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Assessing the Spectrum of Gender Norms Perceptions in Early Adolescence: A Cross-Cultural Analysis of the Global Early Adolescent Study

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A B S T R A C T

Purpose: There is increasing recognition that gender norms affect adolescent health and well-being. This study explores the consistency of adolescents' gender norm perceptions across different dimensions (roles, traits, relations) and describes how the patterns of these perceptions vary across four culturally different settings.

Methods: The study includes 8,977 adolescents aged 10–14 years from Kinshasa, Shanghai, Cuenca, and Indonesia. Three gender norm scales were examined: sexual double standard, gender stereotypical traits, and stereotypical roles. We investigated patterns of gender norms across dimensions (roles, traits, and relations) and compared results between sites. We also examined how adolescents' individual responses across the scales compared with average responses in their site, to assess the consistency of their gender views.

Results: Patterns of gender norms varied across sites, reflected in different levels of endorsement of each gender norms scale, from least equal in Kinshasa to most equal in Shanghai, while greater variation of perspectives across gender dimensions was noted in Cuenca and Indonesia. Moving from a societal to an individual perspective, most adolescents in each site (62%–67%) held both more progressive and less progressive views compared with their average peer depending on the gender dimension.

Conclusions: Our study demonstrates the coexistence of multiple gender worldviews that are assessed and enacted as per adolescents' experiences and social context. Accounting for such complexities is essential for gender-transformative programs, as shifting gender attitudes in one area does not necessarily translate in more gender equitable views across other spheres of life.

IMPLICATIONS AND CONTRIBUTION

Adolescents' gender can vary widely across cultural contexts. Accounting for such complexities is essential for gender-transformative programs, as shifting gender attitudes in one area does not necessarily translate in more gender equitable views across other spheres of life.

Gender equality, a target of the Sustainable Development Goals, is a value in itself and a means to protect and promote human rights and human development [1]. A large body of literature highlights the importance of gender as a social stratifier, one that has particular salience in the understanding of social processes affecting health-related outcomes [2].The

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gender system is multidimensional, manifested in economic, power, affective, and symbolic relations [3]. It is maintained through both institutions and policies, as well as implicit social rules (gender norms) that define appropriate actions for men and women within a given group [4,5]. These norms are produced and replicated through interpersonal interactions as well as through interactions with institutions and society at large [4].

Individuals' engagement with the gender system unfolds throughout their life course, through social learning [6], social interactions and social performance [7]. From a gender developmental perspective, children become aware of their own sex as early as 18 months, which motivates the development of gender stereotypical attitudes and behaviors that become increasingly sophisticated and peak around five or 6 years of age [8]. This normative path is succeeded by a period of flexibility in gender beliefs extending from late childhood [9] to early adolescence [10], followed by a solidification of gender stereotypical views in middle adolescence that extend into adulthood [11]. The flexibility in gender beliefs occurs during a critical period of development when sexual identities are reconfigured and gender expectations intensify [11,12]. Young adolescents' growing capacity to engage in social interactions with an expanding network also contributes to strengthening the role that socialization plays in shaping their gender beliefs [13]. In the United States, research among early adolescents highlights the importance of social transitions and particularly the transition from elementary to junior high school, which drives normative paths that become more flexible when young adolescents engage in a new environment but subsequently rigidify with increasing pressure to conform to adult gender expectations [10]. This socialization process solidifies adolescents' gender beliefs by manifesting and enforcing the prevailing gender norms regulating the acceptable traits, roles, and behaviors for men, women, or another gender minority [4–14]. Endorsement of unequal gender norms and stereotypes is common in early adolescence across cultural settings and largely influenced by family and peers [12,14]. Harmful gender norms that legitimize inequalities between the sexes can have profound implications for the health and well-being of adolescents, in ways that persist over the life course [15–17]. Several studies have examined how nonegalitarian gender norms jeopardize adolescents' physical, mental, and sexual health. For instance, adolescents have been found at greater risk of violence and unsafe sexual interactions when they ascribe to conservative forms of masculinity and femininity [15,18]. The negative effect of being exposed to harmful nonegalitarian gender norms in adolescence persists in adulthood: recent research found that adherence to stereotypical gender norms in early adolescence (with adolescents taking on hypermasculine or hyperfeminine behaviors) negatively affects health outcomes in early adulthood [16].

