trigger important mechanisms of change or which intervention models are most effective.<sup>10,11,14</sup> Reviews report conflicting findings on the role of intervention dose. While a systematic review of DRV interventions for adolescents and young adults suggests that interventions with “repeated exposure to ideas...over time” are more effective,<sup>10(pS49)</sup> the number of contact hours and sessions in education and skills-based interventions among this population made no significant difference to DRV outcomes in meta-analyses<sup>31</sup> and school-based interventions were more effective when they were single- rather than multi-component.<sup>11</sup> In terms of delivery model, review evidence suggests that there might be a benefit to implementing interventions in multiple settings, such as both schools and communities,<sup>10,29</sup> and across multiple levels of the social ecological model.<sup>11</sup> Some evidence supports incorporating a skills component,<sup>11,22,29</sup> including guided practice of new skills and attitudes, and including a higher proportion of girls in DRV programming.<sup>11</sup> Findings are mixed on whether components focusing on the parents of adolescents help or hinder effectiveness.<sup>11,29</sup>

Evaluations rarely assess what factors mediate DRV reduction,<sup>11,13,14</sup> but those that do offer some insights into mechanisms of change. DRV studies included in Melendez-Torres et al.'s

2024 review assessed mediation by changes in knowledge, individual attitudes, conflict management skills, belief in the need for help, school belonging and bystander actions.<sup>11</sup> Results suggest that increases in DRV knowledge and changes in attitudes towards violence and gender stereotyping can mediate reductions in DRV victimisation and perpetration. However, findings vary across studies and DRV type, and despite the influence of gender-transformative approaches to prevention,<sup>8,9,13,14</sup> only one study assessed the mediating role of attitudes towards gender stereotypes.<sup>11</sup> Furthermore, reviewers report that changes in attitudes do not always lead to reductions in DRV and interventions can be effective without detecting significant attitudinal changes,<sup>11,22</sup> concluding that the relationship between attitude and behaviour change “appears far from straightforward”.<sup>22(p171)</sup> These findings suggest that social norms might be at work, influencing behaviour independently of attitudinal influences.<sup>15</sup>

Reviewer syntheses also point to other mechanisms that might be important, including delayed sexual debut, fewer sexual partners and increased family cohesion for DRV and sexual violence interventions;<sup>14</sup> and communication and interpersonal skills, self-confidence and the expansion of peer networks for DRV prevention among adolescents and young adults in LMICs.<sup>9</sup> However, conclusive findings on key components and mechanisms to reduce DRV remain elusive.

#### *1.5.2.2. School-based DRV prevention*

Two decades of research has consistently highlighted school-based programming as a promising approach to reducing DRV.<sup>7,10,11,13,22,32</sup> Schools offer an infrastructure for intervention delivery and enable DRV interventions to reach students at-scale.<sup>7,90</sup> As key sites of social learning<sup>32</sup> and gender socialisation,<sup>91,92</sup> schools can play an important role in the formation of DRV-related attitudes and behaviours and they employ teachers who are positioned to “motivate students to consider new ways of thinking and behaving”.<sup>32(p138)</sup>

As noted in Section 1.6.2., earlier meta-analyses found little impact of school-based interventions on DRV and sexual violence outcomes<sup>30</sup> or of education and skills-based interventions on DRV among adolescents and young adults,<sup>31</sup> but more recent meta-analyses found weak but significant long-term reductions in DRV victimisation and perpetration.<sup>11</sup> While

this is encouraging in terms of the potential of school-based interventions, heterogeneity amongst included studies was high and was not explained by differences in intervention models.<sup>11</sup> Available evidence suggests that school-based interventions can be effective in reducing DRV but concludes little about what intervention designs are likely to be most effective and the mechanisms underlying intervention effects.<sup>11</sup>

#### *1.5.2.3. Limitations to the DRV prevention evidence base*

Reviews identify limitations to the evidence base for DRV prevention in terms of its geographic representation, applicability for SGM young people, impact and mechanisms of change. First, the overwhelming majority of evaluations of DRV and sexual violence interventions and a disproportionate number of those with strong research designs have taken place in high-income settings,<sup>10</sup> primarily in North America.<sup>30,31</sup> Melendez-Torres et al. identified only three DRV outcome evaluations from the UK, all cluster randomised controlled trials (RCTs), published in 2012, 2014 and 2020. None reported DRV reductions.<sup>11</sup> Second, reviewers have noted a dearth of DRV programming targeting SGM young people<sup>8,11,14</sup> despite ample evidence of their elevated risk.<sup>42-44</sup> These gaps present a challenge to reducing DRV globally and equitably, as evidence suggests DRV interventions cannot be simply transferred from one culture or population to another,<sup>8</sup> even between high-income Western settings.<sup>93</sup>

Third, DRV intervention evaluations often focus on attitude and knowledge changes,<sup>13</sup> and many do not measure effects on DRV victimisation and perpetration.<sup>13,28,30</sup> A lack of robust, standardised outcome measures limits comparability across studies<sup>10,28</sup> and the evidence base is further limited by short follow-up periods.<sup>12,13,22,31</sup> Fourth, as noted in Section 1.6.2., evaluations rarely assess which factors mediate intervention success. While much is known about risk factors for perpetrating and experiencing DRV, and behavioural theories suggest theoretical antecedents,<sup>12</sup> existing research tells us little about how interventions impact these factors and whether these impacts lead to reductions in DRV.

Several reviewers draw particular attention to gaps in research on the role and measurement of social norms. Experts see shifting harmful social norms or fostering protective ones as an important aspect of DRV prevention<sup>8</sup> and reviewers report that this approach remains a common underpinning of interventions.<sup>8–10,12,13</sup> Interventions that engage with social norms might reduce DRV via different pathways, depending on whether attitudes and behaviours in the reference group align or conflict with members' perceptions of them.<sup>94</sup> Where young people overestimate their peers' involvement in or support for DRV, interventions might focus on correcting these misperceptions,<sup>86</sup> an approach that has been widely used in the area of alcohol prevention among university students but has demonstrated little effectiveness.<sup>95</sup> Other interventions aim to foster collective changes in attitudes that support violence and to do so in a way that is visible and public within a reference group so that it is clear that social expectations are shifting. For example, group discussions using critical reflection can change both individual attitudes and norms<sup>96,97</sup> and have been effective in reducing violence against women.<sup>98</sup> Behaviour change theory and empirical evidence suggest that relationships between attitudes, norms and behaviours are complex<sup>89,99,100</sup> and variable (e.g., Jewkes et al. 2015,<sup>89</sup> Bicchieri & Mercier 2014,<sup>99</sup> Ajzen 1991,<sup>100</sup> Mackie et al. 2015,<sup>101</sup> Enosh 2007,<sup>76</sup> Hunt et al. 2022<sup>78</sup> and Chung & Rimal 2016<sup>102</sup>). Drawing on the Theory of Planned Behaviour, attitudes and norms can be thought of as influencing each other reciprocally and as varying in their relative influence over behaviour across outcomes and contexts. Evaluations of DRV interventions that aim to address norms have to-date shed light on these pathways: they rarely measure impact on norms,<sup>11,12</sup> and none have assessed whether norms changes have mediated impacts on DRV.<sup>11</sup> Reviewers report that gaps in methods for social norms measurement present a barrier to reliably and validly conducting these analyses.<sup>9,11</sup>

Overall, available evidence suggests DRV interventions can increase knowledge and protective attitudes and, to some extent, improve DRV outcomes.<sup>7,8,11,13,22,30–32</sup> However, little is known about which types of interventions are most effective and the evidence to support DRV behaviour change is limited,<sup>11</sup> making it difficult to recommend particular approaches. Reviews suggest that more research is needed to elaborate the mechanisms that lead to behaviour

change, and that methods for measuring social norms must to be improved in order to examine the role of what is thought to be a key component of DRV prevention.<sup>9,9,11-14</sup>

## Chapter 2. Social norms and DRV

This chapter begins with a brief introduction to the role of social norms in DRV research and prevention and then provides an overview of social norms theory. Next it reviews evidence on relationships between social norms and DRV outcomes and efforts to incorporate social norms into DRV prevention, highlighting limitations to the measurement of social norms in DRV research. The chapter then provides an overview of social norms measurement, drawing on work in the fields of GBV and adolescent SRH. The chapter concludes with my thesis aims, objectives and research questions, which outline my approach to building on existing knowledge about social norms measurement to improve methods for their measurement in DRV research.

### 2.1. Introduction to social norms and DRV

Social norms are the informal rules that determine acceptable behaviour in a group.<sup>103</sup> They can act as a “brake on social change”<sup>104(p7)</sup> or serve to hasten it: they can impede behaviour change even when individual-level attitudes are shifting or, alternatively, foster it even in the absence of changes in individual attitudes.<sup>15,104</sup> Theoretical and empirical literature suggests that social norms might play an important role in DRV behaviours. DRV researchers have long recognised the importance of harnessing peer influence to protect against DRV,<sup>7,32</sup> and feminist approaches to addressing gender norms and gendered power commonly underpin DRV interventions.<sup>13</sup> As social norms theory has gained influence in public health,<sup>105</sup> its influence on DRV interventions has become more explicit.<sup>8,13</sup> In a 2015 systematic review, Stanley et al. report that most included DRV interventions were informed by social norms, feminist or gender theories or used a bystander approach, which aims to foster protective intervention by peers.<sup>k,8</sup> Despite social norms’ theorised role in mediating intervention impact, few evaluations of DRV interventions have measured changes in social norms and none have assessed social norms as potential mediator.<sup>11</sup>

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<sup>k</sup> Bystander interventions can also aim to foster protective intervention by adults.<sup>11</sup>

## 2.2. Social norms theory

### 2.2.1. Social norms scholarship in the social sciences

At its core a study of human interaction, the study of social norms and their influence has been a topic of wide interest across the social sciences.<sup>102</sup> While terminology, definitions of key concepts and operationalisation vary across disciplines, in their 2016 review of social science scholarship on social norms Chung and Rimal report that conceptualisations typically coalesce around social norms as “customary rules that constrain behavior by eliciting conformity”.<sup>102(p3)</sup> Theorists make a key distinction between the framing of social norms as properties of groups (e.g., by sociologists) versus perceptions of individuals (e.g., by social psychologists).<sup>94,102</sup> Informal rules that determine “acceptable, appropriate, and obligatory” behaviour in a group are considered collective norms,<sup>106(p2)</sup> while perceived norms are individuals’ perceptions (whether correct or incorrect) about what others do and approve of.<sup>102</sup>

Situated at the level of the society, collective norms can be thought of both as shaping experiences and behaviours and as shaped through individuals’ actions. According to sociologist Anthony Giddens’ structuration theory, for example, social norms comprise an aspect of social structure that both enables and constrains social practices.<sup>107</sup> This structure is, in turn, maintained or modified by those practices, and individuals can choose to take action to maintain or modify prevailing norms.<sup>107</sup> Scholarship on gender norms, emerging from feminist work to advance gender equality, tends to conceptualise social norms as collective norms situated at the level of society and embedded in institutions.<sup>94</sup>

Perceived norms feature as a key construct in prominent behavioural theories underpinning public health interventions,<sup>6,100,108</sup> including interventions to reduce DRV.<sup>1,11,13</sup> The Theory of Planned Behaviour, for example, posits that subjective norms (perceptions about what is socially expected)<sup>102</sup> have reciprocal influences on personal attitudes and perceived behavioural control, and that these norms influence behaviour via behavioural intentions.<sup>100</sup> According to Social Cognitive Theory, norms (framed as social outcome expectancies) are thought to work alongside non-social outcome expectancies to influence behaviour both directly and via goal-



setting.<sup>109</sup> This theory presents social modelling as an important source of behavioural learning,<sup>108</sup> aligning with the theorised influence of descriptive norms – perceptions of typical behaviour – in social psychology.<sup>102</sup>

Though theorists use different terminology to describe these constructs, the influence of social expectations on health-related behaviours is widely recognised and DRV interventions often seek to modify the social environment to foster protective norms.

#### 2.2.2. Definitions and features of social norms for the present study

A conceptualisation of social norms emerging from social psychology has been particularly influential among health researchers and practitioners who focus on GBV and on adolescent SRH.<sup>6,15,106,110</sup> This approach situates social norms within the mind, framing them as beliefs about people in a valued reference group of important others.<sup>111</sup> Within this framework, theorists distinguish between two types of social norms:<sup>15,106</sup>

- 1) **Descriptive norms:** Beliefs about what others in the group do (i.e. what behaviour is typical)
- 2) **Injunctive norms:** Beliefs about what others in the group think should be done (i.e. what behaviour is considered to be appropriate)

Where descriptive norms are supportive of DRV, young people might believe for example that their peers commonly experience or perpetrate abusive behaviours within their intimate relationships. Where descriptive norms are protective against DRV, they might perceive DRV to be rare among their peers. Where injunctive norms are supportive of DRV, young people might believe that their family or friends would disapprove of the use of violence in intimate relationships or would support their decision to break up with an abusive partner. While these beliefs are subjective, they form based on observations of behaviours in a reference group and of how reference group members react to others' behaviours.<sup>104</sup> For example, descriptive norms about DRV will be based on observations of the typicality of experiencing or perpetrating DRV. Injunctive norms will be based on observations of the reference group's reaction to others who experience or perpetrate DRV, including bystander action to intervene in this type of

abuse. Norms theorists make a critical distinction between personal attitudes, which are *internally* motivated preferences or judgements, and social norms, which represent *social* expectations.<sup>101,112</sup> The reference group or groups important for influencing behaviour can change over time and depending on the behaviour of interest.<sup>15,105</sup>

There is no consensus on causal models of normative influence (i.e. on why individuals comply with prevailing norms); theorists suggest that it might be for a number of reasons.<sup>103,105</sup> Some include, for example: the internalisation of operative norms, the material benefits of coordinated behaviour, and the fulfilment of a sense of social identity.<sup>105</sup> A focus of theorists and interventionists, and perhaps the strongest mechanism of normative influence, however, is the anticipation of social sanctions enacted by a reference group.<sup>103</sup> These sanctions can take the form of social rewards for complying with a norm and of social punishments for deviating from it.<sup>15,103</sup> Theorists disagree about whether descriptive norms, injunctive norms and social consequences must all be in place to confirm existence of a social norm or whether these components work collectively to strengthen its influence.<sup>6</sup> Theorists also disagree about the relationship between descriptive and injunctive norms,<sup>6</sup> with some positing that injunctive norms moderate the behavioural impact of descriptive norms.<sup>102</sup>

Norms are thought to exert a stronger behavioural influence where the behaviour is interdependent and visible, norms relate directly to the behaviour of interest and social sanctions are anticipated to be likely and strong.<sup>103</sup> Theorists suggest that the strength of a social norm's influence determines whether it makes a behaviour obligatory (e.g. female genital cutting), appropriate (e.g. adolescent drinking), tolerated (e.g. sexual harassment) or merely conceivable, which determines the approach to intervention.<sup>103</sup> Practitioners might also usefully consider the constellation of relevant social norms, as some are more resistant to change than others.<sup>113(p31)</sup> Despite norms being likely to be more influential where they relate directly to a specific behaviour,<sup>103</sup> more distal norms can influence behaviours indirectly.<sup>106</sup> Considering violence outcomes, female genital cutting is sustained by direct social norms about

this specific practice.<sup>106</sup> For partner violence, on the other hand, indirect but influential social norms might include norms against divorce or interfering in others' private lives.<sup>15,106</sup>

### 2.2.3. Conceptualising gender norms as a type of social norm

Historically gender theory and social norm theory have developed independently, but efforts over the last decade have sought to join up these two areas of scholarship to inform public health practice.<sup>6,104,114</sup> Gender norms, “informal rules and shared social expectations that distinguish expected behaviour on the basis of gender”<sup>114(p4)</sup> can be situated as one aspect of a broader gender system that privileges maleness and masculinity over femaleness and femininity in the allocation of “resources, roles, power and entitlements”.<sup>94(p410)</sup> In their work to align scholarship on gender norms emerging from feminist scholarship and shaped by sociological theory, and broader social norms as framed largely by social psychologists, Cislighi and Heise, 2020 highlight key differences in how these two bodies of work traditionally conceptualise how norms are situated and reproduced. While social norms in public health tend to be framed as beliefs, situated in the mind, gender norms have traditionally been framed (like collective norms; see Section 2.2.1.) as a feature of society, embedded in institutions whose characteristics and practices sustain male dominance. While both gender norms and social norms are characterised as being reproduced via social interactions, the gender norms literature has traditionally taken into more consideration the role of power as a motivation for enforcing maintaining inequitable gender norms.<sup>94</sup>

As psychologist Sandra Bem wrote in 1981, the differentiation of roles based on gender “serves as a basic organizing principle for every human culture”, driving the socialisation of children into gendered self-concepts, traits, personality attributes and skills.<sup>115(p354)</sup> Cislighi and Heise endorse the prominence of gender as a “primary frame for social relations”,<sup>94</sup> suggesting that gender norms can be thought of as a particularly powerful type of social norm.<sup>94,116</sup> This thesis draws on the social norms framework of descriptive and injunctive norms to consider the role and measurement of gendered social expectations, one aspect of the broader gender system, in DRV research.

Though particular manifestations of gender norms vary, core aspects of social expectations of girls and boys – and their inequity – are remarkably consistent worldwide.<sup>92,117,118</sup> Across settings, femininity is associated with beauty, attractiveness, propriety and compliance.<sup>92</sup> Girls, who are viewed as weak and vulnerable, are expected to submit to male authority.<sup>92</sup> Though their social value may depend on having a stable male partner,<sup>92,117</sup> girls’ and women’s sexuality is “universally restricted”<sup>117(p1582)</sup> as gender norms prescribe their innocence and romantic and sexual passivity.<sup>117,118</sup> Girls and women who are seen as too sexual or promiscuous face social stigma and isolation, and in some settings physical harm.<sup>92,117</sup> Boys, on the other hand, are expected to be strong and tough, and to eschew ostensibly feminine behaviours such as physical weakness or displays of emotion.<sup>92</sup> In contrast to the sexual role prescribed to girls, gender norms dictate male sexual and romantic agency and dominance: men and boys are expected to pursue women and girls, take a dominant role in relationships and “demonstrate manhood”<sup>92(p8)</sup> by having sex with many female partners,<sup>92,118</sup> for which they are socially rewarded.<sup>117</sup>

Parents and peers are central in shaping young people’s attitudes towards gendered expectations<sup>92</sup> and schools can promote gender-equitable attitudes or reinforce inequitable gender norms via their rules, traditions and structure.<sup>91,92</sup> Pressure to conform to gendered expectations intensifies in early adolescence and peer sanctions are a powerful mechanism of gender norms compliance.<sup>92</sup> However, regional variation in dominant gender norms, cultural shifts in prevailing gender expectations over time and existence of young people who challenge inequitable norms indicate that these norms are not inevitable and in fact can be transformed.<sup>82,92,118,119</sup>

### 2.3. Social norms relating to DRV and gender are drivers of DRV

Section 1.5.1.3. discussed peer factors influencing DRV victimisation and perpetration, including the influence of peers’ experience of and attitudes towards DRV. Drawing on the framework offered by social norms theorists, this section reviews in more depth existing evidence on

relationships between descriptive and injunctive DRV and gender norms, and DRV outcomes. The significance and strength of the relationships between DRV norms and DRV outcomes vary within and across studies, and differences in measurement and analysis methods limit comparability. To provide an indication of the magnitude of reported relationships between social norms and DRV outcomes based on the strongest evidence currently available I report effect size estimates where these are available from longitudinal studies.<sup>1</sup>

### 2.3.1. Evidence of the relationship between DRV norms and DRV outcomes

Observational studies with adolescents find that descriptive and injunctive norms relating to DRV are associated with DRV victimisation and perpetration, and predict DRV longitudinally. While findings vary to some extent by study, norms and outcome measurement, and adjustment for other factors, they provide evidence of significant and independent relationships between pro-DRV norms and increased DRV.

Considering the role of descriptive norms, young people who believe that their friends or peers have experienced or perpetrated DRV are more likely to report perpetrating<sup>77,82,120–124</sup> or experiencing<sup>121,122,125,126</sup> DRV themselves. Researchers have examined the relationship between descriptive norms and DRV perpetration longitudinally, finding that it remains significant (aOR=1.34,  $p<0.05$ ;<sup>77,82</sup>  $r=0.12-0.27$ ,  $p<0.001-p<0.05$ <sup>82,124</sup>). Similarly, young people who report pro-DRV injunctive norms are more likely to experience<sup>76,78</sup> and perpetrate<sup>83,127</sup> DRV. While little evidence exists on whether injunctive norms predict subsequent DRV, a study by Nardi-Rodriguez et al. provides some evidence of this.<sup>128</sup> They used two combined measures, each comprising three descriptive and three injunctive DRV norms items: one measure assessed norms for DRV perpetration and the other for DRV victimisation.<sup>128</sup> Unadjusted correlations were significant for and both boys' DRV perpetration and girls' DRV victimisation ( $r=0.22-0.47$ ,  $p<0.01$ ).<sup>128</sup> Using structural equation modelling, they found that these norms measures were

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<sup>1</sup> Appendix F to Paper 1 (thesis Appendix 5) details the methods and results of studies assessing relationships between social norms and DRV based on my systematic review.

each associated with DRV intentions, which were in turn associated with subsequent DRV perpetration and victimisation, respectively.<sup>128</sup>

While results are inconsistent, several studies have found that descriptive<sup>77,122,123</sup> and injunctive<sup>76,129</sup> DRV norms remain cross-sectionally associated with DRV behavioural outcomes when controlling for individual attitudes towards DRV. Some evidence suggests that for descriptive DRV norms, this relationship might persist longitudinally (aOR=1.35-1.44,  $p < 0.05$ ).<sup>77,82</sup> In research with older secondary school students in Haiti,<sup>m</sup> Gage found that injunctive DRV norms were more strongly associated with girls' and boys' physical and psychological DRV perpetration than were personal attitudes towards DRV or gender stereotypes.<sup>129</sup> Similarly, others have found stronger relationships between descriptive<sup>130</sup> and injunctive<sup>78,83</sup> DRV norms and DRV victimisation<sup>78</sup> or perpetration<sup>83,130</sup> than between DRV<sup>130</sup> or gender<sup>78,83</sup> attitudes and DRV outcomes. Heterogeneity in the relative importance of attitudes and DRV norms within<sup>76,77,82</sup> and across<sup>76,78,83,122,127,130-133</sup> studies suggests that these relationships might vary by gender, measure, type of norms, DRV involvement (victimisation or perpetration), DRV type and other factors. This is in-line with the Theory of Planned Behaviour's suggestion that the relative strength of attitudinal and normative influence will vary across outcomes and contexts.<sup>100</sup> The weight of the evidence suggests that pro-DRV norms can influence the behaviours even of young people who personally disapprove of this type of violence, as social norms theory would suggest.<sup>101,104</sup> Considering that individual attitudes could theoretically be on the causal pathway between norms and DRV outcomes, controlling for attitudes in these analyses might actually underestimate the impact of social norms.<sup>100,134</sup>

Qualitative research in the UK provides some insight into the mechanisms of normative influence, finding that fear of being blamed can be a barrier to seeking help for DRV victimisation and that when girls do seek support from peers, controlling and abusive behaviour can be normalised.<sup>34</sup>

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<sup>m</sup> Participants were in grades 10-12, aged 14 years and older. Of these, 61.4% were aged 19 years or older.

### 2.3.2 Evidence of the relationship between gender norms and DRV outcomes

While theoretical and qualitative DRV literature engages extensively with the relationship between gender norms and DRV, quantitative research in this area remains in the early stages. Studies exploring relationships between gender-inequitable injunctive norms are sparse but provide some evidence of cross-sectional associations with DRV outcomes,<sup>133,135,136</sup> including in models controlling for personal attitudes towards DRV<sup>135</sup> and gender.<sup>133</sup> Emerging, cross-sectional evidence suggests that DRV is more common among young people who report gender-inequitable injunctive norms relating to violence against girls and women generally (i.e. not DRV-specific violence),<sup>136</sup> household gender roles<sup>135</sup> and female sexual availability.<sup>133</sup> Quantitative research on associations between gender norms and DRV is otherwise limited because the role of gender norms tends to be assessed by measuring personal gender-related attitudes<sup>80,137</sup> rather than perceptions of others' views.

Drawing on social and psychological theoretical perspectives, Reyes et al. suggest that traditional gender norms advance scripts of male relationship dominance that promote DRV, and they posit that DRV injunctive norms play a role in determining whether boys enact these scripts.<sup>82</sup> Considering UK evidence, qualitative research offers further insights into how inequitable gender norms might manifest to drive and sustain male DRV in heterosexual relationships. Interviews with UK adolescents suggest that boys can lose social status if their girlfriend is unfaithful<sup>138</sup> and that jealousy can feed into controlling behaviours.<sup>34</sup> Abusive boys use DRV as a tactic to assert control and dominance within the relationship<sup>34</sup> and, particularly among boys in disadvantaged groups, to advance a violent and powerful public image.<sup>138</sup> In line with social expectations of girls' chastity, boys report that it is considered acceptable to sexually pressure girls who are seen as sexually experienced.<sup>34</sup> In a context where boys face social pressure to have sex<sup>34</sup> and are celebrated for doing so,<sup>138</sup> for girls resisting sex can precipitate severe physical DRV and coercive threats of abandonment.<sup>34</sup> However, norms prescribing durable heterosexual relationships for girls can make it difficult for them to leave an abusive partner.<sup>34,139</sup>

#### 2.4. Incorporation of social norms approaches into DRV prevention

Adolescence offers a critical window of opportunity to promote protective anti-DRV and gender-equitable norms. As noted in Section 1.6, norms governing sexual and romantic relationships are particularly sensitive to influence as young people first begin to navigate these relationships in adolescence.<sup>6</sup> This period of norm formation overlaps with adolescents' growing awareness of and self-consciousness about how others view them,<sup>140</sup> a shifting affiliation from family towards peers<sup>141</sup> and the increasing importance of peer influence<sup>32,92</sup> at this age. While pressure to conform to gendered expectations intensifies in early adolescence,<sup>92</sup> studies suggest adolescence is also a stage when young people's own views on gender are in flux: attitudes become more gender-equitable and less stereotypical during early adolescence, before boys' views tend to become less egalitarian in middle- and late-adolescence.<sup>82,92</sup> Peer sanctions are a powerful mechanism of gender norms compliance, especially for boys,<sup>119</sup> but variations in manifestations of dominant gender norms and young people who challenge inequitable norms – girls, more commonly than boys<sup>92,118</sup> – suggest that inequitable gender norms can be successfully challenged.

Many DRV interventions capitalise on this window of opportunity, incorporating efforts to promote more gender-equitable norms and to reduce the social acceptability of DRV itself. Bystander interventions, for example, can train participants to intervene to reduce violence,<sup>142</sup> often targeting both sexual violence and DRV.<sup>142–144</sup> While existing evidence is limited<sup>11</sup> and mixed (e.g. Edwards et al., 2019; Miller et al., 2012; Coker et al., 2017),<sup>142–144</sup> cluster RCTs demonstrate that bystander interventions can increase DRV bystander behaviours<sup>143</sup> and reduce DRV perpetration.<sup>142,144</sup>

Effective DRV interventions incorporating a social norms approach have taken a range of forms; evidence does not point to a single model for effectiveness. Green Dot, a “gender-neutral” bystander intervention in US secondary schools,<sup>142(p8)</sup> demonstrated significant reductions in DRV victimisation and perpetration in a cluster RCT but these were sustained only for girls' perpetration by the end of the four-year follow-up. Coaching Boys into Men, a gender-



transformative bystander intervention for male secondary school athletes in the US, was found to be effective in a cluster RCT in reducing DRV perpetration and negative bystander behaviours.<sup>145</sup> Two of the earliest interventions effective in reducing DRV in RCTs – Safe Dates and Shifting Boundaries – targeted social norms alongside other factors as potential mediators of change.<sup>137,146</sup> Safe Dates, implemented in US secondary schools, aimed to shift norms relating to gender and DRV and it significantly reduced perpetration of psychological, moderate physical, and sexual DRV perpetration as well as moderate physical DRV victimisation.<sup>137</sup> Implemented in US middle schools, Shifting Boundaries targeted bystander behaviours and DRV norms and significantly reduced sexual DRV.<sup>147</sup>

Despite the prominence of social norms in intervention theories of change and the effectiveness of interventions that incorporate norms-based approaches, existing literature provides little information about whether these interventions do impact norms as hypothesised, and if so, whether this mediates reductions in DRV. Emerging evidence suggests that DRV interventions can successfully shift DRV-related social norms, including in interventions that reduce DRV.<sup>11,148,149</sup> Evaluations rarely measure norms directly, however, and none appear to have assessed them as mediators of impact on DRV outcomes.<sup>11</sup> Reviewers suggest that this might be due to limitations to methods for reliably and validly measuring social norms.<sup>11</sup> Refinements to these methods would be a valuable step towards improving our understanding of whether, to what extent and to what end DRV interventions are activating this potential mechanism of change.

## 2.5. Social norms measurement

As attention to social norms and its measurement in the areas of both GBV and adolescent SRH has intensified over the last decade, empirical and theoretical literature on these topics has proliferated.<sup>104,150–154</sup> This body of literature, informed by the dynamics of gendered violence and by social and cognitive factors in adolescent development, provides useful insights for social norms measurement in DRV research.

### 2.5.1. Survey measures of social norms are limited

Definitions of beliefs, attitudes and social norms, and the relationships between these constructs, have historically been unclear, as have implications for intervention development and evaluation.<sup>15</sup> Research informed by social norms concepts, including evaluations of DRV interventions, typically measures participants' individual attitudes and not their perceptions of the views of others in their reference group.<sup>6,155</sup> Political theorist Gerry Mackie and colleagues offer a useful framework to illustrate distinctions between “standard” measures of behaviour and attitudes and measures of social norms.<sup>n,101(p49)</sup> Adapted based on this framework, Figure 2 illustrates the distinction between measures of behaviours, attitudes and social norms by categorising these into “beliefs about the self” (second column) and “beliefs about others” (third column). Each type of belief can be thought of as descriptive (what happens) or injunctive (what *should* happen). “Standard” measures of behaviours and attitudes<sup>101(p49)</sup> assess beliefs about the self: beliefs about what one does (behaviours) and about what one thinks should be done (attitudes). Social norms measures assess beliefs about others, or social expectations: beliefs about what others do (descriptive norms) and about what others think should be done (injunctive norms).

	<b>Beliefs about self</b>	<b>Beliefs about others</b>
<b>Descriptive</b>	What I do <i>(behaviour)</i>	What others do <i>(descriptive norm)</i>
<b>Injunctive</b>	What I think should be done <i>(attitude)</i>	What others think should be done <i>(injunctive norm)</i>

**Figure 2. Framework distinguishing between measures of behaviours, attitudes and social norms (adapted from Mackie et al.’s theoretical framework)<sup>101(p49)</sup>**

Assessing social norms and social norms change would mean adding measures of descriptive and injunctive norms – beliefs about what others do and what others think should be done in relation to a specified behaviour, respectively – to evaluation surveys. Measuring these

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<sup>n</sup> Mackie uses the term “empirical expectations” to refer to a construct similar to what we call “descriptive norms”; and “normative expectations” to refer to a construct similar to what we call “injunctive norms”.<sup>101(pp24-25)</sup>

constructs alongside individual behaviours and attitudes is important because research suggests that attitudes and social expectations each correlate with DRV outcomes.<sup>76,77,122,123,129,133,135</sup> Bystander research further suggests that, along with these factors correlating with intentions<sup>86</sup> and actions to intervene in violence as a bystander,<sup>156,157</sup> levels of alignment between attitudes and injunctive norms also correlate with intentions to intervene as a bystander in IPV.<sup>86</sup>

A challenge, however, is that there is little consensus on how to measure social norms and a limited evidence base of norms measures validated in multiple settings.<sup>6</sup> Furthermore, some research suggests that very young adolescents (aged 10-14 years) might struggle to distinguish between their personal attitudes and the views of others<sup>158,159</sup> when responding to social norms items. Without valid and reliable quantitative measures of salient social norms relating to DRV and to gender, appropriate for adolescents' stage of cognitive development, researchers are limited in our ability to assess normative change in intervention surveys and test its theorised role as a mediator of DRV behaviour change.

#### 2.5.2. Measuring social norms: recommendations from GBV and adolescent SRH research

Methods for measuring social norms are still being developed. Little evidence is available to support specific approaches in DRV research, but work on social norms measurement has been rapidly expanding in GBV and adolescent SRH research. Recommendations from experts in these fields, drawing on their own experience and that of their colleagues, offer some insights and raise areas for further research.

Qualitative and quantitative methods can be used to measure social norms, and vignettes exploring norms and social sanctions in realistic but fictional scenarios can be incorporated into either approach.<sup>104,160</sup> The length and complexity of vignettes, however, can make these difficult to fit feasibly within evaluation surveys.<sup>6</sup> A few DRV evaluations have used survey measures of descriptive and injunctive norms effectively, and their findings demonstrate that these measures can be sensitive to change over the course of an evaluation.<sup>11,148,149</sup> Wider use

of social norms measures is hindered, however, by evidence gaps and a lack of consensus on best practice.

Recognising that the relevance and rigidity of norms and the nature of social sanctions vary across settings and populations, experts emphasise the importance of formative research to identify and test relevant, influential norms that are amenable to change.<sup>6,101,104</sup> Experts also highlight the importance of specifying bounded reference groups and disaggregating findings where data include norms among more than one.<sup>6,104</sup> Evaluators can draw on formative research to identify salient reference groups and incorporate these into survey items or can alternatively use survey items to collect this information.<sup>6,160</sup>

Researchers report difficulty balancing the need to include enough items to validly measure norms with the need to keep surveys from becoming unwieldy and labour-intensive.<sup>101,104</sup> The multifaceted nature of social norms means that a wide array of survey items can provide information about a single norm. However, surveys that ask too many similar questions can confuse and fatigue participants.<sup>6</sup> For example, researchers for the Voices for Change project in Nigeria adapted Mackie's framework<sup>101</sup> (see Figure 2) to ask six questions about each norm of interest.<sup>104</sup> They found that this approach was too time- and resource-intensive and that the distinctions between the nuanced items were unclear to participants.<sup>104</sup> Confusion about the meaning and nature of norms items is of particular concern for young respondents.

Recommendations coalesce around focusing on measurement of two aspects of social norms, beliefs about what others do and what others think should be done, and specifying a reference group.<sup>6,104</sup> Experts advise considering carefully whether items should be phrased positively (i.e. if someone does X) or negatively (i.e. if someone doesn't do X) because social sanctions – the causal mechanism of injunctive norms influence – are not necessarily levied in parallel.<sup>101,104,161</sup> Cislighi and Heise offer the example of bringing a cake to the office for one's birthday: while a respondent might say that colleagues would think this was good, it doesn't necessarily follow that *not* bringing the cake would elicit negative social sanctions.<sup>104</sup> If we wanted to know

whether social norms compel colleagues to bring in the cake, we would need to ask about the social consequences of not doing so.<sup>104</sup>

Another challenge is to ensure that item meaning is clear to participants, including that they are being asked what they think and not what is objectively the case.<sup>6</sup> It is important to bear in mind that, for norms items, researchers are interested in participants' perceptions – not true numbers – of what others in their reference group do and think. Norms can persist when many oppose a specific behaviour but incorrectly believe that others in their reference group favour it, a scenario theorists term “pluralistic ignorance”.<sup>101(p23)</sup> It is perceptions themselves, whether accurate or inaccurate, that wield normative influence.<sup>101</sup>

Considering the structure of social norms measures, recommendations on measure length vary. Multi-item scales can be useful to capture the social norms' multidimensional nature and reduce the impact of response errors.<sup>6</sup> On the other hand, evidence suggests that single-item measures might be adequate<sup>104</sup> and these place less burden on respondents. Deciding on the number of response options also involves trade-offs. Binary yes/no items don't allow for nuanced responses indicating the degree of agreement, and field experience suggests that responses to this type of item can be biased towards a “yes” response.<sup>104</sup> Likert scales can be good for collecting nuanced data, but the number of response options needs careful consideration: a greater number provides more granularity, but items with fewer response options are simpler to answer.<sup>160</sup>

Finally, a variety of different item formats can elicit information on norms. Items assessing descriptive norms might ask about a behaviour's prevalence (i.e. “how many”)<sup>104(p18)</sup> or about its frequency (i.e. “how often”).<sup>104(p18)</sup> To assess injunctive norms, researchers might ask separately about the reference group's views and potential social sanctions. An example of the former, tested for an adolescent SRH study in Honduras, was formulated as shown in Figure 3.<sup>104</sup> A different set of response options could be offered instead, for example ranging from “Strongly agree” to “Strongly disagree”.<sup>104</sup>

The people in your community believe that fathers should attend pregnancy check-ups with their pregnant wives/companions

1 = No  
2 = Yes sometimes  
3 = Yes mostly  
4 = Yes always

**Figure 3. Example of survey item assessing injunctive norms by measuring reference group views, excerpted from Cislighi & Heise<sup>104(p17)</sup>**

Alternatively, experts suggest that measurement of injunctive norms can sometimes be simplified by asking only about social sanctions.<sup>104,160</sup> Field experience suggests that participants might find questions about social sanctions easier to answer because the observable actions of others are easier to call to mind than others' thoughts.<sup>162</sup> A limitation to this approach is that specifying sanctions within the survey item requires detailed knowledge about social sanctions governing the norm in the study population and setting. With this information, researchers can ask about the perceived likelihood of specific sanctions, as they do in an example from the Social Norms Mentorship Project in Figure 4.<sup>160</sup>

**If you are given more freedom to move about in public spaces and play sport, how likely is it that the following consequences might occur? There is no right or wrong answer.**

1) You will be harassed by local boys or men

1) You may encounter more arguments/conflicts with your parents

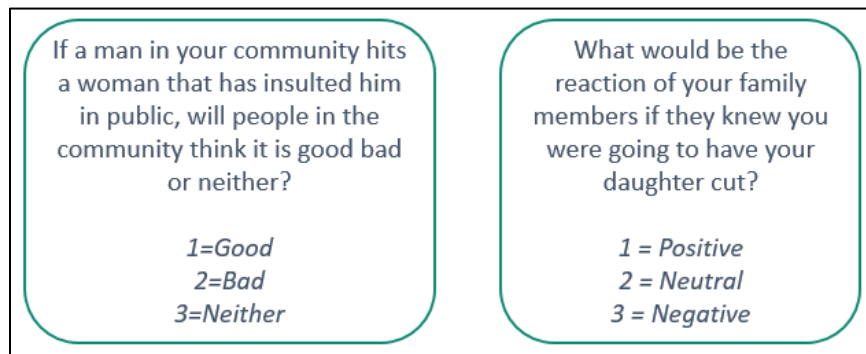
1) You may find it more difficult to get married

1) You may be considered uppity and disobedient

1 = Very likely  
2 = Somewhat likely  
3 = Not likely

**Figure 4. Example of survey item assessing injunctive norms by measuring specific sanctions, excerpted from the Social Norms Mentorship Programme training slides<sup>160(Day 4, slide 25)</sup>**

Otherwise, more general response options can identify the existence of social sanctions with less specificity, as in two other examples offered by the Social Norms Mentorship Programme, shown in Figure 5.<sup>160</sup> Injunctive norms might also ask about perceptions of others' present views, as shown in Figure 3, or frame these items in terms of a hypothetical scenario, as shown in Figure 5.



**Figure 5. Example of survey item assessing injunctive norms by measuring sanctions generally, excerpted from the Social Norms Mentorship Programme training slides<sup>160</sup>(Day 4, slide 26)**

Studies testing different types of descriptive and injunctive norms items are needed to assess which formulations work best,<sup>104</sup> and how this might vary by setting and population. For DRV research, particular attention should be paid to what features support valid and reliable norms measurement among adolescents, whose reference groups and ability to distinguish between their own and others' views might differ from adults'.<sup>158,159</sup>

## 2.6. Research aim, questions and objectives

DRV is widespread and poses a risk to young people's health. Evidence suggests that social norms play an important role in underpinning this type of abuse, and social norms concerning DRV and gender have long been recognised as important to DRV prevention. Although DRV interventions often seek to foster protective DRV and gender norms, measurement of social norms in this field has been largely neglected. A lack of reliable, valid measures for what is thought to be a key mediator of DRV prevention contributes to crucial gaps in our

understanding of why some DRV interventions work and others do not. Informed by social norms theory, my thesis research seeks to address this by building on recent advancements in methods for measuring social norms. Drawing on data from Project Respect, I aim to refine measures of social norms as hypothesised mediators of a school-based intervention to reduce DRV in England and to inform methods of social norms measurement in DRV research.

To achieve these aims, I will address four research questions:

- 1) Are existing measures of adolescent social norms relating to DRV and gender reliable and valid?
- 2) Are new and adapted measures of social norms relating to DRV and gender understandable and answerable when used in research with adolescents in England?
- 3) Are new and adapted measures of social norms relating to DRV and gender reliable and valid when used in research with adolescents in England, and how can they be refined?
- 4) What are student, staff and parent/carer accounts of social norms relating to DRV and gender in schools, and how are these implicated in DRV?

The specific objectives of this thesis research are:

- a) To conduct a systematic review of social norms measures related to gender and DRV used in research with adolescents
- b) To develop, cognitively test and refine social norms measures related to gender and DRV
- c) To pilot new and adapted social norms measures and assess their reliability and validity
- d) To recommend refinements to piloted social norms measures
- e) To analyse qualitative data from Project Respect to identify social norms contributing to DRV in England

Table 2 presents the objectives associated with each research question, the data sources and methods on which I draw to address each research question, and the corresponding papers in which I present my findings.



**Table 2. Research questions and objectives mapped to methods, data sources and papers**

<b>Research questions</b>	<b>Objectives</b>	<b>Methods/Data sources</b>	<b>Paper</b>
1. Are existing measures of adolescent social norms relating to DRV and gender reliable and valid?	a) To conduct a systematic review of social norms measures related to gender and DRV used in research with adolescents	Systematic literature review	Paper 1
2. Are new and adapted measures of social norms relating to DRV and gender understandable and answerable for adolescents in England?	b) To develop, cognitively test and refine social norms measures related to gender and DRV	Qualitative analysis of Project Respect cognitive interviews	Paper 2
3. Are new and adapted measures of social norms relating to DRV and gender reliable and valid when used in research with adolescents in England, and how can they be refined?	c) To pilot new and adapted social norms measures and assess their reliability and validity d) To recommend refinements to piloted social norms measures	Quantitative analysis of Project Respect baseline student surveys	Paper 3
4. What are student, staff and parent/carer accounts of social norms relating to DRV and gender in schools, and how are these implicated in DRV?	d) To recommend refinements to piloted social norms measures <sup>o</sup> e) To analyse qualitative data from Project Respect to identify social norms contributing to DRV England	Qualitative analysis of Project Respect data: <ul style="list-style-type: none"> <li>• Optimisation sessions</li> <li>• NSPCC-delivered trainings</li> <li>• All-staff trainings</li> <li>• Student and staff interviews (intervention and control schools)</li> <li>• Parent/carer interviews (intervention schools)</li> </ul>	Paper 4

<sup>o</sup> Objective (d) contributes to addressing both research question 3 and research question 4.

## Chapter 3. Methods

This chapter opens with an overview of the methods for the Project Respect pilot RCT, summarises its findings and then describes my role as a research fellow on the study. It then outlines the distinction between the Project Respect pilot RCT and my thesis and presents the ontological and epistemological underpinnings of my thesis. Next it provides an overview of reliability and validity as indicators of the quality of quantitative measures, before outlining the methods for each of the four components of my thesis. The first component is a systematic literature review and the remaining three draw on data from Project Respect. I provide further detail on the methods for Chapters 4-6 in the papers presented in those chapters.

Finally, this chapter provides information on the ethical approvals for this work and concludes with a section on reflexivity and my positionality in undertaking this work.

### 3.1. Methods for Project Respect pilot cluster RCT

The Project Respect study was a pilot cluster RCT of a DRV prevention intervention of the same name, conducted with adolescents in England. In this section I will summarise the intervention, the design of its pilot cluster RCT and the findings of the overall study. Further detail on the Project Respect intervention, study and findings are available in publications of the protocol<sup>1</sup> (Appendix 1), process evaluation findings (Appendix 2)<sup>2</sup> and full research report.<sup>37</sup>

#### 3.1.1. Project Respect theory of change and intervention

Project Respect was a school-based, complex intervention<sup>163</sup> informed by the Safe Dates<sup>164</sup> and Shifting Boundaries<sup>146</sup> school-based interventions, both of which were effective in reducing DRV among US school students.<sup>147,165</sup> Its core components and theory of change were developed prior to the study, informed by existing evidence. The research team and our implementing partner, the National Society for the Prevention of Cruelty to Children (NSPCC), led further elaboration of the intervention and the development of programme materials from March to September 2017. The programme was optimised for use in the UK via sessions with UK

secondary school staff and students, input from the Advice Leading to Public Health Advancement young researchers group<sup>166</sup> and consultation with stakeholders.

The Safe Dates DRV prevention intervention was implemented among 8<sup>th</sup> and 9<sup>th</sup> grade students (typically ages 13-15 years old) in 14 public schools in rural North Carolina in November 1994-March 1995.<sup>167</sup> Baseline questionnaires were completed by 1,886 students.<sup>167</sup> Foshee et al. describe programme activities.<sup>167</sup> These included 20 hours of teacher training on DRV and the Safe Dates curriculum, a ten-session curriculum (45 minutes per session) and a DRV-themed poster contest. These in-school components were supplemented by workshops for community service providers. Results from a two-arm cluster RCT suggest that the programme reduced psychological, moderate physical and sexual DRV perpetration and moderate physical DRV victimisation, with effects persisting at least three years post-intervention.<sup>165</sup> This reduction in DRV was mediated by attitudes demonstrating lower DRV acceptance and less support for gender stereotypes and by an increase in awareness of community services.<sup>165</sup>

The Shifting Boundaries intervention aimed to reduce DRV, peer sexual violence and sexual harassment and was implemented with 2,655 6<sup>th</sup> and 7<sup>th</sup> grade students (typically ages 11-13 years old) in New York City public middle schools.<sup>168</sup> The programme had two components: a classroom-based six-session curriculum and a schoolwide building-based component.<sup>168</sup> The latter comprised school-based restraining orders, DRV/sexual harassment-themed posters around the school and hotspot mapping by students to identify physical areas of violence risk in the school for increased teacher surveillance. Participating schools were randomly assigned to one of four arms of a cluster RCT conducted in 2009-2010: (1) building-only, (2) classroom-only, (3) combined building and classroom or (4) control.<sup>168</sup> Taylor et al. report the results of the RCT six months post-intervention.<sup>168</sup> Effects on sexual harassment victimisation were mixed, showing an increase in prevalence but a decrease in frequency in the building-only arm and a decrease in frequency in the combined arm. Findings for other outcomes were more consistent, showing reductions in sexual harassment perpetration (building-only arm), peer sexual violence

victimisation (building-only and combined arms), peer sexual violence perpetration (building-only and combined arms) and sexual DRV victimisation (building-only arm). The trial found no impact on sexual DRV perpetration. The study authors concluded that their findings support the use of a building-only intervention as well as the addition of this type of school-wide component to curriculum interventions.<sup>168</sup>

Drawing on the designs of these two effective interventions, Project Respect was developed by the London School of Hygiene & Tropical Medicine (LSHTM) and optimised for use in secondary schools in England by LSHTM and the NSPCC via sessions with secondary school staff and students. The programme is underpinned by two behavioural theories, the Theory of Planned Behaviour<sup>100</sup> and the Social Development Model.<sup>169</sup> The Theory of Planned Behaviour posits that behavioural intentions are the immediate antecedent to behaviours themselves.<sup>100</sup> As depicted in Ajzen’s model of this theory in Figure 6, personal attitudes, perceived behavioural control and what Ajzen refers to as “subjective norms” are theorised to influence behaviour via intentions, while perceived behavioural control is also thought to exert a direct behavioural influence. As discussed in Section 2.4, subjective norms are a construct analogous to what social norm theorists call injunctive norms.

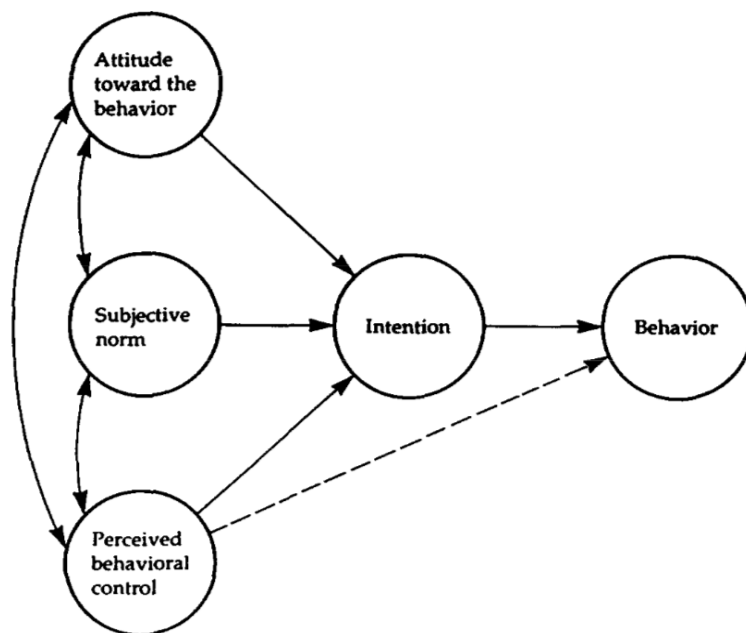


Figure 6. Ajzen’s model of the Theory of Planned Behaviour<sup>100(p182)</sup>

The core tenet of the Social Development Model is that a person’s values, shaped by the social groups to which they are strongly bonded, drive behaviour. The model proposes that people develop prosocial and antisocial behaviours through two parallel pathways of socialisation, as depicted in Figure 7.<sup>170</sup> Considering the prosocial pathway, the model suggests that when a person has the opportunity to take part in pro-social activities, their involvement leads to rewards for involvement with these pro-social groups *if* they have the social, emotional and cognitive skills necessary to access these rewards. Receiving these rewards promotes bonding to others with prosocial orientations and whose influence shapes belief in prosocial values, leading to the adoption of prosocial behaviours. The antisocial pathway is nearly identical but allows for the possibility that rewards for antisocial behaviour and bonding to antisocial groups can foster antisocial behaviour even where they conflict with a person’s own values. The model recognises the influence of three external factors on the opportunities, skills and rewards critical to these pathways: positioning in the social order, external constraints and personal characteristics.

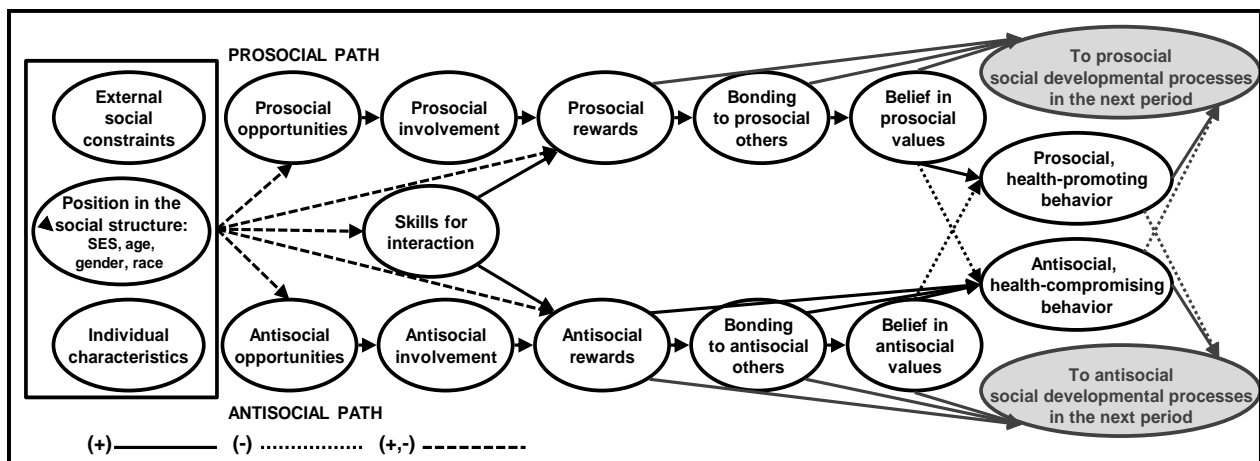


Figure 7. Cambron’s depiction of the Social Development Model<sup>170(p43)</sup>

Turning to Project Respect, I will summarise the programme’s design and then review its underlying theory of change. The programme was comprised of eight core components targeting staff, students, parents and carers and the school environment:

## **Staff**

1. NSPCC-delivered 2-3 hour training for senior leadership and key school staff involved in programme delivery; and programme manual
2. All-staff 1-1.5-hour training, cascaded by staff who attended the NSPCC-delivered training

## **Students**

3. Teacher-delivered student curriculum (six lessons for year 9, two lessons for year 10)
4. Opportunity to download the Circle of 6 app (version 2.0.5, Tech for Good, New York, NY, USA)<sup>p</sup> facilitating requesting support from friends and local services in unsafe situations

## **Parents and carers**

5. Written information for parents and carers

## **School environment**

6. School policy review to assure appropriate response to DRV
7. Hotspot mapping to identify and prompt increased surveillance in areas of risk on the school grounds
8. Student-led campaigns against gender-based harassment and DRV

Drawing on the Theory of Planned Behaviour,<sup>100</sup> Project Respect aimed to reduce DRV in part by shifting attitudes to be less supportive of DRV and gender stereotypes; and by fostering supportive social norms relating to DRV and to gender. Informed by the successes of Safe Dates and Shifting Boundaries, the programme included a substantial package of curriculum lessons alongside whole-school elements which were theorised to work synergistically to reduce gender-based harassment observable on the school site and to promote protective attitudes and norms. In the process of operationalising programme mediators for measurement in student surveys, we elaborated the construct of “perceived norms”<sup>1(p9)</sup> to delineate three types: injunctive DRV and gender norms and descriptive DRV norms. Figure 8 depicts the revised theory of change.

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<sup>p</sup> This app has since been discontinued and is no longer available for download.

Targeting another important behavioural influence in the Theory of Planned Behaviour,<sup>100</sup> Project Respect aimed to promote students' sense of control over their behaviours in relationships via lesson content focused on building communication and anger management skills.<sup>164</sup> Drawing on evidence from Safe Dates and Shifting Boundaries, lessons also addressed gender roles,<sup>165,168</sup> healthy relationships<sup>165,168</sup> and help-seeking.<sup>164</sup> Informed by findings from the Safe Dates study, signposting in lessons and promotion of the Circle of 6 app targeted increases in knowledge of and access to support for students experiencing DRV.<sup>165</sup> Underpinned by the Social Development Model,<sup>170</sup> Project Respect was designed to offer opportunities for student participation in the curriculum and in leadership of whole-school campaigns, promoting school bonding, adherence to gender-equitable and anti-DRV peer norms and adoption of attitudes aligned to these values.

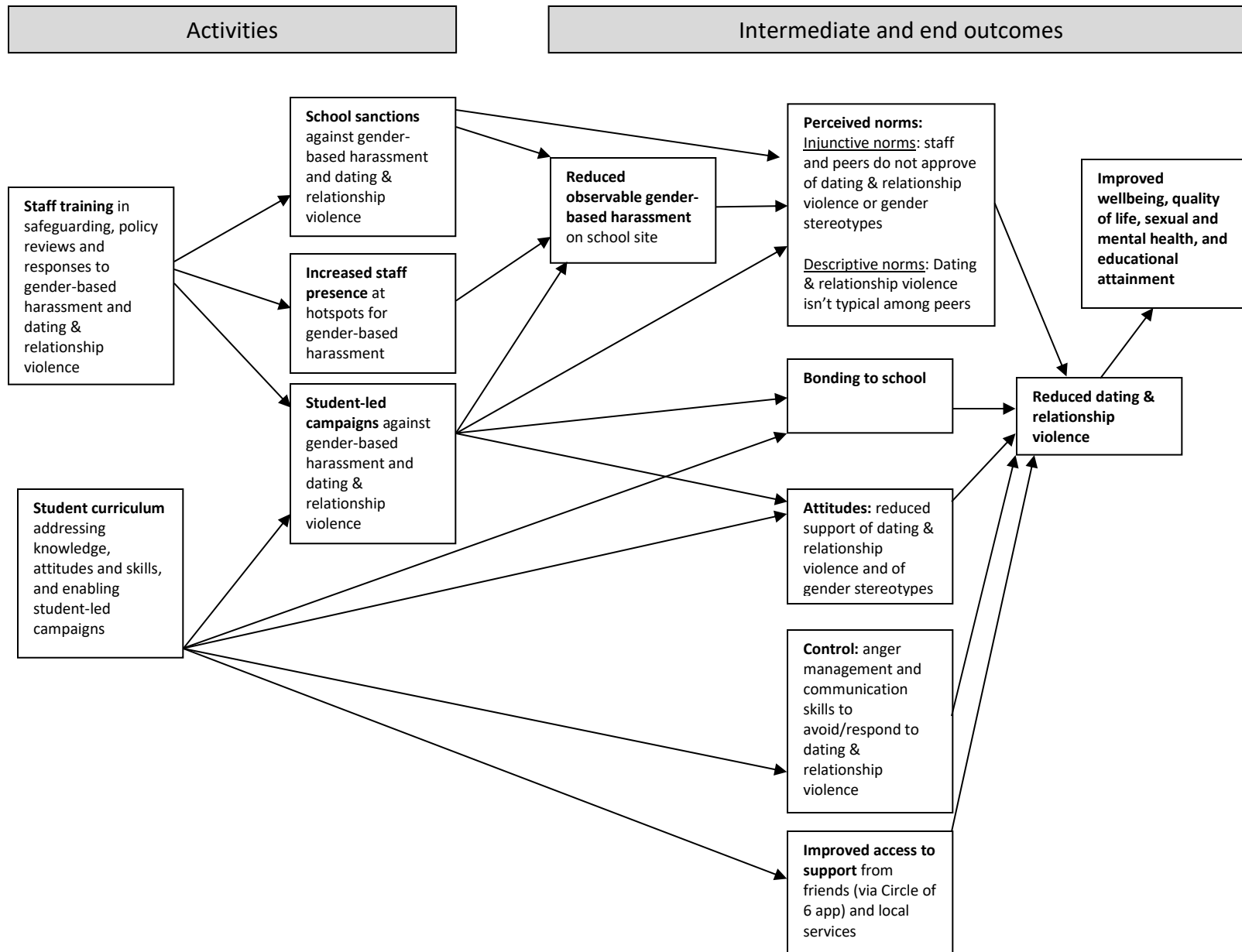


Figure 8. Project Respect theory of change, adapted from published study protocol<sup>1(p9)</sup> (see Appendix 1)



### 3.1.2. Project Respect pilot cluster RCT

The Project Respect pilot cluster RCT aimed to elaborate, optimise and pilot the Project Respect intervention and assess the feasibility and acceptability of the intervention and trial methods.

An embedded process evaluation explored implementation, mechanisms of change and context.<sup>171</sup> An embedded economic evaluation explored feasibility of economic evaluation methods. The study sought to address nine specific research questions:

- 1) Is progression to a Phase III RCT justified in terms of prespecified criteria? These criteria are as follows: randomisation occurs, and four or more schools (out of six) accept randomisation and continue in the study; the intervention is implemented with fidelity in at least three of the four intervention schools; the process evaluation indicates that the intervention is acceptable to  $\geq 70\%$  of the year 9 and 10 students, and staff involved in implementation; computer-assisted self-interviewing surveys of students are acceptable and achieve response rates of at least 80% in four or more schools; and methods for economic evaluation in a Phase III randomised controlled trial are feasible.
- 2) Which of two existing scales – the Safe Dates and the short CADRI (CADRI-s) – is optimal for assessing DRV violence victimisation and perpetration as primary outcomes in a Phase III RCT, judged in terms of completion, interitem reliability and fit?
- 3) What are likely response rates in a Phase III RCT?
- 4) Do the estimates of prevalence and intracluster correlation coefficient of DRV derived from the literature look similar to those found in the UK, so that they may inform a sample-size calculation for a Phase III RCT?
- 5) Are secondary outcome and covariate measures reliable, and what refinements are suggested?
- 6) What refinements to the intervention are suggested by the process evaluation?
- 7) What do qualitative data suggest about how contextual factors might influence implementation, receipt or mechanisms of action?
- 8) Do the qualitative data suggest any potential harms and how might these be reduced?
- 9) What sexual health- and violence-related activities occur in and around control schools?

School recruitment for the pilot trial proceeded via letters and telephone calls to schools in southern England and to school networks. Private schools, pupil referral units and schools exclusively for students with learning disabilities were not eligible. Of eligible schools expressing interest, we selected three from south-east England and three from south-west England purposively by deprivation (assessed using Income Deprivation Affecting Children Index [IDACI] score)<sup>172</sup> and school-level value-added attainment (assessed using Progress 8 score).<sup>173</sup> We conducted two waves of optimisation sessions with students and staff in four secondary schools not taking part in the pilot trial, two in the south-east region of England and two in south-west, in April and July 2017. We pre-piloted the baseline student survey on electronic tablets with one year 8 class in a south-east England optimisation school in April 2017. In the same month I conducted cognitive interviews to test and refine student survey measures in one south-east England secondary school that had expressed interest in the study but not consented in time to take part in the pilot RCT.<sup>q</sup> The head teacher of each participating school consented for the school to take part.

Baseline surveys were conducted with staff using paper and with year 8 and 9 students using electronic tablets from June to July 2017. LSHTM's clinical trials unit then stratified schools by region (south-east and south-west England) and randomly assigned schools 2:1 to the intervention or control condition. Intervention schools were to deliver Project Respect to year 9 and year 10 students in the 2017-2018 school year while control schools were to continue with usual provision. Follow-up surveys with staff and students were conducted using electronic tablets approximately 16 months post-baseline, in September to November 2018.

My thesis draws on optimisation sessions, cognitive interviews, student baseline surveys and process evaluation data to address research questions 2-4 (see Section 2.6.). Details on aspects of Project Respect data collection not used for this thesis are available in the published study protocol<sup>1</sup> (see Appendix 1) and full study report.<sup>37</sup> The Project Respect pilot trial was registered with the ISRCTN registry on 8<sup>th</sup> June 2017 (ISRCTN 65324176).<sup>174</sup>

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<sup>q</sup> This school later joined the pilot RCT to replace a school that had withdrawn from the study.

### 3.1.3. Summary of Project Respect study findings

We completed elaboration and optimisation of the Project Respect intervention. Results from pre-piloting of the student baseline survey and cognitive interviews suggested that students generally understood survey items but also informed some refinements to item wording. One school dropped out prior to baseline surveys. It was replaced but without sufficient time to arrange baseline surveys in the replacement school, resulting in five schools taking part in baseline surveys and six taking part in follow-up surveys. The use of electronic tablets for student surveys was acceptable to students but posed logistical challenges to the study team, requiring intense planning and higher than anticipated levels of staffing. High response rates of 82.5% and 78.2% were achieved in participating schools at baseline and follow-up, respectively. Both the Safe Dates and CADRI-s DRV measures had high completion rates (around 99%) and reliability (Cronbach's and ordinal alphas around 0.9); the CADRI-s was therefore recommended for future use over the Safe Dates measure due to its brevity. School staff surveys achieved very low response rates at baseline (7.5%) and follow-up (6.5%), suggesting that staff surveys were unfeasible.

All six schools accepted randomisation to the intervention or control condition. However, the Project Respect intervention did not meet the criteria for progression to a phase III RCT due to limited fidelity and acceptability in the pilot trial. Implementation in the four intervention schools of school-wide elements was particularly low, including cascaded training for all school staff (delivered by two schools), policy review (delivered by two schools) and reorientation of staff surveillance according to identified hotspots (delivered in no schools). Process evaluation interviews suggested that staff and students viewed DRV as an important topic to address in schools. However, their views on the curriculum were mixed and delivery was undermined where schools were focused on addressing other, emerging challenge (such as poor Ofsted<sup>r</sup> results or budgetary issues), where too few staff shared a commitment to delivery and where staff struggled with timetabling lessons or with insufficient time for planning.

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<sup>r</sup> Office for Standards in Education, Children's Services and Skills

#### 3.1.4. My role as research fellow on the Project Respect study

Project Respect data collection took place from April 2017 to November 2018. I joined the study team as a research fellow at the start of the project and led its management under the direction of the principal investigator. In this role, I helped to refine study methods; led amendments to the bodies responsible for ethical oversight; developed cognitive interview guides and conducted all cognitive interviews; contributed to optimisation, survey and process evaluation data collection tools; led fieldwork in south-east England including optimisation sessions and most process evaluation interviews in the region; led analyses of qualitative and fidelity data; and led reporting on study findings.

### 3.2. Thesis methods

In this section I outline the distinction between the Project Respect study and my role as a research fellow, and my thesis and the tasks I undertook in my capacity as a PhD student. I then discuss the ontological and epistemological positions underpinning my thesis. I report on the methodologies and methods used for Chapters 4-7 as follows:

- In this section I present the methodologies and an overview of the methods used for each of Chapters 4-7
- In this section I also present methods details that are not critical to interpreting the research presented in Chapters 4-7 but that elaborate on considerations underlying my approach
- The papers I present in Chapters 4-7 provide all of the key information on methods that is required for interpreting the research I present in each paper

#### 3.2.1. Distinction between the Project Respect study and my thesis

The Project Respect study set out to optimise and pilot the Project Respect intervention and trial methods and was guided by a published protocol<sup>1</sup> (see Appendix 1). When I joined the study, student survey measures had been identified and one of my tasks was to compile these and prepare the survey for pre-piloting. I noticed at this stage that, while social norms were theorised mediators of the intervention, measures of social norms had not been identified for

inclusion in student surveys. Having worked on a previous adolescent health study that drew on social norms theory to distinguish between descriptive and injunctive norms,<sup>175</sup> I proposed the inclusion of specific measures to assess these two constructs in Project Respect. Finding no established, appropriate measures in the DRV literature, I identified a need for further work in the area of social norms measurement in DRV research. With the approval of the principal investigator, I initiated and led streams of work to (1) develop, refine and test social norms measures for Project Respect, and (2) identify social norms protecting against and contributing to DRV in England by drawing on staff, student and parent and carer accounts. This original work is the topic of my thesis.

My role as a research fellow centred on managing the study, developing data collection tools to answer the study's research questions (see Section 2.6.), data collection in south-east England, analysis and reporting. To address thesis research questions 2-4 I undertook additional work, beyond the scope of my research fellow role:

- 1) I developed three new and adapted measures of social norms relating to DRV and to gender. To test and refine these measures, I conceptualised and led the incorporation of gender and DRV social norms and (for comparison) attitude measures into cognitive testing, analysed the resulting data, reported on findings and refined measures for inclusion in student surveys. I present this work in Chapter 5.
- 2) I conceptualised, designed and conducted the analysis of data from student baseline surveys to assess the performance of the three new and adapted social norms measures, presenting this work in Chapter 6.
- 3) I incorporated questions into optimisation and process evaluation data collection tools to identify social norms contributing to or protecting against DRV. These questions explored the gender regime,<sup>91</sup> gender dynamics and gender and DRV norms within schools; and (for intervention schools) potential intervention impacts on social norms. I analysed data on relevant social norms and report findings in Chapter 7.

I conducted the literature review presented in Chapter 4 independent of the Project Respect study.

### 3.2.2. Ontological and epistemological assumptions

The work in this thesis is informed by the philosophy of critical realism, developed by Roy Bhaskar, which proposes three levels of ontology:<sup>176,177</sup>

- 1) The “empirical” level refers to what is observed
- 2) The “actual” level refers to objects and events that exist, whether or not they are observed
- 3) The “real” level refers to the unseen causes of what takes place at the level of the “actual”

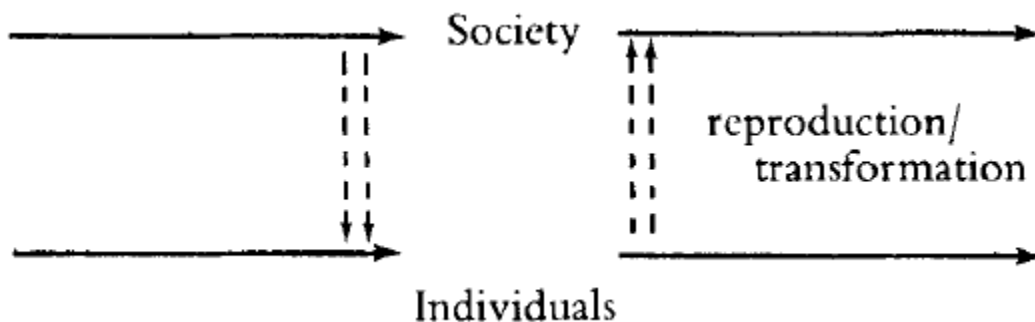
Critical realism accepts a realist ontology – the view that there exists a real world, independent of what we know, observe or measure, which contains both natural and social “causal forces”.<sup>178(p46)</sup> These causal mechanisms represent “tendencies”,<sup>178(p46)</sup> which have the potential to activate to produce outcomes. When they do, they manifest in the realm of the actual where they can, at the level of the empirical, be observed and measured.<sup>177</sup> Critical realist approaches acknowledge that the ways in which researchers come to know about the world are shaped by our perspectives, rendering knowledge inherently incomplete and leaving open the possibility of alternative, valid explanations for what we observe.<sup>179</sup> However, critical realists assert that we can use rational thought as well as empirical observation and experimentation to test, evaluate and refine our ideas to “get closer to truth”.<sup>180</sup>

Critical realism frames the relationship between structure and human agency as “interdependent and partly independent”.<sup>176(p88)</sup> That is, it posits that humans act with agency but their behaviour is also shaped by the structures of which they are a part; and those structures both shape and are shaped by human action.<sup>176,181,182</sup> Maniykhina & Alderson use an illustrative metaphor (Figure 9), asking: “Do rivers shape landscapes or landscapes shape rivers?”<sup>182,slide 14</sup>



**Figure 9.** Image from Manyukhina & Alderson depicting a metaphor for the relationship between structure and human agency in critical realism<sup>182,slide 16</sup>

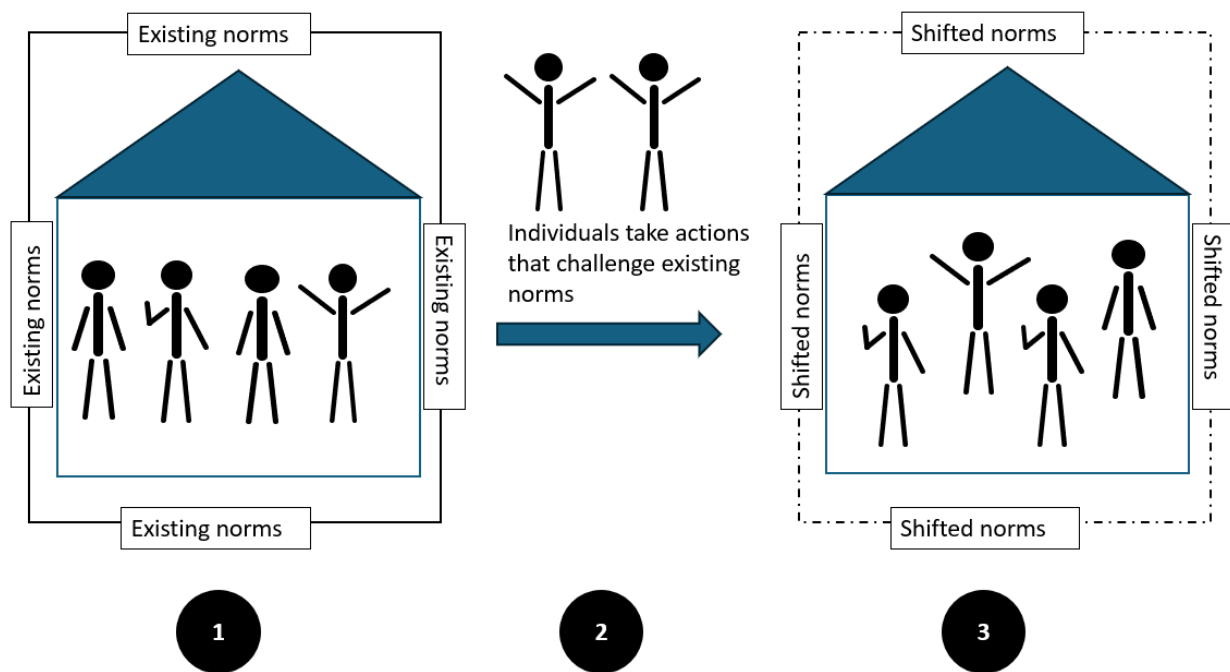
Bhaskar’s transformational model of social activity<sup>181(p12)</sup> (Figure 10) suggests that human action – enabled or constrained as it is by existing structures – is also what reproduces those structures or transforms them over time.<sup>181</sup>



**Figure 10.** Bhaskar’s transformational model of social activity<sup>181(p12)</sup>

Though they act with intention,<sup>181</sup> humans are taken to be only partially aware of the motivations for and consequences of their behaviours.<sup>176</sup> Within this model, norms can be thought of as an aspect of the societal structures influencing behaviour (whether or not humans are conscious of this influence); and it is people’s behaviours that sustain or challenge these norms. Figure 11 applies Bhaskar’s transformational model to an imaginary secondary

school, using a three-part model to illustrate one theoretical pathway through which social norms might change. In this school, existing norms that constitute an aspect of the school's social structure influence the spectrum of behaviours that students feel are permitted (part 1). When students comply with existing norms and enact social sanctions that encourage others to do the same, their actions reproduce those norms within the school. But there is also potential for change: when students act in conflict with existing norms or weaken them by limiting the social sanctioning that encourages compliance (part 2), these acts can begin to shift, or transform, the normative societal structures that influence behaviour in the school. These structural changes might make it easier for students to take action to weaken or challenge prevailing norms going forward (part 3).



**Figure 11. Bhaskar’s transformational model applied to theoretical relationship between normative social structure and students’ actions in school**

DRV interventions attending to social norms seek to foster this kind of transformation. In their elaboration of the concept of realist mechanisms, Dalkin et al. distinguish between resource and reasoning mechanisms.<sup>183</sup> Resource mechanisms represent intervention inputs, which aim



to produce changes in participants' reasoning and subsequent changes in behaviour. Project Respect, for example, provides school staff with lesson plans (resources) to deliver to their students. These lessons aim, in part, to change injunctive norms about the social acceptability of DRV (reasoning), which it is theorised will reduce incidents of DRV. Mapping this to Bhaskar's transformational model of social activity, we can conceptualise this process as intervention resources (lesson plans) producing changes in perceptions of what behaviour is acceptable in the group (reasoning), which changes social structures (social norms) that enable or constrain behaviour in an intervention group. Those changes in reasoning lead to changes in behaviours (DRV victimisation and perpetration, for example) and their social consequences. Those behavioural shifts consequently transform the social structures themselves, making it a bit easier to act in concordance with health-promoting norms (or to reject harmful ones).

Within this framework, social norms are real reasoning mechanisms with the potential to sustain or prevent actual experiences of DRV. While DRV interventions commonly offer resources to activate this mechanism,<sup>8</sup> methodological challenges impede efforts to measure norms at the empirical level and, consequently, to gather evidence to suggest whether (1) the norms are changing, and (2) these changes lead to reductions in DRV. I take a mixed methods approach to addressing this gap. While many critical realists reject the use of quantitative methods in social research,<sup>184</sup> mixed methods researchers outline how studies underpinned by critical realism can in practice draw on the strengths of both qualitative and quantitative approaches to develop a deeper understanding of social phenomena.<sup>185</sup> I subscribe to this view, integrating in my thesis research quantitative and qualitative methods to explore aspects of social norms measurement in more breadth and depth than would be possible using either approach on its own.<sup>178,186</sup> I draw on the strengths of qualitative interviews to explore phenomena in depth and to generate theory<sup>186</sup> to address research questions about young peoples' experiences of social norms themselves (research question 4) and of responding to survey items about these (research question 2). This is complemented by use of quantitative, deductive<sup>186</sup> methods to test the performance of social norms measures in a large sample of young people in England (research question 3).

### 3.2.3. The use, reliability and validity of quantitative measures

In this section I provide an overview of the use of multi-item scales for measuring social phenomena. I then introduce the concepts of reliability and validity and discuss the role of each as an indicator of measure quality. This introduction presents the basis for the research presented in Paper 1 and Paper 3 (see Chapters 4 and 6, respectively), which involve assessing the quality of social norms measures by assessing, in part, their reliability and validity.

#### *3.2.3.1. The use of multi-item scales in social science*

Social scientists use multi-item scales to measure latent variables: constructs that theory suggests exist but that can't be measured directly.<sup>187</sup> Each scale item should share the construct that the scale is intended to measure as their "single common cause".<sup>187(p205)</sup> If they do, the scale can be described as unidimensional: it measures a single construct.<sup>187</sup> A scale's composite score (made up of the scores of each individual item) is therefore taken to represent the level of the latent variable.<sup>187</sup> We can consider as an example the six-item scale designed to measure injunctive DRV norms in Project Respect student baseline surveys, refined on the basis of the cognitive testing presented in Paper 2 (see Chapter 5). This measure asks respondents about their friends' views on six statements about the acceptability of physical DRV. These six items represent different aspects of the phenomenon, two of which are support for girls perpetrating DRV (e.g. "Boys sometimes deserve to be hit by their girlfriends") and support for DRV under specific conditions (e.g. "It is okay for a boy to hit a girl if she hit him first") (see Chapter 5). Items are intended to be indicators of the latent variable's effects: e.g. because a respondent believes that their friends support DRV, they would report that their friend agrees with the statement "Girls sometimes deserve to be hit by their boyfriends" (see Chapter 5). When scores of all six item responses are added together,<sup>5</sup> resulting composite scale scores are expected to be higher than among those of respondents who perceive friends' support for DRV to be low.

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<sup>5</sup> Statements framed in the negative are reverse-scored before computing the scale's composite score.

### 3.2.3.2. Reliability and validity as indicators of measure quality

Classical test theory (CTT) is a traditional social science approach to psychometric testing, assessing the performance of a measure by quantitatively testing its reliability and validity.<sup>188</sup> CTT assumes that a scale's score is made up of two components: the respondent's true score (i.e. the real value of the latent variable) and random, normally distributed error.<sup>188</sup> Scale scores are therefore expected to remain stable if the true value of the latent variable hasn't changed.<sup>187</sup> Tests of **reliability** assess to what extent this is the case. As Devellis defines the concept, "scale reliability is the proportion of variance attributable to the true score of the latent variable".<sup>187(p39)</sup> Reliable scales measure a construct consistently. One way of examining reliability is by calculating a scale's internal consistency, or the correlations between the items in the scale.<sup>187</sup> Internal consistency is an indicator of the extent to which the scale's items assess the same underlying construct.<sup>187</sup> Other indicators of reliability include split-half reliability, which involves splitting a multi-item scale in half and testing the correlation between scores of each half of the scale, and test-retest reliability, which involves administering a measure to the same participant sample at two timepoints and testing the correlation between these two scores.<sup>187</sup> While tests of internal consistency and split-half reliability require multi-item scales, the test-retest approach can also be used to assess the reliability of single-item measures.

The extent to which a scale measures the construct it is intended to is a question of **validity**. Whether and how validity should be sub-categorised is a matter of debate,<sup>189</sup> but textbooks tend to distinguish between three types:<sup>187,189</sup>

- **Construct validity** is the extent to which a scale correlates with measures of other constructs that are theoretically associated with the latent variable.<sup>187</sup>
- **Content validity** is the extent to which a scale's items reflect the construct of interest and cover all relevant aspects of its domain.<sup>t,187,190</sup>

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<sup>t</sup> A scale's content validity is often framed in terms of whether its items assess all aspects of the construct of interest.<sup>187</sup> However, this is particularly difficult to assess for constructs such as beliefs and attitudes, for which it can be challenging to determine the range of potentially relevant items.<sup>187</sup> This thesis draws on definitions of content validity that take into account both the extent to which a scale

- **Criterion validity** refers to the correlation between a scale and an established “gold standard” measure of the construct of interest.<sup>189</sup>

Within CTT, tests of reliability and validity assume that the scale being assessed is unidimensional.<sup>187</sup> Exploratory and confirmatory factor analysis (EFA and CFA, respectively) are two statistical approaches to testing this assumption.<sup>188</sup> By exploring correlations between scale items, EFA can be used to determine how many latent constructs (or factors) a scale is measuring.<sup>187,188</sup> Results of EFA can also help to identify scale items that are not performing well in terms of their fit with the construct(s) being measured.<sup>187</sup> In CFA, on the other hand, researchers draw on theory or on the results of previous analysis to predict a scale’s structure and then statistically assess the extent to which scale data fit that structure.<sup>187,188</sup> EFA and CFA can both be considered tests of a scale’s **convergent validity**,<sup>191</sup> which refers to correlations between measures of the same construct.<sup>192</sup> EFA and CFA can alternatively be described as assessing “item convergence within scales”,<sup>188(p652)</sup> or a scale’s internal or factor structure.<sup>191</sup>

Methods for Paper 1 and Paper 2 (see Chapters 4 and 6, respectively) draw on these conceptualisations of reliability and validity to assess the quality, and test the performance, of social norms measures.

#### 3.2.4. Systematic review of social norms measures relating to DRV and gender used in DRV research – methods for Chapter 4 (Paper 1)

I conducted a systematic review to address my first research question, “Are existing measures of adolescent social norms relating to DRV and gender reliable and valid?” This component of my thesis is presented as a peer-reviewed publication,<sup>193</sup> Paper 1, in Chapter 4. The following provides an overview of the methodology and methods used for this component of my thesis and reports on additional details that fall outside the scope of Paper 1. All methods critical to understanding this systematic review and interpreting its results are detailed in Paper 1. The

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assesses all domains of the construct of interest<sup>187</sup> and the extent to which all of a scale’s items are relevant to that construct.<sup>190</sup>

review protocol was registered in advance on the Open Science Framework<sup>3</sup> and is provided in Appendix 3.

#### 3.2.4.1. Systematic review methodology

Methods for scientific approaches to evidence synthesis began to develop in earnest in the 1900s, though they took hold in health research only in the latter half of the century.<sup>194</sup>

Systematic reviews address the need in health research to collate the universe of existing evidence on a particular topic<sup>194,195</sup> and to present a “comprehensive” synthesis with minimal bias and transparently reported and reproducible methods.<sup>195</sup> While early systematic reviews focused on synthesising RCTs, newer methodologies have proliferated to address a range of different types of research questions.<sup>196</sup> These systematic approaches share nine key features that distinguish them from unsystematic literature reviews,<sup>196</sup> the latter of which report selectively on existing literature and provide more subjective, potentially biased overviews.<sup>195</sup>

These nine distinguishing features, reported in Munn et al.’s typology of systematic reviews, are as follows:<sup>196</sup>

- 1) Clear objectives and research questions
- 2) Explicit, *a priori* inclusion and exclusion criteria to determine study eligibility
- 3) Comprehensive search strategy to identify all relevant studies
- 4) Study screening and selection process
- 5) Appraisal of study quality and of the validity of study findings
- 6) Extraction and analysis of data from included studies
- 7) Presentation and synthesis of the extracted findings
- 8) Interpretation of results
- 9) Transparent reporting of the review methodology and methods used

Psychometrics is the branch of social science “concerned with measuring psychological and social phenomena”.<sup>187(p3)</sup> Munn et al. define psychometric systematic reviews as “systematic reviews of measurement properties”.<sup>196</sup> This type of review involves systematically searching for and assessing the quality of health-related measurement tools in terms of available

evidence on aspects of their performance such as their reliability and validity.<sup>196</sup> Psychometric systematic reviews can be used to assess a particular measurement tool, a set of common tools for measuring a particular construct, all measurement tools for a particular population, or, as it does in this thesis, all measures of a particular construct within a specific population.<sup>196</sup>

Guidelines for conducting psychometric reviews (though they don't use this term) have been developed by the COnsensus-based Standards for the selection of health Measurement Instruments (COSMIN) steering committee.<sup>190,196</sup> COSMIN seeks to improve the selection of what the initiative refers to as "patient-related outcome measures" (PROMS) – questionnaires completed by patients to report directly on their own health.<sup>190</sup> While reports on one's health reflect a construct different from reports on one's perceptions (as social norms measures require), the COSMIN guidance lays out useful steps and practical quality assessment criteria for psychometric systematic reviews such as the one conducted here.

In-line with standard systematic review approaches,<sup>196</sup> the COSMIN guidelines begin with developing the aim of the review; establishing criteria for eligible measures and the studies in which they are reported; and systematically searching and screening the literature.<sup>190</sup> They next offer detailed steps and criteria for appraising the quality of included measures and grading the quality of the underlying evidence of their measurement properties. Measures are evaluated based on their content validity, internal structure, reliability, measurement error, criterion validity,<sup>190(p1152)</sup> construct validity and responsiveness (sensitivity to changes).<sup>190</sup> COSMIN recommendations for the transparent reporting of psychometric systematic reviews align with the PRISMA Statement's 2016 guidelines for the reporting of systematic reviews.<sup>190</sup>

Embedded in the COSMIN guidelines is an assumption that the literature under review has reached a level of maturity such that studies designed to develop or evaluate measures are available and that included measures have been assessed in multiple studies. However, evidence on measurement properties of social norms measures is still in the early stages. In

Section 3.2.4.3. I describe modifications made to the COSMIN inclusion and quality appraisal criteria to reflect the emerging state of the available literature.

#### *3.2.4.2. Overview of systematic review methods*

##### **Eligibility criteria**

This review aimed to systematically identify and assess existing measures of descriptive and injunctive social norms relating to DRV and to gender that have been used in DRV research. Eligible studies were empirical research published in English in 1997 and later. This timeframe was chosen because measures might become less meaningful and therefore appropriate for young people over time due to cultural changes<sup>82</sup> and because 1997 can be considered the advent of social media,<sup>197</sup> which now plays an important role in the formation of adolescent relationships.<sup>198</sup> Eligible studies presented at least one quantitative measure of descriptive DRV norms, injunctive DRV norms, descriptive gender norms and/or injunctive gender norms and assessed construct validity by conducting at least one test of association between an eligible social norms measure and a DRV behavioural outcome among young people aged 10-18 years. An assessment of this aspect of construct validity was required because norms measures that are not associated with DRV outcomes would not be suitable for use in evaluations of DRV evaluations regardless of other aspects of measure quality. DRV behavioural outcomes were defined as DRV victimisation, DRV perpetration and DRV bystander behaviours. Studies could be reported in peer-reviewed published papers or grey literature.

##### **Search strategies**

I employed seven complementary search approaches to ensure comprehensive coverage of available literature:

- 1) Searched databases
- 2) Searched Google Scholar
- 3) Searched websites of relevant organisations
- 4) Contacted subject experts
- 5) Reviewed known literature contained in my existing database of DRV research

- 6) Reviewed the references of included reports
- 7) Screened programme evaluations included in known reviews of DRV interventions

Search terms were based on three concepts, linked by the Boolean search term “OR”: (1) social norms relating to DRV and/or gender; (2) DRV; and (3) adolescents. Specific search terms were informed by known studies that included relevant measures. I piloted and refined the search strategy using known studies on social norms and DRV to assess its sensitivity. The search strategy was then reviewed by an LSHTM librarian according to Peer Review for Electronic Search Strategies guidance and refined based on their feedback.<sup>199,200</sup> The full and final search strategy is available in Appendix 4. Paper 1 (see Chapter 4) provides further detail on the search methods employed.

### **Screening and data extraction**

After deduplication,<sup>u</sup> database search results were screened on title and abstract and then on full text as described in Paper 1. From included reports I extracted the following data for eligible social norms measures: development; content, comprising: title, number of items, item(s) and response options, type of social norm (injunctive or descriptive, DRV or gender) and reference group(s); mode of data collection; evidence of reliability and of construct, content and convergent validity (including setting, sample size and characteristics, DRV behavioural outcome measure, analysis method and results); and statistical properties (measures of the item or scale data’s central tendency and distribution such as its mean, median, mode, skewness and standard distribution or standard error; responsiveness to change; and evidence of floor or ceiling effects). For eligible studies I extracted data on title, author, publication year, type of literature, study region, study design, eligibility and recruitment.

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<sup>u</sup> Deduplication followed the University of Leeds method as outlined by the LSHTM Library & Archives Service,<sup>201</sup> modified slightly to include Medline in-process records with the initial set of Medline record imports.



## **Quality appraisal and data synthesis**

I assessed the quality of each included measure against seven criteria for which I assigned scores as described in Paper 1 (see Chapter 4): (1) the use of participatory development; (2) defined reference group; (3) reliability; (4) content validity; (5) construct validity (assessed as association with DRV behavioural outcome); (6) other evidence of validity (association with theoretically associated constructs, or structure affirmed by factor analysis); and other statistically desirable properties (lack of floor or ceiling effects, responsiveness to change or the availability of evidence on central tendency and distribution<sup>v</sup>). Section 3.2.4.3. provides further detail on the sources and rationale supporting this approach. Further detail on these quality criteria are available in Supplemental Appendix B of Paper 1 (provided in Appendix 5 of this thesis). Reporting was guided by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) checklist.<sup>203</sup>

### *3.2.4.3. Methodological considerations for systematic review*

Decisions on the eligibility criteria and quality appraisal of social norms measures needed careful consideration. In this section I discuss the rationales underpinning key decisions which could not be addressed in detail in Paper 1 (see Chapter 4) due to journal limitations on article length.

## **Eligibility criteria for studies**

COSMIN guidelines recommend including only studies designed to develop or evaluate the measurement properties of included measures.<sup>190</sup> Initial scoping of available literature suggested that this approach would be unfeasible given the early stage of social norms measurement in DRV research. To gather all available evidence in this nascent area of study I did not exclude studies on the basis of their aims.

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<sup>v</sup> The availability of data on the central tendency and distribution of a measure's score is useful because this information aids in interpreting the measure's scores for future use.<sup>202</sup>

Eligible social norms measures had to have been used with respondents ages 10-18 years. Age 10 was selected because this marks the start of adolescence;<sup>17</sup> pressure to conform to gendered expectations begins to intensify at the start of puberty;<sup>92</sup> and students aged 11-13 years report DRV, suggesting primary prevention would ideally begin earlier;<sup>146</sup> and this marks a turning point in the feasibility and developmental appropriateness of self-administered surveys.<sup>204</sup> While social norms prior to age 10 could be salient for early primary prevention, differences in cognitive and reading skills before and after around age 10<sup>204</sup> suggest that measures appropriate for younger respondents are unlikely to also be suitable for older adolescents. Age 18 was selected as the upper age limit because sexual violence research suggests prevention should begin prior to university<sup>205</sup> and to maintain a focus on school-aged adolescents, excluding studies primarily comprised of university samples. To avoid excluding relevant studies that included some participants outside of this age range, I operationalised the age criteria by including studies for which >50% of participants were age 18 years or younger. If this information was unavailable, studies were included if the mean age was younger than 19 years (e.g. a study with a mean age of 18.9 years would be eligible for inclusion).

I aimed to explore the pool of existing measures that have been assessed for construct validity as norms associated with DRV behavioural outcomes among young people. Reports with relevant social norms measures but that did not report on their use among young people aged 10-18 years, and those that did not assess their association with a DRV behavioural outcome, were excluded. This is because, as Ashburn et al. observe, “there is considerable literature on theoretical ways to measure norms...[but] far fewer examples of social norm measures that have been utilized and shown valid in multiple contexts”.<sup>6</sup> In addition to DRV victimisation and perpetration, bystander behaviours (i.e. intervening to prevent or address DRV) were included as eligible outcome measures because they represent a concrete behavioural outcome that we would expect to correlate with social norms measures.

### **Eligibility criteria for social norms measures**

Eligible descriptive norms measures assessed perceptions of how (1) typical or (2) frequent DRV or gendered behaviours were. Eligible injunctive norms measures assessed perceptions of (1) the social acceptability of DRV or (2) social expectations based on gender. Measures that asked whether anyone in the participant's reference group had been involved in DRV or if the participant had been told about or witnessed DRV were excluded, as were studies which assessed DRV rates among reference groups by asking the reference groups directly. This is because these approaches do not directly assess *social perceptions of how widespread* the behaviour is – the key feature of descriptive norms' influence. Witnessing or being told about an instance of DRV would not necessarily lead to a perception that DRV is typical within the reference group, while DRV behaviours that were common could be discreet. Similarly, measures that assess perceived consequences of DRV but do not specify these consequences as social (e.g. "bad things would happen" to the participant if they hit a partner)<sup>206(p71)</sup> were excluded because they do not clearly assess the construct of *social expectations* key to the influence of injunctive norms. "Bad things" could, for example, refer to regulatory outcomes such as arrest, or personal harm such as feeling guilty. Finally, scales that assess social norms relating to sexual or other types of interpersonal violence without specifying the context of an intimate partnership were excluded. This is because non-partner violence might be driven by a different constellation of social norms than those underpinning partner-specific violence.

### **Rationale for conducting quality appraisal of measures but not studies**

In line with the approaches of previous systematic reviews on measures in menstrual health research<sup>207</sup> and of social norms relating to contraception,<sup>208</sup> I focused on the characteristics and quality of included measures and did not grade the underlying evidence by assessing the quality of the studies themselves. This is because, reflecting the early stage of social norms measurement in DRV research, their measurement properties tend to be reported incidentally within studies with non-psychometric aims (e.g. epidemiologic and other observational studies) and the same measures did not tend to be referred to in different studies. COSMIN methods for grading the quality of evidence for specific measurement properties of each included

measure<sup>190</sup> will be more appropriate when findings from multiple studies can be synthesised to assess measurement properties for more established measures.

### **Quality appraisal of included measures**

In the absence of established criteria for appraising the quality of social norms measures, I developed a tailored assessment tool. This approach was informed by the work of Doherty et al., who developed a novel quality appraisal tool for their systematic review of measures to assess the mental health of people who have experienced human trafficking.<sup>209</sup> Informed by COSMIN guidelines,<sup>190</sup> methods of existing systematic reviews of measures,<sup>209–211</sup> and literature on social norms measurement,<sup>6,208</sup> I selected quality criteria inductively based on initial scoping of available evidence. In line with COSMIN guidelines, I assessed quality on the basis of available evidence on reliability (including internal consistency, split-half reliability and test-retest reliability), content validity, construct validity, assessment of factor structure, floor or ceiling effects and responsiveness.<sup>190</sup> Cross-cultural validity/measurement invariance, which refers to an assessment of how consistently a measure performs across different populations,<sup>190</sup> was not assessed given the lack of studies focused on measure development and evaluation across populations. Feasibility<sup>190</sup> was not assessed because the review did not aim to make recommendations about specific measures for use. Criteria were added to assess availability of benchmark data on the central tendency and distribution of the measure's total score;<sup>210</sup> use of a defined reference group;<sup>6,208</sup> and use of formative work involving the target population to inform measure development.<sup>6</sup>

Sample size thresholds for determining measurement properties with sufficient precision (e.g. the minimum sample required to establish properties like reliability and construct validity) are assessed through evidence grading in the COSMIN guidelines.<sup>190</sup> Drawing on detailed sample size thresholds offered by Terwee et al. and Lewis et al.,<sup>w</sup> I embedded these criteria within the quality appraisal of included measures. Supplemental Appendix B of Paper 1 (see thesis

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<sup>w</sup> Terwee et al.'s criteria<sup>202</sup> are a predecessor to the COSMIN guidelines,<sup>190</sup> while Lewis et al. offer criteria for assessing the quality of measures of implementation.<sup>210</sup>

Appendix 5) details sample size criteria for assessments of reliability, construct and convergent validity, floor or ceiling effects, responsiveness and measurements of central tendency and distribution.

A score was assigned for each criterion but not for the overall measure. This was to avoid obscuring specific strengths and weaknesses for each measure, which were presented by type of norm: descriptive DRV, injunctive DRV, descriptive gender and injunctive gender.

Supplemental Appendix B of Paper 1 (see thesis Appendix 5) specifies the criteria and scoring for each quality criterion.

### 3.2.5. Cognitive interviews informing the development of social norms measures – methods for Chapter 5 (Paper 2)

Data from cognitive interviews testing new and adapted social norms measures were used to answer my second research question, “Are new and adapted measures of social norms relating to DRV and gender understandable and answerable when used in research with adolescents in England?” This component of my research is presented as a peer-reviewed publication,<sup>212</sup> in Chapter 5. In this section, I provide an overview of the methodology and methods for this component of my thesis and report on details that could not be included in Paper 2 due to space. All methods critical to understanding this research and interpreting its results are reported Paper 2.

Cognitive testing of norms items was conducted as part of a broader cognitive interviewing component of the Project Respect study which also tested survey elements outside the scope of this thesis. In this section, I report on methods relating to the testing of social norms items.