Although there is growing interest in promoting gender equality through structural and normative change, there is little consensus about what "gender equality" looks like in early adolescence and how their outlooks about gender vary across different cultures [19,20]. Several studies point out that people's gender beliefs and behaviors change depending on what areas of life they relate to—people, in other words, have a multitude of gendered opinions, that can also be contrasting and at times incoherent [12,19,20]. This complexity is rarely examined in current research, which either focuses on a specific gender domain (e.g., Sexual Relationship Power Scale [21]) or averages gender attitudes across multiple domains (e.g., Attitude Toward Women Scale for Adolescents [22]). This limits capacity to both identify pathways linking gender norms to health behaviors and to inform effective gender transformative interventions. A further limitation to our current understanding of gender norms as a social determinant of health and well-being is that most existing research with young adolescents is concentrated in high-income countries [12], and although ideals of male dominance, strength, and sexual prowess are reported in diverse settings [12,23], a quantitative assessment of the prevalence of these unequal gender perceptions, their consistencies across different areas of life, and their relevance in different social contexts has not been documented.

Using data from the Global Early Adolescent Study (GEAS), a cross-cultural exploration of gender norms and adolescent well-being among early adolescents living in poor urban settings across the globe (https://www.geastudy.org/), we seek to examine the multifaceted nature of gender norms from both a population and an individual perspective. Specifically, we aim to compare the patterns of young people's gender norms — again, perceptions of what is expected of them as boys or girls — across different areas of life in different societies. We also seek to examine the multitude of gendered opinions young people hold as individuals and how they compare with the average opinions of their peers within each society. Revealing the complexities of gendered outlooks at the societal and individual level challenges the utility of considering gender equality as a unique reality, with monitoring and programmatic implications. We explore these questions in very diverse settings, from more conservative cultures in sub-Saharan Africa to more liberal gender perspectives in Shanghai, to assess the spectrum of young peoples' gender norm perceptions in different parts of the world, and understand what constellation of perceptions represents the most gender equal or the most gender unequal perspectives in different sociocultural context.

Methods

Study design and procedures

The present study uses baseline data from six GEAS poor urban neighborhoods in four countries: Kinshasa (Democratic Republic of the Congo); Shanghai (China); Cuenca (Ecuador); and Lampung, Semarang, and Denpasar (Indonesia). The focus on poor urban adolescents was a deliberate choice to shed light on an exponentially growing population, who are not only poorly represented in population-based surveys, but are also likely to suffer from an urban health penalty [24]. The sites were chosen to represent a range of cultural, economic, and political environments to understand how gender socialization and its implications for adolescent health varied along these conditions. They were also chosen based on long-standing research partnerships to cultivate an existing international network of scholars working on adolescent health. A more in-depth description of the social context of adolescents in each of the GEAS sites is provided by Mmari et al [25] who shed light on the family and peer relationships, adversities, school opportunities, and resources of young adolescents living in these impoverished communities and discussed the differences across sites and by gender. The three Indonesian sites were combined into one sample for the purpose of this analysis. All GEAS sites shared the same study protocol and survey instruments, although sampling strategies and data collection modes varied as explained

elsewhere [25]. In each site, the study took place in a poor urban setting and included a convenience sample of adolescents between the ages of 10–14 years, who provided assent and received parent consent to participate. Each GEAS setting received local ethical approval and was also approved by the Johns Hopkins Bloomberg School of Public Health Institutional Review Board.

From the original sample of 9,990 adolescents surveyed across the four settings, 8,977 were retained in the current analysis after excluding 1,013 cases (10%) with missing data on any of the 17 gender norm questions that contribute to our primary outcomes. The final analytic sample comprised 2,767 adolescents in Kinshasa, 1,657 in Shanghai, 618 in Cuenca, and 3,935 in Indonesia, each corresponding to 97.4% of the original sample size in Kinshasa, 94.1% in Shanghai, 87.8% in Cuenca, and 84.0% in Indonesia. Sensitivity analysis comparing results among respondents of Cuenca and Indonesia included in the analysis and those excluded indicated that excluded individuals had slightly less stereotypical views than participants who provided complete answers.

Data collection took place in 2017 and 2018 and involved a two-hour long survey (including several breaks to reduce participant fatigue) collecting information on a range of topics including young people's family background and social circumstances, adverse child events, as well as their physical and mental health and well-being. The survey also included a series of questions assessing adolescents' perceptions of gender norms regulating romantic relationships and norms related to gender stereotypical traits and roles. We refer to gender stereotypes as reflecting conservative views about gender. The GEAS survey instrument is available at https://www.geastudy.org. The gender norm instrument is shown in WebAppendix.

Measures

Gender norm instrument. Seventeen questions scored on a five-point Likert scale ranging from "disagree a lot" to "agree a lot" were used to assess three dimensions of gender norm perceptions. A description of each survey item and the psychometric properties of each of the three gender scales are provided in Appendix 1: the sexual double standard (SDS), the gender stereotypical traits (GST), and the gender stereotypical roles (GSR). We refer to these measures as *perceptions* of gender norms, rather than attitudes or norms, as the questions relate to young people's perceptions about adolescents in their communities. In the absence of validated cross-cultural measures of gender norms for early adolescents, our first two scales were derived from GEAS formative work, grounded in the voices of young people and their parents in 14 sites across five continents [26]. Distinct from the prior two scales, the GSR measure was derived from existing measures [27] to allow for comparisons and adaptation of our perceptions of gender norm measures as adolescents grow older across the longitudinal phase. In each setting, individual responses were combined to provide a mean score for each subscale, ranging from 1 to 5, with higher scores signaling perceptions of more unequal gender norms.

Composite indicator of perceptions of gender inequality. We derived a combined three-category measure of young people's perceptions of gender inequality based on the three aforementioned gender scales (SDS, GST, GSR). Because the scales were not normally distributed across all sites (all three scales were skewed in Kinshasa), we calculated the median score of each subscale in each site and classified respondents as per whether they scored greater or lower than the median for each scale in their own site. Participants who fell below the median score (which represent the average response of their peers) across the three gender norms scales were considered as having *less gender unequal* perceptions compared with their peers (type I: equal) while those who scored greater than the median across the three dimensions were considered having *more gender unequal* perceptions compared with their peers (type III: unequal). Respondents whose scores varied greater and lower than the median for the different scales were classified in an intermediate gender norms inequality category (type II: intermediate).

Analysis

We first examined the basic sociodemographic composition of each sample. Next, we verified the psychometric properties of each scale (SDS, GST, GSR) (Appendix 1) and described the distribution of each gender norm scale in each site. Each scale was considered as a continuous measure ranging from one to 5 with higher scores reflecting perceptions of more unequal gender norms.

Table 1
Sociodemographics of study population by site

	Kinshasa (N = 2,767)	Shanghai (N = 1,657)	Cuenca (N = 618)	Indonesia (N = 3,935)
Age (Mean ± SD)	11.92 ± 1.38	12.46 ± .96	11.95 ± 1.37	12.18 ± .54
<12 (%)	41.27	17.92	41.10	5.49
≥12	58.73	82.08	58.90	94.51
Sex (%)				
Boy	50.09	50.69	50.00	47.37
Girl	49.91	49.31	50.00	52.63
Family structure – living with… (%)				
No parents	14.42	4.53	3.07	5.41
One parent only	28.15	11.71	30.10	7.40
Both parents	57.43	83.77	66.83	87.19
Sibling (%)				
None	2.06	61.26	6.96	8.03
1–2	15.76	23.72	56.15	51.87
>2	82.18	15.03	36.89	40.10
Received age-appropriate education (%)	62.99	95.96	90.45	98.53
Literacy – being able to read a simple sentence (%)	71.74	97.65	99.51	98.65

Moving from a population to an individual level perspective, we examined the consistency in which adolescents had more gender equal views or more unequal gender views across multiple areas of life, by examining their individual gender norm perceptions across the three domains in comparison with their average peers. We used our composite measure described previously to estimate the percentage of individuals who systematically scored lower than their site median across the three gender norms dimensions (type I: equal), the percentage who consistently scored greater than their site median across all dimensions (type III: unequal), and the percentage who crossed the median depending on the dimension considered (type II: intermediate). We computed the mean score of each gender scale as per this typology to assess the differences in gender norm perceptions among adolescents' who fall at both ends of the gender equality spectrum in each site.