#### 3.2.5.1. Cognitive interviewing methodology

Cognitive interviewing, also referred to as cognitive testing,<sup>213</sup> is a qualitative approach to exploring whether participants consistently understand survey items as intended and how they approach responding to these items.<sup>214</sup> The “question-and-answer model”, originating in

cognitive psychology, is a widely accepted theory of participants' processes for engaging with survey items.<sup>214(p231)</sup> The model specifies four steps: comprehension (understanding the item's intended meaning), retrieval (accessing the necessary information from memory), judgement (assessing which information is needed to respond to the question) and response (selecting a response in line with the survey format and that the participant is willing to give).<sup>214</sup> Directly studying the question-and-answer process in cognitive interviews<sup>214</sup> enables researchers to identify problems with proposed survey items<sup>189</sup> and refine items before administering surveys. This can reduce measurement error stemming from participants' misunderstanding of items, from their not retrieving the necessary information or from problems with communicating their responses.<sup>214</sup>

Cognitive interviewers typically combine the method's two techniques, "think-aloud interviewing" and "verbal probing".<sup>213(p354)</sup> The think-aloud method asks participants to narrate their thoughts as they answer survey items.<sup>214,215</sup> This approach benefits from being open-ended and minimising interviewer bias, but it can be difficult for participants and takes time for them to learn.<sup>215</sup> A warm-up exercise at the start of the interview can help to train participants in the technique.<sup>215</sup> Willis offers this example:

*"Try to visualize the place where you live, and think about how many windows there are in that place. As you count up the windows, tell me what you are seeing and thinking about."*<sup>215(p4)</sup>

A warm-up gives the participant the opportunity to become comfortable with verbalising their thought process in front of the interviewer and for the interviewer to provide feedback on the participant's technique.

Verbal probing involves asking specific questions about the participant's experience of responding to items.<sup>214,215</sup> Proactive probes are determined before the interview and reactive probes are developed *ad hoc* in response to what happens in the interview.<sup>213</sup> Interviewers can

use verbal probes concurrently, immediately after the participant has responded to a tested item and while the experience is still “fresh in the subject’s mind”;<sup>215(p7)</sup> or retrospectively, after they’ve finished responding to all tested items. The latter approach might be more useful when items are self- rather than interviewer-administered and in later stages of development when the aim is to test items as they would ultimately be administered.<sup>215</sup> Complementing the think-aloud method, verbal probing allows the interviewer to ask about aspects of survey items they suspect might be a source of response error,<sup>215</sup> and places less burden on participants.<sup>214</sup> On the other hand, probes risk introducing bias from leading questions and so using them requires careful consideration of wording.<sup>215</sup> Cognitive interviews can be conducted with children as well as adults.<sup>204</sup> For young people aged 13-15 years, the age range of the cognitive interviewing sample for this thesis, combining the think-aloud and verbal probing approaches and beginning with a warm-up to practice thinking aloud is thought to work well.<sup>204</sup>

Cognitive interview samples tend to be small (i.e. between ten and 30 participants).<sup>213</sup> Researchers should aim to recruit samples that are similar to the survey’s target population and reflect the diversity present in that population.<sup>213</sup> Researchers can analyse audio-recordings of interviews or written item-by-item notes.<sup>213</sup> Willis recommends aggregating interview notes by item, looking for common themes both across interviews for a single item and that might be shared across items.<sup>213,215</sup> Analyses should be sensitive to both common problems and problems that were uncommon but pose a serious risk to data quality.<sup>215</sup> Resource permitting, researchers can subject refined items to further rounds of cognitive testing.<sup>215</sup>

### *3.2.5.2. Overview of cognitive interview methods*

#### **Measure development**

I conducted cognitive interviews to test items designed to assess the following social norms constructs: descriptive DRV norms (two items), injunctive DRV norms (one item) and injunctive gender norms (two items). Interviews did not test items assessing descriptive gender norms because no suitable existing measures were identified to serve as a basis for this type of item. In light of emerging evidence suggesting that young people might struggle to distinguish

between their own views and the views of others,<sup>158,159</sup> I also tested one item assessing personal attitudes towards the same gender-stereotyped behaviour assessed in one injunctive norms item. Comparing results from parallel attitudinal and norms items enabled exploration of whether and how participants distinguished between these two constructs in their processes of making sense of and responding to these items. Tested items are shown in Table 3.

I adapted the descriptive DRV norms items from an existing measure with respectable reliability<sup>x</sup> (Cronbach's  $\alpha=0.70$ ) in the evaluation of the Green Dot DRV and sexual violence intervention in US high schools.<sup>216</sup> To develop injunctive DRV and gender norms items, I adopted the approach used by Gage<sup>129</sup> (among others), which involves adapting existing attitudinal scales to ask participants about others' views rather than their own. The injunctive DRV norms item was adapted from a DRV attitudes scale with minimally acceptable reliability (Cronbach's  $\alpha=0.69$ ) used with 8<sup>th</sup> and 9<sup>th</sup> grade US students (typically aged 13-15 years) in the evaluation of the Safe Dates DRV intervention.<sup>77</sup> Injunctive gender norms items were adapted from the Attitudes Towards Women Scale, an attitudinal scale used with very good reliability (Cronbach's  $\alpha=0.82$ ) in a 2011 study of young people's attitudes towards gender roles and stereotypes and DRV in Greece (mean participant age=16.6 years).<sup>217</sup>

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<sup>x</sup> In this thesis I use Devellis' subjective assessments of reliability, which ascribe the following labels:  $\alpha < 0.60$ , unacceptable;  $\alpha$  between 0.60 and 0.65, undesirable;  $\alpha$  between 0.65 and 0.70, minimally acceptable;  $\alpha$  between 0.70 and 0.80, respectable; between 0.80 and 0.90, very good; "much above" 0.90, consider shortening scale.<sup>187(p145)</sup>



**Table 3. Survey items subject to cognitive testing**

Construct	Item #	Item(s) tested	Response options
Descriptive DRV norms		Please tick one box on each line <sup>a</sup> to show how many students in your school you think has done each of the following:	
	DD1	a) How many <b>boys</b> in your school insult their girlfriend, swear at her, or try to control everything she does?	<ul style="list-style-type: none"> <li>• None</li> <li>• Some</li> <li>• Many</li> <li>• Most</li> </ul>
	DD2	b) How many <b>girls</b> in your school insult their boyfriend, swear at him, or try to control everything he does?	<ul style="list-style-type: none"> <li>• None</li> <li>• Some</li> <li>• Many</li> <li>• Most</li> </ul>
Injunctive DRV norms	ID1	Please tick one box on each line <sup>a</sup> to show how <b>most other students in your school</b> would feel if a student in your school did each of the following: a) A boy hit his girlfriend to get her back under control	<ul style="list-style-type: none"> <li>• Approve</li> <li>• Disapprove</li> <li>• Neither</li> </ul>
Injunctive gender norms	IG1	Please tick one box on each line <sup>a</sup> to show how <b>most other students in your school</b> would feel about each of the following scenarios: a) A girl and a boy go on a date, and the boy pays all the expenses	<ul style="list-style-type: none"> <li>• Approve</li> <li>• Disapprove</li> <li>• Neither</li> </ul>
	IG2	Please tick one box on each line <sup>a</sup> to show how <b>most other students in your school</b> would feel about a girl or a boy in your school who does each of the following: a) A girl in your school who has a lot of sex partners.	<ul style="list-style-type: none"> <li>• Approve</li> <li>• Disapprove</li> <li>• Neither</li> </ul>
Attitudes towards gender roles/ stereotypes	AG1	Please tick one box on each line <sup>a</sup> to show how much <b>you personally</b> agree or disagree with each statement. a) On a date, the boy should pay all the expenses.	<ul style="list-style-type: none"> <li>• Strongly agree</li> <li>• Agree</li> <li>• Disagree</li> <li>• Strongly disagree</li> </ul>

<sup>a</sup> Instructions for items refer to ticking “one box on each line” because the tested items form part of multi-item measures in which each item appears on a separate line. The wording was retained for cognitive testing including where only one item was tested.

### Sampling and recruitment

I conducted cognitive testing to refine survey items in one London secondary school, which had expressed interest in the Project Respect pilot cluster RCT but was not yet involved (this school later replaced a school that withdrew from the pilot trial). I asked the school to purposively sample eight girls and eight boys of varying academic abilities from year groups 8 to 10, including at least two girls and two boys per year group. We recommended that students with

personal experience of DRV not be selected due to the sensitive nature of the survey items to be tested. Participants' parents or carers received an information sheet prior to the interview and could opt out their child if they wished. On the day of their interview, I reviewed the assent form with participants and they had the opportunity to ask questions before completing the form and beginning the interview. The information sheet and assent form for cognitive interviews are provided in Appendix 6.

### **Data collection**

I conducted cognitive interviews in a private room in the participating school in April 2017. Participants self-completed a brief demographic form (Appendix 7) before participating in a warm-up exercise to gain familiarity with the think-aloud method. Interviews followed a written guide (see Appendix 7) that combined the think-aloud method with proactive verbal probes; reactive probes were used as the need arose. Using show-cards to demonstrate how survey items and response options would appear in the survey, I read each tested item aloud and took detailed notes on participants' responses to each think-aloud task and verbal probe.

### **Analysis**

I produced written summaries of responses to each think-aloud task and verbal probe by participant year group and then overall. Summaries were subjected to thematic analysis.<sup>178</sup> Drawing on Young et al.'s survey development work, initial codes related to understandability (assessing comprehension) and answerability (assessing recall, judgement and response).<sup>214,218</sup> I developed sub-codes inductively to reflect item characteristics enhancing or impeding item clarity and participants' ability to respond.<sup>178,213</sup> Finally, I applied this coding framework to the coding of notes on individual interviews to identify the participant-specific evidence underlying the themes emerging from analysis of written summaries.

#### *3.2.5.3. Methodological considerations for cognitive interviews*

In this section, I discuss my rationale for the selection of specific items for cognitive testing and the challenges preventing the inclusion of a descriptive gender norms item.

## Measure development

I selected items for cognitive interviews that would enable me to test a range of item characteristics, as shown in Table 4. In addition to covering four distinct constructs (injunctive DRV norms, injunctive gender norms, descriptive DRV norms and attitudes towards gender roles and stereotypes), tested items varied by DRV type (physical, psychological), perpetrator (girls, boys) and gender role construct. Considering gender role constructs, gender attitude and norms items assessed indicators of benevolent sexism<sup>219</sup> and the sexual double-standard. The former refers to an ideology conferring protection and other benefits to girls and women who adopt traditional roles,<sup>220</sup> while the latter refers to a common societal double-standard conferring more sexual permissiveness to boys and men than to girls and women.<sup>117,221</sup>

**Table 4. Characteristics of tested items**

Construct	Item #	DRV type		Perpetrator		Gender role construct	
		Physical	Psychological	Girls	Boys	Benevolent sexism	Sexual double-standard
Descriptive DRV norms	DD1		X		X		
	DD2		X	X			
Injunctive DRV norms	ID1	X			X		
Injunctive gender norms	IG1					X	
	IG2						X
Attitudes towards gender roles/ stereotypes	AG1					X	

I did not test an item assessing gender descriptive norms because I found no existing measures to serve as a basis for such an item and existing literature linking gender norms to DRV tends to focus on the role of social expectations and social sanctions (injunctive norms) rather than on beliefs about typical gendered behaviour. Developing an evidence-based measure of descriptive gender norms associated with DRV would be a standalone research project outside of the scope of this thesis.

### 3.2.6. Reliability and validity testing of new and adapted social norms measures – methods for Chapter 6 (Paper 3)

The Project Respect pilot cluster RCT offers an analytic opportunity to test the performance of two new and one adapted measure of social norms. Following their refinement based on cognitive testing, these measures were piloted in student baseline surveys. I draw on these data to answer my third research question, “Are new and adapted measures of social norms relating to DRV and gender reliable and valid when used in research with adolescents in England, and how can they be refined?” I present this component of my thesis as Paper 3 (prepared for publication) in Chapter 6.

As reflected in the student baseline survey instrument (Appendix 8) and detailed in the full Project Respect study report,<sup>37</sup> student baseline surveys collected data on a number of sociodemographic, mediator and outcome variables. In this section I report on methods for the collection and analysis of survey data used to assess the performance of social norms measures, including details that could not be included in Paper 3. All methods essential to interpreting this research are reported in Paper 3.

#### *3.2.6.1. Method for testing social norms measures*

In line with the CTT approach described in Section 3.2.3.2., I conducted psychometric testing to assess the reliability and validity of three social norms measures and to identify potential refinements. Paper 3 (see Chapter 6) tests the construct validity of these measures by testing hypotheses about how they should correlate with other measures. I address content validity in the Discussion section of my thesis (see Chapter 8), where I draw on findings from Paper 4 (see Chapter 7) to reflect on the extent to which social norms underpinning DRV in England are incorporated into the social norms measures presented in Paper 3. Criterion validity cannot be assessed for these measures because, as reported in Paper 1 (see Chapter 4), there exists no gold standard, no established measures of DRV norms or of gender norms in DRV research.<sup>193</sup>

### *3.2.6.2. Overview of methods used to test social norms measures*

#### **Sampling and recruitment**

One school in the Project Respect trial did not take part in baseline surveys because it joined the study shortly before baseline surveys were administered, replacing a school that had withdrawn. Year 8 and 9 students from the other five study schools were invited to take part in student baseline surveys, excluding students whom school staff judged as not competent to provide assent. Prior to data collection, students and their parents/carers received a study information sheet and could opt out/opt out their child ahead of time if they wished. On the day of data collection, students received a copy of the student information sheet. LSHTM fieldworkers, trained in safeguarding, research procedures and administration of the Project Respect survey, described the study. Students had the opportunity to ask questions before completing an assent form to take part. Information sheets and the assent form for baseline surveys are available in Appendix 9.

#### **Data collection**

Trained fieldworkers administered student baseline surveys in schools in June-July 2017. Students self-completed surveys anonymously using electronic tablets, which were replaced by paper surveys on the rare occasion when technical issues inhibited survey completion. School staff remained in the classroom but were instructed to refer questions about the survey to fieldworkers. Eligible students with learning or language difficulties who required support to complete baseline surveys were supported to do so by fieldworkers. Copies of the survey and assent forms were left for eligible students who were not in school on the day of data collection to self-complete and return via post. Further details on fieldwork are available on the full study report.<sup>37</sup> See Appendix 8 for the full student baseline survey.

#### **Survey measures**

After refinement based on the results of cognitive testing (see Chapter 5), three measures of social norms were piloted and tested in student baseline surveys: one adapted measure of descriptive DRV norms (3 items), one new measure of injunctive DRV norms (6 items) and one

new measure of injunctive gender norms (5 items). Participants reporting having friends with girlfriends/boyfriends, based on a routing question, were eligible to respond to descriptive DRV norms items. All participants were eligible to respond to injunctive norms items.

Informed by cognitive testing (see Chapter 5), measures of DRV and gender attitudes were adapted based on measures used in the Safe Dates trial<sup>77</sup> and in a study of gender attitudes and DRV in Greece,<sup>217</sup> respectively. As reported in Section 3.2.5.2., these original measures had also served as the bases for the new measures of injunctive DRV and gender norms, respectively. All participants were eligible to respond to DRV and gender attitudes items.

DRV victimisation and perpetration were measured using the 58-item Safe Dates scale<sup>167</sup> and the 18-item CADRI-s scale,<sup>222</sup> both with slight adaptations informed by cognitive testing.<sup>y</sup>

Participants reporting ever having dated were routed to Safe Dates items and those reporting having a girlfriend or boyfriend in the past year were routed to both Safe Dates and CADRI-s items. Scales assessed eight DRV outcomes:

- The Safe Dates measure assessed overall victimisation and perpetration, and psychological and physical subscales assessed type-specific victimisation and perpetration.
- The CADRI-s assessed overall victimisation and perpetration.

Sociodemographic variables for all participants included sex assigned at birth,<sup>223</sup> gender identity, age, year group, ethnicity,<sup>224</sup> sexual identity, religion<sup>225</sup> and socioeconomic status.<sup>226</sup> Participants were categorised as SGM if they reported a minoritised sexual or gender identity, including (in addition to direct responses to sex and gender items) those reporting their gender as female if assigned male sex at birth or their gender as male if assigned female sex at birth.<sup>z</sup>

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<sup>y</sup> Cognitive testing and refinements to DRV victimisation and perpetration measures are reported in detail in the full study report.<sup>37</sup>

<sup>z</sup> “Female” and “male” are sex rather than gender terms; however, wording here follows the wording of survey items.

## **Statistical analysis**

### Sample characteristics

I first explored characteristics of the overall sample and of the sample eligible to respond to descriptive norms items (“descriptive norms sample”). Subsequent analyses using descriptive norms items were conducted using the descriptive norms sample and other analyses were conducted using the full sample. To gain familiarity with the data, I examined relationships between DRV outcomes and sociodemographic and attitudinal variables. I examined DRV prevalence by group for categorical sociodemographic variables and assessed associations between DRV outcomes and continuous sociodemographic and attitudinal variables using univariable linear regression.

### Characteristics of social norms items

I used descriptive analyses to assess completion rates and distributions of each of the 14 social norms items.

### Assessing factor structure

Tests of reliability and validity assume that multi-item measures are unidimensional – that is, that they assess a single construct.<sup>187</sup> In line with Taylor et al.’s approach to attitudinal measures,<sup>146</sup> I conducted EFA on the full set of social norms items to determine whether items intended to measure the same construct loaded together. Items that loaded together were considered a single measure. I then conducted CFA to statistically test the fit of the resulting factor structure, i.e. the set of measures emerging from EFA.

### Assessing reliability

I assessed each measure’s reliability (how consistently it measures the assessed construct) using ordinal alpha, which is considered to be a more suitable index of reliability for Likert data than the more commonly reported Cronbach’s alpha.<sup>227</sup> I then tested whether removing any item would improve reliability. I carried out subsequent testing on the measures derived from

factor loadings that demonstrated minimally acceptable or better reliability according to the criteria proposed by Devellis.<sup>187</sup>

### Exploring statistical properties

I used descriptive analyses to explore the distribution of each measure's total and mean response scores, determining the measures' sensitivity to different levels of the assessed norms. I compared mean response scores by sex using t-tests, accounting for clustering within schools.

### Assessing validity

Tests of construct validity were guided by three *a priori* hypotheses:

- 1) Pro-DRV and gender-inequitable norms will be associated with Safe Dates measures of DRV victimisation and perpetration in univariable analyses
- 2) Pro-DRV and gender-inequitable norms will be associated with CADRI-s measures of DRV victimisation and perpetration in univariable analyses
- 3) Sex will moderate one or more relationships between pro-DRV and gender-inequitable norms and DRV

I tested these hypotheses using unadjusted linear regressions to assess associations between piloted social norms measures and DRV outcomes. I then added a sex\*social norms interaction term to each regression model to assess whether relationships between piloted social norms measures and DRV outcomes were moderated by sex.

Linear regressions assume independence, normality and homoskedasticity of the residuals. Violations of these assumptions can result in heteroskedasticity, which means that the residuals (the differences between predicted and actual values of the outcome variable) are not randomly distributed across all values of the independent variable. Heteroskedasticity, which can reduce the accuracy of standard error estimates for regression coefficients (and the resulting 95% confidence intervals and tests of statistical significance), can be assessed using



scatterplots which show the distribution of the residuals across values of the independent variable. To inform my analyses, I therefore tested whether the outcome variables used in my regressions (DRV victimisation and perpetration scores) were normally distributed. Finding skewed distributions, I examined residual plots for a sample of my univariable regressions, which showed heteroskedasticity. Data transformations were precluded by a high proportion of participants with DRV outcome scores of 0 because under these conditions transformations cannot approximate a normal distribution.<sup>228</sup> I therefore used bootstrapping, an approach robust to heteroskedasticity. to improve estimates for these and subsequent regressions. With bootstrapping, an analysis is repeated many times<sup>aa</sup> using smaller, randomly selected subsamples of the overall sample to simulate many smaller studies conducted from among an overall population defined by the full sample. The resulting estimates are normally distributed. These results are used to calculate the mean and standard error, which in bootstrapped regressions are taken as the bootstrapped regression coefficient and bootstrapped standard error respectively. The 95% confidence interval is calculated using the bootstrapped standard error.

Linear regressions also by default assume independence between observations, but clustered data like the data from Project Respect violates this assumption. I accounted for clustering within schools in my univariable and subsequent regressions by using robust cluster standard errors. This approach improves the accuracy of standard errors under these conditions by relaxing the assumption of independence between observations and imposing an assumption of independence between the sample's clusters (schools). Resampling for bootstrapped analyses took into account the clustered sampling design.

#### Linear regression with addition of covariates

To identify where refinements to the piloted measures might be needed, I conducted exploratory analyses using bootstrapped multivariable linear regressions that accounted for

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<sup>aa</sup> My bootstrapped analyses used 1000 replications, which is typically considered sufficient for calculating acceptable bootstrapped estimates.<sup>229</sup>

clustering using robust cluster standard errors. These regressions explored associations between piloted social norms measures and DRV outcomes, adjusting for sociodemographic and attitudinal covariates. Models were sex-stratified where sex\*social norms interactions had been significant. The weight of existing evidence, including longitudinal research,<sup>77,82</sup> suggests that some social norms and DRV outcomes have a significant association that is independent of the effects of personal attitudes.<sup>76,77,82,122,123</sup> Gaps in existing literature and heterogeneity in measurement and methods preclude conclusions about which types of social norms are associated with which DRV outcomes in this way, and behavioural theory suggests that the relative importance of attitudes and norms is likely to vary by outcome and context.<sup>100</sup> Consequently, I did not develop *a priori* hypotheses about which tested measures would show an independent relationship with which DRV outcomes. Instead, I drew on the results of these analyses to assess whether the tested measures were sensitive to an independent relationship with DRV outcomes, and, if not, to consider refinements to improve their sensitivity.

### *3.2.6.3. Methodological considerations for testing social norms measures*

#### **Statistical analysis – testing validity**

Evidence is mixed on how relationships between social norms and DRV might vary by sex. For example, Foshee et al. found that descriptive DRV norms were associated with DRV perpetration among boys in some analyses but not among girls<sup>77</sup> while Nardi-Rodriguez et al. found consistent correlations between descriptive DRV norms and boys' and girls' victimisation and perpetration.<sup>128</sup> Mixed evidence is also found for injunctive DRV norms (e.g. see Enosh 2007 and Hunt et al. 2022),<sup>76,78</sup> and my systematic review (see Paper 1) identified no studies that compare associations between injunctive gender norms and DRV (either victimisation or perpetration) among both girls and boys.<sup>193</sup> So while within- and across-study evidence suggests that relationships between social norms and DRV can vary by sex, it does not support hypotheses about which norm-DRV relationships will vary in this way.

The tests of construct validity undertaken for my thesis share two underlying assumptions: (1) social norms correlate with DRV risk, and (2) this relationship varies by sex for some norm-DRV

outcomes pairings. However, there is no definitive way to assess construct validity.<sup>189</sup> If the piloted social norms measures don't correlate with DRV or vary by sex in their correlations as hypothesised, this could be for a number reasons. It could be due to a problem with theory (i.e. social norms do not underpin DRV or this relationship doesn't vary by sex) and/or with the piloted measure (i.e. social norms underpin DRV and do so differently for girls and boys, but the piloted measure does not really measure these norms).<sup>189</sup> It could also be due to a problem with the comparator measure (i.e. our outcome measure does not really measure DRV) or with a sample size too small to detect real correlations and effect-modification. Given this uncertainty, Streiner and Norman advise that "the weight of the evidence should be in favor of a positive relationship...the burden of evidence in testing construct validity arises not from a single powerful experiment, but from a series of converging experiments".<sup>189(p11)</sup> I therefore assessed construct validity against different types of DRV (overall, psychological and physical) and both victimisation and perpetration. While a reliable and valid social norms measure might not correlate with every outcome, hypothesis-driven tests exploring outcome measures provide the opportunity to build up a picture of how the tested measures perform. The Safe Dates and CADRI-s scales were both selected because they are the two most commonly used relationship violence scales developed for adolescents<sup>230</sup> and they provide different types of evidence for validity-testing. The Safe Dates scale is more sensitive, while the CADRI-s is more established and shorter, and so potentially more suitable for use in evaluation studies.<sup>37</sup>

### **Statistical analysis – exploratory analysis to inform refinements**

If social norms do play a role in shaping DRV outcomes, they should theoretically show an independent relationship to DRV outcomes after adjusting for sociodemographic and attitudinal covariates. Several studies identified in my systematic review (see Paper 1) have examined this relationship empirically, adjusting for DRV and/or gender attitudes. Given the range of different possible DRV outcomes (e.g. experience and perpetration of DRV overall or by type; and in samples of girls, boys or all genders), however, the picture they paint is quite patchy. There is currently no evidence on whether relationships between descriptive gender norms persist when accounting for DRV or gender attitudes. Considering descriptive DRV norms, attitude-

adjusted analyses variously report associations with DRV perpetration among boys<sup>77,82,123</sup> or report no such association among girls,<sup>77</sup> boys<sup>77,81,82</sup> or overall.<sup>130</sup> Similarly, findings on injunctive DRV norms are conflicting. Some studies report that these are not associated with either victimisation or perpetration among girls<sup>76</sup> or overall<sup>131,132</sup> in attitude-adjusted analyses. However, others find that they are associated with victimisation<sup>78</sup> and perpetration<sup>83,127</sup> among girls<sup>78,127</sup> and overall<sup>78,83</sup> in these analyses. Among boys, evidence suggests that injunctive DRV norms are associated with DRV victimisation<sup>76,78</sup> but not perpetration<sup>76,127</sup> in attitude-adjusted analyses. Similar analyses exploring gender-inequitable injunctive norms report an association with girls' victimisation<sup>135</sup> and with perpetration but not victimisation in a gender-aggregated sample.<sup>133</sup>

The weight of available evidence suggests that some norms-DRV associations can be expected to persist when attitude variables are added to these models, but it does not pinpoint norms and DRV outcomes for which this is likely to be the case. I therefore used multivariable regressions to test whether the piloted measures were sensitive enough to demonstrate this relationship, and I reflect on findings to inform recommendations in Paper 3 (see Chapter 6) and in the Discussion section of my thesis (see Chapter 8) on potential refinements of the tested measures.

### 3.2.7. Relationships between social norms and DRV in student, staff and parent/carer accounts – methods for Chapter 7 (Paper 4)

Content validation refers to ensuring that a scale sufficiently covers the construct it is intended to measure and includes only items that reflect that specific construct.<sup>189</sup> This is easiest to ascertain for well-defined constructs. Devellis gives the example of a measure assessing all vocabulary words taught to sixth grade students.<sup>187</sup> Content validity is generally more difficult to ensure for constructs like attitudes or beliefs because it is difficult to define the universe of potentially relevant items.<sup>187</sup> Assessing and improving the content validity of the social norms measures tested in Chapter 6 requires evidence on which social norms are important to DRV behaviour in the UK, which could also inform preliminary development of items on descriptive

gender norms. Qualitative research with young people in the UK offers some insights<sup>34,138,139</sup> but has not sought explicitly to explore these questions or to analyse data through a social norms lens. The Project Respect pilot trial provided an opportunity to explore prevalent social norms relating to DRV and gender with young people, parents/carers and school staff and to identify relevant norms implicated in their discussions about or justifications for DRV.

I drew on data from Project Respect optimisation sessions, trainings and process evaluation interviews and focus groups to address my fourth thesis research question, “What are student, staff and parent/carer accounts of social norms relating to DRV and gender in schools, and how are these implicated in DRV?”. I present this component of my thesis as Paper 4 (prepared for publication) in Chapter 7. Details of optimisation and process evaluation methods have been previously reported in full.<sup>37</sup> In this section, I report on methods relating to the collection and analysis of the data I draw on for this component of my thesis, including details that could not be included in Paper 4 due to length. All methods essential to interpreting the results of this research are reported in Paper 4.

#### *3.2.7.1. Method for exploring social norms and DRV in student, staff and parent/carer accounts*

In contrast to quantitative research, which primarily produces numerical data, qualitative research primarily uses interviews and observations to produce written or oral language data.<sup>178</sup> While quantitative research focuses on quantifying phenomena,<sup>178</sup> qualitative research focuses on the contexts, meanings and explanations of participants’ experiences and can be used to generate theory and hypotheses.<sup>186</sup> By exploring questions like “how” and “why”,<sup>178(p8)</sup> this approach can provide insight into processes over time, detailed accounts of setting and context, and a deep understanding of the concepts explored.<sup>186</sup>

Conducted individually or in a group, qualitative interviews provide participant accounts of the phenomenon of study.<sup>178</sup> They are particularly well-suited to exploring participants’ perceptions of why they and others do what they do.<sup>178</sup> This approach is suited well to my fourth research question because the conceptualisation of social norms in this thesis focuses on perceptions of

what others think and do and social mechanisms through which these factors influence DRV behaviour. While observational methods typically function to provide direct data on phenomena,<sup>178</sup> the observational data on which I draw for the present analysis (recorded trainings) are more akin to group interview data because they feature comments from staff about their perceptions of DRV and of behaviours in their schools that they find concerning. These data complement individual staff interviews for two reasons: (1) participants might feel more comfortable discussing sensitive topics, such as negative or critical views, in a group environment,<sup>178</sup> and (2) interview data are subject to social desirability bias,<sup>178</sup> but hesitation to share information that staff feel could cast their school in a negative light might be mitigated in a learning setting where it is a trainer rather than an evaluator posing questions. In a similar vein, utilising a mixture of group, paired and individual interviews with students provided opportunities to access both “shared social meanings”<sup>178(p155)</sup> that become evident in interactions between participants and more “in-depth accounts”<sup>178(p61)</sup> as well as socially proscribed views that participants might hesitate to raise amongst their peers.<sup>178</sup>

### *3.2.7.2. Overview of methods used to explore social norms and DRV in student, staff and parent/carer accounts*

#### **Sampling and recruitment**

##### Optimisation sessions

From the list of secondary schools that had expressed an interest in but were not selected for the Project Respect pilot RCT (see Section 3.1.2.), we selected four to take part in focus groups to optimise the Project Respect intervention. We sampled schools purposively by region (south-east and south-west England) and deprivation, assessing the latter using the IDACI score assigned to the school’s postcode. Each school’s head teacher signed a consent form. For each optimisation session we aimed to include three girls and three boys from each of years 9 and 10 alongside three or more staff. We aimed for the latter to include: a school safeguarding lead; staff involved in Personal, Social, Health and Economic education; and senior leadership. Participants and the parents/carers of students invited to take part received an information sheet ahead of time and could opt out if they wished. Participants completed an

assent/consent form at the start of each session. When feasible, participants from the first wave of optimisation sessions also took part in the second (final) wave. Information sheets and assent/consent forms for optimisation sessions are available in Appendix 10.

### Process evaluation – trainings and interviews

For this component of my thesis, I drew on training and interview data collected as part of the Project Respect process evaluation. We aimed to audio-record NSPCC-led trainings and the cascaded all-staff trainings (delivered by school staff participating in the NSPCC-led trainings) in each of the four intervention schools. For NSPCC-led trainings, the trainer and each participant received a study information sheet ahead of time and completed a consent form at the start of the session. Trainers for cascaded all-staff trainings also received an information sheet ahead of time and completed a consent form before the session. Information sheets and consent forms for NSPCC-led and cascaded trainings are available in Appendix 11.

For interviews in each intervention school we aimed to recruit four staff, purposively sampled by seniority and programme involvement, and two parents/carers, purposively sampled by their child's year group and sex. We aimed to recruit eight students per intervention school and four per control school, purposively sampled by year group and gender. We also aimed to recruit two staff members per control school, purposively sampled by seniority. Interview participants, and the parents/carers of students invited to take part, received an information sheet ahead of time with information on how to opt out. At the start of the session, they received a copy of the information sheet and completed an assent/consent form. A sample of information sheets and assent/consent forms for process evaluation interviews are available in Appendix 12.

## **Data collection**

### Optimisation sessions

We sought to conduct one session per school for each of two waves of optimisation sessions. The first informed the intervention's content and format. The second sought feedback on the

planned intervention and draft materials, and explored terminology used among young people, the role of social media in romantic and sexual relationships, and factors that could affect programme implementation. We began each session with a slide presentation outlining key information. The first session also included prompts for whole-group discussions in the course of this presentation. Staff and students were then separated for focus groups, each of which was led by a member of the NSPCC or research team using semi-structured discussion guides (optimisation session and process evaluation guides are available in Appendix 13). We noted in the first session that students were more forthcoming once separated from staff and that younger students were reluctant to speak, which informed the decision for subsequent optimisation sessions to shorten the whole-group portion and to further separate year 9 and year 10 students for focus group discussions. NSPCC and study team members took notes on optimisation sessions. Sessions in the second wave were also audio-recorded and transcribed.

#### Process evaluation – trainings and interviews

NSPCC-led trainings aimed to enable school and intervention leaders to plan and deliver Project Respect, while cascaded all-staff training delivered by school staff leading the intervention aimed to prepare all school staff to recognise, prevent and respond to DRV. Trainings included discussions among staff about signs of DRV and about behaviours in the school that concern them, providing data on school context. We conducted interviews using semi-structured guides (see Appendix 13). Where schools requested, student interviews were conducted in pairs or in groups. All interviews explored school context, including how gender was negotiated in schools, for example in terms of school gender balance, power relations and gender norms, and the extent to which the school environment reinforced gender role differences.<sup>91</sup> Intervention school interviews further explored programme implementation, acceptability, impact and mechanisms of change. Control school interviews further explored provision of relationship and sex education, social and emotional learning and violence prevention.

#### **Data analysis**

I had initially gained familiarity with Project Respect optimisation, training and interview data through my work on the per-protocol process evaluation. To address my fourth thesis research



question, I conducted a secondary analysis of these data focusing on dynamics and expectations concerning gender, dating and relationships and sexual harassment.

Taking a common approach to analysing qualitative data in public health, I conducted thematic analysis complemented by techniques drawn from grounded theory.<sup>178</sup> Blending deductive and inductive approaches,<sup>178</sup> my research question and a review of background theoretical and empirical literature guided starting codes and subsequent analysis. As new themes emerged, new codes were added inductively to capture accounts of social norms and how they present and operate within schools. These could come underneath starting codes or be added as new independent codes in the coding framework. Axial coding was then used to explore relationships between codes. As analysis progressed, codes were combined where there was significant overlap and separated where distinct constructs emerged, to arrive at a final coding scheme.

### *3.2.7.3. Methodological considerations for exploring social norms and DRV in student, staff and parent/carer accounts*

#### **Data collection and analysis**

##### Direct and indirect evidence on social norms and DRV

Collecting qualitative data for the optimisation and process evaluation of Project Respect provided an opportunity to explore young people's accounts of social norms relating directly and indirectly to DRV. Personal experiences with DRV and adolescent sexual abuse in the UK have been explored elsewhere<sup>34,138,139</sup> and were not the focus of this research. We therefore did not purposively select interview participants with experience of DRV, and we oriented interview questions more broadly to explore perceptions of behaviours and norms within participating schools. Where participants drew direct links between social norms and DRV, I drew this out in my analysis. Acknowledging that people are not fully and consciously aware of the factors driving their and others' behaviours,<sup>176,231</sup> I drew on empirical and theoretical literature to interpret participant accounts of social norms and gender relations in their contexts and how these might contribute to or protect against DRV.<sup>178</sup>

##### Sequencing of analysis

Bearing in mind that qualitative research can provide a deep but relatively narrow perspective from a limited number of participants compared to quantitative surveys, I staged my analyses to move from the data sources providing the broadest perspective and most general application (i.e., from optimisation and control schools) to those exploring experience with the Project Respect intervention. I anticipated that interviews from intervention schools would provide richer data on DRV and social norms because the intervention itself addressed these. In addition to participants having concrete lessons and potential programme impacts on which to draw, I anticipated that they were also likely to have considered these issues in more depth over the preceding year and to be more practised in discussing them, yielding more in-depth observations and reflections. I therefore conducted initial coding of optimisation and process evaluation data in the following order:

1. Optimisation sessions
2. Control school interviews
3. Intervention school data

### 3.2.8. Ethics

Project Respect received ethical approval from the LSHTM Ethics Committee (reference: 11986) and the NSPCC Research Ethics Committee (R/17/106). The latter provided separate approvals for each component (baseline surveys, intervention implementation, process evaluation and follow-up surveys). Ethical approval letters are provided in Appendix 14. These approvals cover all data collection and per-protocol analyses of optimisation sessions, process evaluation data, cognitive interviews and baseline surveys. I conceptualised and obtained ethical approval for an amendment to the study's original ethics application to examine the attitude and social norms measures in the cognitive interviews. The literature review I conducted for Paper 1 of this thesis, presented in Chapter 4, is exempt from ethical review. I conducted secondary analyses of data collected for Project Respect for Papers 2-4, presented in Chapters 5-7, respectively. I obtained ethical approval for this secondary analysis from the LSHTM Ethics Committee (ref: 28163), and this ethical approval letter is included in Appendix 14.

### 3.2.9. Reflexivity and positionality

I share the critical realist view that social science should seek to improve societal well-being.<sup>177</sup>

Shaped by my communities and the feminist values with which I was raised, before coming to public health I studied and worked in politics and policy advocacy. I became interested in public health because of its practical, integrative approach to assessing risks to health and wellbeing, and how they might be mitigated most effectively. What drew me to DRV research, in particular, was its potential for contributing to transformation towards a more gender-equitable society. Aware of how these core values have shaped the paths I have pursued, I have been alert to the importance of approaching my research and this thesis with curiosity and not dogma. Studying behavioural theories in previous research on theory synthesis<sup>232</sup> and then in the early work on my thesis was formative in expanding my view of the wide-ranging factors that interact to produce health outcomes. I hope with my thesis to make a useful contribution to social norms measurement in DRV research, a narrow but important area that is still in its early days of development. The data from Project Respect offered an analytic opportunity for this work. Having seen measurement as a black box in the past, I shaped a project that would provide the opportunity to expand my qualitative skillset while taking my first steps into the vast and somewhat intimidating field of psychometrics.

As a university student, I trained and volunteered in peer patient-centred counselling, and I drew on key skills from that work in my qualitative interviews. These included asking open-ended questions and reflecting back what is said, techniques to avoid biasing participant responses and to check that I have understood participants' meanings as they intended. Familiarity with these skills also helped to offset an imbalanced dynamic in my interactions with study participants. I sensed that in meeting with me as a university researcher coming to evaluate the programme they had been tasked with delivering, school staff were sometimes inclined to portray their schools and their work in a positive light. Many faced challenges with implementing Project Respect due to structural and resource constraints in the school, as we have previously reported,<sup>2</sup> which might have made participants feel defensive of their work or their school. Similarly, students were sometimes hesitant to speak openly in interviews with adult professionals they had never previously met. At the start of my interviews, I reiterated my

role – to evaluate survey questions (for cognitive interviews) and the programme (for process evaluation interviews) – and that I was interested in knowing both what they thought worked and what they thought didn't. Though levels of rapport and openness varied by participant, we were able to have insightful and engaged discussions and the data collected represent a range of participant views.

## Chapter 4. Paper 1: Social norms measures relating to DRV and gender – systematic review of DRV research

### 4.1. Introduction to Paper 1

When developing student surveys for the Project Respect pilot RCT, we encountered a practical challenge: we could identify no established measures of social norms relating to DRV and gender as theorised mediators in the intervention's theory of change. Given the time constraints of an ongoing trial, there was no scope to conduct a systematic review, so I instead conducted an *ad hoc* review of available literature to try to locate appropriate measures. Aware that social norms experts had drawn attention to the common practice of measuring personal attitudes but not social norms,<sup>6,155</sup> and to the dearth of established, validated norms measures in the field of adolescent SRH,<sup>6</sup> I was unsurprised to identify no established measures in DRV research.

Through this process I identified a gap in existing DRV research: though social norms were widely viewed as important,<sup>8</sup> measures to assess them had not been systematically collated and assessed. I therefore set out to conduct a systematic review and quality assessment of measures of the types of social norms most extensively linked to DRV (DRV norms and gender norms) and to answer the first research question of my thesis: "Are existing measures of adolescent social norms relating to DRV and gender reliable and valid?" The practicalities of field research meant that the Project Respect study had ended before findings from this review were available and the review could not be used to inform the tested measures. Instead, findings from the review fill in the broader picture of social norms measurement in DRV research. They reveal a disjointed field of study with some promising approaches but little coherence, cumulation and synthesis of knowledge, strategic direction or shared principles. This work sets the stage for the subsequent results chapters of my thesis, which describe the systematic testing and refinement of three specific measures and draw on evidence from this work to, informed by the review presented in this chapter, offer recommendations to further social norms measurement in DRV research.

The published supplemental appendices to which Paper 1 refers are provided in Appendix 5 of this thesis.

I have previously presented preliminary findings from this systematic review at the Lancet's UK Public Health Science conference (2022);<sup>233</sup> in the associated abstract published in a special issue of *The Lancet* (2022)<sup>4</sup> and provided in Appendix 15; and in a webinar for the Learning Initiative on Norms, Exploitation and Abuse (LINEA) Project (2020).<sup>234</sup>

4.2. Paper 1: Social norms about dating and relationship violence and gender among adolescents: systematic review of measures used in dating and relationship violence research

## RESEARCH PAPER COVER SHEET

Please note that a cover sheet must be completed for each research paper included within a thesis.

### SECTION A – Student Details

Student ID Number	452277	Title	Ms.
First Name(s)	Rebecca		
Surname/Family Name	Meiksin		
Thesis Title	Developing and refining social norms measures for the evaluation of a school-based intervention to reduce dating and relationship violence among adolescents in England		
Primary Supervisor	Professor Chris Bonell		

If the Research Paper has previously been published please complete Section B, if not please move to Section C.

### SECTION B – Paper already published

Where was the work published?	Trauma, Violence, and Abuse		
When was the work published?	February 2023		
If the work was published prior to registration for your research degree, give a brief rationale for its inclusion	N/A		
Have you retained the copyright for the work?*	Yes	Was the work subject to academic peer review?	Yes

\*If yes, please attach evidence of retention. If no, or if the work is being included in its published format, please attach evidence of permission from the copyright holder (publisher or other author) to include this work.

### SECTION C – Prepared for publication, but not yet published

Where is the work intended to be published?	█
Please list the paper's authors in the intended authorship order:	█



Stage of publication	Choose an item.
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**SECTION D – Multi-authored work**



<p>For multi-authored work, give full details of your role in the research included in the paper and in the preparation of the paper. (Attach a further sheet if necessary)</p>	<p>I led protocol development, conducted the literature searches, led screening, conducted data extraction and led analysis, writing and submission. I trained Manika Garg and Amiya Bhatia in the review protocol for their roles in supporting title/abstract screening and checking data extraction, respectively. Anjalee Kohli was the lead advisor on the protocol. Chris Bonell, GJ Melendez-Torres and Nambusi Kyegombe helped to interpret the data. All authors provided feedback on the manuscript and approved the manuscript prior to publication.</p>
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**SECTION E**

Student Signature	Rebecca Meiksin
Date	15/03/2024

Supervisor Signature	Chris Bonell
Date	15/03/2024

# Social Norms About Dating and Relationship Violence and Gender Among Adolescents: Systematic Review of Measures Used in Dating and Relationship Violence Research

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TRAUMA, VIOLENCE, & ABUSE  
1–15

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## Abstract

Adolescent dating and relationship violence (DRV) is widespread and associated with increased risk of subsequent poor mental health outcomes and partner violence. Shifting social norms (i.e., descriptive norms of perceived behavior and injunctive norms of acceptable behavior among a reference group of important others) may be important for reducing DRV. However, few DRV studies assess norms, measurement varies, and evidence on measure quality is diffuse. We aimed to map and assess how studies examining DRV measured social norms concerning DRV and gender. We conducted a systematic review of DRV literature reporting on the use and validity of such measures among participants aged 10–18 years. Searches included English peer-reviewed and grey literature identified via nine databases; Google Scholar; organization websites; reference checking; known studies; and expert requests. We identified 24 eligible studies from the Americas ( $N=15$ ), Africa ( $N=4$ ), and Europe ( $N=5$ ) using 40 eligible measures of DRV norms (descriptive:  $N=19$ ; injunctive:  $N=14$ ) and gender norms (descriptive:  $N=1$ ; injunctive:  $N=6$ ). No measure was shared across studies. Most measures were significantly associated with DRV outcomes and most had a defined reference group. Other evidence of quality was mixed. DRV norms measures sometimes specified heterosexual relationships but rarely separated norms governing DRV perpetrated by girls and boys. None specified sexual-minority relationships. Gender norms measures tended to focus on violence, but missed broader gendered expectations underpinning DRV. Future research should develop valid, reliable DRV norms and gender norms measures, and assess whether interventions' impact on norms mediates impact on DRV.

## Keywords

social norms, dating violence, dating and relationship violence, domestic violence, intimate partner violence, measurement

## Introduction

Dating and relationship violence (DRV) refers to intimate partner violence (IPV) involving a young person (Young et al., 2017), defined here as aged 12–18 years. It comprises physical, psychological, and/or sexual abuse perpetrated or experienced by a current or former intimate partner (Barter & Stanley, 2016; Breiding et al., 2015; Young et al., 2017). DRV is widespread among girls and boys (Leen et al., 2013; World Health Organization, 2021): in systematic reviews, psychological DRV victimization rates range from 47% to 88% (Exner-Cortens et al., 2016a) and meta-analyses suggest prevalence of 21% for physical and 14% (among girls) and 8% (among boys) for sexual DRV (Wincentak et al., 2017). While specific prevalence rates vary widely by measurement and sampling (Exner-Cortens et al., 2016a; Leen et al., 2013; Wincentak et al., 2017), patterns tend to be

consistent: psychological DRV is the most common, followed by physical and then sexual DRV, often with multiple types co-occurring (Leen et al., 2013). Experiencing DRV can lead to injuries (Foshee, 1996) and is associated with increased risk of subsequent depression (Roberts et al., 2003), substance use, antisocial behavior (Exner-Cortens et al., 2013; Roberts et al., 2003), suicidal ideation (Exner-Cortens et al., 2013), and suicide attempts (Castellvi et al., 2017) among girls and boys. In addition, it is a leading risk

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factor for morbidity and mortality among girls aged 15–19 years (Mokdad et al., 2016), with girls who experience DRV reporting harms additional to those reported by boys including fear (Barter et al., 2009), increased substance use (Exner-Cortens et al., 2013), and more injuries (Foshee, 1996). DRV victimization is a longitudinal risk factor for IPV victimization (Exner-Cortens et al., 2017; Herrenkohl & Jung, 2016) and perpetration (Manchikanti Gómez, 2011) in adulthood, highlighting the influence of adolescent relationships on future development (Exner-Cortens et al., 2017) and the importance of early intervention.

Systematic reviews report that interventions have been successful in increasing DRV knowledge (De La Rue et al., 2014; Fellmeth et al., 2013) and changing personal attitudes (De La Rue et al., 2014), but demonstrate little impact on DRV perpetration or victimization (De La Rue et al., 2014; Fellmeth et al., 2013). While little is known about effective DRV prevention, social norms theory posits that harmful social norms can hinder behavior change despite changes in knowledge or attitudes (Alexander-Scott et al., 2016), while protective norms can support behavior change (Cislaghi & Heise, 2018). Social norms comprise perceptions of typical behaviors (descriptive norms) and acceptable behaviors (injunctive norms) among a reference group of important others, with social sanctions playing an important role in holding norms in place (Alexander-Scott et al., 2016; Cislaghi & Heise, 2018).

Empirical research finds that DRV norms are associated with DRV victimization and perpetration. Considering descriptive norms, young people who believe that their friends experience or perpetrate DRV are more likely to report perpetrating DRV themselves (Kinsfogel & Grych, 2004; Reed et al., 2011), including in longitudinal studies (Foshee et al., 2001; Vagi et al., 2013), even when controlling for their own attitudes toward DRV (Foshee et al., 2001). Girls who report having friends involved in violent relationships are at increased risk for subsequent victimization (Arriaga & Foshee, 2004). Although injunctive norms are less explored in the literature, data also suggest that injunctive pro-DRV norms in secondary school are associated with sexual violence perpetration prior to university (Salazar et al., 2018).

Gender norms, “collective beliefs about what behaviors are appropriate for women and men and the relations between them” (The Social Norms Learning Collaborative, 2021, p. 8), can be thought of as a particularly powerful type of social norms (Lokot et al., 2020) and play an important role in DRV risk. Qualitative research finds myriad ways in which inequitable gender norms operate to underpin male DRV in heterosexual relationships, including by forming a basis for the social acceptability of sexual coercion (Barter et al., 2009) and by grounding girls’ status in having a boyfriend (Marston & King, 2006), which could present a barrier to ending abusive relationships (Barter, 2006; Barter et al., 2009). In interviews with young people, norms supporting the legitimacy of

male dominance in relationships emerge as drivers of both physical violence and controlling behaviors (Barter et al., 2009; Wood et al., 2011). Although less explored in quantitative research, evidence also suggests that inequitable injunctive norms relating to household gender roles (Shakya et al., 2022) and female sexual availability (Wesche & Dickson-Gomez, 2019) are associated with an increased risk of DRV.