Results

The description of the study sample is shown in Table 1. The mean age ranged from 11.92 years ± 1.38 (standard deviation) in Kinshasa to 12.46 years ± .96 in Shanghai. Most adolescents lived with two parents although the family structure differed by the setting, with a greater proportion of adolescents living in single-parent households or with no parent in Kinshasa than other sites. Most students were enrolled in age appropriate school grades, although again in Kinshasa a higher percentage of adolescents were old for grade (37.0%) and 28.8% were out of school (as Kinshasa included an out-of-school sample). Literacy rates also varied widely ranging from 71.7% in Kinshasa to 99.5% in Cuenca.

At the population level, exploring the different dimensions of gender norms as perceived by adolescents, we found that mean gender norms scores varied substantially by site and gender domain (Figure 1A–C). Scores were highest in Kinshasa, indicative of more unequal norms and lower in Cuenca and Shanghai signaling greater perceptions of gender equality. Perceptions of GST were generally highest, followed by GSR, although in Cuenca, the highest mean score was observed for the SDS scale, and in Kinshasa, the mean GST score was slightly higher than the GSR mean score. The range in the scores also varied substantially in each site, suggesting substantial differences between individuals in these settings.

Correlations between the three scales were generally low in all settings, with the Pearson correlation coefficients between SDS and GSR ranging from .05 in Cuenca and Shanghai to .17 in Kinshasa, which suggest a distinct nature of these different gender norm domains and complex patterns of gender norms across the sites. Correlations between SDS and GST varied from .15 in Cuenca to .36 in Kinshasa, while correlations between the