This evidence suggests that interventions may need to shift social norms concerning DRV and gender that support DRV. Social norms theory, and the approach of fostering protective DRV and gender norms among peers, has long informed DRV interventions (Offenhauer & Buchalter, 2011; Stanley et al., 2015; Wolfe & Jaffe, 1999). This is evident in the popularity of bystander interventions, which encourage young people to intervene in DRV (Stanley et al., 2015), and of gender-transformative approaches (Stanley et al., 2015; Whitaker et al., 2006), which aim to reshape gender roles and promote “more gender-equitable relationships” (Gupta, 2000, p. 10). Evaluations suggest that norms-based interventions can be effective in reducing intra-marital and domestic violence (Fulu et al., 2014), and there is emerging evidence that interventions with young people (Plourde et al., 2016) or their parents (Ehrensaft et al., 2018) can shift DRV-specific social norms among adolescents. However, evaluations of DRV interventions rarely assess impact on social norms (Coker et al., 2017; Foshee et al., 2005; Miller et al., 2014; Taylor et al., 2011), and to our knowledge none have assessed social norms as a potential mediator of intervention effects, limiting what is known about intervention mechanisms.

This may be due in part to the lack of consensus on how to measure social norms and to limited evidence as to the reliability and validity of existing measures (Ashburn et al., 2016). Valid measures assess the construct in question (DeVellis, 2017): in this case, social norms that are important to DRV outcomes. Reliable measures do so consistently (DeVellis, 2017). Measures of social norms used with adults are unlikely to be suitable for adolescents due to likely differences between these populations in reference groups, behaviors, and cognitive ability to distinguish between personal attitudes and the views of others (Moreau, 2018; Moreau et al., 2021). We therefore reviewed existing DRV literature to explore (1) what measures exist of adolescent descriptive and injunctive social norms concerning DRV and gender and (2) the validity and reliability of these measures.

## Methods

This review was guided by a study protocol registered on the Open Science Framework (Meiksin, 2020) and is exempt from ethical review.

### *Eligibility, Search Strategy, and Screening*

Eligible reports were studies published in English since 1997. We selected this timeframe because cultural shifts



might render older measures meaningless or inappropriate for young people today (Reyes et al., 2016), and because 1997 marks the advent of social media (History Cooperative, n.d.), which plays an important role in the initiation and formation of relationships among adolescents (McGeeney & Hanson, 2017). Reports were required to assess the construct validity of one or more quantitative measure of norms relating to DRV and/or gender (including bystander norms in these domains) by testing these against DRV behavioral outcomes (i.e., by exploring their association with DRV victimization, perpetration, and/or bystander behavior). Measures were assessed among participants aged 10–18 years and comprised one or more survey items, with at least 50% of items assessing one of four domains: descriptive DRV norms, injunctive DRV norms, descriptive gender norms, or injunctive gender norms. Where eligible measures comprised subscales, subscales were also included as unique measures if they independently met eligibility criteria.

Measures of DRV and gender norms overlap where those relating to perceptions of the typicality or social acceptability of DRV are “gender specific,” by which we mean they assess norms governing girls and boys separately (e.g., a measure assessing the social acceptability of a boy hitting his girlfriend). We categorized all measures of DRV norms as DRV norms whether or not they were gender specific. Broader gender norms measures, that is, those that did not focus on violent behaviors in the context of adolescent relationships or dating, were categorized as gender norms. Descriptive norms were operationalized as perceptions of the typicality or frequency of (1) DRV and (2) gendered behaviors, excluding DRV behaviors. Injunctive norms were operationalized as perceptions of (1) DRV’s social acceptability and (2) social expectations based on gender, excluding social acceptability of DRV.

Our search strategy used free-text and controlled vocabulary terms linked by the Boolean connector “OR” for three concepts: (1) social norms concerning DRV and/or gender; (2) DRV; and (3) adolescents. The search terms used within each concept were linked by the Boolean connector “AND” (see Supplemental Appendix A for Medline search strategy). The search strategy was peer reviewed based on the Peer Review for Electronic Search Strategies guidance (McGowan et al., 2016; Shamseer et al., 2015). After piloting the strategy in Medline, in June 2019 we searched nine databases containing reports relevant to our topic: IBSS; Popline; Medline; PsychINFO; PsychEXTRA; EMBASE; Web of Science; Global Health; and Scopus. We conducted additional searches via Google Scholar (July 2019; limited to the first 100 results), websites of relevant organizations (June 2020) (Care Evaluations, n.d.; Explore Our Resources, n.d.; Find a Report, n.d.; Girl Effect, n.d.; Global Early Adolescent Study, n.d.; Publications, n.d.; Resources, n.d.), two online databases of relevant measures (June 2020) (EMERGE, n.d.a; EMERGE, n.d.b; Gender and Power Metrics, n.d.), contacting subject experts (February–March

2020) (Advancing Learning and Innovation on Gender Norms (ALIGN), n.d.; Gender Violence and Health Centre (GVHC), n.d.; Learning Collaborative to Advance Normative Change—IRH, n.d.; Sexual Violence Research Initiative, n.d.), our study team’s internal database of DRV literature, and reference checking. We also screened for eligibility all evaluations included in eight reviews of DRV intervention studies (Cornelius & Resseguie, 2007; De Koker et al., 2014; De La Rue et al., 2014; Fellmeth et al., 2013; Leen et al., 2013; Lundgren & Amin, 2015; Stanley et al., 2015; Whitaker et al., 2006).

Search results were imported into EndNote X9 (The EndNote Team, 2013), de-duplicated (“Removing Duplicates from an EndNote Library,” 2018), and dual-screened on title and abstract by the first author (RM) and another reviewer in batches of 50 until reaching 85% agreement. These reviewers discussed records of uncertain eligibility to reach a consensus. RM then single-screened remaining records on title and abstract and screened all retained records on full text, discussing records of uncertain eligibility with AK and CB.

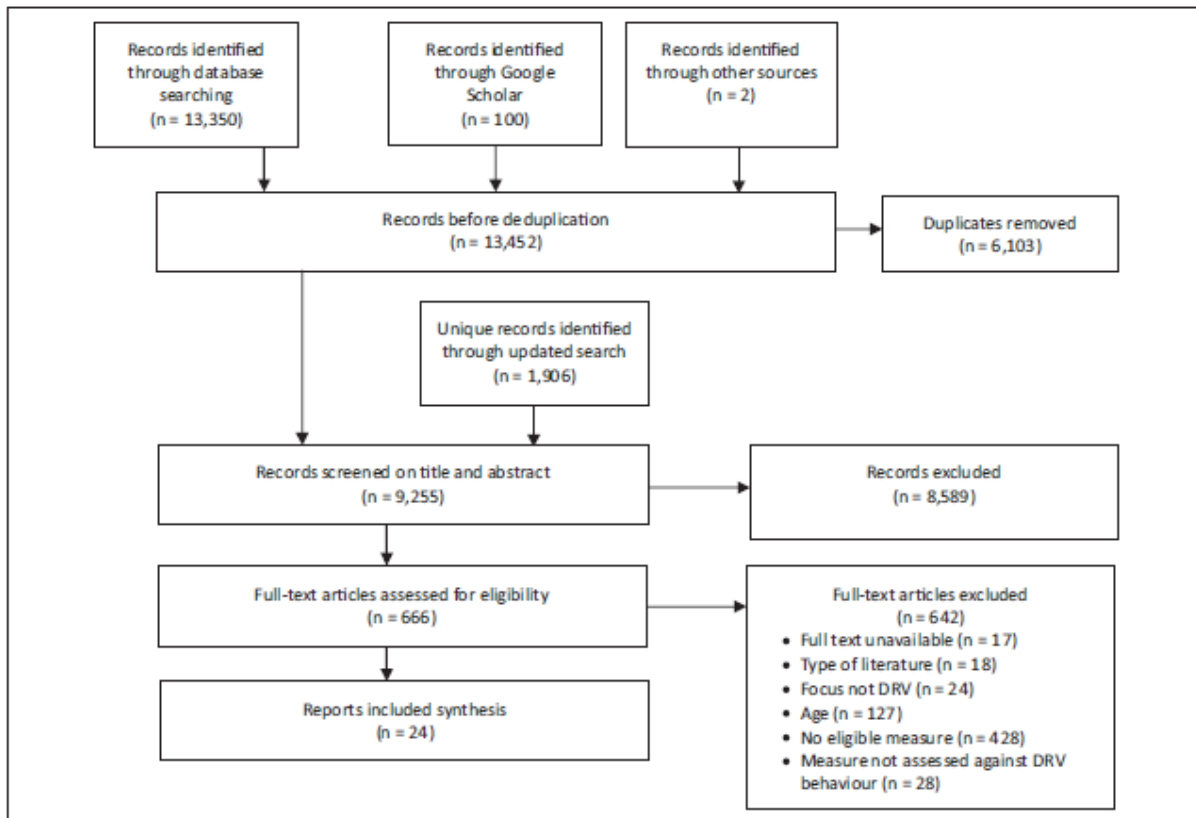
The database search was updated in March 2022, excluding IBSS (due to lack of institutional access) and Popline (retired in September 2019) (USAID, n.d.).

### Data Extraction

From all included reports, RM extracted study information and the following data for each eligible measure: method of development; content; mode of data collection; evidence of reliability, construct validity, content validity, and convergent validity; and statistical properties. A second reviewer (AB) checked all extracted data, flagging areas of disagreement which were then resolved through discussion. We requested missing information on social norms measures and analysis results from study authors.

### Analysis and Synthesis

Informed by previous reviews of measures (Costenbader et al., 2017; Hennegan et al., 2020), we report on the quality of included norms measures rather than the overall quality of included studies. This quality assessment is the key focus of this review. Drawing on existing methods for assessing survey measure quality (Doherty et al., 2016; Lewis et al., 2015, 2018; Pocock et al., 2021; Prinsen et al., 2018; Terwee et al., 2007), we assessed each measure against seven criteria: participatory development; defined reference group; reliability (internal consistency, test–retest reliability, or split-half reliability); content validity (assessed as 75% or more items aligning with a relevant domain); construct validity (significant association with DRV behavior); other evidence of validity (factor analysis; or significant association with theoretically related constructs: DRV/gender attitudes, DRV intentions or perceived behavioral control over DRV); and statistically desirable properties (responsiveness, lack of



**Figure 1.** Flow diagram of search and study selection.

floor/ceiling effects, or data available on measures of central tendency and distribution of total score for the full measure—or, where absent, for all measure subscales) (Lewis et al., 2015; Terwee et al., 2007). Significance of associations for construct validity criteria was assessed using the threshold of  $p \leq .05$ , or a lower  $p$  value where lower values were used by the authors of included reports. Reliability was scored to reflect poor reliability (Cronbach's alpha or correlation of  $<0.70$ ) (−1), no evidence (0) or good reliability (Cronbach's alpha or correlation of  $\geq 0.70$ ) (+1). Construct validity was scored to reflect an inverse relationship between pro-DRV/inequitable gender norms and DRV (−1), no evidence of a significant relationship (0), or pro-DRV/inequitable gender norms associated with increased risk of DRV (+1). All other criteria were scored as evidence absent (0) or present (1). Supplemental Appendix B further details our methods assessing for assessing measure quality.

Within each of the four social norms domains considered in this review, we inductively created categories of constructs assessed by included measures (Hennegan et al., 2020). We then created tables summarizing features of included measures and evidence on their quality; and summarizing characteristics of the measures and of the samples in which their

reliability and construct validity were assessed. Drawing on these tables and other extracted data, we summarized the following: features of included studies; features of included measures; and evidence for measures' validity and reliability, identifying strengths and limitations of existing measures.

## Results

### Literature Search

Database and Google Scholar searches identified 7,347 unique records (Figure 1), of which 477 were retained to screen on full text and 21 were eligible for inclusion (Aizpitarte et al., 2017; Antônio et al., 2012; Enosh, 2007; Flisher et al., 2007; Foshee et al., 2001; Gagné et al., 2005; Gonzalez-Mendez et al., 2019; Hébert et al., 2019; Helland, 1998; Hopper, 2011; Kernsmith & Tolman, 2011; Kinsfogel & Grych, 2004; Peskin et al., 2017; Pöllänen et al., 2021; Price, 2002; Reed et al., 2011; Reyes et al., 2016; Shamu et al., 2016; Shorey et al., 2018; Van Ouytsel et al., 2020; Wesche & Dickson-Gomez, 2019), reporting on 21 unique studies. Two reports presented analyses of different social norms measures from the same randomized controlled trial



(Foshee et al., 2001; Reyes et al., 2016) and were therefore treated as two unique studies. Our updated search identified one new eligible report (Hunt et al., 2022), and two additional reports were identified by screening known studies (Nardi-Rodríguez et al., 2022; Shakya et al., 2022), resulting in the inclusion of 24 eligible reports of 24 unique studies.

### Included Studies

Of the included studies, 11 were conducted in the United States (Foshee et al., 2001; Helland, 1998; Hopper, 2011; Hunt et al., 2022; Kernsmith & Tolman, 2011; Kinsfogel & Grych, 2004; Peskin et al., 2017; Reed et al., 2011; Reyes et al., 2016; Shorey et al., 2018; Wesche & Dickson-Gomez, 2019), three in Canada (Gagné et al., 2005; Hébert et al., 2019; Price, 2002), three in South Africa (Flisher et al., 2007; Pöllänen et al., 2021; Shamu et al., 2016), three in Spain (Aizpitarte et al., 2017; Gonzalez-Mendez et al., 2019; Nardi-Rodríguez et al., 2022), one in Belgium (Van Ouytsel et al., 2020), one in Brazil (Antônio et al., 2012), one in Israel (Enosh, 2007), and one in Niger (Shakya et al., 2022). All studies were observational, and seven (Enosh, 2007; Foshee et al., 2001; Peskin et al., 2017; Pöllänen et al., 2021; Reyes et al., 2016; Shakya et al., 2022; Shamu et al., 2016) analyzed data collected as part of an evaluation. One report presented only longitudinal associations between social norms measures and DRV (Nardi-Rodríguez et al., 2022), all other reports presented cross-sectional analyses, and three presented both (Foshee et al., 2001; Reyes et al., 2016; Shorey et al., 2018). Considering participants, 17 studies sampled girls and boys, four included only girls and three included only boys (Supplemental Appendices C and D provide further details of study and sample characteristics, respectively). All studies assessed relationships between social norms measures and DRV victimization and/or perpetration; none assessed relationships with bystander behaviors.

### Included Measures

Most studies included a single eligible social norms measure assessing a single domain of interest ( $N=15$ ) (Aizpitarte et al., 2017; Antônio et al., 2012; Enosh, 2007; Foshee et al., 2001; Hébert et al., 2019; Helland, 1998; Hunt et al., 2022; Kernsmith & Tolman, 2011; Peskin et al., 2017; Price, 2002; Reed et al., 2011; Reyes et al., 2016; Shorey et al., 2018; Van Ouytsel et al., 2020; Wesche & Dickson-Gomez, 2019). Six studies included two eligible measures (Flisher et al., 2007; Gonzalez-Mendez et al., 2019; Hopper, 2011; Kinsfogel & Grych, 2004; Pöllänen et al., 2021; Shakya et al., 2022) and one study included three (Shamu et al., 2016). In addition, one study included a single measure for which half the items assessed one social norms domain and half assessed another (Gagné et al., 2005), and a second study included four such measures (Nardi-Rodríguez et al., 2022). Since half of a

measure's items must assess a domain of interest for inclusion as a measure of that domain, each of these five measures was eligible for inclusion in two separate domains and therefore counted twice for this review. The review therefore includes 35 unique measures, assessed as 40 measures across four domains: 19 measuring descriptive DRV norms, 14 measuring injunctive DRV norms, one measuring descriptive gender norms, and six measuring injunctive gender norms.

### Characteristics of Measures

Measures were generally quite short, comprising a median of six items (range = 1–28, mean = 7). For most measures (58%), all items assessed the domain of interest. Where information was provided on measure development, reports suggested that six measures were adapted from measures of DRV outcomes (Aizpitarte et al., 2017; Antônio et al., 2012; Hopper, 2011; Kinsfogel & Grych, 2004; Van Ouytsel et al., 2020); two were adapted from a measure of personal attitudes (Shakya et al., 2022); two were tools used in previous studies (Hébert et al., 2019; Kernsmith & Tolman, 2011); one was adapted from a previous study to ask about physically rather than sexually aggressive behaviors (Helland, 1998); and six were newly developed (Flisher et al., 2007; Peskin et al., 2017; Pöllänen et al., 2021; Wesche & Dickson-Gomez, 2019). For detailed information on each included measure please, see Supplemental Appendices D (measure wording, variable calculation) and E (initial development, reference group, content validity, reliability, and construct validity).

**Descriptive DRV norms.** The review identified 19 eligible measures of descriptive DRV norms from 14 included reports (Table 1) (Aizpitarte et al., 2017; Antônio et al., 2012; Foshee et al., 2001; Gagné et al., 2005; Gonzalez-Mendez et al., 2019; Hébert et al., 2019; Helland, 1998; Kinsfogel & Grych, 2004; Nardi-Rodríguez et al., 2022; Peskin et al., 2017; Price, 2002; Reed et al., 2011; Reyes et al., 2016; Shorey et al., 2018). Measures ranged from 1 to 26 items (mean = 6, median = 4). Most specified reference groups of friends or peers. Only two referenced social rewards or consequences for adhering to/violating a norm (Flisher et al., 2007; Pöllänen et al., 2021). Questions were typically framed to ask for perceptions of the number or proportion of reference-group members who had experienced or perpetrated DRV, or for perceptions of whether “most” reference-group members had done so (Foshee et al., 2001, p. 133; Nardi-Rodríguez et al., 2022, pp. 12–13; Reyes et al., 2016, p. 353). Most measures referred to specific DRV behaviors among the reference group (e.g., hitting, yelling, threatening, forcing sex).

Most measures were gender neutral, that is, they did not specify gender or they included items about girls and boys within the same measure. Most asked about perceptions of DRV perpetration alone. We identified three inductive categories of constructs measured (Table 1). In all, 10 “gender/sexuality-neutral DRV” measures did not specify

**Table 1.** Eligible Constructs Assessed by Included Measures and Evidence of Measure Quality, by Domain and Inductive Grouping.

Report	Construct Assessed										Measure Quality (Possible Score)						
	DRV Type				Involvement		Gender			Specifies Heterosexual Relationship	Participatory Dev. (0 to 1)	Defined Reference Group (0 to 1)	Reliability (-1 to 1)	Content Validity <sup>a</sup> (0 to 1)	Construct Validity <sup>b</sup> (-1 to 1)	Other Validity (0 to 1)	Statistically Desirable Properties (0 to 1)
	Psych.	Phys.	Sex.	Gen.	Vict.	Perp.	F	M	GN								
<b>Descriptive DRV norms</b>																	
<b>Gender/sexuality-neutral DRV</b>																	
Aizpitarte et al. (2017)	✓	✓	✓			✓			✓		0	1	1	1	1	0	1
Antonio et al. (2012)	✓	✓	✓			✓			✓		0	1	1	1	1	0	0
Gonzalez-Mendez et al. (2019) (#1)				✓		✓			✓		0	1	0	1	1	0	1
Gonzalez-Mendez et al. (2019) (#2)					✓	✓			✓		0	1	0	1	1	0	1
Hebert et al. (2019)		✓	✓		✓				✓		0	1	-1	1	1	0	0
Helland (1998)		✓				✓			✓		0	1	0	1	1	1	0
Kinsfogel and Grych (2004) (#1)	✓	✓							✓		0	1	1	0	1	0	0
Kinsfogel and Grych (2004) (#2)	✓	✓							✓		0	1	1	1	1	1	1
Peskin et al. (2017)	✓	✓				✓			✓		0	1	1	1	1	0	1
Shorey et al. (2018)		✓				✓			✓		0	1	0	1	1	0	1
<b>Mixed DRV</b>																	
Gagné et al. (2005) (#1)		✓			✓	✓	✓		✓		0	1	0	0	1	0	0
<b>Heterosexual DRV</b>																	
Foshee et al. (2001)		✓				✓	✓	✓	✓		1	1	1	0	1	0	0
Nardi-Rodriguez (2022) (#1)	✓					✓		✓	✓		0	1	1	0	1	1	1
Nardi-Rodriguez (2022) (#2)	✓					✓		✓	✓		0	1	1	0	1	1	1
Nardi-Rodriguez (2022) (#3)	✓				✓		✓		✓		0	1	1	0	1	1	1
Nardi-Rodriguez (2022) (#4)	✓				✓		✓		✓		0	1	1	0	1	1	1
Price (2002)	✓					✓		✓	✓		1	1	1	1	1	1	1
Reed et al. (2011)		✓	✓			✓		✓	✓		0	1	0	1	1	0	0
Reyes et al. (2016)		✓				✓	✓	✓	✓		1	1	-1	1	1	1	1
<b>Injunctive DRV norms</b>																	
<b>Respondent DRV</b>																	
Kernsmith and Tolman (2011)				✓		✓	✓				0	1	1	1	0	1	1
Nardi-Rodriguez (2022) (#5)	✓					✓		✓			0	1	1	0	1	1	1
Nardi-Rodriguez (2022) (#6)	✓					✓		✓			0	1	1	0	1	1	1
Nardi-Rodriguez (2022) (#7)	✓				✓		✓				0	1	1	0	1	1	1
Nardi-Rodriguez (2022) (#8)	✓				✓		✓				0	1	1	0	1	1	1
Pollänen et al. (2018) (#1)			✓			✓	✓	✓	✓		1	0	1	0	1	0	1
Pollänen et al. (2018) (#2)			✓			✓	✓	✓	✓		1	1	1	1	1	0	1
<b>Gender-neutral heterosexual DRV</b>																	
Enosh (2007)			✓			✓	✓	✓	✓		1	1	0	1	1	0	0
Fisher et al. (2007) (#2)		✓				✓	✓	✓	✓		0	1	-1	1	0	1	0
Hopper (2011) (#1)	✓				✓	✓	✓	✓	✓		0	1	1	1	1	1	1
Hopper (2011) (#2)		✓			✓	✓	✓	✓	✓		0	1	1	1	1	1	1
Hunt et al. (2022)		✓			✓	✓	✓	✓	✓		0	1	1	1	1	0	1
<b>Mixed or unspecified DRV</b>																	
Fisher et al. (2007) (#1)		✓				✓	✓	✓	✓		0	1	-1	1	0	1	0
van Ouytsel et al. (2020)	✓					✓		✓	✓		0	1	1	1	1	1	1
<b>Descriptive gender norms</b>																	
Gagné et al. (2005) (#2)	# of friends involved in male-perpetrated sexual violence against female peer										0	1	0	0	1	0	0
<b>Injunctive gender norms</b>																	
<b>Gendered violence</b>																	
Shakya et al. (2022) (#2)	Beliefs about people in village's attitudes toward phys. violence against women										0	1	0	1	0	0	0
Shamu et al. (2016) (#1)	Beliefs about family/friends' attitudes toward gender-based violence										1	1	-1	0	1	1	1
Shamu et al. (2016) (#2)	Beliefs about family's attitudes toward gender-based violence										1	1	-1	1	1	0	1
Shamu et al. (2016) (#3)	Beliefs about friends' attitudes toward gender-based violence										1	1	-1	1	1	0	1
<b>Gendered expectations</b>																	
Shakya et al. (2022) (#1)	Beliefs about people in village's attitudes toward household gender roles										0	1	1	1	1	0	1
Wesche and Dickson-Gomez (2019)	Beliefs about sexual expectations of female gang members										0	0	1	1	1	1	1

Note. DRV = dating and relationship violence; F = female; gen. = general; GN = gender neutral; M = male; participatory dev. = participatory development; perp. = perpetration; psych. = psychological; phys. = physical; sex. = sexual; vict. = victimization.

<sup>a</sup>≥75% items assessing social norms domain.

<sup>b</sup>Relationship to DRV behavioral outcome.



heterosexual or sexual-minority relationships (Aizpitarte et al., 2017; Antônio et al., 2012; Gonzalez-Mendez et al., 2019; Hébert et al., 2019; Helland, 1998; Kinsfogel & Grych, 2004; Peskin et al., 2017; Shorey et al., 2018). One “mixed DRV” measure assessed perceptions of gender-neutral perpetration and female victimization within heterosexual partnerships (Gagné et al., 2005), and eight “heterosexual DRV” measures assessed perceptions of DRV within heterosexual relationships (perpetration by girls and boys within one measure (Foshee et al., 2001; Reyes et al., 2016), boys’ perpetration (Nardi-Rodríguez et al., 2022; Price, 2002; Reed et al., 2011) or girls’ victimization (Nardi-Rodríguez et al., 2022).

**Injunctive DRV norms.** We identified 14 eligible measures of injunctive DRV norms from eight included reports (Table 1) (Enosh, 2007; Flisher et al., 2007; Hopper, 2011; Hunt et al., 2022; Kernsmith & Tolman, 2011; Nardi-Rodríguez et al., 2022; Pöllänen et al., 2021; Van Ouytsel et al., 2020). These ranged from two to 28 items (mean = 8, median = 6). Six specified a single reference group of respondents’ friends and six referred to multiple reference groups, one of which also assessed the importance of each (Kernsmith & Tolman, 2011). One measure did not specify a reference group (Pöllänen et al., 2021).

Measures asked respondents to report their perceptions of the views of reference group members, or the extent to which the respondent thought that DRV perpetration would “make me seem successful” (Pöllänen et al., 2021, p. 9). Nine (64%) asked about norms governing DRV perpetration alone (Enosh, 2007; Flisher et al., 2007; Kernsmith & Tolman, 2011; Nardi-Rodríguez et al., 2022; Pöllänen et al., 2021; Van Ouytsel et al., 2020). Most measures used Likert scale response options.

Half of the measures were gender specific (Kernsmith & Tolman, 2011; Nardi-Rodríguez et al., 2022; Pöllänen et al., 2021), and all but one measure (Kernsmith & Tolman, 2011) specified a single type of DRV. We identified three inductive categories of included measures (Table 1). Seven “respondent DRV” measures assessed injunctive norms governing DRV among survey respondents (Kernsmith & Tolman, 2011; Nardi-Rodríguez et al., 2022; Pöllänen et al., 2021) (e.g., asked to select a response for what will happen “[i]f I put pressure on my boyfriend or girlfriend to have sex. . .”) (Pöllänen et al., 2021, p. 9). Five “gender-neutral heterosexual DRV” measures combined DRV among girls and boys and focused on heterosexual partnerships (Enosh, 2007; Flisher et al., 2007; Hopper, 2011; Hunt et al., 2022). Two “mixed-or-unspecified DRV” measures assessed a combination of DRV perpetrated by girls and boys in heterosexual relationships and by young people responding to the survey (without specifying partner gender) (Flisher et al., 2007), or gender-neutral DRV perpetration (Van Ouytsel et al., 2020).

**Descriptive gender norms.** The review identified one eligible measure of descriptive gender norms from one included

report (Table 1). This measure assessed perceptions of the prevalence of male-perpetrated sexual coercion of females (without specifying a dating/relationship context) among friends from the past year (Gagné et al., 2005).

**Injunctive gender norms.** The review identified six eligible measures of injunctive gender norms from three included reports (Table 1) (Shakya et al., 2022; Shamu et al., 2016; Wesche & Dickson-Gomez, 2019). Measures ranged from one to 15 items (mean = 6, median = 5) and where response options were described, measures used Likert scales. Four “gendered-violence” measures assessed injunctive norms governing male-perpetrated violence and violence against girls/women (e.g., “My family thinks that there are times when a woman deserves to be beaten”) (S. Shamu, personal communication, May 2, 2019), without specifying the context of adolescent dating/relationships. Two “gendered expectations” measures assessed social norms concerning broader gender roles (Shakya et al., 2022; Wesche & Dickson-Gomez, 2019), including sexual expectations of female gang members (Wesche & Dickson-Gomez, 2019) and gender roles within the family or household (Shakya et al., 2022).

### Quality of Measures

Table 1 shows the quality of included measures by domain and inductive category. Further details on the evidence underpinning our quality assessment are available in Supplemental Appendices D (study samples, DRV outcome measures), E (summaries of initial development, reference group, content validity, reliability, and construct validity) and F (construct validity: analysis methods, results, and summary findings showing alignment between norm and outcome measures).

**Descriptive DRV norms.** Among the 19 included measures of descriptive DRV norms, three (16%) were informed by participatory development and all had defined reference groups. In all, 11 (58%) had good reliability and two (11%) had poor reliability. In total, 12 measures (63%) had good content validity. All showed a significant association between higher levels of perceived DRV prevalence and higher DRV risk. Eight measures (42%) also had other evidence of validity and 12 (63%) had statistically desirable properties.

Most measures were tested separately against DRV perpetration and/or victimization outcomes. Although most descriptive DRV norms measures were gender neutral, almost all were tested against gender-specific DRV outcomes, primarily standalone measures of girls’ victimization and/or boys’ perpetration.

The six gender-specific descriptive DRV norms measures were tested against DRV outcomes that matched the gender of the norms measure (Nardi-Rodríguez et al., 2022; Price, 2002; Reed et al., 2011) (i.e., norms concerning DRV among



boys tested against DRV outcomes among boys). In all, 15 measures were tested against DRV outcomes that matched on type of DRV involvement (victimization or perpetration), and 11 were tested against outcomes that matched on type(s) of DRV (psychological, physical, and/or sexual). Five measures matched the DRV outcome against which they were assessed in all three dimensions, which focused on boys' perpetration (Nardi-Rodríguez et al., 2022; Price, 2002) and girls' experience (Nardi-Rodríguez et al., 2022) of psychological DRV.

**Injunctive DRV norms.** Of the 14 included measures of injunctive DRV norms, three (21%) were informed by participatory development. In all, 13 (93%) included a defined reference group, 11 (79%) had good reliability, and two (14%) had poor reliability. Nine measures (64%) had good content validity. In total, 11 (79%) showed a significant association between pro-DRV norms and higher DRV risk. Ten (71%) had other evidence of validity and 11 (79%) had statistically desirable properties.

Most injunctive DRV measures were tested against stand-alone DRV perpetration outcomes and against gender-specific outcomes. All seven gender-specific measures were tested against DRV outcomes specifying the same gender (Kernsmith & Tolman, 2011; Nardi-Rodríguez et al., 2022; Pöllänen et al., 2021). Ten measures were tested against outcomes that matched on victimization (Nardi-Rodríguez et al., 2022) or perpetration (Enosh, 2007; Flisher et al., 2007; Nardi-Rodríguez et al., 2022; Pöllänen et al., 2021; Van Ouytsel et al., 2020), and 13 were tested against DRV outcomes that matched on type of DRV (Enosh, 2007; Flisher et al., 2007; Hopper, 2011; Hunt et al., 2022; Nardi-Rodríguez et al., 2022; Pöllänen et al., 2021; Van Ouytsel et al., 2020). Six gender-specific measures aligned with assessed DRV outcomes in all three dimensions, focusing on girls' and boys' perpetration of sexual DRV (Pöllänen et al., 2021) and on boys' perpetration and girls' experience of psychological DRV (Nardi-Rodríguez et al., 2022).

**Descriptive gender norms.** The single measure of descriptive gender norms had a defined reference group and showed a significant association with DRV outcomes: Girls who reported more inequitable descriptive gender norms (i.e., more friends involved in sexual coercion) were significantly more likely to report DRV victimization (Gagné et al., 2005). The measure met no other quality criteria.

**Injunctive gender norms.** Of the six included measures of injunctive gender norms, three (50%) were informed by participatory development and five (83%) had a defined reference group. Two (33%) had good reliability and three had poor reliability. Five (83%) had good content validity. For five measures, inequitable gender norms were significantly associated with higher DRV risk. Two measures had other evidence of validity and five had statistically desirable

properties. Five were tested against gender-specific DRV outcomes (Shakya et al., 2022; Shamu et al., 2016).

## Discussion

### Summary of Key Findings

Our findings suggest that social norms measures relating to DRV that are valid and reliable among young people can be developed, but that measurement is inconsistent and evidence supporting the quality of existing measures is limited. We found no eligible measure used more than once, limiting comparability across studies. Geographic diversity was also limited, with more than half of included studies taking place in the Region of the Americas. We found no eligible measures used in the South-East Asian, Eastern Mediterranean, or Western Pacific Regions (World Health Organization, 2021).

Most measures reviewed had evidence of construct validity, assessed as a significant association between pro-DRV/inequitable gender norms and increased DRV risk. Measures were typically tested against gender-specific DRV outcomes, most commonly girls' victimization and boys' perpetration. Psychological, physical, and sexual DRV all featured frequently among the behavioral outcomes explored. Evidence on reliability and on other types of validity was mixed.

Though under a third of included measures had evidence of being informed by participatory development with young people, nearly all specified a defined reference group. However, all reference groups were pre-defined; no measure asked respondents to identify who held the most influence over them in relation to the assessed norms (Costenbader et al., 2017) and only one assessed the importance of each reference group to the respondent (Kernsmith & Tolman, 2011).

Two-thirds of gender norms measures asked about the respondent's friends and/or family, two groups that are particularly influential in gender socialization (Kågesten et al., 2016). However, several measures combined items asking about multiple reference groups, including unbounded groups of "others" and "people important to you" (Flisher et al., 2007, p. 622): features that limit their usefulness for gathering valid data about norms among a clear, coherent group and the relationship between these norms and DRV. Only two measures of injunctive norms referenced social sanctions, both without specifying the reference group applying these (Flisher et al., 2007; Pöllänen et al., 2021).

Several measures specified norms within heterosexual partnerships. Though sexual-minority youth face significantly higher risk of DRV than their heterosexual peers (Dank et al., 2014; Luo et al., 2014; Young et al., 2017), no measures specified norms governing sexual-minority relationships and no studies explicitly explored associations between included measures and DRV within sexual-minority relationships. Little is known about social norms contributing to DRV

among same-sex partners and the key reference groups among which these norms are held. Some experts have suggested minority-stress theory (Dietz, 2019; Martin-Storey & Fromme, 2021; Reuter & Whitton, 2018) as a framework for understanding the elevated DRV risk among sexual-minority youth, which would suggest that homophobia, underpinned by gender norms (Solomon, 2015; Whitley, 2001), could play an important role. Formative research is needed to explore the social norms influencing same-sex DRV, and its findings should form the basis of social norms measures used with sexual-minority youth.

Considering measures of DRV norms, several studies explored the relationship between descriptive DRV norms and DRV outcomes, while fewer explored the relationship between injunctive DRV norms and DRV outcomes. DRV norms measures most commonly focused on DRV perpetration, and most were gender neutral. While studies usually explored DRV norms as predictors of gender-specific DRV outcomes, this was less common for measures of injunctive than descriptive DRV norms, despite evidence suggesting that predictors of DRV differ for girls and boys (Ali et al., 2011; Arriaga & Foshee, 2004; Capaldi et al., 2012; Foshee et al., 2001, 2011; Leen et al., 2013). A minority of DRV norms measures were tested against DRV outcomes focusing on the same gender, involvement (victimization/perpetration), and DRV type. This presents an important limitation to existing measures of DRV norms: social norms theorists hypothesize that norms relating directly to a behavior of interest (as the most salient at the time of the behavior) generally exert a stronger influence than do more distal norms (Cislaghi & Heise, 2018). Empirical literature suggests that this may be the case for DRV. DRV norms may affect DRV outcomes via gender-specific pathways (Foshee et al., 2001; Pöllänen et al., 2021; Shorey et al., 2018), and in Gagné et al.'s (2005) research physical DRV norms predicted physical and psychological but not sexual DRV. The relationship between attitudes and DRV outcomes has been more widely explored, finding that young people tend to view male-perpetrated DRV more negatively than female-perpetrated DRV (Exner-Cortens et al., 2016b; Reeves & Orpinas, 2012; Rogers et al., 2019), and that attitudes toward DRV vary by DRV type (Exner-Cortens et al., 2016b; Reeves & Orpinas, 2012), with attitudes most strongly predicting DRV outcomes of the same type (Exner-Cortens et al., 2016b). Omitting or combining genders, victimization/perpetration, and/or types of DRV in measures of DRV norms (and the outcomes these might predict) therefore risks missing important differences in norms and their influence.

Far fewer studies explored the relationship between gender norms and DRV. Compared to measures of DRV norms, gender norms measures tended to have less evidence of reliability and of validity assessed as an association with theoretically related constructs aside from DRV behaviors. As a strength, most gender norms measures were assessed

for their relationship with gender-specific DRV outcomes. We identified only one measure of descriptive gender norms, which did not appear to be conceptualized as such given that only half of its items assessed this domain. Injunctive gender norms measures were more conceptually consistent, with the vast majority showing good content validity. However, both tended to focus on the social acceptability of violence by males and/or against females. This is a limitation to existing measures, as evidence points to the importance of separating gender norms from violence norms to avoid conflating the relationships between these distinct constructs and DRV behavior (Reyes et al., 2016). Only two measures asked about broader gendered expectations, assessing norms governing female sexual roles and gender roles within the family/household. No measures explored other gendered expectations that qualitative research suggests contribute to DRV, such as the social importance of sustained heterosexual relationships for girls (Barter et al., 2009; Marston & King, 2006) and of being sexually active for boys (Wood et al., 2011).

No eligible measures assessed bystander norms, reflecting limited evidence on the relationship between norms supporting protective, DRV-specific bystander behaviors and DRV outcomes. However, it is important to note that research with adolescents that reports on measures of DRV, gender, and bystander norms not assessed for their relationship to DRV outcomes, or on measures of related norms (e.g., sexual violence norms), can offer insights into norms measurement among this population.

### Limitations

Like all reviews, this review might have missed eligible reports published after our search was completed. However, our database search was extensive and updated near the end of the study period, and no additional reports were identified through our expert requests. Eligible reports might also have been missed where abstracts did not indicate that relevant norms measures were used. However, we mitigated this risk by full-text screening evaluations of DRV interventions identified via reviews, and reports for which abstracts referenced "attitudes" or any terminology suggestive of norms.

We did not undertake dual data extraction, but worked with a second reviewer to check data extraction and identify and reconcile disagreements. We used a novel, tailored tool for quality assessment rather than an existing tool.

### Implications

Findings from this review support a number of recommendations for practice, policy, and research (Table 2). We recommend that future research build on existing measures where evidence supports their reliability and validity among similar populations, and where measures distinguish between victimization/perpetration among girls and boys



**Table 2.** Implications for Practice, Policy, and Research.

Practice	<ul style="list-style-type: none"> <li>Public health practitioners should draw on studies that use valid and reliable measures of social norms, where these are available in their setting, to identify the social norms contributing to DRV and to pinpoint areas for intervention</li> </ul>
Policy	<ul style="list-style-type: none"> <li>When funding evaluations of interventions that aim to reduce DRV by modifying social norms, policymakers should ensure that these use reliable and valid measures to assess norms and that such measures are gender specific where norms exert gendered influence</li> </ul>
Research	<ul style="list-style-type: none"> <li>Evaluators should use existing valid and reliable measures of DRV and gender norms, if these are available in their setting, to assess social norms as a mediator in DRV interventions aiming to modify social norms</li> <li>Researchers should adapt existing measures to be gender specific where norms exert gendered influence, and to focus on the DRV type(s) of interest, where no such measures exist for their setting. Where no such measures exist for similar settings, researchers should develop new measures informed by existing literature and participatory research with young people</li> <li>Researchers should develop and validate measures of gender norms governing the broad range of gendered behaviors underpinning DRV and measures of social norms influencing same-sex DRV</li> </ul>

DRV = dating and relationship violence.

and focus on the DRV type(s) of interest; or where they can be adapted to do so. New measures should be informed by existing literature and participatory research with young people to develop and refine measures and to select reference groups (Costenbader et al., 2019). Researchers should report on the development, piloting, refinement, reliability, and validity of such measures, which in addition to enhancing social norms measurement in DRV research would also contribute to learning on best practices for social norms measurement among adolescents. Future research should synthesize this learning with findings from other areas of norms research among adolescents to inform methodological approaches with this population.

Future research should inform the development of gender norms measures that predict DRV but are distinct from norms about gendered violence itself, including descriptive gender norms. New research is also needed to inform the development of measures of social norms influencing same-sex DRV, considering the higher risk of DRV among sexual-minority youth.

New measures should specify a bounded reference group (Ashburn et al., 2016), and where more than one reference group is pertinent, norms among each should be measured separately. Finally, future research should use valid and reliable measures to explore relationships between descriptive and injunctive DRV and gender norms and subsequent DRV outcomes, assess the impact of interventions on these norms and explore their role in reducing DRV.

## Conclusions

Developing valid, reliable measures of social norms associated with DRV is possible, but measurement methods are currently inconsistent. Researchers should report on the development, reliability, and validity of such measures, which should be gender-specific where norms exert gendered influence, consider sexual-minority relationships, and assess gender norms beyond gendered violence.

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## Supplemental Material

Supplemental material for this article is available online.

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### Author Biographies

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**Professor Chris Bonell**, PhD, is a Professor of Public Health Sociology at the London School of Hygiene & Tropical Medicine. His research on adolescent health focuses on how schools and school-based interventions can benefit or harm young people’s health. His

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**Amiya Bhatia**, PhD, is an Assistant Professor in Social Epidemiology and Child Protection at the London School of Hygiene & Tropical Medicine. Her research examines how child health and child protection outcomes are unevenly and unfairly distributed in low- and middle-income countries and the data used to measure these outcomes.

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**Anjalee Kohli**, PhD, is an Assistant Professor-Adjunct at Georgetown University and an independent consultant. Through participatory and mixed methods research and learning partnerships, Dr. Kohli advances the evidence and practice to prevent violence against women and children, to improve gender equity and sexual and reproductive health.



## Chapter 5. Paper 2: Cognitive interviews informing the development of social norms measures

### 5.1. Introduction to Paper 2

As described in the introduction to Paper 1, we identified in the course of the Project Respect pilot RCT a need for measures that could be used to assess social norms as a theorised mediator of the intervention's effects. Finding no established measures of social norms concerning DRV and gender, we developed descriptive norms items based on an existing measure of descriptive DRV norms that had been used with university students and proposed for use with adolescents.<sup>216</sup> We developed injunctive DRV and gender norms items based on measures of personal attitudes that had been used with adolescents.<sup>77,217</sup> A planned phase of cognitive testing to refine the trial's measures of DRV victimisation and perpetration provided the opportunity to also incorporate testing of these three types of social norms items. Paper 2 presents the development and cognitive testing of these items and how this work informed the three social norms measures ultimately piloted in Project Respect student surveys. Further, I draw out features of tested items that helped and hindered participants' understanding of items' intended meanings and their ability to respond to these items. Based on these findings, I offer broader recommendations for social norms measurement among adolescents and suggest areas for future research.

The published supplemental appendix to which Paper 2 refers is provided in Appendix 16 of this thesis.

#### 5.1.1. Notes on Table 1 of Paper 2

Table 1 (pp. 6-7) of Paper 2 shows the progression of measures used in cognitive testing from the measures under consideration as the basis for Project Respect survey measures immediately preceding cognitive testing (first column) to the measures tested in cognitive testing (second column) and the final measures which were refined on the basis of cognitive testing and ultimately piloted in Project Respect (third column). As noted in footnotes (a) and (b) to Table 1, the "attitudes towards DRV" and "descriptive DRV norms" measures under

consideration as the basis for Project Respect survey measures were adapted from their original sources. As Paper 2 does not specify these adaptations, I describe them here. From the “attitudes towards DRV” measure, the ninth item (“If someone hits their boyfriend or girlfriend, their boyfriend or girlfriend should break up with them”) was adapted from the original used by Foshee et al.<sup>77</sup> (“If I hit a dating partner, he/she would break up with me”) to more closely align with the construct of a personal attitude. From the “descriptive DRV norms” measure, the second item (“How any of your friends have used physical force, such as hitting to solve fights with their girlfriends or boyfriends?”) was adapted from the original used by Cook-Craig et al.<sup>216</sup> (“How many of your friends have used physical force, such as hitting to solve fights with their boyfriends or girlfriends”) for consistency with the third item in the measure which references girlfriends then boyfriends.

Please also note two corrections to the published version of this paper:

- 1) In the last column of Table 1 (p. 7), the last line should read “First tested item removed” rather than “Second tested item removed”.
- 2) Footnote (c) to Table 1 should read “Items from Sotiriou et al.” rather than “Items adapted from Sotiriou et al.” because the “attitudes towards gender roles and stereotypes” measure appears here as it does in the referenced source, Sotiriou et al.<sup>217</sup>

5.1.2. Previous work reporting on this research With my colleague, Dr. Ruth Ponsford, the second author of Paper 2, I had previously conducted an analysis of data from the cognitive testing of the Project Respect social norms items alongside data from the cognitive testing of social norms items relating to sexual behaviour that Dr. Ponsford had undertaken as part of the Positive Choices pilot trial.<sup>235</sup> For Paper 3 and this thesis, I draw only on Project Respect data. However, I presented preliminary findings from the previous analysis drawing on both studies at the LINEA Biennial Meeting (2020);<sup>236</sup> in a webinar for the LINEA Project (2020);<sup>234</sup> at the Lancet’s UK Public Health Science conference (2018);<sup>237</sup> and in the associated abstract published in a special issue of *The Lancet* (2018),<sup>5</sup> presented in Appendix 17.

5.2. Paper 2: Assessing survey items on social norms relating to dating and relationship violence and to gender: cognitive interviews with young people in England

## RESEARCH PAPER COVER SHEET

Please note that a cover sheet must be completed for each research paper included within a thesis.

### SECTION A – Student Details

Student ID Number	452277	Title	Ms.
First Name(s)	Rebecca		
Surname/Family Name	Meiksin		
Thesis Title	Developing and refining social norms measures for the evaluation of a school-based intervention to reduce dating and relationship violence among adolescents in England		
Primary Supervisor	Professor Chris Bonell		

If the Research Paper has previously been published please complete Section B, if not please move to Section C.

### SECTION B – Paper already published

Where was the work published?	Journal of Interpersonal violence		
When was the work published?	October 2023		
If the work was published prior to registration for your research degree, give a brief rationale for its inclusion	N/A		
Have you retained the copyright for the work?*	Yes	Was the work subject to academic peer review?	Yes

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### SECTION C – Prepared for publication, but not yet published

Where is the work intended to be published?	█
Please list the paper's authors in the intended authorship order:	█

Stage of publication	Choose an item.
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**SECTION D – Multi-authored work**

<p>For multi-authored work, give full details of your role in the research included in the paper and in the preparation of the paper. (Attach a further sheet if necessary)</p>	<p>I conceptualised the cognitive interviewing of social norms items, developed cognitive interview guides, conducted interviews and led analysis, writing and submission. Nambusi Kyegombe and Chris Bonell provided feedback on interview guides. Ruth Ponsford helped to develop the analytical framework. All authors contributed to interpretation of findings, provided feedback on the manuscript and approved the final manuscript prior to publication. Chris Bonell designed the overall study.</p>
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**SECTION E**

Student Signature	Rebecca Meiksin
Date	15/03/2024

Supervisor Signature	Chris Bonell
Date	15/03/2024

# Assessing Survey Items on Social Norms Relating to Dating and Relationship Violence and to Gender: Cognitive Interviews with Young People in England

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## Abstract

Widespread among adolescents in England, dating and relationship violence (DRV) is associated with subsequent injuries and serious mental health problems. While DRV prevention interventions often aim to shift harmful social norms, no established measures exist to assess relevant norms and their role in mediating DRV outcomes. We conducted cognitive interviews exploring the understandability and answerability of candidate measures of social norms relating to DRV and gender roles, informing measure refinement. In all, 11 participants aged 13 to 15 from one school in England participated. Cognitive interviews tested two items assessing descriptive norms (beliefs about what behaviors are typical), three assessing injunctive norms (beliefs about what is socially acceptable), and (for comparison) one assessing personal attitudes. Findings were summarized by drawing on

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interview notes. Summaries and interview notes were subjected to thematic analysis. For some participants, injunctive norms items required further explanation to clarify that items asked about others' views, not their own. Lack of certainty about, and perceived heterogeneity of, behaviors and views among a broad reference group detracted from answerability. Participants were better able to answer items for which they could draw on concrete experiences of observing or discussing relevant behaviors or social sanctions. Data suggest that a narrowed reference group could improve answerability for items assessing salient norms. Findings informed refinements to social norms measures. It is possible to develop social norms measures that are understandable and answerable for adolescents in England. Measures should assess norms that are salient and publicly manifest among a cohesive and influential reference group.

### **Keywords**

dating and relationship violence, adolescents, social norms, measurement, qualitative

## **Introduction**

### *Background*

"Dating and relationship violence" (DRV) among young people refers to physical, sexual, or psychological abuse by a current or former intimate partner (Barter & Stanley, 2016; Young et al., 2017). DRV is widespread in England, with 49.1% of young people with a mean age of 13.4 years ( $SD=0.6$ ) reporting psychological victimization and 39.5% reporting physical victimization (Meiksin et al., 2020). Among those aged 14 to 17 years in England who have ever been in a relationship, 41% of girls and 14% of boys report experiencing sexual DRV, assessed as having been pressured or physically forced into intimate touching or sexual intercourse (Barter et al., 2014). In addition to causing injuries (Foshee et al., 1996), DRV victimization is associated with subsequent antisocial behavior, substance misuse (Exner-Cortens et al., 2013; Roberts et al., 2003), and mental health problems (Castellví et al., 2017; Exner-Cortens et al., 2013; Roberts et al., 2003), including suicidal ideation (Exner-Cortens et al., 2013) and suicide attempts (Castellví et al., 2017).

As social affiliation shifts from adults to peers in adolescence (Spear, 2000), young people are particularly sensitive to peer influence (Bonell et al., 2019). Social norms theory suggests that a person's behaviors are influenced

by beliefs about what behaviors are typical (“descriptive norms”) and appropriate (“injunctive norms”) among a reference group of others whose views are important to them (Alexander-Scott et al., 2016; Cislighi & Heise, 2018). According to this conceptualization of social norms, which has been particularly influential in gender-based violence (Alexander-Scott et al., 2016) and adolescent sexual and reproductive health (Costenbader et al., 2019) research, these norms are sustained by anticipation of social rewards (for complying with them) and social punishment (for violating them) enacted by the reference group (Alexander-Scott et al., 2016; Cislighi & Heise, 2018).

Empirical studies demonstrate the role of peer influence in DRV victimization and perpetration, finding that inequitable gender norms (Barter et al., 2009; Shakya et al., 2022; Wesche & Dickson-Gomez, 2019) and social norms supportive of DRV (Foshee et al., 2001; Gage, 2016; Salazar et al., 2018; Vagi et al., 2013) contribute to DRV risk, even when controlling for personal attitudes toward DRV (Foshee et al., 2001; Gage, 2016; Shakya et al., 2022). Interventions to reduce DRV often incorporate strategies to influence the peer social norms that contribute to sustaining this type of abuse (Stanley et al., 2015) but have not assessed social norms as a mediator of intervention effects (Meiksin et al., 2023).

### *Social Norms Measurement in DRV Research*

A recent global systematic review reported on the use and quality of measures assessing social norms about DRV and gender, where measures had been tested for their association with DRV outcomes (Meiksin et al., 2023). None of the 40 descriptive and injunctive measures identified by the review were used in more than one study, and the review identified no evaluations of DRV interventions that explored whether changes in social norms mediated intervention impact (Meiksin et al., 2023). Fewer than one-quarter of included measures had been developed using input from young people (Meiksin et al., 2023) despite evidence suggesting that young people might struggle to distinguish between their own and their friends’ views when responding to survey items (Moreau, 2018; Moreau et al., 2021).

In preparation for the evaluation of a new intervention in England that aimed, in part, to change social norms to reduce DRV (Meiksin 2020), we sought to test candidate social norms measures via cognitive interviews. Cognitive interviewing is a qualitative method for pretesting survey measures by exploring whether survey items function as intended and the cognitive processes participants use to answer these items (Willis & Artino, 2013). The approach allows researchers to identify any problems (Streiner & Norman, 2008) and refine items before administering surveys. The recommended



approach for adolescents uses a combination of the think-aloud method and verbal probing (de Leeuw et al., 2002). The former is more open ended, asking participants to narrate their thoughts as they answer survey items (Collins, 2003; Willis, 1999). The latter involves asking specific questions about participants' experience responding to tested items, allowing the interviewer to explore aspects they suspect might be a source of response error (Collins, 2003; Willis, 1999).

In the present study, we conducted cognitive interviews with adolescents in England to assess the understandability and answerability of candidate measures of social norms relating to DRV and gender and to refine these survey measures based on our findings.

## **Methods**

### *Study Overview*

We conducted cognitive interviews to refine measures used in student surveys administered for Project Respect, a pilot cluster randomized controlled trial of a school-based intervention to reduce DRV in England (Meiksin 2020). Cognitive interviews tested selected survey items from measures of descriptive and injunctive DRV norms, and injunctive gender norms. They also tested survey instructions explaining safeguarding procedures, items on attitudes toward gender roles and stereotypes, items on relationship history, and two DRV measures. Findings from the testing of social norms and attitudes items are the focus of this paper. Ethical approval for this research was granted by the London School of Hygiene and Tropical Medicine Ethics Committee (11986).

### *Recruitment and Informed Consent*

Drawing on our existing networks, we recruited one London state secondary school to take part. We asked school staff to select students of diverse academic ability across years 8, 9, and 10 (aged 13–15 years), based on their overall knowledge of the students, including at least two girls and two boys from each year-group. Students deemed by school staff to be unable to give informed consent due to severe cognitive limitations were not eligible to take part. Due to the sensitive nature of tested items, we recommended that students with known experience of DRV not be selected.

Participants' parents/carers received information describing the study and could opt their child out of taking part. Before beginning the interview, the researcher reviewed the written informed consent form with participants and

explained that responses would be kept confidential except in the case of safeguarding concerns, which would include the following: reports of sexual activity before age 13, ongoing risk of serious harm, or disclosures for which the participant asked the researcher to breach confidentiality. A safeguarding concern arose for one participant, which was reported to the school's safeguarding officer per our policy. Participants had the opportunity to ask questions before providing consent.

### *Interviews*

Cognitive interviews took place at the participating school during the school day. Lasting around 40 min, interviews tested instructions, survey items, and response options for measures of descriptive and injunctive DRV norms, injunctive gender norms, and (for comparison) attitudes toward gender roles and stereotypes (Table 1). We did not test descriptive gender norms items because we found no appropriate measure in the DRV literature and developing a new measure would require formative research outside the scope of this study.

After each participant self-completed a brief demographic questionnaire, the interviewer explained that the participant would be asked to "think aloud," describing their thought process as they responded to each tested item. To practice carrying out this process, participants completed an exercise adapted from Willis (1999) which instructed them to "try to imagine your home, and think about how many windows there are in it. As you count up the windows, tell me what you are seeing and thinking about" (Willis, 1999, p. 4). Interviews then proceeded using a combination of the think-aloud and verbal probing approaches (de Leeuw et al., 2002). Participants were asked to think aloud as they answered tested items, which were displayed on show cards as they would appear on a survey. Verbal probes explored: alternative reference groups for norms items (i.e., the participant's friends; or their friends in the school); how easy/difficult items were to answer; understanding of terminology; alternative terminology (i.e., how the participant would phrase the question to their friends); and experiences of answering attitudes versus social norms items. The interviewer (RM) used a laptop to type detailed notes on participants' responses during interviews (Willis, 1999).

### *Measures*

The demographic questionnaire asked for participants' age, year-group, ethnic group (White British; any other White background; Asian or Asian British; Black, African, Caribbean, or Black British; Mixed/multiple ethnic

**Table 1.** Original Measures, Tested Items, and Final Measures.

Original measure (tested items in <b>bold</b> , retained items <u>underlined</u> )	Items tested in cognitive interviews	Final measure (tested items in <b>bold</b> )
<i>Attitudes toward DRV<sup>a</sup></i>	<i>Injunctive DRV norms</i>	<i>Injunctive DRV norms</i>
<ol style="list-style-type: none"> <li>1. <u>It is OK for a boy to hit his girlfriend if she did something to make him mad.</u></li> <li>2. <u>It is OK for a boy to hit his girlfriend if she insulted him in front of friends.</u></li> <li>3. <u>Girls sometimes deserve to be hit by the boys they date.</u></li> <li>4. <u>A girl who makes her boyfriend jealous on purpose, deserves to be hit</u></li> <li>5. <u>Boys sometimes deserve to be hit by the girls they date.</u></li> <li>6. <b>Sometimes boys have to hit their girlfriends to get them back under control.</b></li> <li>7. <u>It is OK for a boy to hit a girl if she hits him first.</u></li> <li>8. <u>It is OK for a girl to hit a boy if he hits her first.</u></li> <li>9. <u>If someone hits their boyfriend or girlfriend, their boyfriend or girlfriend should break up with them</u></li> </ol>	<p>Please tick one box to show how <b>most other students in your school</b> would feel if a student in your school did each of the following:</p> <ol style="list-style-type: none"> <li>a. A boy hit his girlfriend to get her back under control</li> </ol> <p><b>ROs:</b> Approve, Disapprove, Neither</p>	<p>Please tick a box to show whether <b>your friends</b> would agree or disagree with each statement:</p> <ol style="list-style-type: none"> <li>a. It is NOT okay for a boy to hit his girlfriend if she did something to make him mad.</li> <li>b. Girls sometimes deserve to be hit by their boyfriends.</li> <li>c. Boys sometimes deserve to be hit by their girlfriends.</li> <li>d. It is okay for a boy to hit a girl if she hit him first.</li> <li>e. It is NOT okay for a girl to hit a boy if he hit her first.</li> <li>f. If someone hits their boyfriend or girlfriend, the boyfriend or girlfriend should break up with them</li> </ol> <p><b>ROs:</b> My friends would agree, My friends would disagree, My friends would neither agree nor disagree</p>
<b>ROs:</b> Strongly agree, Agree, Disagree, Strongly Disagree		<i>Tested item removed.</i>
<i>Descriptive DRV norms<sup>b</sup></i>	<i>Descriptive DRV norms</i>	<i>Descriptive DRV norms</i>
<ol style="list-style-type: none"> <li>1. How many of your friends have forced someone to have sexual activity with them that caused their partner to cry, scream, plead, hit, or fight back?</li> <li>2. <u>How many of your friends have used physical force, such as hitting to solve fights with their girlfriends or boyfriends?</u></li> <li>3. <b><u>How many of your friends insult their girlfriend or boyfriend, swear at them, or try to control everything their boyfriend or girlfriend does?</u></b></li> </ol>	<p>Please tick one box on each line to show how many students in your school you think have done each of the following:</p> <ol style="list-style-type: none"> <li>a. How many <b>boys</b> in your school insult their girlfriend, swear at her, or try to control everything she does?</li> <li>b. How many <b>girls</b> in your school insult their boyfriend, swear at him, or try to control everything he does?</li> </ol>	<p>Do you have friends who have girlfriends or boyfriends?</p> <p><b>ROs:</b> Yes, No (if Yes)</p> <p>Please tick a box to show <b>your best guess</b> of how many of <b>your friends</b> have done the following:</p> <ol style="list-style-type: none"> <li>a. How many of <b>your friends</b> have used physical force, such as hitting, to solve fights with their girlfriend or boyfriend?</li> <li>b. <b>How many of your friends insult or swear at their girlfriend or boyfriend?</b></li> <li>c. <b>How many of your friends try to control everything their girlfriend or boyfriend does?</b></li> </ol>
<b>ROs:</b> 0 friends, 1–2, 3–5, 6+	<b>ROs:</b> None, Some, Many, Most	<b>ROs:</b> None, Some, Many, Most

(continued)

**Table 1. (continued)**

<i>Attitudes toward gender roles &amp; stereotypes<sup>c</sup></i>	<i>Attitudes toward gender roles &amp; stereotypes</i>	<i>Attitudes toward gender roles &amp; stereotypes</i>
<ol style="list-style-type: none"> <li>1. Swearing is worse for a girl than for a boy.</li> <li>2. <b>On a date, the boy should be expected to pay all expenses.</b></li> <li>3. <u>On the average, girls are as smart as boys.</u></li> <li>4. <u>More encouragement in a family should be given to sons than daughters to go to college.</u></li> <li>5. It is all right for a girl to want to play rough sports like football.</li> <li>6. In general, the father should have greater authority than the mother in making family decisions.</li> <li>7. It is all right for a girl to ask a boy out on a date.</li> <li>8. It is more important for boys than girls to do well in school.</li> <li>9. If both husband and wife have jobs, the husband should do a share of the housework such as washing dishes and doing the laundry.</li> <li>10. Boys are better leaders than girls.</li> <li>11. Girls should be more concerned with becoming good wives and mothers rather than desiring a professional or business career.</li> <li>12. <u>Girls should have the same freedom as boys.</u></li> <li>13. <u>Most girls like to show off their bodies.</u></li> <li>14. Most boys like to go out with girls just for sex.</li> <li>15. Most girls cannot be trusted.</li> <li>16. <b><u>It is more accepted for a boy to have many sexual partners than for a girl.</u></b></li> </ol>	<p>Please tick one box on each line to show how much <b>you personally</b> agree or disagree with each statement.</p> <ol style="list-style-type: none"> <li>a. On a date, the boy should pay all the expenses.</li> </ol> <p><b>ROs:</b> Strongly agree, Agree, Disagree, Strongly disagree</p> <p><i>Injunctive gender norms</i></p> <p>Please tick one box on each line to show how <b>most other students in your school</b> would feel about each of the following scenarios:</p> <ol style="list-style-type: none"> <li>a. A girl and a boy go on a date, and the boy pays all the expenses</li> </ol> <p><b>ROs:</b> Approve, Disapprove, Neither</p> <p>Please tick one box on each line to show how <b>most other students in your school</b> would feel about a girl or boy in your school who does each of the following:</p> <ol style="list-style-type: none"> <li>a. A girl in your school who has a lot of sex partners.</li> </ol> <p><b>ROs:</b> Approve, Disapprove, Neither</p>	<p>Please tick a box to show how much <b>you personally</b> agree or disagree with each statement.</p> <ol style="list-style-type: none"> <li>a. Swearing is worse for a girl than for a boy.</li> <li>b. It is more acceptable for a boy to have a lot of sexual partners than for a girl.</li> <li>c. Most girls can't be trusted.</li> <li>d. On average, girls are as smart as boys.</li> <li>e. Girls should have the same freedom as boys.</li> </ol> <p><b>ROs:</b> I strongly agree, I agree, I disagree, I strongly disagree</p> <p><i>Tested item removed.</i></p> <p><i>Injunctive gender norms</i></p> <p>Please tick a box to show whether <b>your friends</b> would agree or disagree with each statement.</p> <ol style="list-style-type: none"> <li>a. Swearing is worse for a girl than for a boy.</li> <li>b. <b>It is more acceptable for a boy to have a lot of sexual partners than for a girl.</b></li> <li>c. Most girls can't be trusted.</li> <li>d. On average, girls are as smart as boys.</li> <li>e. Girls should have the same freedom as boys.</li> </ol> <p><b>ROs:</b> My friends would agree, My friends would disagree, My friends would neither agree nor disagree</p> <p><i>Second tested item removed.</i></p>
<p><b>ROs:</b> Strongly agree, Agree, Disagree, Strongly disagree</p>		

Note: DRV = dating and relationship violence; ROs = response options.

<sup>a</sup>Items adapted from Foshee et al. (2001).

<sup>b</sup>Items adapted from Cook-Craig et al. (2014).

<sup>c</sup>Items adapted from Sotiriou et al. (2011).

background; or any other ethnic group), sex assigned at birth, gender (male; female; transgender male; transgender female; or do not identify as male, female, or transgender), and religious group (none; Christian; Jewish; Muslim/Islam; Hindu; Buddhist; Sikh; I don't know/not sure; other religious group).

*Injunctive DRV Norms.* We developed an item measuring injunctive DRV norms (see Table 1) based on a scale assessing attitudes toward DRV which was used with adequate reliability (Lewis et al., 2015) of  $\alpha = .69$  in a trial of the Safe Dates DRV intervention (Foshee et al., 2001). The new measure instructed participants to indicate the views of “most other students in your school” on a series of behaviors attributed to students at the school, assessing norms at the site of intervention. We adapted the item “Sometimes boys have to hit their girlfriends to get them back under control” to ask about injunctive norms governing this behavior. We simplified response options from four levels of agreement (“strongly agree,” “agree,” “disagree,” and “strongly disagree”) to “approve,” “disapprove,” and “neither” (Cislaghi, 2016).

*Descriptive DRV Norms.* We adapted the descriptive DRV norms item “How many of your friends insult their girlfriend or boyfriend, swear at them, or try to control everything their boyfriend or girlfriend does?” to create two items concerning psychological DRV, complementing the injunctive norms item concerning physical DRV (see Table 1). The original item was drawn from a descriptive norms measure used with good reliability (Lewis et al., 2015) of  $\alpha = .70$  in a trial of Green Dot, a DRV and sexual violence intervention (Cook-Craig et al., 2014). We simplified response options from asking for the number of people to four options: “none,” “some,” “many,” or “most” (Cislaghi, 2016). We changed the reference group from “your friends” to “girls in your school” and (in a separate item) “boys in your school,” assessing norms at the site of intervention and separately by gender given that reported rates of DRV can differ between girls and boys (Barter et al., 2014; Leen et al., 2013). While evidence suggests that DRV rates might be higher among gender minorities as compared to cisgender young people (Dietz, 2019), we restricted this item to the two gender reference groups used in existing valid and reliable DRV descriptive norms measures (Meiksin et al., 2023).

*Attitudes Toward Gender Roles and Stereotypes.* We adapted an item from the 16-item Attitudes Toward Women Scale (ATWS), a measure of attitudes toward gender roles and stereotypes that combines items from previous measures (Sotiriou et al., 2011) and was used with excellent reliability (Lewis et al., 2015) of  $\alpha = .82$  in a 2011 study in Greece (see Table 1) (Sotiriou et al.,



2011). We identified this measure via an ad hoc search for relevant measures used with good reliability in gender-based violence research among adolescents within the previous decade. We selected an item to test that concerned gender roles in dating, and instructed participants to indicate “how much you personally agree or disagree.” We simplified language from “On a date, the boy should be expected to pay all expenses” to “On a date, the boy should pay all the expenses.”

*Injunctive Gender Norms.* We adapted two items from the ATWS (Sotiriou et al., 2011) to develop injunctive gender norms items asking participants to indicate the views of “most other students in your school” on a series of behaviors and scenarios (see Table 1). The first item assessed norms governing sexual behavior. To simplify language and focus on norms at the site of the intervention, we adapted the original item (“It is more accepted for a boy to have many sexual partners than for a girl”) to ask about “a girl in your school who has a lot of sex partners.” The second item was paired with the tested item on attitudes toward gender roles and stereotypes, allowing for comparison between responses about participants’ own and others’ views on the same behavior. We simplified response options for both items from four levels of agreement to “approve,” “disapprove,” and “neither” (Cislaghi, 2016).

## Analysis

The interviewer took detailed notes on each participant’s response to each interview question and probe during the interview (Willis, 1999) and, after reading and re-reading these notes after data collection, produced written summaries of the results for each question and probe by participant year-group and then overall sample (Willis & Artino, 2013). Summaries detailed both “dominant trends” and “discoveries” (i.e., problems might be significant despite arising rarely) (Willis, 1999, p. 28) and differences and similarities by gender and year-group. The detailed notes and written summaries were then subjected to thematic analysis (Green & Thorogood, 2018). Informed by the notion of constant comparison (Green & Thorogood, 2018), data and codes were compared throughout the analysis process, and newly emerging codes were applied to the full dataset.

When responding to a survey item, a survey participant must comprehend the question, retrieve information from long-term memory, make a judgment about how to answer, and then select from among the response options provided (Collins, 2003). Drawing on Young et al.’s work developing survey measures for young people (Young et al., 2016), we conceptualized these processes as falling within two distinct analytic categories: understandability

(encompassing comprehension) and answerability (encompassing retrieval, judgment, and response). Individual codes were developed inductively under the headings of “understandability” and “answerability,” with two sets of such codes: one applied to data on social norms items and the other (for comparison) applied to data on attitude items. Interview data were coded for evidence of good or poor understandability and answerability and for aspects of the tested items that enhanced or detracted from understandability and answerability. Axial coding drew together initial codes relating to the same themes—for example, the role of the framing of the reference group or observed manifestations of social norms—facilitating analysis within these themes.

Analysis of written summaries provided an overview of our findings and facilitated comparison by gender and year-group. Further analysis of notes on individual interviews identified the evidence supporting overall findings.

## **Results**

In all, 11 students took part in cognitive testing of social norms and attitudes items (Table 2). All were cisgender comprising seven girls and four boys. Participants were spread across year-groups with three in year 8 (age 13), five in year 9 (ages 13–14), and three in year 10 (ages 14–15). All but one identified as White British and all but two selected “none” for a religious group. Injunctive gender norms items were skipped with one participant, who did not reach these items before having to return to class; all other items were tested with all 11 participants.

Summary results relating to understandability and answerability of each tested measure, and refinements made based on these findings, are available in Supplemental Appendix A.

### *Understandability*

*Item Clarity.* There was some initial difficulty with understanding the intended meaning of all three injunctive norms measures for some participants. Rather than difficulty with specific terms or phrases, some confusion appeared to stem from the framing of the items which, when the instructions and item were read aloud together, were somewhat lengthy (see Table 1). When presented with injunctive norms measures, participants from all year-groups often asked whether the item was asking for their own or others’ views, or answered initially in terms of their own views. In an example of the former, one boy asked the interviewer to clarify whether the injunctive DRV norms measure was asking for his views, those of other boys in

**Table 2.** Background Characteristics of Cognitive Interview Participants.

Characteristics	Year 8 N	Year 9 N	Year 10 N	Total N (%)
Gender				
Girls	2	3	2	7 (63.6)
Boys	1	2	1	4 (33.4)
Age in years				
13	3	1	0	4 (33.4)
14	0	4	2	6 (54.5)
15	0	0	1	1 (9.1)
Ethnicity				
Black African, Caribbean, or Black British	1	0	0	1 (9.1)
White British	2	5	3	10 (90.9)
Religion				
Christian	1	0	1	2 (18.2)
None	2	5	2	9 (81.8)
Total N (%)	3 (27.3)	5 (45.5)	3 (27.3)	11 (100.0)

the school or those of girls. In an example of the latter, in response to the item assessing injunctive gender norms relating to a girl with many sex partners, a girl said, “If it was my friend I’d disapprove, but if it was someone I didn’t know, I wouldn’t care.” Similarly, another girl described the measure of injunctive DRV norms as easy to answer because “I just think boys shouldn’t hit girls,” suggesting that she had interpreted the item as assessing her own views on DRV.

These findings suggest that injunctive norms items tended not to work well in their tested form, as their meanings were often not initially clear to participants. Where this was the case, the interviewer explained the intended meaning of the item, including (where needed) explaining that the question was asking about the participant’s perception of others’ views. These explanations were effective in clarifying item meaning, suggesting that for participants who had difficulty with understandability, this reflected a lack of clarity of wording rather than a more fundamental inability to distinguish injunctive norms from personal views. Students’ ability to make this distinction was especially apparent in responses to the parallel items (see Table 1) that explored both personal attitudes and injunctive social norms regarding the gendered behavior of a boy paying the expenses on a date with a girl. In their responses, two girls highlighted where they personally disagreed with others’ views (as they perceived them).



### *Answerability*

*Level of Certainty About Others' Behavior and Views.* Participants tended to have difficulty responding to the measure of descriptive DRV norms because they were uncertain about the prevalence of psychological DRV perpetration among their peers. Some qualified their answers; for example, participants added "that I know of" and one of these participants also specified that they were responding with estimates among people whom they knew. Furthermore, asking about multiple behaviors within the same item detracted from answerability. For example, one girl commented that some boys might swear at their partner but would not necessarily insult or try to control her. Contributing to this uncertainty was that psychological DRV perpetration might be unobservable. As one boy explained, some might try to control their partner due to jealousy but he did not think they would "broadcast" this behavior because people would disapprove and the person would feel embarrassed by others' disapproval.

Overall, participants tended to report that they could respond more easily to measures of attitudes than to measures of injunctive norms. They explained that they knew their own mind better while imagining what others thought was more difficult. The level of difficulty in answering injunctive norms items varied based on the specified reference group and on the observability of social sanctions for, and on the strength of, the assessed norm, as described below.

*Reference group.* The reference group for injunctive norms measures, "most other students in your school," brought to mind a range of different groups for participants. A few said they thought of their friends when responding to these items; others reported thinking of older students or their own year-group. Some reported thinking of other students of the same gender, including older or popular boys. Our data suggest that responses to injunctive norms items would differ depending on the gender of the reference group students had in mind. For example, regarding an injunctive DRV norms item, one girl responded, "I know a lot of the girls would disapprove. I think it depends on who the boy's friends are. . . ." A gendered distinction arose also for the descriptive norms items, where levels of perceived DRV differed for items asking about perpetration by girls and by boys.

When asked about changing the reference group to "your friends," some participants said this could make some norms items easier to answer. This change tended to improve the answerability of the injunctive DRV norms measure, with one boy suggesting that this was because he would be more likely to know the views of his friends than views among the broader reference group. However, it made less of a difference to the answerability of the

measure of injunctive gender norms relating to paying on a date because the absence of a strong norm governing this behavior also detracted from that item's answerability.

*Observability of Behaviors and Social Sanctions.* Answerability was improved where participants could draw concretely on past observations and conversations to respond to social norms items. For example, in discussing how she arrived at her response to the descriptive DRV norms item, a girl recalled seeing a boy screaming at another girl because she had thrown away a ring he had given to her. Discussing how they became aware of injunctive gender norms governing sexual behavior, participants described the public visibility of social sanctions. For example, one girl reported that a boy with many sexual partners would be high-fived while a girl would be called a "slag." Similarly, a boy explained that "all the students in the school" would talk judgmentally with their friends about a student with many sexual partners or when a nude image of a student was circulated.

*Presence of a Strong Norm.* Once the intention to assess others' views had been clarified where needed, participants answered the measure assessing injunctive gender norms relating to a girl with many sexual partners more easily and confidently than they did other social norms measures. Participants were able to describe social repercussions for violating this norm, suggesting that the item taps a norm that is strong in the reference group and they could thus easily draw on examples of observed behavior related to this norm. By contrast, participants tended to have more difficulty responding to the injunctive gender norms item assessing expectations of who should pay on a date between a girl and a boy. While some answered this item with little apparent difficulty, participants often expressed some uncertainty about their response, for example using words like "maybe" or "probably" or describing variable views among the reference group.

Responses to the parallel measure of attitudes provided further insight. For several participants, the response depended on context, for example, who had paid last time, the cost of the bill, or whether this was a first date. Responses to these paired attitude and injunctive norms items suggest that the injunctive norms measure did not tap a strong social norm among this population.

### *Measure Refinements*

Based on our cognitive interview findings, we made a number of refinements to social norms and attitude measures in preparation for piloting. To address variability in who the reference group "most other students in your school"

brought to mind, and difficulty reporting perceived views of this reference group, all social norms measures were adapted to ask about a reference group of “your friends.” To improve clarity and readability, we simplified the instructions for all measures and made minor changes to wording to reflect common parlance in England. To clarify that injunctive norms items ask about the views of others, we simplified the measures’ instructions and adapted items and response options to mirror corresponding attitudes measures (i.e., “Please tick a box to show whether **your friends** would agree or disagree with each statement”). Refined survey measures thus asked about one’s own and others’ views on the same behaviors and presented similar Likert scale response options that reinforced the perspective in question (e.g., “I agree” for attitudes items and “My friends would agree” for injunctive norms items). While attitudes items had four response options (two levels of agreement and two levels of disagreement), refined injunctive norms measures had three (agreement, disagreement, or neither) to improve answerability and to accommodate the possibility of items representing weak or absent norms. We also removed three items from the injunctive DRV norms measure (and corresponding attitudes measure) that specified a rationale for DRV (e.g., “A girl who makes her boyfriend jealous on purpose deserves to be hit”), which we judged to be less readable than other items and more difficult to respond to from the perspective of a reference group; and reframed two items from pro- to anti-DRV statements to ensure a mixture of statements supporting and opposing DRV.

For the descriptive DRV norms measure, we added instructions to “show your best guess” and we added a filter question so that only participants reporting more than one friend with a partner would be routed to these items. Based on findings that items assessing behaviors that were more likely to be observed were easier to answer and that assessing multiple behaviors within one item reduced answerability, we removed the item about sexual DRV and separated items on controlling behavior and insulting/swearing at a partner. We also adapted descriptive DRV norms items to be gender-neutral, more closely reflecting the original measure (see Table 1) and enabling us to ask about a more meaningful reference group (friends with partners, as opposed to smaller groups specifying female friends with boyfriends and male friends with girlfriends) while reducing the number of items in the measure. Attitude and injunctive gender norms items relating to who should pay on a date were dropped. To reduce the length of the injunctive gender norms measure and the corresponding attitudes measure, we removed items about gender roles among adults (father/mother, husband/wife) and items we judged to be less likely to represent strong norms among young people in England.

## Discussion

Our findings suggest that participants were able to understand both descriptive and injunctive norms items and distinguish between the latter and their own views. Some participants showed initial confusion about whether injunctive norms items were asking for their own views or the views of others, suggesting that the wording of tested measures should be refined to improve clarity. To this end, injunctive norms measures were adapted to mirror attitude measures, that is, to ask about the same behaviors using similar Likert scale response options, a format used in other research with young people (Shamu et al., 2016).

We found that inconsistency in who the reference group “most other students in your school” brought to mind, lack of certainty about DRV behaviors, and perceived heterogeneity in views among this population, detracted from the answerability of norms items. Our data suggest that narrowing the reference group to “your friends” might improve answerability where norms are salient among this reference group and where the behaviors in question are likely to have been discussed or observed. The use of this narrower reference group is supported by evidence from a recent systematic review of social norms measures in DRV research showing that for nearly all included measures, DRV supportive norms among friends were associated with young people’s own experience of DRV (Meiksin et al., 2023).

Research with young people finds that levels of support for DRV (Pöllänen et al., 2018) and DRV prevalence (Barter et al., 2014; Leen et al., 2013) can both vary by gender and that girls tend to report less support for inequitable gender norms (Kågesten et al., 2016) than do boys. Findings from our study suggest that young people are sensitive to these differences among their peers: participants consider the gender of reference group members in their responses to norms items. Where they thought that the views of girls and boys differed, this detracted from the answerability of tested injunctive norms items. However, repeating all norms measures for reference groups of girls and boys separately could result in lengthy scales that would be unfeasible to include in surveys. Narrowing the reference group to “your friends” allows participants to bring to mind a smaller social group. Peers with whom young people identify or feel connected (such as friends) can be particularly influential (Wolfe & Temple, 2018). While the majority of adolescents’ friends are those of the same sex (Deutsch et al., 2014), this approach also allows for individual variation in the gender composition of the reference group while minimizing the number of measure items. Piloting these measures among a representative sample of young people in England will provide important information about their acceptability, reliability, and validity.



During the development of gender norms measures for the Global Early Adolescent Study, participants aged 10 to 14 years were surveyed about their own attitudes and those of their friends toward the same gender norms (Moreau, 2018). The study found that many reported not knowing what their friends thought and that, overall, participants tended to report their friends' views as very similar to their own, raising concerns about whether data collected via surveys can distinguish between these two concepts in this age group (Moreau, 2018; Moreau et al., 2021). The present study builds on these findings by identifying features of norms measures that improve answerability. We found that participants were most easily and confidently able to respond where norms appeared relatively strong and where they could draw on concrete experiences of seeing norms on public display; that is, where they had discussed or seen the specified behaviors or where they had observed social rewards/repercussions for complying with/violating injunctive norms.

As with any research on social norms important to a particular health outcome, norms measures in DRV research should focus on social norms that are linked theoretically or empirically to DRV outcomes. Based on our findings, we recommend that decisions about which social norms items to include in DRV research should be based on local formative research identifying norms (a) held among a cohesive and influential reference group; (b) strong enough among the reference group for respondents to discern; and (c) for which the relevant behavior (for descriptive norms) or social sanctioning (injunctive norms) is discussed or directly observable. Measures should be worded as clearly and concisely as possible and, where surveys include corresponding attitudinal measures, researchers should consider using parallel formatting, items, and response options for both types of measures to improve the understandability of injunctive norms measures.

### *Limitations*

As the interviewer took notes during cognitive interviews, it is possible that some nonverbal signs of participants' confusion or tentativeness could have been missed.

Our data come from a sample of 11 participants aged 13 to 15 years recruited from one school in England. While our sample included cisgender girls and boys, it was not diverse by ethnicity, religion, or other gender identities and no data were available on sexual orientation. In addition, given time constraints on the length of the interviews as well as the early stage of our work to refine social norms measures, only two descriptive norms items and three injunctive norms items were tested and this did not include testing of

refined items. We were, therefore, unable to test directly whether refinements improved understandability and answerability, including assessing whether the gender-neutral framing of the reference group “your friends” detracts from answerability due to the gendered nature of the tested items.

## Conclusions

Our findings suggest that it is possible to develop social norms measures about gender and DRV that are understandable and answerable for young people aged 13 to 15 years in England. Future research should cognitively test a broader range of items, including those assessing norms suspected to be more and less publicly manifest, and should do so among a sample of young people that is diverse in terms of backgrounds and sexual and gender identities. The acceptability, reliability, and validity of the social norms measures refined through cognitive testing in the present study should be assessed among a representative sample of young people in England. Where new social norms measures are developed or existing measures adapted for DRV research, these should assess norms which are salient and publicly manifest among a cohesive, influential reference group. Careful consideration is needed to establish the value of including measures of social norms where this is not known to be the case.

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## Supplemental Material

Supplemental material for this article is available online.

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### 5.3. Follow-up to Paper 2: Development and refinement of social norms measures for piloting

This section summarises the development of the three social norms measures discussed in Paper 2 and their refinement in preparation for being piloted in Project Respect.

#### 5.3.1. Descriptive DRV norms measure

The measure of descriptive DRV norms was adapted from an existing three-item measure used with respectable reliability<sup>187</sup> ( $\alpha=0.70$ ) among secondary school students in a trial of Green Dot, a sexual violence and DRV intervention in the US.<sup>216</sup> Table 3 presents the original measure, items tested in cognitive interviews and the refined measure subsequently piloted in Project Respect.

We removed the item assessing sexual DRV due to the young age of survey respondents (aged 12-14 years). Drawing on examples of simple social norms items highlighted in the work of an expert group on social norms measurement in GBV research,<sup>104</sup> I simplified response options for cognitive interviews from asking about the number of friends perpetrating DRV to “none”, “some”, “many” and “most”. I further simplified the measure by developing instructions to apply to all items in the measure. I reversed the order in which boyfriends and girlfriends are referenced second item for consistency with the beginning of the third item.

Time constraints prevented cognitively testing of all measure items, and so testing focused on the item assessing psychological DRV in order to complement cognitive testing of another norms measure that addressed physical DRV. I split the item on psychological DRV into two separate items in order to ask about girls and boys separately because reported DRV rates differ by gender.<sup>22,238</sup> I specified the reference group as girls/boys “in your school” because Project Respect targeted students within intervention schools.

On the basis of cognitive interviews, I added a routing question to direct only students with friends who have partners to descriptive DRV norms items, added instructions to “show your

best guess”, reverted to the original reference group (“your friends”), and split the single item assessing psychological DRV into two separate items to ask about verbal abuse and control separately. Like the original measure, response options for the refined measure were scored such that a higher score indicated more pro-DRV norms and these were summed to compute a total score for the measure.

**Table 3. Descriptive DRV norms: Original, cognitively tested and piloted measures**

	<b>Title, items, response options and scoring</b>
<b>Original measure</b>	<p><b><i>Peer support for violence<sup>a</sup></i></b></p> <ol style="list-style-type: none"> <li>1. How many of your friends have forced someone to have sexual activity with them that caused their partner to cry, scream, plead, hit or fight back?</li> <li>2. How many of your friends have used physical force, such as hitting to solve fights with their boyfriends or girlfriends?</li> <li>3. How many of your friends insult their girlfriend or boyfriend, swear at them, or try to control everything their boyfriend or girlfriend does?</li> </ol> <p><b>Response options:</b> 0 friends (=0), 1-2 (=1), 3-5 (=2), 6+ (=3)</p>
<b>Tested items used in cognitive testing</b>	<p>Please tick one box on each line to show <b>how many students in your school</b> you think has done each of the following:</p> <ol style="list-style-type: none"> <li>a. How many <b>boys</b> in your school insult their girlfriend, swear at her, or try to control everything she does?</li> <li>b. How many <b>girls</b> in your school insult their boyfriend, swear at him, or try to control everything he does?</li> </ol> <p><b>Response options:</b> None, Some, Many, Most</p>
<b>Piloted measure<sup>b</sup> refined based on cognitive testing</b>	<p>Please tick a box to show <b>your best guess</b> of how many of <b>your friends</b> have done the following:</p> <ol style="list-style-type: none"> <li>a. How many of <b>your friends</b> have used physical force, such as hitting, to solve fights with their girlfriend or boyfriend?</li> <li>b. How many of <b>your friends</b> insult or swear at their girlfriend or boyfriend?</li> <li>c. How many of <b>your friends</b> try to control everything their girlfriend or boyfriend does?</li> </ol> <p><b>Response options:</b> None (=1), Some (=2), Many (=3), Most (=4)</p>

<sup>a</sup> Measure from Cook-Craig et al.<sup>216</sup>

<sup>b</sup> Items asked of participants answering “yes” to the yes/no routing question, “Do you have friends who have girlfriends or boyfriends?”

### 5.3.2. Injunctive DRV norms measure

The measure of injunctive DRV norms was developed based on an eight-item measure of DRV attitudes used with minimally acceptable reliability<sup>187</sup> ( $\alpha=0.69$ ) among 8<sup>th</sup> and 9<sup>th</sup> grade students in a trial of the Safe Dates DRV prevention intervention.<sup>77</sup> I added introductory text and modified wording to ask participants about the views of “most other students in your school” rather than their own views. This was to assess injunctive norms at the site of intervention. I added an additional item by adapting an existing item from the three-item “perceived negative sanctions” measure used in the Safe Dates trial.<sup>77</sup> I replaced “dating partner” with “boyfriend or girlfriend” to align with other items in the new measure and I modified the wording to assess injunctive norms about breaking up with an abusive partner rather than the participant’s expectation of whether perpetrating DRV would result in losing their partner. I did not include the remaining two items from the original measure because they did not assess specifically social sanctions, the type of sanctions with which injunctive norms are concerned, and because the measure had unacceptable reliability<sup>187</sup> (Cronbach’s  $\alpha=0.55$ ) in the trial. Informed by simplified approaches to measuring injunctive norms highlighted in the work of an expert group on social norms measurement in GBV research,<sup>104</sup> for cognitive interviews I added a neutral response option and simplified response options from a four-point Likert scale to “approve”, “disapprove” and “neither”. Table 4 presents the original measures, items tested in cognitive interviews and the refined measure subsequently piloted in Project Respect.

Time constraints prevented cognitively testing all measure items, and so testing focused on one item addressing physical DRV to complement cognitive testing of the descriptive DRV norms items addressing psychological DRV. On the basis of cognitive interviews I then simplified the introductory text, structured the measure’s format and response options to mirror the DRV attitudes measure also included in the Project Respect survey, simplified the reference group to “your friends”, reiterated the reference group within the response options and removed three items specifying a justification for DRV. In consultation with the study team we reverse-worded three items to avoid confronting participants with a barrage of pro-DRV statements. Like the

original measure, response options for the refined measure were scored such that a higher score indicated more pro-DRV norms (reverse-scoring the reverse-worded items) and these were summed to compute a total score for the measure.

**Table 4. Injunctive DRV norms: Original, cognitively tested and piloted measures**

	<b>Title, items, response options and scoring</b>
<b>Original measures</b>	<p><b>Prescribed norms<sup>a</sup></b></p> <ol style="list-style-type: none"> <li>1. It is OK for a boy to hit his girlfriend if she did something to make him mad.</li> <li>2. It is OK for a boy to hit his girlfriend if she insulted him in front of friends.</li> <li>3. Girls sometimes deserve to be hit by the boys they date.</li> <li>4. A girl who makes her boyfriend jealous on purpose, deserves to be hit</li> <li>5. Boys sometimes deserve to be hit by the girls they date.</li> <li>6. Sometimes boys have to hit their girlfriends to get them back under control.</li> <li>7. It is OK for a boy to hit a girl if she hit him first.</li> <li>8. It is OK for a girl to hit a boy if he hit her first.</li> </ol> <p><b>Perceived negative sanctions<sup>a</sup></b></p> <ol style="list-style-type: none"> <li>1. If I hit a dating partner he/she would break up with me.</li> <li>2. Bad things happen to people who are violent to their dating partners</li> <li>3. If I hit a dating partner I would be arrested</li> </ol> <p><b>Response options (both measures):</b> strongly disagree (=0), disagree (=1), agree (=2), strongly agree (=3)</p>
<b>Tested items used in cognitive testing</b>	<p>Please tick one box to show how <b>most other students in your school</b> would feel if a student in your school did each of the following:</p> <ol style="list-style-type: none"> <li>a. A boy hit his girlfriend to get her back under control.</li> </ol> <p><b>Response options:</b> Approve, Disapprove, Neither</p>
<b>Piloted measure refined based on cognitive testing</b>	<p>Please tick a box to show whether <b>your friends</b> would agree or disagree with each statement:</p> <ol style="list-style-type: none"> <li>a. It is NOT okay for a boy to hit his girlfriend if she did something to make him mad. <b>(rev)</b></li> <li>b. Girls sometimes deserve to be hit by their boyfriends.</li> <li>c. Boys sometimes deserve to be hit by their girlfriends.</li> <li>d. It is okay for a boy to hit a girl if she hit him first.</li> <li>e. It is NOT okay for a girl to hit a boy if he hit her first. <b>(rev)</b></li> <li>f. If someone hits their boyfriend or girlfriend, the boyfriend or girlfriend should break up with them. <b>(rev)</b></li> </ol> <p><b>Response options:</b> My friends would agree (=3), My friends would neither agree nor disagree (=2), My friends would disagree (=1)</p>

<sup>a</sup> Measures from Foshee et al. <sup>77</sup>

rev=reverse-worded, meaning response options scored in the reverse so that a higher score indicates more pro-DRV norms

### 5.3.3. Injunctive gender norms measure

The measure of injunctive gender norms was developed based on a 16-item measure of gender attitudes used with very good reliability<sup>187</sup> ( $\alpha=0.82$ ) among participants aged 15-20 years in Greece.<sup>217</sup> As with the injunctive DRV norms measure, I added introductory text, modified wording to ask participants about the views of students in their school, added a neutral response option and simplified response options from a four-point Likert scale to “approve”, “disapprove” and “neither”. Table 5 presents the original measures, items tested in cognitive interviews and the refined measure subsequently piloted in Project Respect.

Time constraints prevented cognitively testing all measure items and survey length precluded including all items. In order to focus on norms proximal to DRV, I selected two items to cognitively test which focused on the context of intimate relationships. Refinements based on cognitive testing mirrored those for the injunctive DRV norms measure: I simplified the introductory text, structured the measure’s format and response options to mirror the gender attitudes measure also included in the Project Respect survey, simplified the reference group to “your friends” and reiterated the reference group within the response options. Cognitive interviews informed the selection of the final five items for inclusion, alongside the research team’s assessment of items’ salience for young people in the UK. Items were also selected to retain a mixture of those assessing different aspects of the gender norms domain.<sup>187</sup>

We reverse-worded two items so as not to present participants with a barrage of sexist statements. Response options for the refined measure were scored such that a higher score indicated more anti-equality norms (reverse-scoring the reverse-worded items). These were summed to compute a total score for the measure.



**Table 5. Injunctive gender norms: Original, cognitively tested and piloted measures**

	<b>Title, items, response options and scoring</b>
<b>Original measure</b>	<p><b>Attitudes towards women scale<sup>a</sup></b></p> <ol style="list-style-type: none"> <li>1. Swearing is worse for a girl than for a boy.</li> <li>2. On a date, the boy should be expected to pay all expenses.</li> <li>3. On the average, girls are as smart as boys.<sup>b</sup></li> <li>4. More encouragement in a family should be given to sons than daughters to go to college.</li> <li>5. It is all right for a girl to want to play rough sports like football.<sup>b</sup></li> <li>6. In general, the father should have greater authority than the mother in making family decisions.</li> <li>7. It is all right for a girl to ask a boy out on a date.<sup>b</sup></li> <li>8. It is more important for boys than girls to do well in school.</li> <li>9. If both husband and wife have jobs, the husband should do a share of the housework such as washing dishes and doing the laundry.<sup>b</sup></li> <li>10. Boys are better leaders than girls.</li> <li>11. Girls should be more concerned with becoming good wives and mothers rather than desiring a professional or business career.</li> <li>12. Girls should have the same freedom as boys.<sup>b</sup></li> <li>13. Most girls like to show off their bodies.</li> <li>14. Most boys like to go out with girls just for sex.</li> <li>15. Most girls can't be trusted.</li> <li>16. It is more accepted for a boy to have many sexual partners than for a girl.</li> </ol> <p><b>Response options:</b> strongly disagree (=1), disagree (=2), agree (=3), strongly agree (=4)</p>
<b>Tested items used in cognitive testing</b>	<p>Please tick one box on each line to show how <b>most other students in your school</b> would feel about each of the following scenarios:<sup>c</sup></p> <ol style="list-style-type: none"> <li>a. A girl and a boy go on a date, and the boy pays all the expenses</li> </ol> <p>Please tick one box on each line to show how <b>most other students in your school</b> would feel about a girl or boy in your school who does each of the following:<sup>c</sup></p> <ol style="list-style-type: none"> <li>a. A girl in your school who has a lot of sex partners.</li> </ol> <p><b>Response options:</b> Approve, Disapprove, Neither</p> <p><i>(table continued...)</i></p>

	<b>Title, items, response options and scoring</b>
<b>Piloted measure</b> <i>refined based on cognitive testing</i>	<p>Please tick a box to show whether <b>your friends</b> would agree or disagree with each statement.</p> <ul style="list-style-type: none"> <li>a. Swearing is worse for a girl than for a boy.</li> <li>b. It is more acceptable for a boy to have a lot of sexual partners than for a girl.</li> <li>c. Most girls can't be trusted.</li> <li>d. On average, girls are as smart as boys. <b>(rev)</b></li> <li>e. Girls should have the same freedom as boys. <b>(rev)</b></li> </ul> <p><b>Response options:</b> My friends would agree (=3), My friends would neither agree nor disagree (=2), My friends would disagree (=1)</p>

<sup>a</sup> Items from Sotiriou et al. <sup>217</sup>

<sup>b</sup> rev=reverse-worded, meaning response options scored in the reverse so that a higher score indicates more anti-equality attitudes

rev=reverse-worded; response options scored in the reverse so that a higher score indicates more anti-equality norms

<sup>c</sup> Instructions for items refer to ticking “one box on each line” because the tested items form part of multi-item measures in which each item appears on a separate line. The wording was retained for cognitive testing including where only one item was tested.

5.3.4. Piloted social norms measures

Table 6 shows the social norms measures, refined on the basis of cognitive testing, which were piloted in Project Respect. Paper 3 (see Chapter 6) reports on the results of this piloting.

**Table 6. Piloted social norms measures, refined on the basis of cognitive testing**

Measure, response options, scoring	Items
<p><b>Descriptive DRV norms</b>  <i>None (=1), Some (=2), Many (=3), Most (=4)</i></p>	<p>Please tick a box to show <b>your best guess</b> of how many of <b>your friends</b> have done the following:</p> <ol style="list-style-type: none"> <li>1. How many of <b>your friends</b> have used physical force, such as hitting, to solve fights with their girlfriend or boyfriend?</li> <li>2. How many of <b>your friends</b> insult or swear at their girlfriend or boyfriend?</li> <li>3. How many of <b>your friends</b> try to control everything their girlfriend or boyfriend does?</li> </ol>
<p><b>Injunctive DRV norms</b>  <i>My friends would agree (=3), My friends would neither agree nor disagree (=2), My friends would disagree (=1)</i></p>	<p>Please tick a box to show whether <b>your friends</b> would agree or disagree with each statement:</p> <ol style="list-style-type: none"> <li>a. It is NOT okay for a boy to hit his girlfriend if she did something to make him mad. <b>(rev)</b></li> <li>b. Girls sometimes deserve to be hit by their boyfriends.</li> <li>c. Boys sometimes deserve to be hit by their girlfriends.</li> <li>d. It is okay for a boy to hit a girl if she hit him first.</li> <li>e. It is NOT okay for a girl to hit a boy if he hit her first. <b>(rev)</b></li> <li>f. If someone hits their boyfriend or girlfriend, the boyfriend or girlfriend should break up with them. <b>(rev)</b></li> </ol>
<p><b>Injunctive gender norms</b>  <i>My friends would agree (=3), My friends would neither agree nor disagree (=2), My friends would disagree (=1)</i></p>	<p>Please tick a box to show whether <b>your friends</b> would agree or disagree with each statement.</p> <ol style="list-style-type: none"> <li>a. Swearing is worse for a girl than for a boy.</li> <li>b. It is more acceptable for a boy to have a lot of sexual partners than for a girl.</li> <li>c. Most girls can't be trusted.</li> <li>d. On average, girls are as smart as boys. <b>(rev)</b></li> <li>e. Girls should have the same freedom as boys. <b>(rev)</b></li> </ol>

rev=reverse-worded, meaning response options scored in the reverse so that a higher score indicates more pro-DRV/anti-equality norms

## Chapter 6. Paper 3: Reliability and validity testing of new social norms measures

### 6.1. Introduction to Paper 3

After refining three social norms measures through cognitive testing as reported in Paper 2 (see Chapter 5), we piloted the measures in baseline surveys with year 8 students in five schools taking part in Project Respect. Paper 3 reports on the reliability and validity of these measures and makes recommendations for future refinements, then extends this work to make recommendations for future development and use of social norms measures in DRV research. In doing so, this paper addresses the third research question of my thesis, “Are new and adapted measures of social norms relating to DRV and gender reliable and valid when used in research with adolescents in England, and how can they be refined?”