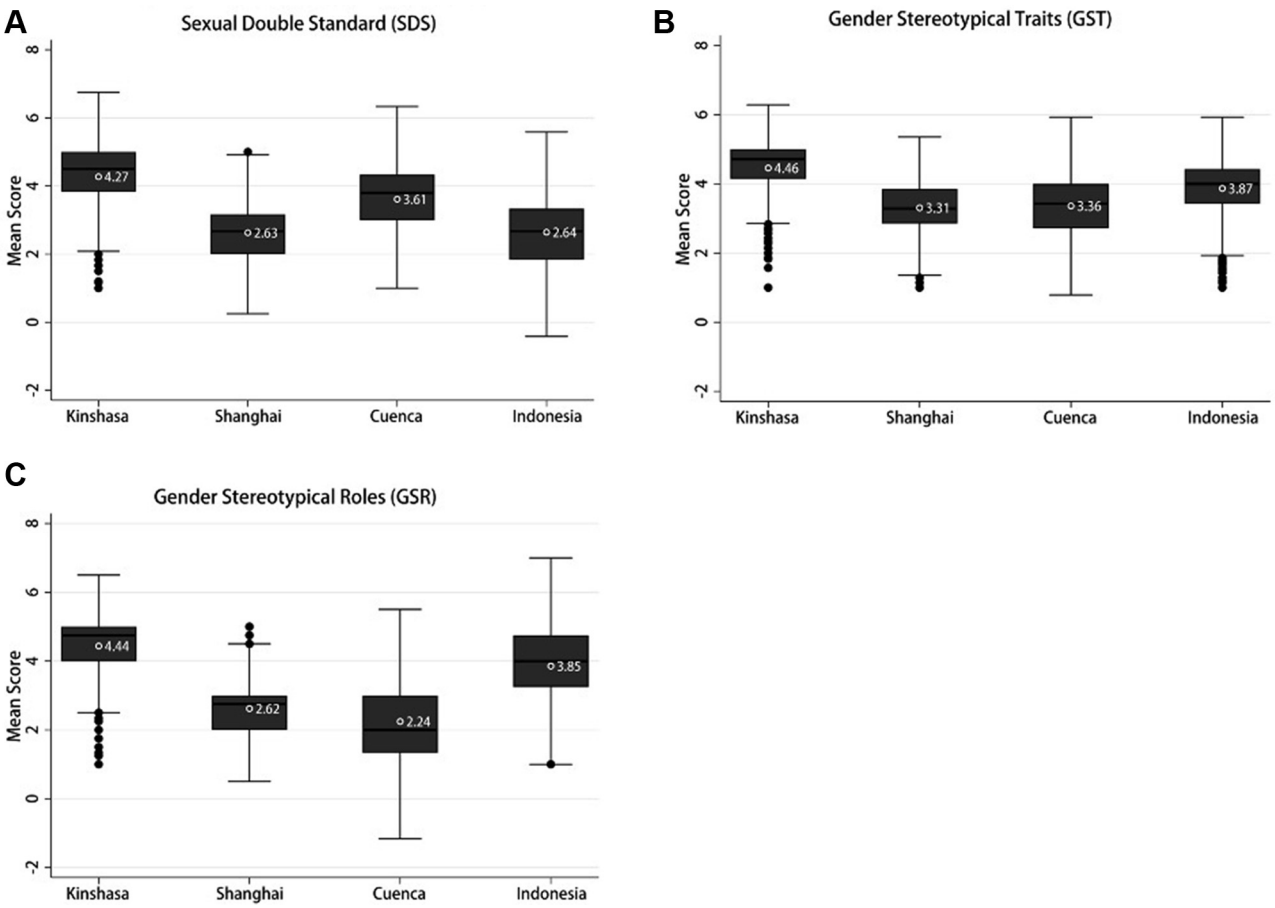

Figure 1. (A–C) Distribution of mean score of each gender norms scale per site.

Table 2
Site-specific correlations between three gender norm scales

Kinshasa	*SDS*	*GST*	*GSR*	Shanghai	*SDS*	*GST*	*GSR*
SDS	1			*SDS*	1		
GST	.36	1		*GST*	.20	1	
GSR	.17	.27	1	*GSR*	.05	.40	1
Cuenca	***SDS***	***GST***	***GSR***	**Indonesia**	***SDS***	***GST***	***GSR***
SDS	1			*SDS*	1		
GST	.15	1		*GST*	.20	1	
GSR	.05	.37	1	*GSR*	.08	.36	1

GSR = gender stereotypical roles; GST = gender stereotypical traits; SDS = sexual double standard.

GST and GSR varied from .27 in Kinshasa to .40 in Shanghai (Table 2).

Turning to the assessment of adolescents' individual perceptions compared with their average peers, we found that two thirds of adolescents varied in their gender norm perceptions, holding more equal gender views than their average peer on some gender domains but less equal views on others (Figure 2). Between 13.7% and 16.6% of adolescents consistently scored lower than their average peer on all three gender norms scales and conversely between 16.2% and 21.8% consistently scored higher than their average peer on all three scales.

The gradient of gender egalitarian perceptions reflected in this typology is made evident in the increasing mean score of each gender scale (SDS, GST, GSR) indicative of more unequal gender perceptions moving across the typology, from type I representing greater gender egalitarian views to type III representing more inegalitarian gender views (Table 3).

Discussion

This cross-site study draws a complex picture of gender norm perceptions in early adolescence, especially because it provides empirical evidence of the extent to which norms vary among geographical settings, between individuals and within individuals. This finding confirms one important assumption of the gender norm theory: the gender system is ubiquitous but manifests itself in different ways as per time, place, or situation [28].

That patterns of gender norms vary across sites was reflected in the different levels of endorsement of each gender norms scale, as well as in the differences in the patterns of gender normative views across study settings. In general, adolescents' gender perceptions were least equal in Kinshasa and most equal in Shanghai, mirroring the distribution of the United Nations' Gender Inequality Index. The Gender Inequality Index indicates, on a scale of inequality from 0 to 1, that inequality is highest at .655 in the DRC, dropping to .451 and .389 in Indonesia and Ecuador, respectively, and lower at .163 in China (http://hdr.undp.org/en/data). These general patterns, however, conceal substantial variation in adolescents' perceptions of gendered traits and roles. Adolescents were more likely to endorse stereotypical traits, recognizing male strength over female vulnerabilities (a belief reported in a number of other studies around the globe [12]), than stereotypical roles in family decisions and responsibilities (with the exception of Indonesia). Variation across gender dimensions was particularly evident in Ecuador and Indonesia (average scores varied from 2.24 to 3.61