As noted in Section 3.2.5.3, the weight of available evidence suggests that some norms measures should show an independent relationship to some DRV outcomes when adjusting for personal attitudes but does not pinpoint which norms measures should do so and for which DRV outcomes. As part of my analysis, I explored these relationships in multivariable models, and the results contribute to considerations for potential refinements of the tested norms measures. I considered that if tested norms measures were to show an association with DRV outcomes in univariable but not multivariable regressions, this could indicate that the measures should be refined to increase the opportunity for covariation with DRV outcomes.

These analyses also serve a second purpose in broader DRV research. In the context of Paper 3 as a standalone article, I frame the multivariable regressions as exploratory analyses under the distinct research question, “Are social norms concerning DRV and gender associated with DRV outcomes after adjusting for individual attitudes and sociodemographic factors?” This approach was informed by Clark et al.’s work psychometrically testing a new social norms measure and then modelling its covariate-adjusted relationship to IPV outcomes.<sup>151</sup> After confirmation of the

reliability and validity of three norms measures presented in Paper 3, I drew on Project Respect data to add to the limited empirical research on relationships between social norms and DRV.

The supplemental appendices to which Paper 3 refers are provided in Appendix 18 of this thesis.

6.2. Paper 3: Social norms in dating and relationship violence research: testing new and adapted measures and examining their relationships to violence outcomes

## RESEARCH PAPER COVER SHEET

Please note that a cover sheet must be completed for each research paper included within a thesis.

### SECTION A – Student Details

Student ID Number	452277	Title	Ms.
First Name(s)	Rebecca		
Surname/Family Name	Meiksin		
Thesis Title	Developing and refining social norms measures for the evaluation of a school-based intervention to reduce dating and relationship violence among adolescents in England		
Primary Supervisor	Professor Chris Bonell		

If the Research Paper has previously been published please complete Section B, if not please move to Section C.

### SECTION B – Paper already published

Where was the work published?	<input type="text"/>		
When was the work published?	<input type="text"/>		
If the work was published prior to registration for your research degree, give a brief rationale for its inclusion	<input type="text"/>		
Have you retained the copyright for the work?*	Choose an item.	Was the work subject to academic peer review?	Choose an item.

\*If yes, please attach evidence of retention. If no, or if the work is being included in its published format, please attach evidence of permission from the copyright holder (publisher or other author) to include this work.

### SECTION C – Prepared for publication, but not yet published

Where is the work intended to be published?	Social Science & Medicine
Please list the paper's authors in the intended authorship order:	Rebecca Meiksin, GJ Melendez-Torres, Charles Opondo, Anjalee Kohli, Nambusi Kyegombe, Chris Bonell

Stage of publication	Not yet submitted
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**SECTION D – Multi-authored work**

For multi-authored work, give full details of your role in the research included in the paper and in the preparation of the paper. (Attach a further sheet if necessary)	I conceptualised the research questions, designed the tested measures, conducted the analysis and led interpretation and writing. GJ Melendez-Torres led advising on the analysis. Charles Opondo provided specialist statistical advice on the analysis of clustered data. Chris Bonell designed the overall study and advised on analysis. All authors helped interpret the findings and provided feedback on the manuscript.
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**SECTION E**

Student Signature	Rebecca Meiksin
Date	15/03/2024

Supervisor Signature	Chris Bonell
Date	15/03/2024



## **Social norms in dating and relationship violence research: testing new and adapted measures and exploring their relationships to violence outcomes**

**Authors:** Rebecca Meiksin, GJ Melendez-Torres, Charles Opondo Anjalee Kohli, Nambusi Kyegombe, Chris Bonell

### **Abstract**

Dating and relationship violence (DRV) is widespread globally and associated with increased substance use, sexual risk behaviours, depression and suicide attempts. While DRV interventions often aim to change social norms underpinning DRV, a lack of established measures inhibits researchers' ability to assess whether norms are changing, and if so, whether this mediates programme impact. Drawing on baseline survey data from a DRV prevention pilot trial in secondary schools in England, we analysed the factor structure of 14 pilot items assessing descriptive and injunctive DRV norms and injunctive gender norms. We assessed the reliability and validity of the resulting measures and examined whether associations between norms and DRV were moderated by sex for eight DRV outcomes. Finally, we explored whether associations persisted in multivariable regressions that included other norms measures and sociodemographic and attitudinal variables where these were found to be covariates. Surveys took place from June-July 2017 and included 1,426 students aged 12-14 years (82.5% response rate) in five schools. Reverse-worded norms items loaded onto a single factor with low reliability and unclear interpretability. Loadings of remaining items delineated three distinct measures aligned with *a priori* social-norms constructs. Measures had acceptable reliability and were associated with all DRV outcomes in univariable analyses. However, floor effects suggested they were not sensitive to low-to-moderate levels of the constructs assessed. In multivariable analyses, descriptive DRV norms remained independently associated with most DRV outcomes; injunctive gender norms retained an association with most victimisation outcomes. This research resulted in three brief, reliable, valid measures of distinct social norms associated with a broad range of DRV outcomes which can be used in evaluations. Measures could be further refined with the addition of items indicating more moderate levels of the constructs assessed.

Longitudinal research is needed to explore temporal relationships between social norms and DRV and whether these are moderated by sex.

## **Introduction**

Comprising psychological, physical or sexual abuse in adolescence by a current or former intimate partner,<sup>16,19</sup> dating and relationship violence (DRV) poses risks to young people's health and wellbeing.<sup>26,52</sup> While interventions often target harmful social norms sustaining this type of violence,<sup>8</sup> methods for social norms measurement are underdeveloped, impeding observational and intervention studies.<sup>11</sup> Drawing on data from a pilot trial of a DRV prevention programme in England, the present study examines the reliability and validity of new and adapted social norms measures and explores their associations with DRV outcomes.

While reported prevalence varies by study design and sample, reviews suggest that DRV is widespread. In a 2016 systematic review, among the 26 studies using the Conflict Tactics Scale (the most commonly used DRV behaviour measure), median psychological victimisation rates were 88% among girls and 72% among boys.<sup>21</sup> A meta-analytic 2017 systematic review reported physical DRV victimisation rates of 21% among both girls and boys, and sexual DRV victimisation rates of 14% among girls and 8% among boys.<sup>25</sup> In addition to injuries,<sup>50</sup> DRV victimisation is associated with subsequent antisocial<sup>26,52</sup> and sexual risk<sup>54</sup> behaviours, substance use,<sup>26,52</sup> depression,<sup>52</sup> suicidal ideation<sup>26</sup> and suicide attempts,<sup>55</sup> and intimate partner violence (IPV) victimisation<sup>49</sup> and perpetration in adulthood.<sup>56</sup> Compared to boys, girls report additional harms including fear<sup>34</sup> and greater injury.<sup>50</sup>

## **Social norms and DRV**

Theory and empirical research suggest that social norms might play an important role in sustaining DRV. A common construct across several prominent behavioural theories,<sup>100,108,239,240</sup> social norms are informal rules that determine acceptable behaviour within a social group.<sup>103</sup> Theorists distinguish between two types of social norms: beliefs about what people within a reference group of influential others<sup>101</sup> (1) typically do (descriptive norms), and (2) consider to

be appropriate (injunctive norms).<sup>15,102</sup> Anticipation of social rewards and punishments by the reference group are said to maintain these social expectations.<sup>15,106</sup>

In a 2023 systematic review of DRV research, we explored measures of social norms concerning DRV and gender and their associations with DRV outcomes.<sup>193</sup> Pro-DRV descriptive and injunctive norms (i.e., those supportive of DRV) were associated with increased DRV risk in the vast majority of included studies, including longitudinally.<sup>193</sup> Evidence suggests these relationships can, but don't always, vary by sex.<sup>76–78,128</sup> Gender norms, which “distinguish expected behaviour on the basis of gender”,<sup>97(p4)</sup> are a particularly powerful type of social norm.<sup>94</sup> The few quantitative studies examining associations between gender norms and DRV have mostly focused on norms concerning gender-based violence (GBV), missing broader gendered expectations underpinning DRV.<sup>193</sup> Nonetheless, the limited research available suggests that social norms supporting male-perpetrated GBV are associated with girls' DRV victimisation<sup>136,241</sup> and boys' perpetration.<sup>136</sup> The two studies examining broader gender norms reported that gender-inequitable sexual and household norms are associated with increased DRV.<sup>133,135</sup>

Qualitative research offers further insights into relationships between gender norms and DRV. For example, Marston and King's global systematic review of qualitative research on factors shaping young people's sexual behaviour found that social expectations of female chastity can hinder young women's expression of sexual desire, undermining clear communication about sexual consent.<sup>117</sup> Considering UK research, in a context where boys are valorised but girls are stigmatised for sexual activity<sup>138</sup> girls report that resisting sex can precipitate physical DRV and boys report that girls who are perceived to be sexually experienced are considered more acceptable targets of sexual pressure.<sup>34</sup> Their accounts further suggest that norms linking boys' social status to their partners' faithfulness can drive jealousy and controlling behaviours;<sup>138</sup> while for girls, leaving an abusive relationship could result in loss of social status.<sup>34</sup>

In contrast to social norms, which hinge on social expectations, personal attitudes are preferences or judgements that are motivated internally.<sup>101,112</sup> While attitudes and norms are thought to influence each other reciprocally,<sup>100</sup> theorists posit that social norms can also

influence behaviour directly and in some cases override the influence of personal attitudes.<sup>101,104</sup> Offering empirical support, several studies find that DRV<sup>76–78,82,83,122,123,127</sup> and gender<sup>133,135</sup> norms remain associated with DRV in models adjusted for personal attitudes, including (for descriptive DRV norms) longitudinally.<sup>77,82</sup> Considering the relative strength of attitudinal and normative influences, this appears to vary, as behavioural theory would suggest:<sup>100</sup> some studies find that social norms are more strongly associated with DRV than are attitudes<sup>78,83,127,130</sup> while in other studies it is attitudes that show a stronger relationship to DRV.<sup>76,127,131,133,135</sup> There is little evidence, however, to suggest which norms are most important for which DRV outcomes or among whom. Few studies have modelled attitudes and norms together across DRV types<sup>76,132</sup> or for both perpetration and victimisation.<sup>76,78</sup> According to our review, no studies share norms measures, limiting comparability; and none have included distinct measures of descriptive and injunctive norms, or DRV and gender norms, in the same DRV models.<sup>193</sup>

While DRV interventions often seek to harness the “power of the peer group”<sup>8(p126)</sup> to reduce DRV, a limited evidence base offers little guidance in terms of which norms are most important and how they might work together, alongside attitudes, to shape DRV outcomes.<sup>82</sup> Furthermore, though systematic reviews find that DRV interventions can change personal attitudes,<sup>22,30</sup> evaluations of DRV interventions rarely measure social norms directly.<sup>11,193</sup> Those that have offer emerging evidence that interventions can shift norms,<sup>11,149</sup> though none to date have assessed the role of social norms in mediating impact on DRV outcomes.<sup>11,193</sup> Both observational and intervention studies are hampered by a lack of established, validated social norms measures.<sup>11,193</sup>

### **Social norms measurement in DRV research**

Our 2023 review of DRV research identified 40 measures of norms concerning DRV and gender. It assessed their quality, including the extent to which their assessments were consistent (reliability) and measured the intended constructs (validity).<sup>187,193</sup> Tests of a scale’s reliability and validity assume that the scale is unidimensional, i.e., that its items tap a single domain. Where they are multidimensional – i.e., responses to items cluster in a way that

indicates the presence of subscales each tapping a different domain – reliability and validity tests should be carried out on emergent subscales.<sup>187</sup> However, our review found evidence of an analysis to confirm unidimensionality for only one included measure. Setting this limitation aside, most included measures did show evidence of an association with one or more DRV outcome, offering some support for their validity. Indicators of reliability, however, were mixed.<sup>193</sup> And though research suggests that adolescents might have difficulty responding to questions about the views of others,<sup>158,159</sup> fewer than a quarter of included measures were reported to have been informed by youth engagement. Finally, no measure had been used in more than one study, reflecting a disjointed and unconsolidated body of literature.<sup>193</sup>

### **The present study**

Project Respect was a DRV prevention programme piloted in England.<sup>37</sup> Informed by the programme's theory of change, the pilot trial tested three measures of social norms: a measure of descriptive DRV norms was adapted from an existing scale<sup>216</sup> and new measures of injunctive DRV and gender norms were developed based on existing measures of personal attitudes.<sup>77,217</sup> Original measures had previously demonstrated reliability that was minimally acceptable<sup>187</sup> or better among adolescents. Adapted and new measures were cognitively tested with young people in England and refined before piloting.<sup>212</sup> In the present study, we first assessed the performance of piloted measures in terms of their reliability and validity. We then conducted exploratory analyses of associations between the validated social norms measures and DRV, examining whether associations persisted after adjusting for the other norms measures, attitudes and sociodemographic characteristics in multivariable analyses. This study addresses two research questions (RQs):

- 1) Are new and adapted measures of social norms concerning DRV and gender reliable and valid when used in cross-sectional research with adolescents in England?
- 2) Are social norms concerning DRV and gender associated with DRV after adjusting for each other, personal attitudes and sociodemographic factors?

In the discussion we reflect on these findings to consider what refinements of adapted measures, if any, are indicated.

## Methods

### Overview

Project Respect was a pilot cluster randomised controlled trial to assess the feasibility and acceptability of a DRV prevention programme and trial methods for its evaluation in secondary schools in England, including the performance of survey measures.<sup>37</sup> Recruited via email and telephone calls, eligible schools comprised state secondary schools in southern England excluding pupil referral units and schools exclusively for students with learning disabilities. Of schools expressing interest, we selected three in south-east England and three in south-west England, varying by school value-added attainment and local deprivation.<sup>37</sup> Before random allocation, students in years 8 and 9 (aged 12-14 years) from five of the selected schools took part in baseline surveys. The present study draws on the resulting attitudes, norms, DRV outcomes and sociodemographic data to assess the performance of the piloted social norms measures. Further information on trial methods<sup>1</sup> and findings<sup>2,37</sup> are published elsewhere.

### Fieldwork and sample

Baseline surveys were conducted in participating schools from June to July 2017. All year-8 and year-9 students were eligible except students whom school staff judged unable to assent to take part. Students and their parents/carers received information sheets one week before data collection, including information on how to opt out. On the day of data collection, a trained fieldworker orally described the study and students had the opportunity to ask questions before completing assent forms. Surveys were completed anonymously on electronic tablets. Sessions took place during a lesson period and typically lasted approximately 45-60 minutes. Eligible students absent during data collection received assent forms and paper surveys to complete and return by post. The London School of Hygiene & Tropical Medicine (11986) and NSPCC (R/17/106) Ethics Committees approved this research.

## Measures

One social norms measure assessing descriptive DRV norms was adapted from an existing measure.<sup>216</sup> One new measure assessing injunctive DRV norms and one assessing injunctive gender norms were developed based on existing measures of DRV and gender attitudes, respectively.<sup>77,217</sup> Tables 1 and 2 present survey measures of descriptive and injunctive norms, respectively, while the original and adapted norms measures are shown in Appendix A. No measure of descriptive gender norms was included as we did not identify a suitable existing measure nor did we find theory or evidence suggesting which descriptive gender norms are likely to be associated with DRV.

Our analyses also drew on measures of personal attitudes, sociodemographic characteristics and DRV outcomes. Appendix A presents attitudes measures and documents adaptations to the original measures on which they are based.<sup>77,217</sup> Social norms and attitude measures were refined through cognitive testing and pre-piloted with one year-9 class (N=25), as reported elsewhere,<sup>37,212</sup> before piloting in baseline surveys. Sociodemographic measures and DRV outcome measures are presented in Appendix B. The tablets used for survey administration required a response to each item before moving on to the next item. Given their sensitivity, items assessing sexual and gender identity included a “prefer not to answer” option which enabled participants to skip these items.

### ***Descriptive DRV norms***

Descriptive DRV norms refer to perceived DRV behaviours among a reference group. Evaluators of a US-based DRV and sexual violence prevention programme report a measure of descriptive DRV norms used with US secondary school students ( $\alpha=0.70$ ).<sup>216</sup> Our adaptations for this three-item measure (see Appendix A), reported in detail elsewhere,<sup>212</sup> included removing the item on sexual DRV and simplifying response options from the number of friends to “none”, “some”, “many”, or “most”, reflecting a simplified set of response options used by social norms experts.<sup>104</sup> Cognitive testing informed the following additional adaptations for use with young people in England:<sup>212</sup> adding a routing question to exclude respondents who do not have friends with partners; adding instructions to “show your best guess”; and splitting one item

assessing two types of psychological DRV into two separate items.<sup>212</sup> Responses were scored 1-4 and summed to compute a total score; a higher scores represented higher levels of perceived DRV among friends.

### ***Injunctive DRV norms***

As no suitable scales assessing injunctive DRV norms (perceptions of social expectations relating to DRV) were identified, we developed a new measure by drawing on an eight-item existing measure of DRV attitudes. The original measure was used with 8<sup>th</sup>- and 9<sup>th</sup>-grade students (typically aged 13-15 years) in a trial of the Safe Dates DRV intervention ( $\alpha=0.69$ ) (see Appendix A), which had informed the development of Project Respect.<sup>1,77</sup> Informed by cognitive interviews,<sup>212</sup> adaptations: asked about respondents' friends' rather than their own views; reduced the number of response options from four to three; added a neutral response option; reiterated the reference group within the response options (e.g., changing "Agree" to "My friends would agree"); and removed three items that specified a rationale for DRV. Our measure's sixth item was adapted from the Safe Dates trial's "perceived negative sanctions" scale to assess friends' rather than respondents' attitudes.<sup>77</sup> We reverse-worded three items to avoid presenting participants with a barrage of pro-DRV statements. Responses to each item were scored 1-3. To compute a total score, responses to reverse-worded items were reverse-scored and all responses were summed; a higher value represented more perceived support for DRV among friends.

### ***Injunctive gender norms***

No suitable existing measure of injunctive gender norms (perceptions of social expectations relating to gender) used in DRV research among adolescents was identified. The piloted five-item measure was developed by adapting an existing measure of attitudes towards gender roles and stereotypes used in DRV and gender-based violence research with young people aged 15-20 years in Greece ( $\alpha=0.82$ ) (see Appendix A ).<sup>217</sup> Informed by cognitive interviews,<sup>212</sup> adaptations: asked respondents about their friends' rather than their own views; simplified language; and aligned response options to the format of injunctive DRV norms items.



We shortened the measure by selecting five items judged as most salient among young people in the UK, drawing on cognitive interviews and retaining items assessing different aspects of the domain.<sup>212</sup> We reverse-worded two items to avoid presenting participants with a barrage of sexist statements. Responses were scored 1-3. To compute a total score, responses to reverse-worded items were reverse-scored and all responses were summed; a higher value represented more perceived gender-inequitable views among friends.

### ***DRV outcomes***

Measures of DRV victimisation and perpetration were used in analyses testing the validity of piloted norms measures and exploring associations between norms and DRV after adjusting for covariates. DRV was assessed via slightly adapted versions of the Safe Dates (58 items)<sup>167</sup> and short Conflict in Adolescent Dating Relationships Inventory (“CADRI-s”, 18 items) scales,<sup>222</sup> the two most commonly used DRV measures developed for adolescents.<sup>230</sup> While the Safe Dates measure is more sensitive, the CADRI-s is more established and potentially more suitable in evaluation studies because it is shorter.<sup>37</sup> Informed by cognitive testing, minor adaptations to the original measures were made to clarify wording and to improve flow and appropriateness for adolescents in England. To improve answerability, the Safe Dates measure was also adapted to offer uniform response options. The CADRI-s was also adapted to add controlling behaviours; and to capture both online and offline abuse within or outside the context of a conflict from all partners within the reporting period. Sexual abuse items were excluded from both measures. Adaptations, cognitive testing and pre-piloting of DRV measures among adolescents in England are reported in full elsewhere.<sup>37</sup> Final measures are presented in Appendix B.

Safe Dates items were asked of participants who reported ever having had a girlfriend/boyfriend or gone out with or dated someone. The measure comprises six subscales assessing overall victimisation, overall perpetration, and physical and psychological victimisation and perpetration. CADRI-s items were asked of the smaller subsample of participants reporting a serious or casual girlfriend and/or boyfriend in the last 12 months. Items from its two subscales, victimisation and perpetration, tap physical and psychological

DRV. DRV outcome measures' interitem reliability ranged from ordinal alpha=0.77-0.94 in Project Respect baseline surveys.<sup>bb,37,187</sup> For each measure, four response options ranged from "Never" to "Often", scored from 1 to 4 such that a higher score represented more DRV. Items were summed for each scale and subscale to compute total scores.

### ***DRV and gender attitudes***

We used measures of attitudes towards DRV (five items) and gender (five items) in analyses exploring associations between norms and DRV behaviour adjusting for individual attitudes and socio-demographics. Measures were adapted from the same original attitude measures as were the parallel injunctive norms measures (see Appendix A).<sup>77,217</sup> Like the original measures, our attitude measures asked for respondents' own views. Response options were adapted to reinforce this perspective (e.g., "I agree") based on findings of cognitive interviews.<sup>212</sup> Changes to wording and item selection mirrored the changes made for parallel social norms measures. As reported elsewhere, DRV and gender attitudes measures achieved respective ordinal alphas of 0.65 and 0.68 in Project Respect baseline surveys.<sup>37</sup> Response options were scored 1-4 such that a higher score represented more pro-DRV or gender-inequitable views. Mean response scores were computed for each measure, representing item response scores averaged across all items in the measure for all participants who responded to the full measure.

### ***Sociodemographic variables***

Mean response scores of norms measures were compared by sex, and validation analyses explored moderation by sex. Sociodemographic variables, including sex where models were not stratified by sex, were included as covariates in analyses examining associations between norms and DRV. Survey questions for these variables are reported in Appendix B. Age in years was a continuous variable. Socioeconomic status was a continuous variable assessed via a slightly modified version of the Family Affluence Scale II; responses were summed for a

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<sup>bb</sup> Ordinal alpha is a less biased estimate of internal consistency for Likert data than the more typically reported Cronbach's alpha.<sup>187</sup>

score of 0 to 9 with a higher score indicating higher affluence.<sup>226</sup> All other sociodemographic variables were categorical: sex assigned at birth, gender identity, year group, ethnicity, sexual identity and religion. Ethnicity was categorised as White or ethnically minoritised. Responses to items assessing sex assigned at birth, gender identity and sexual identity were used to construct a “sexual and/or gender minority” (SGM) variable. Participants were classified as a SGM if they: reported a sexuality of gay or lesbian, bisexual, other, or unsure/questioning; reported a gender identity of non-binary, unsure/questioning, or other; and/or reported a gender identity of female if they were assigned male at birth or of male if they were assigned female at birth.

Response options for participants identifying as White but not White British did not distinguish between ethnically minoritised White groups (e.g., White Roma, Gypsy or Irish Traveller) and other White non-British groups. A binary ethnicity variable was constructed, categorising participants as White (those selecting White British or Any other White background) or ethnically minoritised (those selecting Asian or Asian British; Black, African, Caribbean or Black British; Mixed/multiple ethnic background; or any other ethnic group). For use in a sensitivity analysis, an alternative binary ethnicity variable was constructed which categorised participants as White British or (for those selecting any other response option) Other ethnic group.

## **Statistical analysis**

### ***Handling of missing data***

Because tablets on which the survey was administered moved participants systematically through survey items, data could be missing if a participant stopped the survey before reaching the item or if they selected “prefer not to answer” for gender or sexual identity items. We handled missing data by listwise deletion where missing data were not expected to affect results, for example, where less than 10% of a variable’s data were missing.<sup>242</sup>

### ***Sample and item characteristics***

Analyses of descriptive DRV norms drew on data from participants who reported having friends with girlfriends/boyfriends (“descriptive norms sample”); other analyses drew on the

full sample. Following examination of each variable's distribution, we conducted descriptive analyses to characterise our two analytic samples and explore DRV prevalence by group for categorical sociodemographic variables. Relationships between continuous sociodemographic and attitude variables and DRV outcomes were assessed using univariable linear regressions. Descriptive analyses assessed completion rates and distributions of individual norms items, including mean response scores for each item across all participants who responded to the item.

***Addressing RQ1: Are new and adapted measures of social norms concerning DRV and gender reliable and valid when used in cross-sectional research with adolescents in England?***

**Assessing factor structure and reliability.** Our first step was to assess the latent factor structure among the 14 tested norms items. This refers to the pattern of clustering that indicates which items tap a shared, single underlying construct. In psychometric testing, items loading onto each latent factor are grouped together and treated as a unidimensional measure which can then be subject to reliability and validity testing. Assessing factor structure allowed us to explore whether the tested items loaded onto the three distinct factors as theorised (descriptive DRV norms, injunctive DRV norms and injunctive gender norms) or whether a different factor structure emerged from our data.

Parallel analysis on the polychoric correlation matrix was used to identify the number of latent factors among the 14 tested items. Findings were used to determine the number of factors to extract in exploratory factor analysis (EFA) with oblique rotation, which was conducted to obtain factor loadings for each item. As indicators of how similar each item is to each latent factor, factor loadings were used to determine which norms items should be grouped into distinct measures for subsequent psychometric testing. We conducted confirmatory factor analysis (CFA) to statistically assess how well the resulting factor structure fit our data using three estimates: root mean square error of approximation (RMSEA), which assesses how close the factor structure is to a perfect model of the data, and comparative fit index (CFI) and Tucker-Lewis Index (TLI) estimates, which compare the factor structure to a "baseline model" representing the worst possible fit.<sup>243(p409)</sup>

We examined the reliability of each resulting measure by calculating internal consistency, a test of the measure's items' covariance, which indicates the extent to which these items tap the same underlying construct. We assessed ordinal alphas according to Devellis's criteria for unacceptable, undesirable, minimally acceptable, respectable or very good reliability.<sup>187</sup> We then examined whether removing any single item would improve reliability. Measures resulting from factor analysis and with minimally acceptable or better internal consistency (ordinal alpha  $\geq 0.65$ )<sup>187</sup> were retained for subsequent analyses.

**Exploring statistical properties.** We first examined the distribution of each retained measure's total and mean response scores to assess sensitivity to different levels of social norms. When a measure can discriminate between different levels of its underlying construct its scores will vary, which allows the opportunity to covary and correlate with other measures.<sup>187</sup> We compared mean social norms response scores by sex using t-tests that accounted for clustering within schools. We did not formulate a hypothesis about this relationship because findings from existing research are sparse and mixed: studies variably show girls reporting higher levels than boys of pro-DRV descriptive<sup>120</sup> and gender-equitable injunctive norms,<sup>133</sup> boys reporting higher levels of pro-DRV injunctive norms<sup>127,132</sup> and no gender difference in injunctive DRV norms.<sup>78,131</sup>

**Assessing validity.** Tests of construct validity examined each measure's relationship to theoretically associated measures<sup>187</sup> by testing three *a priori* hypothesis: (1) pro-DRV and gender-inequitable norms will be associated with Safe Dates measures of DRV victimisation and perpetration in univariable analyses; (2) pro-DRV and gender-inequitable norms will be associated with CADRI-s measures of DRV victimisation and perpetration in univariable analyses; and (3) Sex will moderate relationships between DRV/gender norms and DRV outcomes. Given mixed findings in a limited existing evidence base,<sup>76-78,128</sup> this third hypothesis did not specify how many or which norm-DRV relationships would be moderated by sex. Tests were conducted using linear regressions that included mean social norms measure response scores as their independent variables and DRV victimisation and perpetration scores as their outcome variables.

We assessed the normality of the distribution of the outcome variables to inform our regressions. Finding skewed distributions of DRV scores, we examined residual plots for a sample of our univariable regressions. Finding non-normal distributions of residuals in these models, we bootstrapped these and subsequent regressions to improve the resulting estimates. We then ran bootstrapped linear regressions, accounting for clustering within schools by using robust cluster standard errors, to test our three *a priori* hypotheses. Appendix C provides histograms of DRV outcome scores, residual plots for a sample of univariable regressions and examples of the code used to account for clustering in non-bootstrapped and bootstrapped regressions.

Following unadjusted univariable regression analyses, sex and then sex\*social norms interaction terms were added step-wise to each DRV outcome model. Social norms measures were considered significantly correlated with DRV outcomes where  $p < 0.10$  for comparability with subsequent multivariable regressions (discussed in the next section).

***Addressing RQ2: Are social norms concerning DRV and gender associated with DRV after adjusting for each other, personal attitudes and sociodemographic factors?***

**Linear regression with addition of covariates.** We built regression models for each DRV outcome to address our second research question, exploring the association between mean social norms (mean measure response scores) and DRV (victimisation and perpetration scores), adjusting for covariates. Given this early stage of this research, these analyses were considered exploratory and the threshold for significance set at  $p < 0.10$ . Where sex moderated the relationship between the norms measure and DRV outcome assessed, models were sex-stratified. To determine which covariates to include in each model, we first ran bootstrapped univariable linear regressions to examine unadjusted relationships between potential covariates (sex, age, SGM, ethnicity and attitude variables) and each DRV outcome. We then ran similar regressions to examine unadjusted relationships between potential covariates and each social norm measure. The latter set of regressions also assessed relationships between

social norms measures.<sup>cc</sup> In each model variables associated with both the assessed social norms measure and the DRV outcome were retained. The threshold for statistical significance was set at  $p < 0.10$  in order to avoid discarding potential covariates prematurely.<sup>77</sup> We then ran bootstrapped multivariable linear regressions to examine relationships between each social norms measure and each DRV outcome, adjusting each model for its retained covariates. All regressions accounted for clustering within schools by using robust cluster standard errors. Analyses were conducted using Stata/SE 18.0.<sup>244</sup>

**Sensitivity analysis.** We conducted a sensitivity analysis using the alternative construction of the ethnicity variable to assess whether categorising participants who selected “Any other White background” with other participants who did not select “White British” changed the results of the multivariable regressions.

## Results

### Sample and item characteristics

Of the 1,728 students invited, 82.5% (N=1,426) took part in the Project Respect baseline survey. The proportion of missing data was greater than 10% for religion and family affluence variables, both used only to describe the sample. The proportion of missing data was minimal (7% or lower) for the remaining variables, including those used for psychometric testing (Table 3) and therefore not expected to bias results.<sup>242</sup> Missing data were therefore handled using listwise deletion.

Characteristics of the participating full (N=1,426) and descriptive DRV norms (N=917) samples were similar (see Table 3): in both, just under half of participants were female and nearly 30% were categorised as SGM with a mean age of 13.4 years. Respectively by sample, 59% and 66% identified as White and 40% and 46% reported having no religious affiliation. Appendix D shows DRV prevalence among eligible samples overall and by participant characteristics for categorical independent variables. Overall DRV victimisation rates were 78%

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<sup>cc</sup> To assess the relationship between social norms measures and DRV outcomes for the purpose of building the multivariable models, we referred to the results of the previous univariable regressions conducted as part of testing the validity of the social norms measures.

and 73% according to the Safe Dates and CADRI-s measures, respectively. Safe Dates and CADRI-s DRV perpetration rates were 66% and 62%, respectively.

Norms item completion rates were high (92%-100%) and participants used all response options for all descriptive (see Table 1) and injunctive (see Table 2) norms items, but mean response scores for most items fell closer the anti-DRV and gender-equitable ends of scale ranges.

[Insert Tables 1, 2 and 3 around here]

## **Results for RQ1: Are new and adapted measures of social norms concerning DRV and gender reliable and valid when used in cross-sectional research with adolescents in England?**

### ***Assessing factor structure and reliability***

Parallel analysis indicated the need to extract four latent factors in EFA. As shown in Table 4, all items had a clear primary loading, with higher loadings (0.50 or greater) for factors 1, 2 and 3. Factor 1, “pro-DRV injunctive norms”, comprised the three items developed to assess injunctive DRV norms and worded in support of DRV. Factor 2, “gender-inequitable injunctive norms”, comprised the three items developed to assess injunctive gender norms and worded in opposition to gender equality. Factor 3, “pro-DRV descriptive norms”, comprised all three items developed to assess descriptive DRV norms. Factor 4, “gender-equitable/anti-DRV injunctive norms”, was less conceptually consistent: it comprised three items developed as injunctive DRV norms and two as injunctive gender norms, all reverse-worded (i.e. supporting gender equality/opposing DRV). Estimates from CFA suggested good fit (RMSEA=0.030, CFI=0.950, TLI=0.936).<sup>245</sup> Ordinal alphas were minimally acceptable for factors 1 (alpha=0.68), 2 (alpha=0.69) and 3 (alpha=0.65) and unacceptable for factor 4 (alpha=0.56).<sup>187</sup> Internal consistency did not improve by removing any items (see Table 4). We dropped the measure defined by factor 4 and conducted further analyses on the three retained measures.

[Insert Table 4 around here]



### ***Exploring statistical properties***

More than 15% of participants scored the lowest possible scores for pro-DRV descriptive norms, pro-DRV injunctive norms and gender-equitable injunctive norms, suggesting that these measures are not sensitive to moderate levels of the constructs they assess (Table 5). Norms differed by sex. In Table 6 we report the mean response scores for each tested measure by sex, showing that female participants reported higher levels of pro-DRV descriptive norms while males reported higher levels of pro-DRV and gender-inequitable injunctive norms. The p-values for the t-tests comparing mean response scores for each tested measure by sex are  $<0.10$ , shown in the last column, indicating that mean response score differences by sex are statistically significant and unlikely to have occurred by chance.

[Insert Tables 5 and 6 around here]

### ***Assessing validity***

Table 7 reports regression coefficient estimates for regressions assessing the validity of the tested social norms measures. These estimates represent the mean change in DRV score for each one-point increase in the mean response score of the social norms measure. Symbols indicate whether the relationship between the social norms measure and DRV outcome is significant at the level of the p-value specified in the table endnotes. Coefficients indicating relationships significant at the level of  $p < 0.10$  are presented in bold.

Tests of construct validity aligned with our hypotheses. For all three norms measures, pro-DRV and gender-inequitable norms were associated with higher levels of all DRV outcomes in univariable regressions (Table 7, first column of results for each social norms measure). These relationships persisted when controlling for sex (Table 7, second column of results for each social norms measure). With the addition of interaction terms for norms\*sex in each model, all three norms measures lost their association with overall DRV perpetration (CADRI-s) but other norms-DRV associations persisted (Table 7, third column of results for each social norms measure). All interaction term coefficients for DRV perpetration (CADRI-s) were significant, indicating moderation by sex. Sex also moderated the relationship between descriptive DRV

norms and four Safe Dates DRV outcomes: overall, psychological and physical perpetration, and psychological victimisation.

[Insert Table 7 around here]

## **Results for RQ2: Are social norms concerning DRV and gender associated with DRV after adjusting for each other, personal attitudes and sociodemographic factors?**

### ***Linear regression with addition of covariates***

The results of exploratory multivariable linear regressions of DRV outcomes are presented in Table 8. Where the norms-outcome relationship had been found to be moderated by sex (see Table 7) we report sex-stratified estimates. The results of univariable linear regressions used to determine which covariates to retain are reported in Appendix E and Appendix F.

Like Table 7, Table 8 reports regression coefficient estimates representing the mean change in DRV score for each one-point increase in the mean response score of the social norms measure. Grouped by norms measure, results are presented according to whether analyses were conducted within full (first column for each norms measure) or sex-stratified (second and third columns for each norms measure) samples. Symbols and the use of bold text indicate statistical significance.

When adjusting for other norms measures, personal attitudes and sociodemographic factors assessed as covariates, pro-DRV descriptive norms retained an association with higher levels of overall (Safe Dates and CADRI-s measures) and physical DRV victimisation in the full descriptive norms sample. In sex-stratified models, descriptive DRV norms were associated with psychological victimisation and perpetration among both females and males (with higher regression coefficients among females); and with overall (Safe Dates and CADRI-s measures) and physical perpetration among females. Pro-DRV injunctive norms did not retain an association with any DRV outcomes in adjusted models. Gender-inequitable injunctive norms retained an association with higher levels of overall (Safe Dates and CADRI-s measures) and

psychological DRV victimisation but were no longer associated with DRV perpetration or physical victimisation.

### ***Sensitivity analysis***

The sensitivity analysis using the alternative construction of the ethnicity variable did not result in any changes to the pattern of significance of the relationships between the social norms measures and DRV outcomes. We report the full results of the sensitivity analysis in Appendix G.

[Insert Table 8 around here]

## **Discussion**

### **Summary and interpretation**

#### ***Research question 1: Are new and adapted measures of social norms concerning DRV and gender reliable and valid when used in cross-sectional research with adolescents in England?***

Descriptive DRV norms and pro-DRV and gender-inequitable injunctive norms items loaded well onto three conceptually distinct factors. Reverse-worded injunctive norms items, however, loaded poorly and onto a single factor with unacceptable reliability<sup>187</sup> and lacking clear interpretability. Item loading onto this fourth factor meant that the injunctive DRV and injunctive gender norms scales were shorter than designed, which tends to compromise reliability. Nonetheless, measures defined by the first three factors demonstrated minimally acceptable reliability and were retained.<sup>187</sup> All three retained measures were associated with all tested DRV outcomes with some relationships moderated by sex, providing evidence in support of construct validity.

Our findings suggest that reverse-worded items do not contribute to reliable and valid measurement of social norms relating to DRV and gender, supporting findings in other fields that reverse-worded items tend to perform poorly<sup>187</sup> and load onto a separate, methods- rather than conceptually-defined factors.<sup>246</sup>

***Research question 2: Are social norms concerning DRV and gender associated with DRV after adjusting for each other, personal attitudes and sociodemographic factors?***

When adjusting for covariates, pro-DRV descriptive norms retained independent associations with higher levels of all eight DRV outcomes and tended to be more strongly associated with DRV among females than males, particularly for perpetration. Among males, pro-DRV descriptive norms were associated with psychological but no other type of DRV perpetration, reflecting previous attitude-adjusted analyses reporting correlation with psychological perpetration<sup>123</sup> and inconsistent relationships with other types of male DRV perpetration.<sup>77,82</sup> Conversely, consistent and robust associations in the present study provide new evidence that descriptive DRV norms might play an important role in female perpetration, in contrast to previous findings.<sup>77</sup> This is the first study to our knowledge to explore descriptive DRV norms in DRV victimisation models accounting for personal attitudes and it provides new evidence of consistent and robust relationships between descriptive DRV norms and DRV victimisation. Building on a limited evidence base, our findings suggest that pro-DRV descriptive norms are independently associated with increased DRV and that this relationship might be particularly strong among females, particularly for perpetration.

Injunctive DRV norms showed no association with DRV outcomes in multivariable models. Previous research adjusting for personal attitudes reports an association between girls' victimisation<sup>76,78</sup> and perpetration<sup>76,127</sup> but mixed evidence among boys<sup>76,78,127</sup> and overall.<sup>78,83,131,132</sup> Considering injunctive gender norms, a large and global body of literature documents mechanisms through which patriarchal gender norms contribute to male-perpetrated violence against women and girls,<sup>88,89</sup> including DRV.<sup>34,82,138,247</sup> Within this framework we might expect gender-inequitable injunctive norms to correlate most strongly with male perpetration and female victimisation. The limited evidence from studies that account for the role of personal attitudes reports an association between gender-inequitable injunctive norms and female victimisation,<sup>135</sup> and with overall perpetration but not victimisation.<sup>133</sup> However, in our adjusted analyses these patterns differed: norms were associated with overall and psychological victimisation but no other DRV outcomes, with no sex differences in these patterns. Varied findings in this sparse body of literature highlight gaps in

understanding of the complex, gender-specific pathways between gender norms and violence.<sup>248</sup>

Though we found that norms themselves differed significantly by sex, patterns of associations between injunctive norms and DRV did not, suggesting that the social pressures we measured might function similarly in relationship to DRV across both groups. We did not find evidence of independent relationships between DRV injunctive norms and DRV outcomes or between injunctive gender norms and perpetration, suggesting a few possibilities. First, these relationships might be fully attenuated by the covariates retained in the model. Second, adjusted models might underestimate the relationship between social norms and DRV outcomes if, as theory suggests,<sup>100,134</sup> attitudes could mediate this relationship. A third possibility is that relationships between some norms and DRV outcomes are indirect, interacting with other norms<sup>102</sup> or attitudes.<sup>82</sup> Longitudinal research with adolescent boys provides some support for this possibility. Reyes et al. found that gender-inequitable attitudes predicted DRV perpetration only for those with supportive attitudes towards DRV, while descriptive DRV norms retained an independent association with DRV perpetration. The study found no interaction between gender attitudes and descriptive norms but did not measure injunctive norms. A fourth possibility is that norms measures did not detect underlying associations in adjusted analyses due to sample size or limitations or to limited sensitivity to different levels of their respective constructs.

### **Implications for future research**

Evaluation of DRV interventions that aim to shift social norms relies on having valid, reliable measures that are sensitive to changes to modifiable social norms that contribute to or protect against DRV. Adding items and additional Likert scale response options to our measures would “increase opportunities”<sup>187(p123)</sup> for score variability and therefore covariance among scale items, which provides the opportunity for increased reliability.<sup>187</sup> Floor effects<sup>202</sup> and skewed mean response scores observed for each measure suggest that survey items represent more pro-DRV/gender-inequitable norms than are held among friends of the average participant. Many of the original items included in the piloted measures were developed in the

1990s and earlier,<sup>77,216,217</sup> and changes in gender role expectations over time might mean that these reflect ideas that have become less mainstream.<sup>82</sup> Our findings suggest that piloted measures might perform better with the addition of items representing more moderate indicators of these constructs.<sup>187</sup> The addition of items about psychological DRV could be particularly appropriate in light of research finding that young people tend to oppose physical DRV but are less likely to identify psychological DRV as abuse.<sup>249</sup> Measures that allow for more variance would also address the possibility that sensitivity to relationships between injunctive norms and DRV was limited due to measurement or sample size limitations.

Social norm theory<sup>103</sup> and empirical research<sup>77,124,127,241,250,251</sup> suggest that social norms relating most closely to DRV outcomes tend to yield the strongest influence. Due to limited space in a long evaluation survey, our tested measures of DRV norms were gender-neutral and combined physical and psychological DRV (descriptive DRV norms), or combined items concerning female-and male-perpetrated physical DRV (injunctive DRV norms). Distinct, gender-specific measures focusing on psychological, physical or sexual DRV could be expected to more strongly and robustly correlate with outcomes matched on gender and DRV type,<sup>48,124</sup> providing more granular evidence on norms underpinning specific DRV outcomes.

Considering the gender norms most closely linked to DRV outcomes, our measure of injunctive gender norms might also be usefully refined by focusing new items on sexual and romantic gendered expectations<sup>82</sup> and on gender norms implicated in qualitative DRV research. A review by McCarthy et al. found that attitude measures that include items on male sexual entitlement were more consistently associated with IPV perpetration than were those addressing male control over finances or other generic measures of gender role attitudes.<sup>252</sup> Drawing on global and UK research, gender norms restricting girls' sexuality,<sup>117</sup> prescribing their romantic and sexual passivity<sup>117</sup> and pinning their social value to stable heterosexual partnership<sup>34,92,117,139</sup> might be particularly salient. Among boys, norms prescribing toughness,<sup>92,138</sup> sexual and romantic dominance<sup>92</sup> and sexual promiscuity<sup>92</sup> while threatening loss of social status if their girlfriend is unfaithful<sup>138</sup> can be considered proximal to DRV perpetration. Qualitative research with young people designed to explore the range of social norms influencing DRV would provide valuable insights for further refinement.

While lengthier measures might not be feasibly used for evaluation research, development of longer-form measures could offer a higher level of sensitivity valuable in epidemiological research. It may be that more detailed measures can be used where feasible and indicated while less sensitive yet valid and reliable measures will be useful where survey objectives require assessment of a broad battery of measures.<sup>222</sup>

Our findings offer three key insights to strengthen the measurement of social norms in DRV research:

1. Descriptive DRV norms, pro-DRV injunctive norms and gender-inequitable injunctive norms comprise empirically distinct latent constructs.
2. As in other areas of health research,<sup>187,246</sup> reverse-wording items in DRV and gender norms measures detracts from construct validity.
3. Scale reliability and validity might be strengthened by (a) providing more than four response options and (b) where survey length allows, including more than three items tapping multiple domains of DRV and gender norms constructs.

Results of psychometric testing support the reliability and validity of three brief social norms measures and indicate potential refinements to further improve their salience and reliability. These measures should next be incorporated into evaluations of norms-based DRV interventions. These evaluations should assess changes to norms and whether these mediate impact on DRV.

Our analysis suggests that descriptive norms might be an important mediator of DRV outcomes, highlighting the urgent need for a measure of descriptive gender norms.<sup>193</sup> This gap limits researchers' ability to measure the extent to which young people see others in their reference group modelling non-traditional gendered behaviours that could theoretically offer protection against DRV. Qualitative research should explicitly explore gender-specific mechanisms through which gender norms shape DRV outcomes. Findings could also fill critical gaps in the evidence on the relationship between gender norms and DRV among sexual-minority young people, who despite disproportionate DRV risk<sup>16</sup> have been neglected in research on social norms and DRV.<sup>193</sup>

Longitudinal research is needed to further probe relationships between social norms and DRV, including temporal patterns and whether personal attitudes confound, mediate or moderate this relationship. This research should explore psychological, physical and sexual DRV victimisation and perpetration outcomes with well-powered samples, assess for moderation by sex and explore the relative influence of social norms by type and population. Assessing the relative contribution of distinct norms would help intervention developers pinpoint modifiable behavioural antecedents on which to focus.

### **Limitations**

This study uses cross-sectional data which cannot be used to infer causality. Our sample size is more than adequate for examining the factor structure of piloted social norms items<sup>187</sup> but might be underpowered to detect significance in multivariable analyses, especially for CADRI-s outcomes and in sex-stratified models. Our multivariable analyses are exploratory, providing new evidence to inform the development and testing of hypotheses in future research. However, their results cannot be used to determine which factors are responsible for the observed attenuation of norms-outcome associations and regression coefficients for descriptive norms cannot be directly compared to those of injunctive norms due to differing numbers of response options for these two types of measures.

### **Conclusions**

This study presents three brief, reliable and valid measures of distinct social norms associated with a broad range of DRV outcomes. These measures should be incorporated into evaluations of norms-based interventions to assess their sensitivity to change. Quality of these and future measures might be further improved by the addition of more nuanced response options, gender-specific items tapping more moderate DRV norms and items assessing relationship-specific gender norms. Qualitative research is needed to shed light on gender-specific mechanisms through which gender norms shape DRV outcomes.

This study also offers new evidence that descriptive and injunctive norms, and norms relating to DRV and to gender, each retain independent relationships with some DRV outcomes



when adjusting for personal attitudes and other normative factors. It highlights the importance of descriptive DRV norms across DRV outcomes, particularly for girls, and of gender-inequitable injunctive norms in DRV victimisation. Well-powered, quantitative and theory-driven longitudinal research is needed to examine social norms as potential predictors of subsequent DRV outcomes and possible interactions amongst normative and attitudinal constructs.