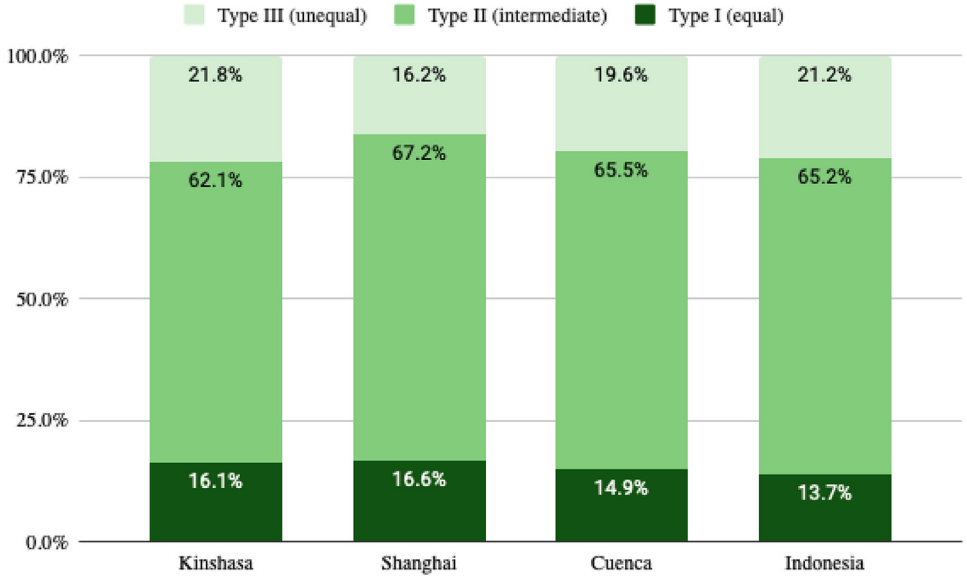

Figure 2. Distribution of theoretical composite measure of gender inequality/site. Type I (equal) indicates that the respondent has more equal gender perceptions than his/her site-specific average peer across all three gender domains (SDS, GST, GSR), type II (intermediate) indicates the respondent has both more equal and more unequal gender perceptions than his/her site-specific average peer depending on gender domains (SDS, GST, GSR). Type III (unequal) indicates that the respondent has more unequal gender perceptions than his/her site-specific average peer across all three gender domains (SDS, GST, GSR). GSR = gender stereotypical roles; GST = gender stereotypical traits; SDS = sexual double standard.

Table 3
Mean scores for each scale based on composite measure categories

	Kinshasa			Shanghai			Cuenca			Indonesia		
	SDS	GST	GSR	SDS	GST	GSR	SDS	GST	GSR	SDS	GST	GSR
Perceptions of gender norms (relative composite measure)												
Type I – equal	3.40	3.76	3.62	1.86	2.61	1.77	2.77	2.5	1.25	1.82	3.17	2.93
Type II – intermediate	4.29	4.48	4.47	2.66	3.32	2.61	3.58	3.33	2.25	2.55	3.85	3.85
Type III – unequal	4.91	4.96	4.98	3.30	4.40	3.54	4.51	4.21	3.04	3.54	4.49	4.61

Gender scores range from 1 to 5, with higher scores signaling greater inequality.
GSR = gender stereotypical roles; GST = gender stereotypical traits; SDS = sexual double standard.

and from 2.64 to 3.87, respectively), two countries sitting in the midrange of the United Nations gender inequality scale but both experiencing significant trends toward more equality since 1995 (http://hdr.undp.org/en/data). These results on the variation of perspectives across gender dimensions highlight how the pace toward gender equality varies for different areas of life. Transitions toward gender equality are a manifestation of the different historical, cultural, and structural (particularly economic) forces shaping relations between people [29]. This finding also calls into being a long-standing tension between promoting global gender justice everywhere in the world (e.g., equal pay for equal work, equal access to services, and so on) and recognizing (and, for some, accepting) the diverse culturally relevant meanings of which norms and behaviors are locally considered gender-just [29]. Further qualitative exploration of young peoples' own interpretation of equality could provide important insights into the meaning of gender equality for adolescents living in diverse cultures.

The multifaceted nature of gender norms (i.e., the fact that people can hold contrasting normative beliefs related to gender) is also evident when moving from a societal to an individual perspective: most adolescents in our study fluctuated in their views about gendered traits, roles, and romantic relations, with 62%–67% holding at the same time more and less progressive views than their peers depending on the dimension considered. Only a minority held consistent equal or unequal gender views compared with their average peers. Recall what was mentioned about people having multitudes of sometimes incoherent gender beliefs. People are not inherently gender equitable or inequitable, but their outlooks can vary as per time, space, and the specific dimension of gender equality that is being measured [12,19-207]. This "multitude hypothesis" has important implications for effective policy and practice, and, more generally, for the values and judgments made about study or intervention participants, by those who are not familiar with the cultural context.