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**Table 1. Completion and distribution of piloted DRV descriptive norms items (N=947)**

Items		Completion rate (%)	Range	Mean response score (SD) <sup>c</sup>	None (%)	Some (%)	Many (%)	Most (%)
<i>Descriptive DRV norms<sup>a, b</sup></i> Please tick a box to show your best guess of how many of your friends have done the following:								
A1.	How many of your friends have used physical force, such as hitting, to solve fights with their girlfriend or boyfriend?	99.7	1-4	1.25 (0.59)	81.3	14.8	1.9	2.0
A2.	How many of your friends insult or swear at their girlfriend or boyfriend?	99.5	1-4	1.49 (0.68)	60.1	33.0	5.1	1.8
A3.	How many of your friends try to control everything their girlfriend or boyfriend does?	99.7	1-4	1.34 (0.64)	73.5	21.2	3.4	1.9

<sup>a</sup> Items asked of participants answering “yes” to the yes/no routing question, “Do you have friends who have girlfriends or boyfriends?”

<sup>b</sup> Scoring: 1=None, 2=Some, 3=Many, 4=Most

<sup>c</sup> Mean response scores across all participants who responded to the item

DRV=dating and relationship violence

SD=standard deviation

**Table 2. Completion and distribution of piloted DRV and gender injunctive norms items (N=1,426)**

Items	Completion rate (%)	Range	Mean response score (SD) <sup>b</sup>	My friends would agree (%)	My friends would neither agree nor disagree (%)	My friends would disagree (%)	
<i>Injunctive DRV norms<sup>a</sup></i> Please tick a box to show whether your friends would agree or disagree with each statement.							
B1.	It is NOT okay for a boy to hit his girlfriend if she did something to make him mad. <b>(rev)</b>	94.9	1-3	2.38 (0.87)	64.4	9.3	26.3
B2.	Girls sometimes deserve to be hit by their boyfriends.	94.9	1-3	1.29 (0.58)	6.8	15.2	78.1
B3.	Boys sometimes deserve to be hit by their girlfriends.	94.9	1-3	1.50 (0.75)	15.3	19.2	65.5
B4.	It is okay for a boy to hit a girl if she hit him first.	94.9	1-3	1.52 (0.74)	14.6	23.0	62.5
B5.	It is NOT okay for a girl to hit a boy if he hit her first. <b>(rev)</b>	94.4	1-3	1.94 (0.87)	35.1	23.5	41.4
B6.	If someone hits their boyfriend or girlfriend, the boyfriend or girlfriend should break up with them. <b>(rev)</b>	94.4	1-3	2.36 (0.79)	55.8	24.6	19.7
<i>Injunctive gender norms<sup>b</sup></i> Please tick a box to show whether your friends would agree or disagree with each statement.							
C1.	Swearing is worse for a girl than for a boy.	91.9	1-3	1.53 (0.073)	13.9	25.7	60.4
C2.	It is more acceptable for a boy to have a lot of sexual partners than for a girl.	91.9	1-3	1.45 (0.69)	11.8	21.5	66.8
C3.	Most girls can't be trusted.	91.9	1-3	1.58 (0.78)	18.4	21.1	60.5
C4.	On average, girls are as smart as boys. <b>(rev)</b>	91.8	1-3	2.44 (0.81)	64.0	15.5	20.5
C5.	Girls should have the same freedom as boys. <b>(rev)</b>	91.9	1-3	2.77 (0.57)	84.1	8.5	7.4

<sup>a</sup> Scoring: 3=My friends would agree, 2=My friends would neither agree nor disagree, 1=My friends would disagree

DRV=dating and relationship violence

<sup>b</sup> Mean response scores across all participants who responded to the item

SD=standard deviation

rev=reverse-worded item (against DRV/pro-equality)

**Table 3. Participant characteristics and DRV prevalence**

Characteristics	Descriptive norms sample N=917	Full sample N=1,426
Sex, %		
Female	49.3	48.5
Male	50.7	51.5
Missing	0.0	0.1
Gender, %		
Female (including trans girl)	41.3	41.0
Male (including trans boy)	39.9	40.1
Non-binary	4.1	3.7
Unsure/questioning	5.2	4.8
Other	4.3	4.4
Prefer not to say	4.8	5.6
Missing	0.3	0.4
Age (years), mean (SD)	13.4 (0.63)	13.4 (0.63)
Missing, %	0	0.1
Year group, %		
Year 8	44.0	46.2
Year 9	56.1	53.7
Missing	0	0.1
Ethnicity, %		
White British	52.8	46.8
White other	12.8	12.1
Asian/Asian British	5.2	5.6
Black/Black British	11.0	10.5
Mixed ethnicity	8.4	5.5
Any other ethnic group	5.6	5.5
Missing	4.3	1.8
Sexual identity, %		
Heterosexual/straight	84.6	84.2
Gay or lesbian	2.5	2.7
Bisexual	6.1	5.1
Unsure/questioning	2.9	3.4
Other	2.3	2.1
Prefer not to say	1.3	2.2
Missing	0.2	0.4
Sexual or gender minority, %		
Yes	27.8	26.9
No	67.3	66.6
Missing	4.9	6.5
Religion, %		
None	45.6	39.9
Christian	24.9	22.8
Jewish	3.2	2.7
Muslim/Islam	9.9	10.7
Hindu	1.4	1.4
Buddhist	0.9	0.8

<b>Characteristics</b>	<b>Descriptive norms sample N=917</b>	<b>Full sample N=1,426</b>
Sikh	0.3	0.4
I don't know/not sure	6.5	6.4
Other religious group	2.6	3.0
Missing	4.7	12.1
Family affluence scale, mean (SD)	6.2 (1.6)	6.1 (1.6)
Missing, %	29.6	35.3
Ever dated – Safe Dates sample, %		
Yes	76.0	71.7
No	23.9	28.1
Missing	0.1	0.2
Girlfriend/boyfriend last 12 months – CADRI-s sample, %		
Yes	49.0	44.0
No	50.7	55.5
Missing	0.3	0.4

SD=Standard deviation

**Table 4. Rotated factor loadings and ordinal alphas (last row of table) of tested DRV and gender items (N=917)**

Bold indicates primary factor loadings

Item		Factor loading				Ordinal alpha of primary factor if item removed
		Factor 1 Pro-DRV injunctive DRV norms	Factor 2 Gender-inequitable injunctive norms	Factor 3 Pro-DRV descriptive norms	Factor 4 Gender-equitable/anti-DRV injunctive norms	
<b>Pro-DRV injunctive norms</b>						
B2.	Girls sometimes deserve to be hit by their boyfriends.	<b>0.668</b>	0.207	-0.019	0.065	0.49
B3.	Boys sometimes deserve to be hit by their girlfriends.	<b>0.675</b>	0.018	0.079	0.006	0.62
B4.	It is okay for a boy to hit a girl if she hit him first.	<b>0.544</b>	0.037	-0.019	0.013	0.53
<b>Gender-inequitable injunctive norms</b>						
C1.	Swearing is worse for a girl than for a boy.	0.086	<b>0.618</b>	-0.043	-0.009	0.47
C2.	It is more acceptable for a boy to have a lot of sexual partners than for a girl.	0.077	<b>0.671</b>	0.056	-0.056	0.53
C3.	Most girls can't be trusted.	0.109	<b>0.506</b>	-0.031	-0.115	0.49
<b>Pro-DRV descriptive norms</b>						
A1.	How many of your friends have used physical force, such as hitting, to solve fights with their girlfriend or boyfriend?	-0.044	0.004	<b>0.643</b>	-0.058	0.49
A2.	How many of your friends insult or swear at their girlfriend or boyfriend?	0.113	-0.047	<b>0.566</b>	0.008	0.50
A3.	How many of your friends try to control everything their girlfriend or boyfriend does?	0.023	0.048	<b>0.630</b>	0.007	0.44
<b>Gender-equitable/anti-DRV injunctive norms</b>						
B1.	It is NOT okay for a boy to hit his girlfriend if she did something to make him mad. (rev)	-0.112	0.124	-0.023	<b>0.476</b>	0.43
B5.	It is NOT okay for a girl to hit a boy if he hit her first. (rev)	-0.129	0.223	0.072	<b>0.385</b>	0.42
B6.	If someone hits their boyfriend or girlfriend, the boyfriend or girlfriend should break up with them. (rev)	-0.048	0.030	-0.014	<b>0.375</b>	0.60
C4.	On average, girls are as smart as boys. (rev)	0.091	-0.167	0.097	<b>0.535</b>	0.49
C5.	Girls should have the same freedom as boys. (rev)	0.125	-0.231	-0.134	<b>0.576</b>	0.44
<i>Ordinal alpha</i>		0.68	0.69	0.65	0.56	

DRV=dating and relationship violence

rev=reverse-worded item (against DRV/pro-equality)

**Table 5. Distribution of EFA-derived social norms measures**

Scale	N	Possible mean response score range	Mean response score (SD) <sup>b</sup>	Possible score range	Score range	% lowest possible score	% highest possible score
Pro-DRV descriptive norms <sup>a</sup>	942	1-4	1.36 (0.46)	3-12	3-12	30.1	0.2
Pro-DRV injunctive norms	1353	1-3	1.44 (0.51)	3-9	3-9	41.6	2.5
Gender-inequitable injunctive norms	1310	1-3	1.52 (0.55)	3-9	3-9	34.7	3.4

<sup>a</sup> Asked of participants answering “yes” to the yes/no routing question, “Do you have friends who have girlfriends or boyfriends?”

<sup>b</sup> Item response scores averaged across all items in the measure for all participants who responded to the full measure

DRV=dating and relationship violence

SD=standard deviation

**Table 6. Characteristics of EFA-derived social norms measures by sex**

Scale	Female		Male		p-value
	N	Mean response score (SE) <sup>b</sup>	N	Mean response score (SE) <sup>b</sup>	
Pro-DRV descriptive norms <sup>a</sup>	459	1.41 (0.03)	482	1.31 (0.03)	p=0.035
Pro-DRV injunctive norms	655	1.37 (0.02)	698	1.50 (0.02)	p=0.002
Gender-inequitable injunctive norms	643	1.45 (0.05)	666	1.59 (0.05)	p=0.093

<sup>a</sup> Asked of participants answering “yes” to the yes/no routing question, “Do you have friends who have girlfriends or boyfriends?”

<sup>b</sup> Item response scores averaged across all items in the measure for all participants who responded to the full measure

DRV=dating and relationship violence

SE=standard error

**Table 7. Unadjusted and adjusted regression coefficients showing relationships between social norms measures and DRV outcomes**

				Independent variable								
				Pro-DRV descriptive norms <sup>a</sup>			Pro-DRV injunctive norms			Gender-inequitable injunctive norms		
				Unadjusted [95%CI]	Adjusted for sex [95%CI]	Adjusted for norms*sex interaction [95%CI]	Unadjusted [95%CI]	Adjusted for sex [95%CI]	Adjusted for norms*sex interaction [95%CI]	Unadjusted [95%CI]	Adjusted for sex [95%CI]	Adjusted for norms*sex interaction [95%CI]
Safe Dates DRV measure	Overall	Vict.	Norm	<b>7.69***</b> [4.86, 10.51]	<b>7.59***</b> [4.73, 10.44]	<b>6.44**</b> [2.22, 10.66]	<b>3.42***</b> [2.41, 4.44]	<b>3.67***</b> [2.63, 4.71]	<b>3.44***</b> [2.32, 4.56]	<b>3.71***</b> [1.68, 5.73]	<b>4.01***</b> [2.09, 5.92]	<b>3.00**</b> [0.91, 5.08]
			F sex		<b>1.00**</b> [0.38, 1.62]	-2.11 [-8.10, 3.89]		<b>2.15**</b> [0.76, 3.54]	1.34 [-1.39, 4.08]		<b>2.32**</b> [0.86, 3.79]	-1.42 [-5.49, 2.65]
		Norm*sex			2.27 [-2.12, 6.65]			0.56 [-1.75, 2.88]				
		Perp.	Norm	<b>3.83**</b> [1.41, 6.25]	<b>3.80**</b> [1.41, 6.17]	<b>1.87*</b> [0.41, 3.34]	<b>1.58***</b> [0.82, 2.34]	<b>1.70***</b> [0.90, 2.50]	<b>1.47***</b> [0.84, 2.09]	<b>1.57**</b> [0.41, 2.73]	<b>1.73**</b> [0.55, 2.90]	<b>1.46**</b> [0.46, 2.46]
	F sex		<b>0.37^</b> [-0.01, 0.75]	<b>-4.79*</b> [-8.78, -0.81]		<b>1.15*</b> [0.13, 2.17]	0.31 [-1.85, 2.46]		<b>1.21*</b> [0.14, 2.27]	0.22 [-1.32, 1.75]	0.64 [-0.97, 2.26]	
	Norm*sex			<b>3.77*</b> [0.68, 6.85]			0.59 [-0.89, 2.07]					
	Psych.	Vict.	Norm	<b>4.83***</b> [3.31, 6.35]	<b>4.73***</b> [3.19, 6.27]	<b>3.53**</b> [1.19, 5.88]	<b>2.06***</b> [1.38, 2.75]	<b>2.26***</b> [1.59, 2.93]	<b>2.20***</b> [1.35, 3.04]	<b>2.13***</b> [1.03, 3.23]	<b>2.36***</b> [1.38, 3.33]	<b>1.81**</b> [0.65, 2.98]
			F sex		<b>1.03***</b> [0.61, 1.46]	-2.20 [-5.86, 1.47]		<b>1.66**</b> [0.70, 2.62]	<b>1.46*</b> [0.06, 2.86]		<b>1.73**</b> [0.75, 2.71]	-0.28 [-2.76, 2.20]
Norm*sex				<b>2.36^</b> [-0.29, 5.00]			0.14 [-1.31, 1.60]			1.31 [-0.68, 0.30]		
Perp.		Norm	<b>2.36**</b> [0.86, 3.86]	<b>2.33**</b> [0.86, 3.80]	<b>1.12*</b> [0.25, 1.99]	<b>0.76**</b> [0.20, 1.31]	<b>0.83**</b> [0.25, 1.41]	<b>0.63***</b> [0.33, 0.94]	<b>0.87***</b> [0.44, 1.30]	<b>0.97***</b> [0.56, 1.37]	<b>0.81***</b> [0.38, 1.23]	
F sex		<b>0.33**</b> [0.10, 0.57]	<b>-2.92**</b> [-5.06, -0.79]			<b>0.67*</b> [0.06, 1.28]	-0.03 [-0.84, 0.78]		<b>0.71*</b> [0.11, 1.31]	0.12 [-0.70, 0.94]		
Norm*sex			<b>2.37**</b> [0.78, 3.97]				0.49 [-0.21, 1.19]			0.39 [-0.43, 1.21]		



			Independent variable									
			Pro-DRV descriptive norms <sup>a</sup>			Pro-DRV injunctive norms			Gender-inequitable injunctive norms			
			Unadjusted [95%CI]	Adjusted for sex [95%CI]	Adjusted for norms*sex interaction [95%CI]	Unadjusted [95%CI]	Adjusted for sex [95%CI]	Adjusted for norms*sex interaction [95%CI]	Unadjusted [95%CI]	Adjusted for sex [95%CI]	Adjusted for norms*sex interaction [95%CI]	
CADRI-s DRV measure	Phys.	Vict.	Norm F sex Norm*sex	<b>2.84***</b> [1.47, 4.22]	<b>2.85***</b> [1.46, 4.23] -0.04 [-0.28, 0.20]	<b>2.90**</b> [0.94, 4.87] 0.11 [-2.22, 2.44] -0.11 [-1.84, 1.62]	<b>1.35***</b> [0.98, 1.73]	<b>1.41***</b> [1.00, 1.82] <b>0.47*</b> [0.02, 0.93]	<b>1.25***</b> [0.73, 1.78] -0.08 [-1.85, 1.70] 0.38 [-0.86, 1.62]	<b>1.56**</b> [0.55, 2.57]	<b>1.63**</b> [0.61, 2.66] <b>0.59*</b> [0.04, 1.14]	<b>1.17*</b> [0.09, 2.24] -1.16 [-3.26, 0.95] 1.13 [-0.57, 2.83]
		Perp.	Norm F sex Norm*sex	<b>1.46**</b> [0.54, 2.38]	<b>1.46**</b> [-0.55, 2.37] 0.05 [-0.15, 0.25]	<b>0.75*</b> [0.08, 1.43] <b>-1.85^</b> [-3.84, 0.14] <b>1.38^</b> [-0.21, 2.97]	<b>0.81***</b> [0.57, 1.06]	<b>0.86***</b> [0.60, 1.12] <b>0.47*</b> [0.08, 0.86]	<b>0.82**</b> [0.31, 1.33] 0.34 [-1.16, 1.83] 0.09 [-0.88, 1.06]	<b>0.69^</b> [-0.08, 1.47]	<b>0.75^</b> [-0.04, 1.54] <b>0.47*</b> [0.03, 0.92]	<b>0.66*</b> [0.04, 1.29] 0.15 [-0.77, 1.06] 0.21 [-0.64, 1.06]
Overall	Vict.	Norm F sex Norm*sex	<b>2.60***</b> [1.71, 3.48]	<b>2.52***</b> [1.57, 3.47] <b>0.69*</b> [0.15, 1.23]	<b>2.75**</b> [0.91, 4.60] 1.31 [-1.04, 3.65] -0.45 [-2.32, 1.42]	<b>1.53***</b> [1.10, 1.97]	<b>1.59***</b> [1.15, 2.04] <b>0.78*</b> [0.10, 1.47]	<b>1.62**</b> [0.55, 2.69] 0.87 [-2.13, 3.87] -0.06 [-2.01, 1.89]	<b>1.88***</b> [1.32, 2.44]	<b>2.02***</b> [1.53, 2.51] <b>1.01**</b> [0.35, 1.67]	<b>1.82***</b> [0.99, 2.65] 0.25 [-1.10, 1.61] 0.48 [-0.75, 1.71]	
	Perp.	Norm F sex Norm*sex	<b>1.56***</b> [0.79, 2.33]	<b>1.48***</b> [0.80, 2.16] <b>0.74**</b> [0.25, 1.23]	0.73 [-0.38, 1.84] -1.20 [-3.00, 0.60] <b>1.40*</b> [0.24, 2.56]	<b>0.80*</b> [0.10, 1.50]	<b>0.88*</b> [0.14, 1.61] <b>0.96*</b> [0.20, 1.72]	0.30 [-0.36, 0.96] -1.01 [-2.46, 0.43] <b>1.36*</b> [0.33, 2.39]	<b>0.77*</b> [0.05, 1.50]	<b>0.92*</b> [0.22, 1.62] <b>1.05**</b> [0.27, 1.82]	0.19 [-0.30, 0.68] <b>-1.72**</b> [-3.01, -0.43] <b>1.77**</b> [-0.63, 2.90]	

<sup>a</sup> Asked of participants answering "yes" to the yes/no routing question, "Do you have friends who have girlfriends or boyfriends?"

^0.10, \*p<0.05, \*\*p<0.01, \*\*\*p<0.001

CI=confidence interval; DRV=dating and relationship violence; F=female; Perp.=perpetration; Phys=physical; Psych=psychological; Vict.=victimisation

**Table 8. Regression coefficients showing relationships between social norms measures and DRV outcomes, adjusted for covariates**

			Independent variable								
			Pro-DRV descriptive norms <sup>a</sup>			Pro-DRV injunctive norms			Gender-inequitable injunctive norms		
			All <sup>b,c</sup> [95%CI]	Females <sup>d,e</sup> [95%CI]	Males <sup>d,e</sup> [95%CI]	All <sup>b,c</sup> [95%CI]	Females <sup>d,e</sup> [95%CI]	Males <sup>d,e</sup> [95%CI]	All <sup>b,c</sup> [95%CI]	Females <sup>d,e</sup> [95%CI]	Males <sup>d,e</sup> [95%CI]
Safe Dates DRV measure	Overall	V	<b>6.62***</b> [3.65, 9.58]	N/A	N/A	-0.53 [-2.41, 1.35]	N/A	N/A	<b>1.97*</b> [0.08, 3.87]	N/A	N/A
		P	N/A	<b>5.64**</b> [2.04, 9.24]	1.17 [-0.71, 3.05]	-0.82 [-2.30, 0.67]	N/A	N/A	0.34 [-1.23, 1.92]	N/A	N/A
	Psych.	V	N/A	<b>5.40***</b> [3.54, 7.25]	<b>3.04*</b> [0.56, 5.53]	0.08 [-0.95, 1.11]	N/A	N/A	<b>1.30**</b> [0.41, 2.20]	N/A	N/A
		P	N/A	<b>3.57**</b> [1.43, 5.71]	<b>0.73^</b> [-0.11, 1.57]	-0.54 [-1.28, 0.20]	N/A	N/A	0.20 [-0.60, 1.00]	N/A	N/A
	Phys.	V	<b>2.49**</b> [1.05, 3.93]	N/A	N/A	-0.60 [-1.52, 0.32]	N/A	N/A	0.62 [-0.44, 1.68]	N/A	N/A
		P	N/A	<b>2.25**</b> [0.59, 3.90]	0.45 [-0.48, 1.38]	-0.28 [-1.16, 0.61]	N/A	N/A	0.03 [-0.72, 0.78]	N/A	N/A
CADRI-s DRV	Overall	V	<b>1.94***</b> [0.91, 2.97]	N/A	N/A	-0.02 [-0.80, 0.75]	N/A	N/A	<b>0.89***</b> [0.43, 1.36]	N/A	N/A
		P	N/A	<b>1.44***</b> [0.94, 1.94]	0.62 [-0.45, 1.68]	N/A	-0.26 [-0.88, 0.35]	-0.22 [-0.80, 0.37]	N/A	0.58 [-0.59, 1.75]	-0.19 [-0.74, 0.36]

<sup>a</sup> Asked of participants answering “yes” to the yes/no routing question, “Do you have friends who have girlfriends or boyfriends?”

<sup>b</sup> Models control for other social norms measures, DRV attitudes, gender attitudes, sex, age, sexual/gender minority status and ethnicity where each is associated with the specified social norms measure and DRV outcome at p<0.10.

<sup>c</sup> Number of observations with complete data, based on non-bootstrapped regressions, ranges from 623 to 695 for Safe Dates measure outcomes and 422 to 444 for CADRI-s measure outcomes.

<sup>d</sup> Models control for other social norms measures, DRV attitudes, gender attitudes, age, sexual/gender minority status and ethnicity where each is associated with the specified social norms measure and DRV outcome at p<0.10.

<sup>e</sup> Number of observations with complete data, based on non-bootstrapped regressions, ranges from 306 to 355 for Safe Dates measure outcomes and 205 to 229 for CADRI-s measure outcomes.

<sup>^</sup>p<0.10; \*p<0.05; \*\*p<0.01; \*\*\*p<0.001

CI=confidence interval; DRV=dating and relationship violence; P=perpetration; Phys.=physical; Psych.=psychological; V=victimisation

### 6.3. Follow-up to Paper 3: social norms measures refined on the basis of psychometric testing

As reported in Paper 3, on the basis of psychometric testing three items were removed from the piloted injunctive DRV norms measure and two were removed from the piloted injunctive gender norms measure. The descriptive DRV norms measure remained unchanged. Table 9 shows the refined versions all three measures following psychometric testing.

**Table 9. Final social norms measures following psychometric testing**

<b>Measure, response options, scoring</b>	<b>Items</b>
<b>Descriptive DRV norms<sup>a</sup></b> <i>None (=1), Some (=2), Many (=3), Most (=4)</i>	Please tick a box to show <b>your best guess</b> of how many of <b>your friends</b> have done the following: <ol style="list-style-type: none"> <li>1. How many of <b>your friends</b> have used physical force, such as hitting, to solve fights with their girlfriend or boyfriend?</li> <li>2. How many of <b>your friends</b> insult or swear at their girlfriend or boyfriend?</li> <li>3. How many of <b>your friends</b> try to control everything their girlfriend or boyfriend does?</li> </ol>
<b>Injunctive DRV norms</b> <i>My friends would agree (=3), My friends would neither agree nor disagree (=2), My friends would disagree (=1)</i>	Please tick a box to show whether <b>your friends</b> would agree or disagree with each statement: <ol style="list-style-type: none"> <li>a. Girls sometimes deserve to be hit by their boyfriends.</li> <li>b. Boys sometimes deserve to be hit by their girlfriends.</li> <li>c. It is okay for a boy to hit a girl if she hit him first.</li> </ol>
<b>Injunctive gender norms</b> <i>My friends would agree (=3), My friends would neither agree nor disagree (=2), My friends would disagree (=1)</i>	Please tick a box to show whether <b>your friends</b> would agree or disagree with each statement. <ol style="list-style-type: none"> <li>a. Swearing is worse for a girl than for a boy.</li> <li>b. It is more acceptable for a boy to have a lot of sexual partners than for a girl.</li> <li>c. Most girls can't be trusted.</li> </ol>

<sup>a</sup> Items asked of participants answering “yes” to the yes/no routing question, “Do you have friends who have girlfriends or boyfriends?”

## Chapter 7. Paper 4: Relationships between social norms and DRV in student, staff and parent/carer accounts

### 7.1. Introduction to Paper 4

Project Respect yielded rich data on social norms in schools, which (1) participants linked to DRV in their accounts, or (2) existing theoretical or empirical literature suggests could play a role in DRV. I conceptualised the analysis for Paper 4 as an opportunity to assess and improve the content validity of the final social norms measures presented in Paper 3. To do so, I aimed to explore relevant norms from participant accounts and assess whether these domains were covered in the measures, informing new items for further refinement.

As my analysis progressed I saw that the data we had collected offered insights into ways in which gendered practices in schools both were facilitated by, and also reinforced, prevailing gender-inequitable norms. While retaining findings on social norms and DRV as intended, I oriented the reporting of my findings to an integrative analysis of interactions between these norms and practices. In the Discussion section of my thesis (Chapter 8) I draw on the findings of Paper 4 to consider the content validity of the norms measures presented in Paper 3 and I reflect on implications for refining these measures.

Paper 4 refers to Appendices 1 and 2 showing semi-structured guides used for optimisation and process evaluation data collection, respectively. These tools are provided in Appendix 13 of this thesis.

7.2. Paper 4: Social norms relating to gender and dating and relationship violence in English secondary schools: exploring student, staff and parent/carer accounts

## RESEARCH PAPER COVER SHEET

Please note that a cover sheet must be completed for each research paper included within a thesis.

### SECTION A – Student Details

Student ID Number	452277	Title	Ms.
First Name(s)	Rebecca		
Surname/Family Name	Meiksin		
Thesis Title	Developing and refining social norms measures for the evaluation of a school-based intervention to reduce dating and relationship violence among adolescents in England		
Primary Supervisor	Professor Chris Bonell		

If the Research Paper has previously been published please complete Section B, if not please move to Section C.

### SECTION B – Paper already published

Where was the work published?	<input type="text"/>		
When was the work published?	<input type="text"/>		
If the work was published prior to registration for your research degree, give a brief rationale for its inclusion	<input type="text"/>		
Have you retained the copyright for the work?*	Choose an item.	Was the work subject to academic peer review?	Choose an item.

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### SECTION C – Prepared for publication, but not yet published

Where is the work intended to be published?	Social Science & Medicine
Please list the paper's authors in the intended authorship order:	Rebecca Meiksin, Ruth Ponsford, Nambusi Kyegombe, Chris Bonell

Stage of publication	Not yet submitted
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**SECTION D – Multi-authored work**

<p>For multi-authored work, give full details of your role in the research included in the paper and in the preparation of the paper. (Attach a further sheet if necessary)</p>	<p>I conceptualised the research questions, conducted the analysis and led interpretation and writing. Chris Bonell designed the overall study and advised on analysis and interpretation. All authors helped interpret the findings and provided feedback on the manuscript.</p>
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**SECTION E**

Student Signature	Rebecca Meiksin
Date	15/03/2024

Supervisor Signature	Chris Bonell
Date	15/03/2024

## **Social norms relating to gender and dating and relationship violence in English secondary schools: exploring student, staff and parent/carer accounts**

**Authors:** Rebecca Meiksin, Ruth Ponsford, Nambusi Kyegombe, Chris Bonell

### **Abstract**

Dating and relationship violence (DRV), which refers to intimate partner violence among young people, is widespread. DRV is associated with subsequent mental ill health, substance use and sexual risk among girls and boys and is a leading cause of morbidity and mortality among girls globally. Harmful social norms are widely recognised for their role in sustaining DRV, and interventions often seek to change these. However, little evidence is available to suggest which specific norms are most salient and where protective norms might be strengthened. We conducted, audio-recorded and transcribed focus groups and semi-structured interviews with students (years 9 and 10), staff and parents/carers from ten secondary schools in England. We also audio-recorded discussions in staff DRV trainings in four of these schools. Data collection took place from April 2017 and July 2018. This research explored participant accounts of social norms relating to gender and to DRV in schools and their influence on DRV behaviours. Drawing on Giddens' structuration theory, our thematic analysis found that sexist social norms subjugating girls to boys facilitated gendered practices of harassment and abuse, including DRV; and that these practices, in turn, reproduced this gendered power structure. Our data suggest that while physical DRV is socially proscribed, norms supporting controlling behaviours and inhibiting disclosure of victimisation directly underpin DRV. They further suggest that indirectly, gender norms concerning cross-gender friendships; sexual harassment; the policing of girls' sexuality; homophobic abuse; and dominance, control and sexual activity as masculine ideals indirectly sustain DRV. Accounts demonstrated that students and staff challenge harmful norms, but that these efforts can be ineffective and socially punished. Our findings can inform DRV interventions, which should draw on evidence to foster protective norms and shift those that sustain DRV.



## Introduction

Dating and relationship violence (DRV) refers to intimate partner violence (IPV) among young people<sup>16</sup>. Comprising psychological, physical and sexual violence by a current or former partner, this type of abuse is widespread<sup>21,25</sup> and poses serious threats to young people's health and well-being.<sup>26,27,52</sup> Globally, 24% of girls aged 15-19 years have experienced physical and/or sexual DRV.<sup>253</sup> Though global prevalence data on boys are unavailable,<sup>254</sup> a 2017 meta-analytic review estimates victimisation rates of 21% for physical DRV and 8% for sexual DRV among boys aged 13-18 years.<sup>25</sup> Estimates for psychological DRV victimisation vary widely but also tend to be high among both girls and boys across studies.<sup>21,22</sup> In terms of its impacts, DRV is the fourth leading risk factor for mortality and the third for morbidity among girls aged 15-19 years globally.<sup>27</sup> In addition to causing injuries,<sup>164</sup> DRV is associated with subsequent mental ill health,<sup>26,52,55</sup> substance use<sup>26,52</sup> and sexual risk behaviour<sup>54</sup> among girls and boys as well as with IPV victimisation and perpetration in adulthood.<sup>56</sup>

Public health researchers and practitioners are increasingly using social norms theory as a framework for considering modifiable social factors contributing to gender-based violence and adolescent health.<sup>6,15,150,255</sup> Social norms theorists distinguish between descriptive norms (beliefs about what behaviour is typical in a reference group of important others) and injunctive norms (beliefs about what others in the reference group think constitutes appropriate behaviour).<sup>15,106</sup> Though theorists disagree about the relationship between these two constructs,<sup>6</sup> descriptive and injunctive norms are thought to play discrete roles in influencing behaviour<sup>6,102</sup> and each type has been found to be associated with both experience<sup>76,78,121,122,125,126</sup> and perpetration<sup>77,82,83,120-124,127</sup> of DRV.

Theorists posit that social norms are primarily sustained by anticipation of social sanctioning by the reference group, including social rewards for complying with prevailing norms and social punishments for deviating from them.<sup>15,103</sup> There is evidence to suggest that social norms relating directly to DRV and also more generally to gender expectations are associated with DRV outcomes. In a systematic review we conducted, the vast majority of studies found that young people who report descriptive or injunctive norms supportive of DRV are at increased risk for DRV involvement themselves.<sup>193</sup> Quantitative research on gender

norms tends to focus on injunctive norms and male-perpetrated DRV against girls, reporting significant associations between gender-inequitable norms and increased risk.<sup>193</sup> UK qualitative research provides insights into potential mechanisms of influence, suggesting that gendered expectations relating to sexual behaviour, heterosexual partnerships and masculinity contribute to perpetuating this type of violence.<sup>34,138,139</sup>

DRV prevention interventions have long sought to address gender-inequitable norms and the social acceptability of DRV.<sup>8,32,256</sup> Interventions often take place in schools, which offer a good foundation to foster norms change because schools are key sites of gender socialisation<sup>91</sup> and because there is evidence that group discussions involving critical reflection can be effective in promoting more gender-equitable norms.<sup>96,97</sup> However, evaluations of DRV interventions rarely measure impact on descriptive or injunctive norms and none, according to a recent systematic review, has assessed them as a mediator of DRV reductions.<sup>11</sup> Efforts to do so are limited by gaps in existing research. In addition to a lack of appropriate, established measures of social norms,<sup>11,193</sup> there is little evidence to suggest which specific norms are the most important for DRV and which existing, protective norms might be strengthened. While review evidence suggests that many norms are shared across settings,<sup>117</sup> answers to these questions are also likely to vary by context, at least in part.<sup>6</sup> In the UK specifically, exploratory research suggests that social norms play an important role in enabling initiation and perpetuation of DRV.<sup>34,138,139</sup> However, this research has not sought to explore the range of social norms underpinning DRV, distinguished between descriptive and injunctive norms or explored how each relates to each other, the school environment or DRV. In order to determine which DRV and gender norms operating in UK secondary schools should be prioritised for DRV prevention, there is a need for research informed by social norms theory and distinguishing between descriptive and injunctive norms. We aim to address this gap by exploring student, school staff and parent/carer accounts of (1) social norms relating to gender and to DRV in schools; and (2) how these social norms appear to influence practices of abuse and harassment, including DRV.

Informed by Jamal et al.'s research on girls' bullying in London secondary schools, our analysis draws on Giddens' structuration theory.<sup>107</sup> According to Giddens, structure consists of

“rules and resources” that, in addition to enabling and constraining social practices, are themselves reproduced or modified by those practices.<sup>107(p25)</sup> Giddens suggests that people, while not always completely aware of all the conditions for or consequences of their actions, can deliberately seek to “keep things as they are” or transform the social structures in which they operate.<sup>107(p28)</sup> We draw on this theory to examine social norms concerning gender and DRV as a structural feature of secondary schools, and the practices relating to gender and DRV which they enable and constrain.

## **Methods**

### **The Project Respect study**

Our data come from Project Respect, a study to optimise and pilot the Project Respect DRV intervention in secondary schools in England. This pilot cluster RCT was guided by a study protocol registered on the ISRCTN registry (reference ISRCTN65324176) and included an integral process evaluation.<sup>1</sup> Underpinned by the Theory of Planned Behavior<sup>100</sup> and the Social Development Model,<sup>169</sup> Project Respect was a whole-school intervention aiming to promote changes to the school environment and among the school community to reduce DRV. Informed by the Safe Dates<sup>164</sup> and Shifting Boundaries<sup>146</sup> interventions, both effective in reducing DRV in the United States,<sup>147,165</sup> Project Respect comprised expert-led training for key school staff, led by our delivery partner The National Society for the Prevention of Cruelty to Children (NSPCC); cascaded training to all school staff; school policy review; mapping of ‘hotspots’ for DRV and harassment and shifting of patrol patterns to address these; written information for parents/carers; and a classroom curriculum for students in years 9 and 10 (typically aged 13-15 years). The curriculum included the development of student-led campaigns and the opportunity to download an existing smartphone app<sup>257</sup> to support help-seeking. Detailed information on the intervention and findings on its optimisation and piloting have been published elsewhere.<sup>2,37</sup> The present study draws on qualitative data conducted in two waves of intervention optimisation sessions and for the process evaluation; and on audio-recordings of the expert-led trainings.

## **Sampling and recruitment**

We recruited schools via emails and telephone calls to those eligible, which were mainstream state secondary schools in southern England. Of those expressing interest in participating in the pilot RCT we purposively selected six schools stratified by region (south-east/south-west England) and varying by deprivation and by value-added attainment, which is a school-level indicator of students' progress between school entry and their final secondary school exams.<sup>173</sup> One school withdrew from the study before baseline assessments and was replaced. After baseline assessments, pilot RCT schools were stratified by region and randomised 2:1 to the intervention or control arm. We selected four optimisation schools from among those expressing interest but not selected for the pilot RCT, stratified by region and varying by deprivation. Head teachers in both cases signed a consent form.

For student/staff intervention optimisation sessions, lead school contacts were each asked to recruit at least three girls and three boys from each of years 9 and 10, and three or more members of staff, prioritising: a school safeguarding lead; personal, social and health education staff; and senior leadership. Wave 1 participants also took part in wave 2 sessions where feasible. The expert-led training sessions were for school staff delivering Project Respect and for school senior leadership. For individual interviews in intervention schools, we aimed to recruit four staff, purposively sampled by seniority and programme involvement, and two parents/carers from intervention schools, purposively sampled by their child's year-group (years 9 and 10) and their child's gender. We aimed to recruit eight students from intervention schools and four from control schools, purposively sampled by year-group (years 9 and 10) and gender. Finally, for individual interviews in control schools we aimed to recruit two staff, purposively sampled by seniority.

The trainer and participants involved in the expert-led training, and those invited to take part in optimisation sessions and interviews, received a study information sheet prior to data collection which included information on local support resources and on how to opt out of the study if they wished. They had the opportunity to ask questions to a trained member of the research team before signing a study assent (for students) or consent (for adults) form.

Parents/carers of students invited to take part received an information sheet before data collection and had the opportunity to opt out their child. Interview participants also received a copy of the information sheet at the start of their interview. Information and assent/consent materials made clear that participation was voluntary and confidential, and that participants could stop taking part at any time.

### **Data collection**

Optimisation sessions aimed to inform intervention content and format (wave 1) and to gather feedback on intervention materials and inform delivery (wave 2). Led by members of the intervention and evaluation teams, each session included an introductory slide presentation followed by discussions using a semi-structured guide (Appendix 1). The first session included a plenary discussion followed by separate staff and student group discussions. In subsequent sessions, we led discussions in three groups: year-9 students, year-10 students and staff. Facilitators took notes and wave-2 sessions were also audio-recorded and transcribed. Trainings were audio-recorded and included discussion questions for staff about signs of DRV, and about concerning behaviours in their schools that they would like to address through Project Respect. Researchers took notes on the audio-recordings of trainings.

Interviews were conducted by experienced researchers using semi-structured guides on which they were trained (Appendix 2). We primarily conducted individual interviews but also conducted student interviews in pairs or small groups when schools requested this. All interviews explored school context. Intervention school interviews also explored programme implementation, costs, receipt, mechanisms of change and impacts. Control school interviews also explored provision of violence prevention, relationship and sex education and social/emotional learning. The present analysis draws on interview data about school context, social norms and gender-based harassment and abuse. Data were recorded in interview notes and, where participants assented/consented, audio-recordings which were transcribed verbatim.

## **Data analysis**

Notes and transcripts were loaded into the qualitative analysis software Nvivo 12 to aid analysis.<sup>258</sup> Data were analysed using thematic analysis, complemented with techniques from grounded theory.<sup>178</sup> After reviewing and re-reviewing transcripts to gain familiarity with the data, RM led initial coding, and CB and RM reviewed and interpreted the coded data. Starting codes were informed by social norms theory and existing research on relationships between social norms and DRV, and these included: descriptive and injunctive gender norms, other descriptive and injunctive norms, reference groups and social sanctions. New codes were developed inductively as new themes emerged, with special attention to “deviant cases” that challenged or provided deeper insight into emerging themes.<sup>178(p294)</sup> Axial coding built on initial coding and was used to explore relationships between codes, combining those with significant overlap and separating codes that represented distinct constructs, to arrive at a final coding scheme. Informed by Jamal et al.’s study of bullying in schools<sup>259</sup> and by Giddens,<sup>107</sup> our analysis was sensitised to where norms constrained or enabled actions that made DRV more likely, to ways in which norms were reproduced by abusive practices and to where people appeared to exercise agency in reshaping these norms to transform existing structures. Informed by the notion of “constant comparison”,<sup>178(p290)</sup> codes and transcripts were compared throughout the analysis process.

Where participant accounts directly or indirectly linked social norms to DRV, we drew this out in our analysis. In our interpretation, we distinguished between norms linked to DRV in participant accounts and norms emerging from participant accounts and for which other existing evidence supports a relationship with DRV. We explored norms in both intervention and control schools and we treated data from these in the same way.

## **Confidentiality and ethical review**

To maximise retention in the study, control schools received a £500 payment. No individual participants received compensation for taking part. Information and assent/consent materials informed participants that if safeguarding concerns arose during data collection, then confidentiality would be removed to address safeguarding concerns. Data were stored in

password-protected folders on the London School of Hygiene & Tropical Medicine’s (LSHTM) secure servers and anonymised using study ID numbers. Further details on safeguarding and data management procedures have been reported previously.<sup>37</sup> This research was approved by the LSHTM (reference: 11986) and NSPCC (reference: R/17/106) Ethics Committees.

## Results

### Participation

We have previously reported on optimisation, fieldwork and participation in Project Respect.<sup>37,260</sup> For the present study we analysed data from ten schools (four optimisation, four intervention and two control).

### *Optimisation sessions*

Optimisation-session participants are described in Table 1. Four schools took part in the first wave of optimisation sessions (April 2017). Of these, one was unable to arrange an optimisation session and instead a member of staff took part by telephone. Participants were 31 students, mixed by gender and year-group, and nine staff. Three schools took part in the second wave (July 2017), which included 35 students and six staff, some of whom had also taken part in the first wave. Across waves, staff participants were a mix of teachers, support staff and senior leadership, and included a member of the safeguarding team in most schools.

**Table 1. Optimisation session participants**

Participants	Wave 1	Wave 2*
Year-9 students		
Girls	8	11
Boys	7	12
Year-10 students		
Girls	9	6
Boys	7	6
<i>Total students</i>	31	35
Staff		
Female	7	4
Male	0	1
Not reported	2	1
<i>Total staff</i>	9	6

\*Some Wave 2 participants had also taken part in Wave 1

### ***Process evaluation – trainings and interviews***

Expert-led training sessions were audio-recorded in all four intervention schools. Process evaluation interview participant characteristics are shown in Table 2. Forty students from six schools participated in interviews, a mixed sample of girls and boys in years 9 and 10. Student interviews were conducted primarily individually (N=9) or in pairs (11 interviews). Two were conducted in small groups of three and six. Individual interviews were conducted with 21 members of staff (16 female, five male) from six schools and with five parents/carers (all female) of a mix of year-9 and -10 students, predominantly girls, from three intervention schools. Staff participants were a mix of those responsible for student well-being initiatives, teachers and senior leadership and the sample included a member of the safeguarding team from most schools.

**Table 2. Interview participants**

<b>Participants</b>	<b>Intervention arm</b>	<b>Control arm</b>	<b>Total</b>
Year-9 students			
Girls	11	2	13
Boys	10	2	12
Year-10 students			
Girls	5	2	7
Boys	6	2	8
<i>Total students</i>	32	8	40
Staff	17	4	21
Female	13	3	16
Male	4	1	5
Parents/carers	5	Not applicable	5

### **Thematic analysis**

#### ***Norms about how girls and boys should behave***

Participant accounts identified a range of gender norms operating in secondary schools to shape girls' and boys' behaviours and their physical and personality attributes. These appeared to support a sexist, gendered hierarchy placing girls in an inferior position to boys.



References to normative expectations and sanctions mainly centred on peer influences, while some participants also made references to parent and broader cultural influences on gender socialisation.

**Sexist norms about gendered attributes.** Participant accounts revealed a range of social expectations in schools governing girls' and boys' physical and personality attributes, which were more pronounced in some settings and populations than in others. These injunctive norms generally functioned to maintain girls' positions as inferior and subordinate to boys, while maintaining boys' position of superiority and dominance over girls, through systems of social rewards and punishments. As summed up by one girl, "Boys are in control and girls do what they say" (optimisation school A, wave 1).

Scrutiny and judgement of girls' looks was a common theme. Participants described social expectations of girls to wear make-up and attend to their physical appearance. At the same time, girls perceived to be too made-up could face social repercussions. As one year-9 girl described girls' confinement, "...if you're not styled up properly you're a tramp, if you're wearing too much make-up you're still a tramp, like there's no in between" (year-9 girls, intervention school D, IDs S1-S2). Injunctive norms governing boys' attributes, on the other hand, generally functioned to promote displays of emotional and physical strength and toughness. Accounts suggested that, while some gender norms were beginning to shift and not all young people supported them, boys nonetheless faced pressure to "prove their masculinity" (staff training, school F) act "tough" (staff, intervention school D, ID T3) and "act like a man" (staff training, school F). Boys were expected to hide emotional vulnerability and not to cry, and they could be teased for showing weakness, wearing make-up or displaying other ostensibly feminine characteristics.

Students also described gendered stereotypes endorsed by their peers, a form of descriptive norm. These included beliefs that girls dressed in feminine clothes, were physically weaker and less emotionally stable than boys and that they were not athletic or as smart as boys in specific subjects. Students reported that boys, on the other hand, were seen as "the stronger sex" (year-10 girl, control school G, ID S1), smarter than girls in some subjects, more athletic and less prone to sadness or agitation.

**Sexist norms governing sexual behaviours.** Scrutiny and judgement of girls' sexual behaviours were prevalent in participant accounts. Students and staff across several schools described injunctive norms supporting a sexual double-standard among students<sup>221</sup> involving social rewards for boys seen as sexually active but stigmatisation of girls seen this way. This was described in relation to both sexual/romantic activity and to the circulation of sexual images. In the case of sexual activity, boys were congratulated for what was seen as sexual or romantic success while girls were reprimanded or derided. Year-9 girls described the phenomenon this way (year-9 girls, intervention school D, IDs S1-S2):

*Participant: Like when boys go, 'Oh we're dating five girls,' it's okay, and then if a girl could maybe be talking to two boys and a friend, they're automatically a slag<sup>dd</sup> or something.*

This policing of female behaviour could foster insecurity and limit girls' self-expression, as a year-9 girl described:

*I think it lowers their self-esteem kind of, even if it doesn't make it visible or something, it does lower it. Like it is kind of sad because some girls will stop doing, like, stop being confident, maybe stop going to dance, just because they got called this or that, and then they just feel insecure and stuff. (Year-9 girls, intervention school D, IDs S1-S2)*

Accounts of students in a few schools suggested that cross-gender friendships were uncommon and that norms governing sexual behaviour could play a role in proscribing them: peers would assume cross-gender friendships were romantic or sexual and if a girl had many male friends, a year-9 student explained that some people might see her as a "slut", "ho" or "sket"<sup>ee</sup> (optimisation school B, SE, wave 2).

**Resistance to sexist norms and gender stereotypes.** Although social pressure could make it difficult, resistance to gendered expectations and stereotypes was common in student accounts across several schools. One manifestation was citing examples that challenged restrictive descriptive norms, as reported by this year-9 girl reflecting on a classroom discussion:

*Boys have a stereotype of not being sad or not getting annoyed as easy as girls do. But then when we discuss that, the boys were like 'No, I've never cried in front of anyone, I've*

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<sup>dd</sup> "Slag" is a derogatory term for a girl or woman who is seen as promiscuous.

<sup>ee</sup> "Sket" is a derogatory term for a girl or woman who is seen as promiscuous.

*never cried'... And then everyone will start saying 'But you probably have, you probably have been upset'. And, like, when it says girls are more agitated, we probably aren't, boys get annoyed when one of their football teams loses and like girls don't care about them things. And then they'll say about how we care about our makeup... but then we all care about something and like we all get the same amount of agitated and we all like cry, we all cry, we all get upset. And it's just common and it's not something that should be stereotyped because boys do get upset and girls do get agitated and it's like common. (year-9 girl, intervention school C, ID S7)*

In participant accounts, resistance could also take the form of students disregarding gendered expectations, either in terms of their own behaviour or by not sanctioning others who transgress them.

**Maintaining gender norms compliance through homophobic practices.** Accounts suggest that enactments of homophobia were common in schools, were perpetuated by both girls and boys, and fell into three main categories. First, accounts indicate that direct bullying of gay and bisexual young people operated as a social sanction supporting an injunctive norm of heterosexuality. Second, homophobic comments appeared to operate as a social sanction sustaining sexist norms. For example, students in a paired interview described the use of homophobic insults to shape masculinity among boys (year-9 girl and boy, control school H, IDs S3-S4):

*Participant: It's not as, because there's like the stereotype that girls used to be all fairies and pink and holding hands and that. But if you're a boy with fairies and pink and holding hands, it would be a lot more strange at that moment.*

*Participant: You'd be gay. Yeah, you'd just be named gay.*

These insults also appeared to play a role in regulating the boundaries of same-gender friendships, particularly among boys, e.g.:

*Or if, let's say, two girls, say, like, really close friends, and they're always hugging, they'll like call them lesbian or 'You're a queer' or something like that. Like if you're holding hands with a girl, like, it's like... But I think boys, if they hold the hands of a boy, it would be more weirder than two girls holding hands. (year-9 girl and boy, control school H, IDs S3-S4)*

Third, some students framed the use of homophobic language as an insult with, as one student put it, "no tag to sexuality at all" (year-9, mixed-gender group, intervention school E, IDs S3-S8). Minimising this type of behaviour, these participants framed homophobic comments

as “jokes” (year-9 boy, intervention school D, IDs S3-S4) or “banter” (year-9 girl and boy, intervention school F, IDs S4 and S8). As one student explained, “It’s an insult but it’s not like a horrible insult in their mind, it’s just saying it because it’s just what comes to mind” (year-9 girl and boy, intervention school F, IDs S4 and S8). In contrast, other students expressed frustration or disapproval, for example describing homophobic practices as “disgusting” (year-9 girls, intervention school D, IDs S1-S2) or suggesting that more should be done to address them:

*Once, in one class, someone said, “That’s so gay”, and the teacher just went, “What exactly do you mean by that?”, or something, and they had their little say about that and it was, but that was it, it was like nothing else. (year-10 girls, intervention school D, IDs S7-S8)*

We found little evidence of significant negative sanctioning of homophobic comments. Accounts suggest that, where staff or students did intervene, this tended to be ineffective. Staff reactions, discussed primarily by students in one school but also by a staff-member in a second, were characterised as inadequate in that they failed to engage students in a meaningful or transformative way, e.g.: “That’s how it feels. Like it’s, like, they’ve been pulled over, ‘You shouldn’t say this, it’s bad’. But like they don’t actually care too much about it so they don’t explain why” (year-9 girls, intervention school D, IDs S1-S2).

A girl who had challenged homophobic behaviour with peers in her school recounted being made a target herself, which functioned as an effective sanction: “Actually in year 7, this is a personal experience, I tried to step in and they accused me, and then they tried to push me down the stairs...from now on I just don’t step in” (year-9 girls, intervention school D, IDs S1-S2).

**Gendered expectations and abuse involving sexual images.** Students and staff discussed the often persistent pressure on girls to send sexual images of themselves to boys and the often severe social consequences of doing so. In these accounts, expectations of girls’ sexual availability and obedience were coupled with acute stigmatisation of girls whose images were subsequently posted publicly or circulated among classmates without their consent. Pressure on girls could come from partners and from other, sometimes older, boys. This could be overtly forceful or more subtle and protracted involving what one teacher described as “...a kind of gentle kind of tapping on the window type of effect over a period of time, where that

young person has just felt ‘I need to do this...’” (staff, control school H, ID T2). A staff-member from one optimisation school demonstrated the significant influence that social norms with regard to sending sexual imagery could have:

*Although we’ve done a lot of work in school on the legal implications of sending and asking for images and sharing images and all that kind of thing, they do it anyway. Just because everybody does it... It is predominantly the boys who are asking the girls for the images and the girls who are sending them because that’s what they’re supposed to do and that’s what the boys like... (staff, optimisation school B, wave 2).*

A year-9 student’s account illustrated how pressure to send sexual images could operate both as an abusive practice in itself and as a social sanction reinforcing an expectation of girls’ sexual availability: “Yeah, the boys just call you frigid and stuff, and they call you boring, ‘Blah blah blah’. And then the girls just give in to it.” (optimisation school A, wave 2)

Referring to the circulation of girls’ images, one student commented that “People in our school think it’s okay to expose a sket” (year-9 girls, intervention school D, IDs S1-S2). This frames the circulation of these images itself as a form of social punishment for violating injunctive norms of sexual modesty. Participants reported that sexual images of both girls and boys were posted publicly or circulated among students without their permission, with frequency varying between schools. Where accounts described gendered impacts, these were manifestly much more severe for girls. Reflecting the sexual double-standard described above, participants reported that boys tended to be “more blasé”, or bragged about their bodies, while girls were “absolutely affronted” (Staff, control school G, ID T1) and typically ridiculed. As a year-9 girl explained, “If a boy’s one gets spreaded, I guess it’s just like, ‘Oh, well done, mate’. But if a girl’s one gets sent, like you’re a slag or summat.” (year-9 girl and boy, control school H, IDs STK3-STK4).

### **Other abusive practices were facilitated by and reproduced sexist norms**

Gendered environments in participating schools were characterised in part by interrelated and overlapping sexual harassment practices, and by use of language that objectified, degraded or subordinated girls. Our interpretation is that these practices were both enabled by, and reproduced, sexist norms.

## ***Sexual harassment***

Perceptions of the prevalence of sexual harassment varied across individuals, settings and groups of students. Some participants expressed uncertainty about how common it was generally or among students outside their social group. Two students commented that sexual harassment was perpetrated by a minority of students, though descriptive norms within and outside of school were seen as contributing to both its perpetration and social acceptance. In the words of one staff-member, “They do it because everybody does...” (optimisation school B, wave 2).

While participants acknowledged that sexual harassment could be perpetrated by, and target, both girls and boys, they focused primarily on boys’ sexual harassment of girls. Accounts of physical sexual harassment included uninvited or unwelcome sexual touching: for example, boys slapping girls’ buttocks was frequently cited. Verbal sexual harassment reportedly often took the form of comments about girls’ appearance and our data suggest that girls could face social repercussions for not accepting these comments as compliments. Through a social norms lens, this comprises a form of social sanctioning that reinforces expectations of girls to submit to male judgement.

Accounts portrayed sexual harassment as often minimised (e.g. framed as a joke or compliment) and as tolerated or accepted among students. Accounts also suggested that perpetration could be socially approved, reflecting supportive injunctive norms. Two year-10 girls explained that boys who sexually harassed girls in their school drew confidence from their “friends as back up” and “[did] it to get laughs from their friends,” who encouraged them rather than intervening (year-10 girls, intervention school D, IDs S7-S8). According to participants, striving for acceptance among a dominant social group and generally preferring to avoid conflict could both prevent students from challenging or reporting sexual harassment.

However, there were also instances of protective social norms in some groups and settings. For example, a year-10 girl’s account of her year-group portrayed an alignment of protective descriptive and injunctive norms:

*We get along so well with the boys, but the boys are... not the sort of boys that would just go over to you and touch your bum. Like our girls, if like my group, would be like, ‘What are you doing? Don’t do that’. (year-10 girl, control school G, ID S1)*

Additionally, participants gave accounts of both victims and bystanders confronting perpetrators and reporting sexual harassment to school staff. Teacher and parent interviews suggested that schools generally respond to sexual harassment. As a parent described,

*...the boys, you know, can be quite sexually aggressive, so I think it, I mean the attitude, there's a kind of general attitude of language which is used, which is just totally inappropriate...and I think the school, I have to say [School D] is brilliant...they would deal with it immediately. (parent/carer, intervention school D, ID P2)*

Data from students, however, suggest that schools' response efforts could be hampered by lack of visibility, with sexual harassment often occurring out of their sight or outside of school. Comments by some staff indicated that they viewed girls as partly responsible for their own victimisation. This raises the possibility that sexist norms among staff might sometimes weaken institutional responses to sexual harassment. These staff expressed concern that girls "normalise" (staff, control school G, ID T2) sexual harassment or "think that's a compliment" (staff, intervention school C, ID T1), and expressed the need to work with both victims and perpetrators to address the issue. For example,

*Around sexual harassment, I would say there have been cases where girls have sometimes complained that boys have been looking at them inappropriately, making inappropriate comments to them. And within a mainstream school, clearly where there are some young people for whom don't wear the right skirt and so on, or will roll the skirt up and comments and so on are made. Clearly, there is work to do for both the victim but also the perpetrator in those areas in terms of highlighting where the concerns are. (staff, control school H, ID T2)*

On the other hand, staff in an intervention school training discussed their concern that the presence of a high level of sexual harassment could contribute to an erosion of physical boundaries among students, normalising "inappropriate" and non-consensual touching, which they suggested might indirectly contribute to DRV (staff training, intervention school D).

### ***Objectification of girls and degrading language***

Participants expressed concern about the prevalence in their schools of objectification of girls and of sexist and degrading language used in reference to girls. Staff concerns in some settings included girls adopting and casually using degrading, gendered terms like "bitches" to

refer to each other. However, accounts primarily centred on boys' behaviour towards girls, for example in using "very sexualised language" (staff, intervention school D, ID T3) and executing public judgements of girls' bodies. As one boy described,

*Yeah, I feel like, I know this kind of may sound petty in some ways, but I feel like quite a few boys take it into their own hands to make comments about girls body composition. And, like, like take it into their own hands to like start staring and like at girls as such. And like looking them up and down as if they're sort of like objects or trophies. And I feel like sometimes boys will hang around in groups and stereotypically talk about how good-looking girls are... (year-10 girl and boy, control school H, IDs S1-S2)*

In our analysis, these behaviours were enabled, in part, by the gender hierarchy formed by prevailing sexist norms. Our data suggest that practices objectifying and degrading girls can also play a role in reproducing that hierarchy, as described by this student: "Some girls would just be called a 'sket' for like doing nothing, because they got on boy's nerves... Like it's just girls are always classified as something so below..." (year-9 girls, intervention school D, IDs S1-S2).

In an intervention school that had also taken other initiatives to improve relationships between students, participants reported recent shifts towards fewer incidents, less social acceptability of sexist behaviours and increasing confidence among students to challenge them (although the last of these could still trigger social repercussions). One teacher described emerging protective injunctive norms among boys in a year-group with which she worked (staff, intervention school D, ID T3):

*Participant: ...like boys, particularly in year 11, do not want to be identified as sexist, that's for sure.*

*Interviewer: Now?*

*Participant: Yeah, which is amazing. Which is, like, huge. I'm not saying that maybe they aren't sexist sometimes but if somebody [peers or school staff] calls them up on it then they really do not want to be considered sexist.*

In line with social norms theory, this account suggested that young people were influenced by social norms among student and staff reference groups even where their personal attitudes had not yet changed.

## **Dating and relationship violence norms**



Participants tended to see DRV as largely unobservable, acknowledging that it could take place outside of school, online or otherwise in private. They were often unsure of how common it was in their school. Our data suggest that embarrassment or fear of losing friends' respect could serve as barriers to disclosing victimisation, and some suggested that disclosure could be particularly difficult for boys. In the words of one student, "I don't think that if anyone in this school is in an abusive relationship or has trouble with sexual harassment then they wouldn't be spreading [it] across the whole school if you know what I mean..." (year-10 girl, control school G, ID S1). Concerns about privacy and about how friends would react were seen as potential deterrents to breaking up with an abusive partner.

Teachers, parents/carers, family, friends and other peers emerged as influential reference groups. Staff saw themselves as playing a protective role and suggested that young people would be embarrassed for a teacher to hear them brag about abusive behaviours. Participants, primarily staff, suggested that young people's expectations about violence in intimate relationships could be influenced by exposure to abusive relationships at home. They emphasised the school's critical role in teaching students about DRV and providing a space to explore their views, as described by this teacher:

*Because I think that they quite often don't have any awareness of any, you know, rules, legislation, anything. Quite often they will have experienced domestic violence and things like that, and don't actually know that it's not normal. Because it's just a normal, you know, it happens to lots of people, unfortunately, around here. And it's something that is not really discussed openly with adults at home. And so I think it's important to inform at school so that they know what is right and what is wrong. But I'm not sure that's a conversation that's happening, often. (staff, intervention school F, ID T3)*

Participants tended to view physical DRV as rare. They described protective social sanctions such that a young person experiencing DRV would "just break up with" the abusive partner (optimisation school B, wave 2, year-10 discussion) and friends of someone experiencing or perpetrating DRV would intervene. One teacher shared an example of peer intervention with a boy who had been "quite heavy handed" with his girlfriend, which the teacher viewed as particularly impactful:

*...about 12 boys came to see the Head of Year and said, this is, you know 'This is totally out of order...he shouldn't have done this. It's really disrespectful. Please can you speak to him?' And in the end the Head of Year actually said, 'Well, why don't you all speak to*

*him?’ So they all sat down and told him how they felt about it and that he shouldn’t be doing that. And he was pretty embarrassed and he completely understood. And, actually, the fact that that was coming from the students was really nice... (staff, intervention school F, ID T3)*

On the other hand, accounts suggested that peer injunctive norms could also contribute to DRV. This was particularly the case for controlling behaviours, which when discussed by gender were described primarily in terms of boys’ behaviours towards girls. Controlling behaviours were viewed as more common and visible than physical DRV, especially when they involved control over how a partner presented themselves or interacted with others. In a year-10 focus group, a boy contrasted social intolerance of physical DRV in his school with what he saw as the more typical practice of controlling behaviours, and others agreed:

*...There’s probably more emotional, like, [a girl agreeing]. They’ll, like, kind of like, an example is, like, they might isolate you, so, like, not let you speak to anyone. That’ll be, cos that’s kind of more subtle, like you don’t really realise, but your friends might realise. But if they just, like, full-out, like, slap you or something, then everyone would just like stop you [another girl and boy agreeing]. And then you go on a break or whatever. But yeah, so emotional bullying, that’s more common, like yeah. Like, I’ve seen it, like, you would be isolated, or you would stop talking to people, because of your boyfriend being scared about losing you or something. (optimisation school B, wave 2, year-10 discussion)*

Often framed as rooted in jealousy, this type of abuse was reported to manifest as control over a partner’s makeup and clothing, whether they went out and who they spent time or talked with. Reflecting gender norms restricting cross-gender friendships, our data also suggest there was an expectation among students that young people in a relationship wouldn’t spend time with cross-gender peers other than their partner (see section “Sexist norms governing sexual behaviour”).

Staff accounts indicated pro-DRV descriptive norms, reporting that jealousy appeared to be considered “normal” and that, as one participant said, “It seems to be very normal for a lot of the pupils to think that whoever you’re dating, should know where you are at all times pretty much...” (staff, intervention school D, ID T3). Contrasting pro-DRV norms in her year-group with protective norms among her friends, one student described injunctive norms condoning controlling behaviours this way:

*I think it's like small things. Like a lot of small things are acceptable, like, for example...people in my year, like their boyfriend would say, they'd be like, 'Oh, yeah, my boyfriend let me wear shorts for PE today'. And you're like, 'Why would he not let you wear shorts for PE today?' Like that's just normal...it's like that's just what's expected, but then so no one like says anything. (year-10 girls, intervention school D, IDs S7-S8)*

Considering sexual DRV, participants described two forms involving sexual images. First, accounts suggest that while young people sometimes shared sexual images of themselves with a partner as a consensual part of their relationship, some did so under pressure from their partner. The second involved threatening to or actually sharing sexual images of a partner or former partner without their consent, abuse which we suggest draws power from sexist norms engendering ridicule of girls whose images are circulated (see section "Sexual abuse involving sexual images").

## **Discussion**

### **Summary and interpretation**

Based on qualitative research with students, staff and parents/carers across ten secondary schools in England, this study describes social norms governing gendered attributes as well as DRV and other forms of abuse among young people. Some DRV norms were discussed in general terms, while others were strongly gendered. Like social practices of sexual harassment, and the objectification and degradation of girls, DRV involving controlling behaviours or sexual images was portrayed as focused largely on dominating girls.

We found Giddens's structuration theory<sup>107</sup> to be a useful framework for examining relationships between the social norms and practices emerging from participant accounts. Drawing on Giddens "duality of structure",<sup>107(p19)</sup> we theorise from the accounts presented that sexist norms comprise a hierarchical gender structure that enables a host of gendered abusive practices among young people, and that enactment of these practices, in turn, reproduce that structure. Integrating a social norms framework, our data suggest that sexist descriptive and injunctive norms governing how girls and boys behave foster social expectations that subjugate girls to boys. Our data also suggest that homophobic language, pressure to share sexual images and the vilification of girls whose images are then circulated operate not only as abusive

practices but also as social sanctions promoting compliance with sexist norms. We theorise that the resulting recursive gender structure, characterised by the subjugation of girls including policing of their bodies and sexuality, enables other practices that are abusive of girls and were prevalent in participant accounts (sexual harassment, objectification, use of degrading language, and some forms of DRV). Our data indicate that injunctive norms tended to support these abusive practices, manifesting as social tolerance and in some cases encouragement from peers. We also theorise that enactments of these abusive practices subjugate girls to boys' judgement and control, functioning to reproducing the prevailing gender structure.

According to this model, engaging in abusive behaviours and enacting social sanctions to uphold prevailing gender norms represent expressions of agency that are both enabled and constrained by a male-dominated gender structure. But Giddens's work suggests that people can take deliberate action to transform prevailing structures<sup>107</sup> and choose between competing norms, particularly where they can draw on different social networks and sources of knowledge. We found evidence of this in the schools in our study. Participants gave accounts of staff and students adopting practices that challenged established norms, from accepting peer transgressions to actively challenging abusive practices and (among staff) pursuing new, coordinated interventions. While doing so could result in social repercussions, structuration theory suggests that these social practices of rebellion nonetheless recursively impact the "conditions of action"<sup>107(p5)</sup> in schools. For example, acts of resistance to existing gender structures might increase the social cost of abusive practices against girls and expand opportunities for others to resist them too. These acts of resistance represent protective practices on which normative DRV interventions can build.

In addition to protecting girls from abuse, evidence suggests that transforming sexist norms and abusive practices identified in this study would also benefit boys. A large body of research documents "the emotional and physical costs of patriarchy for boys and men".<sup>91(p228)</sup> Connell suggests that these include the majority of the burden of school disciplinary practices, underdevelopment of skills for fostering "good human relationships"<sup>91(p222)</sup> and social sanctions against boys who don't conform to hegemonic forms of masculinity.<sup>91</sup> There is evidence of associations between traditional gender norms and increased sexual risk, limited help-seeking,

substance use and suicide and among men.<sup>248</sup> There is also some evidence to suggest that perpetrating DRV predicts subsequent marijuana use and lower academic aspirations, including among boys.<sup>57</sup>

Our findings build on past studies that report on the influential role of schools in the construction and support of gender expectations and hierarchies and in the reproduction (and challenging) of gender inequalities.<sup>91</sup> Others have also reported on the use of sexualised language, including anti-gay and misogynist insults used against girls and boys, as a key feature of the construction of masculinity and of the subjugation of girls in school.<sup>91,261</sup> Our findings also resonate, as we would expect, with Jamal et al.'s research which drew on structuration theory to explore girls' bullying in secondary schools in England.<sup>259</sup> While that research focused mainly on girl-only settings, the "policing of [girls] bodies and sexuality" it documented emerged in our mixed-sex settings. In both studies, students recounted the prevalence of sexual harassment and objectification of girls by boys.<sup>259</sup> These qualitative findings echo the results of a 2017 survey in mixed-sex primary and secondary schools in England and Wales, which found high rates among girls of experiencing sexual harassment (37%), experiencing gender discrimination (36%) and being described using sexist language (30%).<sup>262</sup>

In line with our findings on recursive interactions between abusive practices and the structural conditions that enable them, Jamal et al. demonstrated how school-based sexual bullying of girls reinforced gendered social categories and traced the role of institutional response in reproducing harmful norms "by sometimes ignoring" these practices.<sup>259(p736)</sup> Data from staff in our study indicated that some subscribe to beliefs holding girls accountable for their own victimisation, which could undermine a protective response. However, student complaints about institutional tolerance in this study centred on staff responses to homophobic comments, which were characterised as surface-level and ineffective. These findings suggest that transformation of sexist structures in schools might usefully involve work with secondary school teachers, 27% of whom in England and Wales report not feeling confident in responding to sexist incidents in their school.<sup>262</sup>

Our analysis is novel in using a social norms framework to examine gendered expectations and abusive practices, including DRV, in UK schools. Delineating between norms

that (1) govern DRV directly, (2) participant accounts link explicitly or indirectly to DRV and (3) broader empirical literature links to DRV, we can suggest some specific areas of focus for normative components of DRV interventions. First, descriptive and injunctive norms in schools in this study were described as mainly protective against physical DRV but supportive of boys' controlling behaviours towards female partners. We also found that fear of others' response could be a barrier to DRV help-seeking, results which are supported by other research that finds that young people fear being blamed<sup>34,263</sup> and significant proportions of girls and boys in Great Britain who experience DRV tell no one.<sup>34</sup> Second, staff explicitly linked sexual harassment to DRV via a breakdown of appropriate physical boundaries between students. Participant accounts also indirectly suggest that norms proscribing cross-gender relationships and policing girls' sexuality could contribute to DRV. For the former, this is by underpinning jealousy, which was identified as a key driver of boys' controlling behaviours in relationships. For the latter, we suggest that this policing underpins sanctions that disparage girls whose sexual images are circulated (but not reportedly of the boys who circulate them), lending power to the form of DRV involving threatening to circulate a female partner's sexual images. Third, drawing on other empirical research, we identify pathways through which norms about how girls and boys are expected to behave identified in our study might underpin DRV. Norms prescribing male dominance and control are implicated directly in young people's accounts of boys' DRV perpetration in Great Britain,<sup>34,138</sup> while the sexual double-standard prescribing conflicting sexual behaviours for girls and boys appears to play a role in undermining clear communication about sexual consent.<sup>117</sup> Further considering the latter, in interviews with girls in the UK "male sexual coercion was perceived as standard" for many<sup>34(p108)</sup> and refusing sex could precipitate severe physical DRV.<sup>34</sup> Reports of peer pressure on boys to be sexually active<sup>34</sup> suggest that gendered expectations might play a role in underpinning these types of abuse.

Drawing on a social norms framework also enabled us to conceptualise enactments of homophobia, tactics to pressure girls to share sexual images and the vilification of girls whose images are circulated as manifestations of social sanctions promoting sexist norms. This suggests that interventions to weaken these sanctions, even where personal attitudes have not

yet shifted, could theoretically disrupt cycles whereby they reproduce gender-inequitable structures that facilitate gendered abusive practices, including some forms of DRV.

### **Limitations**

This study collected qualitative data from ten schools in south-east and south-west England. While this type of research can provide valuable theoretical insights and identify areas for further research,<sup>259</sup> its findings cannot automatically be generalised to other schools or settings. However, many of our findings resonated with other UK school-based research, contributing to a broader understanding of gendered expectations and abuse in UK schools. This study focused on perceptions of social patterns, expectations and sanctions but did not ask about other factors underpinning personal experiences of DRV victimisation or perpetration. The latter have emerged from previous UK-based DRV research (e.g. Barter et al., 2009; Wood et al., 2011),<sup>34,138</sup> suggesting that although individuals are not always conscious of the factors driving their behaviour,<sup>107</sup> targeted research in this area could usefully augment our findings.

### **Conclusions**

DRV prevention interventions are often concerned with transforming harmful social norms, but there is limited evidence to inform decisions about which specific norms to target. Drawing on data from ten schools in England, we theorise that sexist norms subjugating girls to boys interact with social practices that are abusive of girls, including DRV against girls, to reproduce gender-inequitable structures in schools. Our findings suggest that school staff and students can, and do, take action to interrupt these cycles, and that physical DRV was seen as uncommon and socially proscribed. Normative DRV interventions might usefully build on these protective factors.

We also found that boys' controlling behaviours towards female partners were considered common and typically socially accepted. Our findings suggest that shifting these norms supporting DRV directly, and weakening the social sanctions used to promote compliance with inequitable gender norms, might both be useful targets of DRV interventions. Finally, when considered alongside other empirical UK evidence, our findings identify several

important candidates for the targeting of normative DRV interventions: norms governing sexual harassment, cross-gender friendships, the sexual double-standard and control and dominance as masculine ideals.

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## Chapter 8. Discussion

This chapter discusses the relationship between social norms and DRV and then summarises key findings for each research question that this thesis sought to address. It then provides a synthesis of my findings and interprets these in the context of existing literature. Next it discusses limitations to this thesis research. It concludes with a discussion of implications of this research for future public health research and practice.

### 8.1. Summary of key findings

#### 8.1.1. Contextualisation

Systematic reviews<sup>22,40,47,72–74</sup> and meta-analyses<sup>67–71</sup> have identified a range of risk factors at the individual, relationship, community and societal levels that are associated with DRV outcomes. Situated at the community level, social norms have emerged as an enduring focus for DRV prevention programmes.<sup>7</sup> This focus is supported both by qualitative research on normative mechanisms underpinning DRV<sup>34,138,139</sup> and by a large body of quantitative research finding associations between social norms and DRV outcomes (see Paper 1, Chapter 4). Theory and empirical research suggest that norms play a role in influencing individual-level risk factors and behaviours, and that societal factors interact with prevailing norms to influence behaviour.

Supporting the Theory of Planned Behaviour,<sup>100</sup> research in fields closely related to DRV provide insights into norms' impact on individual-level risk factors. Mulla et al.'s research on adolescents' bystander actions to address sexual violence and relationship abuse suggests that social norms influence personal attitudes, which in turn affect subsequent bystander action.<sup>156</sup> Similarly in the GBV field, Jewkes et al. highlight the direct influence of gender norms on individual-level risk factors for perpetration, such as having multiple partners and engaging in transactional sex.<sup>89</sup> They also posit that expectations created by patriarchal norms help explain why men who are not living up to hegemonic masculine ideals (e.g., men who report difficulties such as depression or economic marginalisation) are also more likely to perpetrate GBV.<sup>89</sup>

Considering the broader levels of the social ecological model, theory and research suggest that features of social structures or institutions, including schools, influence normative expectations within a social system.<sup>91,107</sup> For example, Connell's scholarship traces ways in which a school's

“gender regime” reinforces gendered expectations,<sup>91(p213)</sup> while UK research documents pervasive sexism in secondary schools and difficulties that teachers face in challenging this.<sup>262</sup>

Despite the wealth of evidence documenting direct relationships between social norms and DRV alongside more complex relationships between societal influences, social norms and individual-level factors, research quantifying the importance of social norms to DRV outcomes remains limited. Injunctive norms do not feature in any existing meta-analyses of DRV risk factors, which would enable comparisons with other DRV risk factors,<sup>67–71</sup> and social norms are only rarely assessed in evaluations of DRV interventions.<sup>11,148,149</sup> Their role has not been examined using consistent, good-quality measures (see Paper 1, Chapter 4), limiting researchers’ ability to assess the influence of social norms across populations and contexts, to model this relationship alongside other factors and ultimately to assess empirically the role of norms change in DRV prevention.

This thesis aimed to address gaps in existing methods for measuring social norms by answering four research questions. The following sections summarise findings for each of these in turn.

#### 8.1.2. Research question 1: Are existing measures of adolescent social norms relating to DRV and gender reliable and valid?

To address this research question, we undertook a systematic review of DRV literature. The review identified 40 eligible measures of DRV norms (19 descriptive, 14 injunctive) and gender norms (1 descriptive, 6 injunctive). Most measures assessed norms among peers or friends, which are appropriate reference groups whose influence intensifies as affiliation shifts from family to peer groups in adolescence.<sup>32,92,141</sup> Almost all eligible measures were associated with young people’s own experience of DRV, supporting their construct validity. However, evidence of reliability and content validity of included measures was mixed. Additionally, we identified no measures used in the UK and none used across more than one study. These findings suggest that it is possible to develop valid, reliable measures of social norms relating to DRV and gender, but existing literature is disjointed and noncomparable.

The review also assessed other indicators of measure quality, identifying potential limitations to the existing suite of measures in terms of their (1) development, (2) reference groups, (3)

assessed norms and (4) analyses of relationships between norms and DRV outcomes. First, considering measure development, few measures drew on participatory work with young people to inform and assess the appropriateness of their content and construction. Second, while most measures asked about a defined reference group, several combined multiple reference groups in the same measure. This limits their usefulness for identifying reference groups for intervention and for assessing the effects of targeted interventions. Third, only one descriptive gender norms measure was identified. Injunctive gender norms measures tended to assess norms about GBV but miss more distal gender norms concerning relationships, sexuality and gendered attributes that qualitative research (e.g. Marston and King 2006, Barter 2009, and Wood 2011),<sup>34,117,138</sup> including data analysed for this thesis, suggests underpin DRV. Longitudinal DRV research by Reyes et al. further supports the relevance of broader gender norms and the importance of measuring these separately from norms about violence.<sup>82</sup> In their research, the relationship between traditional gender role attitudes and male DRV perpetration was modified by attitudes towards DRV. Though their findings report on personal attitudes, the distinct ways in which gender and DRV attitudes operate at the individual level suggest the possibility that social norms governing gender and DRV might also have distinct roles in underpinning DRV. Further considering the types of norms examined, despite elevated risk of DRV among SGM adolescents no included measures specified norms concerning DRV in non-heterosexual relationships.<sup>42-44</sup> Included measures were often gender-neutral or asked about heterosexual DRV but combined items assessing perpetration by girls and by boys in one composite measure. While most were nonetheless associated with DRV outcomes, UK evidence,<sup>48</sup> including the qualitative data analysed for this thesis, suggests that norms concerning DRV vary depending on the gender of the perpetrator. Eliding norms across genders might therefore obscure relationships between gender-specific norms and DRV outcomes.

Fourth, several norms measures were tested for their association with outcomes in aggregated samples of girls and boys, without assessing for effect modification by sex or gender. DRV research, however, suggests that social norms might influence DRV behaviours via gender-specific pathways. For example, studies have found some measures of DRV norms to be associated with DRV perpetration among girls but not boys<sup>77,127</sup> or vice versa,<sup>127</sup> or have found

differences in the strength of these relationships by gender.<sup>124</sup> Like eliding norms across genders, combining samples without assessing the need for stratification by sex or gender risks obscuring the nature and magnitude of relationships between social norms and DRV outcomes.

Psychometric testing of new and adapted social norms measures for this thesis provided the opportunity to assess the importance of two of these potential limitations by testing the performance of norms measures that are not gender-specific and by assessing norms-sex interactions.

8.1.3. Research question 2: Are new and adapted measures of social norms relating to DRV and gender understandable and answerable when used in research with adolescents in England? I conducted cognitive interviews to assess the understandability and answerability of social norms items concerning DRV and gender among young people in England. I found that participants could understand descriptive and injunctive norms items and could distinguish between injunctive norms and their personal attitudes in their responses. Our data suggest that some participants, however, had initial difficulty in understanding whether injunctive norms items were asking about their own or others' views. Our data also suggest that the reference group "most other students in your school" was understood differently by different participants. Additionally, uncertainty about and perceived heterogeneity among this broad group detracted from answerability, as did asking about norms that were not strong among the reference group. Answerability was enhanced where participants could draw on concrete experiences of the norms in question being voiced or enacted. These findings informed refinements to the tested measures.

To improve understandability and reduce the cognitive burden of injunctive norms items, I modified their construction to parallel the construction of more easily understood items assessing personal attitudes. Our data suggested that narrowing the reference group to "your friends" might improve answerability. Supported by my literature review, which found that most measures assessing "your friends" were associated with DRV behavioural outcomes, I modified items to ask about this smaller and more specific reference group. Final measures included only items assessing norms that we judged, based on cognitive interviews and knowledge of our

population and context, to be likely to have been discussed or enacted (i.e. in the form of direct behaviours or social rewards or consequences).

Our data suggest that participants considered gender in their responses to social norms items, which might undermine answerability of the gender-neutral descriptive norms items. We anticipated that narrowing the reference group to “your friends” would help to mitigate this because participants are likely to have better knowledge of the experiences of their friends compared to a broader student population, and because most of adolescents’ friends are of the same gender,<sup>264</sup> suggesting that a gender-neutral item asking about friends might be an acceptable proxy for a gender-specific measure. Psychometric testing provided an opportunity to quantitatively assess the performance of refined measures.

8.1.4. Research question 3: Are new and adapted measures of social norms relating to DRV and gender reliable and valid when used in research with adolescents in England, and how can they be refined?

I tested the refined measures of social norms concerning DRV and gender among a large and diverse sample of young people in England. Reverse-worded items did not perform well, loading on a distinct, methods-related factor which was not conceptually cohesive. Supporting observations by Reyes et al. on the importance of distinguishing between items assessing violence and gender constructs,<sup>82</sup> the remaining items comprised three empirically distinct constructs as theorised: descriptive DRV norms; injunctive DRV norms; and injunctive gender norms. Estimates from CFA suggested that this four-factor solution fit the data well (RMSEA=0.030, CFI=0.950, TLI=0.936).<sup>245</sup> The three conceptually consistent measures of distinct social norms constructs each had an ordinal alpha between 0.65 and 0.70, demonstrating minimally acceptable reliability, and were retained for further testing.<sup>187</sup> I tested the validity of each of these measures by assessing whether its relationship to other, theoretically associated measures followed expected patterns.<sup>187</sup> Pro-DRV and gender-inequitable norms were consistently associated with increased levels of DRV victimisation and perpetration at the level of  $p < 0.10$  in univariable analyses and these relationships showed some evidence of effect modification by sex for each tested norms measure, providing evidence in support of the tested measures’ validity.

More than 15% of participants scored the lowest possible scores for each of the three tested measures, suggesting that all three measures were insensitive to low-to-moderate levels of pro-DRV or gender-inequitable norms. Findings from multivariable analyses using a threshold for statistical significance of  $p < 0.10$  also suggest that measures might be further improved by increasing their sensitivity. Descriptive DRV norms measures, which comprised one item assessing physical DRV and two assessing different forms of psychological DRV, remained associated with victimisation and perpetration overall, and of all DRV types. Sensitivity of this measure might be further improved by the addition of a fifth response option. Injunctive DRV norms, on the other hand, referred only to physical DRV and did not retain an independent association with any assessed DRV outcomes in multivariable analyses. Sensitivity of the injunctive DRV norms measure might be increased by adding items assessing forms of psychological DRV such as controlling behaviours, which young people in the UK are less likely (as compared to physical DRV) to recognise as abuse.<sup>249</sup> Considering differences in the peer acceptability of DRV by perpetrator gender,<sup>48</sup> further refinement might also usefully examine whether the addition of more gender-specific items results in the emergence of distinct constructs for DRV perpetrated by boys and by girls, which might be more sensitive to gender-specific DRV outcomes. The addition of relevant items would also likely improve reliability, which tends to increase with measure length.<sup>187</sup>

Finally, injunctive gender norms retained an independent association with overall and psychological DRV victimisation in multivariable analyses. As others have observed, societal changes over time might render older measures of gender norm outdated, and it is important that DRV research uses measures that assess the specific types of beliefs that influence DRV among young people today.<sup>82</sup> The sensitivity of the injunctive gender norms measure might therefore be increased by adding items assessing domains that qualitative research has identified as salient. These include, for example, romantic and sexual expectations of girls and boys, and norms prescribing passivity for girls and toughness for boys.<sup>34,92,117,138,139</sup> Refinements should be informed by Project Respect's qualitative research, analysed to address research question 4, which explored salient norms among young people in England.

8.1.5. Research question 4: What are student, staff and parent/carer accounts of social norms relating to DRV and gender in schools, and how are these implicated in DRV?

Interviews with students, staff and parents/carers identified a range of social norms that underpin DRV directly or indirectly. Considering social norms concerning DRV itself, our findings suggest that those supporting *controlling behaviours* and inhibiting *disclosure of DRV victimisation* are particularly salient, supporting previous research with UK young people.<sup>34,249</sup> Considering broader gender norms, our data suggest that those supporting *sexual harassment* and the *policing of girls' sexuality*, and those proscribing *cross-gender friendships*, each contribute to DRV.

Other UK research has demonstrated that *sexist norms about gendered attributes*, especially those prescribing *control and dominance as masculine ideals*, contribute to boys' perpetration of DRV.<sup>34,138</sup> Global review evidence suggests that the *sexual double-standard* prescribing sexual activity for boys and proscribing this for girls can undermine communication about sexual consent.<sup>117</sup> Our interview data provide evidence of these norms operating among young people in England, highlighting their salience for local DRV prevention.

Drawing on Giddens' structuration theory,<sup>107</sup> we theorise from participant accounts that social sanctions enacted to uphold sexist norms about gendered attributes function to reproduce the prevailing gendered hierarchy. Sanctions featured in participant accounts included *enactments of homophobia*, *tactics to put pressure on girls to comply with boys' requests for sexual images* (e.g. deriding them as "frigid"), and *social punishments for girls whose personal images were then circulated*. We posit that efforts to weaken these sanctions might effectively alter the structural conditions that facilitate some forms of DRV. In line with social norms theory, our data suggest that efforts to shift social sanctions can be effective in addressing gendered abuse even where personal attitudes have not yet shifted.

Finally, participant accounts demonstrate that students and staff can, and do, take action to negatively sanction DRV and to challenge sexist gender norms in school. However, data from staff and students also suggest that staff efforts to address homophobia can be ineffective, and that some staff view girls as responsible in part for their own sexual harassment, which could theoretically undermine institutional response to sexual harassment in schools. In a 2017

survey, more than a quarter of secondary school teachers in England and Wales reported not feeling confident to respond to sexist incidents in their school,<sup>262</sup> providing further evidence of the need to work with school staff to transform sexist school structures that support DRV.

## 8.2. Synthesis and interpretation

This thesis sought to refine measures of social norms relating to DRV and to gender, and to inform methods of social norms measurement in DRV research. An adapted measure of descriptive DRV norms and new measures of injunctive DRV and gender norms were subjected to cognitive testing with young people in England. Findings led to refinements to the structure, content and reference groups of these measures, which were subsequently piloted among 1,462 year-8 and year-9 students across five secondary schools in England. Results of a literature review and of cognitive testing raised questions about the importance of sex- or gender-specificity in DRV norms measures, and in the DRV outcomes against which they are tested, which piloting also provided the opportunity to examine.

All three refined measures were found to be reliable and valid in psychometric testing, supporting their construction, content and reference group framing. Furthermore, the gender-neutral descriptive norms measure retained an independent relationship with DRV outcomes in multivariable analyses. This suggests that using gender-neutral items is a practical solution, at least for lengthy evaluation surveys, for a brief but sensitive measure of this construct. Results of multivariable analyses suggest that injunctive norms measures could potentially be further refined by increasing the number of response options, and by developing longer-form versions for use where survey length allows and research aims require more sensitive measures.<sup>222</sup> Considering outcomes, relationships between social norms and DRV behavioural outcomes were sometimes, but not always, moderated by sex. This suggests that analyses should test for interactions between social norms measures and sex or gender to guide decisions about whether and which models should be sex- or gender-stratified.

Finally, robust independent associations between descriptive DRV norms and DRV outcomes suggest that descriptive norms might play an important role in DRV. While descriptive DRV norms were the most common type of norms measure identified in our systematic review, descriptive gender norms have been neglected in DRV research. Drawing on Social Cognitive



Theory, which frames social modelling as an important source of behavioural learning,<sup>108</sup> we posit that perceptions that protective gendered behaviours are typical among an influential reference group could be protective against DRV. Our qualitative research suggests, for example, that perceptions of lower levels of compliance with gendered expectations concerning male sexual activity, dominating and controlling forms of masculinity, female sexual expression, cross-gender friendships and sexual harassment could be beneficial. Our findings suggest that the development and testing of salient descriptive gender norms measures would be a valuable contribution to DRV prevention and evaluation.

Our qualitative research also provides insights into salient social norms that could be incorporated into longer versions of our three piloted measures. Our findings support existing items addressing physical DRV and controlling behaviours in the descriptive DRV norms measure, and suggest that norms concerning disclosure of DRV victimisation could be added. Considering the measure of injunctive DRV norms, our findings support the inclusion of items addressing physical DRV, and the addition of items assessing controlling behaviours and disclosure of victimisation. Finally, considering the measure of injunctive gender norms, our qualitative findings support the inclusion of existing items assessing gendered behavioural attributes as well as the sexual double-standard. If the measure is to be extended, other salient norms in schools include social expectations concerning dominance and control as masculine ideals, cross-gender friendships, homophobic abuse, sexual harassment and the policing of girls' sexuality.

#### 8.2.1. Implications for research

Results of psychometric testing support the reliability and validity of three brief new and adapted measures of descriptive DRV norms, injunctive DRV norms and injunctive gender norms. These measures should be incorporated into evaluations of DRV interventions that aim to shift social norms, which should assess impact on norms and whether changes mediate reductions in DRV. As Reyes et al. recommend, evaluators should use mediation, moderation and moderated mediation analyses both to inform interventions and to improve our understanding of how DRV develops and is sustained.<sup>82</sup>

Further refinements to increase the sensitivity of the three tested measures could be useful, especially for epidemiological research to inform interventions. This work should be guided by existing research on the specific DRV and gender norms that underpin DRV in the UK, including findings from analysis conducted for this thesis of interviews with students, school staff and parents/carers. Additional work is needed to develop and test a measure of salient descriptive gender norms, drawing on existing research, while exploratory formative research is needed to inform the development of measures of social norms underpinning DRV among SGM young people.

Findings from this thesis research support several recommendations for the development of social norms measures for DRV research among young people. Recommendations relate to the norms assessed, reference groups and measure construction:

**Measures should assess norms:**

1. that are held among a **cohesive, influential reference group**;
2. that are **strong enough** among the reference group for respondents to discern;
3. for which participants can draw on **concrete experiences** to respond (i.e. descriptive norms governing behaviours that are observable or discussed; or injunctive norms supported by observable social sanctions);
4. that include what evidence suggests might be **more moderate indicators** of the phenomenon of interest;
5. that are **proximal**, or **distal** where evidence supports the influence of specific distal norms;
6. concerning **gender-specific forms of DRV**, where feasible; and
7. concerning a **broad range of gendered expectations beyond violence itself** that are important to DRV.

### Measures should use reference groups that are:

1. **separate, bounded and sufficiently narrow**;<sup>ff</sup>
2. of **known importance** for the behaviour of interest; and
3. **gender-specific**, where feasible and where evidence suggests that norms vary among girls and boys.

### In terms of their construction, norms measures:

1. should use **simple, clear and concise** instructions and wording;
2. should **not use reverse-worded items**;
3. can use **parallel formatting, items and response options** where surveys assess both norms and attitudes relating to the same phenomena; and
4. can include a **response option indicating uncertainty**, which should especially be considered where it is uncertain whether norms are discernible and publicly manifest.

A challenge in norms measurement with young people is the need to balance a measure's length and answerability with its sensitivity and opportunity for co-variation with other variables of interest. Existing reliable and valid norms measures identified via review of the DRV literature review tended to include more than three items (ranging from two<sup>gg</sup> to 28 items), and to offer more than four response options (ranging from four to seven, where information was provided). The length of norms measures needs to be considered in the context of the length of the full survey in which they are administered, but these findings suggest that longer measures and those with more than four response options can perform well among young people.

Another challenge is the need to balance the contextual specificity of salient norms<sup>6</sup> with the time and resources required to develop new measures, and the limitations that the proliferation of new measures poses for comparisons across time, settings and populations. Findings from a

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<sup>ff</sup> If there is more than one important reference group, these should be asked about in separate items. Items should be combined into a single measure only if indicated in an analysis of factor structure.

<sup>gg</sup> This excludes single-item measures, some of which were valid but which were not assessed for reliability.

global systematic review of 268 qualitative studies addressing factors that shape young people's sexual behaviour suggest that many normative social factors are shared across settings.<sup>117</sup> In the review, key themes addressing stigma, gender stereotypes, social expectations, social sanctions and the sexual double-standard were present in all study countries. If key norms underpinning DRV are similarly shared across settings, this suggests that existing measures might be reliable and valid across settings or could potentially be refined to be used across settings. This possibility could be explored via cognitive testing on an *ad hoc* basis to assess whether existing reliable, valid measures such as those found to be reliable and valid in this thesis research can be used with minimal changes among similar populations, as has been done with more established measures such as the Safe Dates and CADRI-s measures of DRV.<sup>37</sup> Alternatively, multi-site research exploring whether existing measures of salient norms are sufficiently general to perform well across contexts would also make a valuable contribution to the field. The availability of established measures that are reliable and valid across multiple settings would reduce barriers to and improve comparability of norms measurement in DRV research, aiding evidence synthesis and the consolidation of learning. The routine incorporation of norms measures would improve our understanding of the role that social norms play in the development, persistence and reduction of DRV.

#### 8.2.2. Implications for practice

Norms concerning DRV itself and broader gender norms are both independently associated with DRV outcomes. Social norms theory, DRV experts and empirical research suggest that addressing these norms is an important aspect of DRV prevention.<sup>8,15,34,138</sup> Intervention developers should draw on existing research, and conduct formative research where needed, to explicitly theorise which specific DRV and gender norms are important for interventions to target in their settings. In the UK, our and others'<sup>34,48</sup> findings suggest these include norms concerning psychological DRV and disclosure of DRV victimisation. Considering broader gender norms, participant accounts in our research and other qualitative research with UK young people have identified norms concerning several gendered phenomena as particularly salient. These include norms concerning: cross-gender friendships; control and dominance as masculine ideals;<sup>34,138</sup> the policing of girls' sexuality; loss of status for boys if their girlfriend is

unfaithful;<sup>34,138</sup> durable heterosexual relationships for girls;<sup>34,139</sup> the sexual double-standard;<sup>34,138</sup> and sexual harassment and homophobic abuse. Interventions should also support protective norms evidenced in UK schools, such as those proscribing physical DRV, and those supporting student and staff efforts to challenge gender stereotypes, sexual harassment and homophobic abuse. Finally, interventions should incorporate work with school staff to address harmful views, and to enhance skills and confidence for effectively engaging with students to transform sexist school structures that support DRV.

### 8.3. Limitations

This thesis research draws on data collected for the Project Respect study, and the scope of feasible data collection activities was determined by the funding, timeline and resources for that overall study. While Project Respect provided an excellent opportunity to address the research questions set out in this thesis, it also posed some limitations. Full-scale measure development beginning with formative research and the testing of a broad range of candidate items<sup>187</sup> was not feasible. There was insufficient time to conduct a systematic review of relevant norms measures before developing and testing new and adapted measures for Project Respect, which meant that measures were developed based on the most relevant measures identified in a rapid, *ad hoc* review. Similarly, measures were refined based on cognitive testing but the study timeline did not allow for a second round of cognitive testing to evaluate whether these changes improved understandability and answerability. Despite these limitations, I was able to modify existing measures to develop and refine an adapted descriptive DRV norms measure, and new injunctive DRV and gender norms measures. The baseline survey conducted for Project Respect provided the opportunity to psychometrically test the resulting measures among a large, diverse sample of young people in England, and the refined measures were found to be reliable and valid. Testing also identified floor effects, suggesting that measures could be further improved to enhance their sensitivity to low-to-moderate levels of the assessed norms.

Limitations to available resources precluded full dual-screening of systematic review records and dual data extraction. To minimise errors, initial records were instead dual-screened on title and abstract until reaching a high level of agreement and a second reviewer checked all data extraction. However, it remains possible that eligible records were excluded or relevant data

missed. Similarly, available resources precluded dual coding of qualitative data. To enhance the internal validity of my analysis, findings and interpretation were discussed at length with colleagues who have expertise in qualitative and school-based research. Considering external validity, it is important to note that, while the qualitative component of this research provides valuable theoretical insights and indicates potential areas for future research<sup>259</sup> and measure refinement, its findings come from ten schools in south-east and south-west England, and cannot be assumed to generalise to other settings or populations.

#### 8.4. Conclusions

Descriptive DRV norms, injunctive DRV norms and injunctive gender norms comprise empirically distinct constructs. It is possible to develop reliable and valid measures of these constructs for use with young people. This thesis research involved developing and testing three such measures for use in DRV research in England. These measures should next be incorporated into DRV intervention evaluation research, which should assess changes in social norms and examine the role of any changes in mediating DRV reduction. Further research should build on the tested measures to develop more sensitive, longer-form versions for use in epidemiological research, drawing on what is known about salient DRV and gender norms underpinning DRV victimisation and perpetration. Researchers should draw on existing knowledge about gender norms underpinning DRV to develop a new measure of salient descriptive gender norms, while exploratory research is needed to inform the development of measures assessing social norms underpinning DRV among SGM young people.

Findings from this research support several recommendations for social norms measurement in DRV research.

- 1) Measures should assess relevant and discernible social norms that are publicly manifest among a specific, bounded, cohesive and influential reference group.
- 2) These should include indicators of less severe forms of the phenomenon of interest.
- 3) Measures should assess norms that are proximal to the form of DRV that is of interest, or more distal norms where evidence supports their role in underpinning DRV.
- 4) Gender norms measures should assess gendered expectations beyond violence itself.
- 5) Norms and reference groups should be gender-specific, where indicated and feasible.

- 6) Measures should use simple, clear and concise instructions and wording.
- 7) Reverse-worded items should not be used.
- 8) Measures can be constructed as parallel to attitudes measures where analogous attitudes are assessed in the same survey.
- 9) Measures can include a response option that indicates uncertainty.

Future research should explore the potential for use of measures of salient social norms underpinning DRV across contexts, which if reliable and valid across settings could be routinely incorporated into DRV research.

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