Taken together, our results challenge the idea of gender equality as a necessarily coherent system of beliefs and norms. The complexities of gendered outlooks are captured in both population-level and individual-level results. These results support the use of multidimensional measures of gender norm perceptions to track population trends in social values related to gender that should not be assumed to be consistent across all domains of life. Such efforts are useful in identifying areas of progress and resistance to best promote gender equal values as per specific contexts and can help us examine how social structures and institutions contribute in shaping gender patterns in a given society. At the individual level, our relative measure of gender inequality offers an opportunity for a more in-depth exploration of the sociodevelopmental factors contributing to adolescents' complex gender beliefs within their social contexts. From a programmatic perspective, both results support the need to specify the objectives of gender-transformative interventions that are unlikely to address unequal gender norms in all spheres of life. Rather, such programs should target specific norms that are assumed to be linked to specific outcomes, based on a specified theory of change [30,31], and subsequently use tailored rather than generic gender norm measures to evaluate their actions. Supporting this call for a more nuanced and contextualized understanding of gender normative influences on adolescents' agency and health, Zimmerman, Koenig et al [32] show that GEAS gender norm perceptions (SDS, GST, GSR) are differentially related to young people's agency (voice and decision making) in Kinshasa, while Koenig et al [33] report different mediating effects of GEAS gender norm perceptions on the sex divide in depressive symptomatology, depending on the dimension considered (SDS vs. GST) and the social context. Future programs should provide clarity on the expected role of specific gender unequal expectations on health behaviors and outcomes, while acknowledging the constellation of gender norms that may reinforce or conflict with the specific area of intervention to inform overall outcomes.

Limitations

Although providing a comprehensive description of gender norms perceptions across diverse cultural settings, this study is not without limitations. First, the GEAS uses convenience samples of adolescents living in poor urban settings that are not necessarily representative of their communities, let alone the countries in which they live. The focus on poor urban adolescents was a deliberate choice to shed light on an understudied yet vulnerable and growing population of adolescents living in urban poor environments, but does not allow generalizability of the findings or an intersectional approach [34]. The consistency of findings on the multidimensional nature of gender norms across such diverse settings makes a strong case for considering the complexity and culturally grounded concept of gender, but further analysis is needed to characterize how these patterns are shaped as per local social hierarchies of sex, age, social class, or race/ethnicity. Second, we fail to capture norms related to sexual minorities that are related to discriminatory practices. This omission was informed by pilot results showing highly skewed distributions toward disapproval of sexual minorities, especially in sites where homosexuality is outlawed. Thus, questions on young people's perceived acceptance of sexual minorities were not included in a number of sites, preventing the inclusion of this dimension in the present study. Finally, while our measures were grounded in qualitative work among young adolescents [26] and pilot tested in 14 sites around the globe to substantiate their salience in this age group, the measures present conceptual and

operational challenges. Specifically, by asking young people if they agreed with the statements about adolescents in their communities, including descriptive statements, such as "girls are the victims of rumors if they have boyfriends" or injunction statements such as "boys should be raised tough so they can overcome any difficulty in life," we were unable to lift the ambiguity between young people's understanding of normative gender expectations in their community versus their personal gender attitudes. The distinction is likely difficult to capture in this age group, as suggested in the pilot study where we found that many adolescents were unaware of their friends' gender opinions or provided highly correlated responses between their own and their perceived friends' opinions. Thus, we refer to the GEAS measures as perceptions of gender norms indicators instead of attitudes or norms. The questions also used Likert scale responses, which proved challenging with this age group, as young adolescents struggle to formulate responses in more nuanced ways. The skewness of the scale distributions may partly reflect these challenges, affecting the ability to discriminate between different response patterns, especially in Kinshasa.

Conclusion

The results of this cross-site study highlight the coexistence of multiple gender worldviews, including more equal and less equal norms and attitudes within societies and within individuals. Accounting for such complexities is essential for gender-transformative programs, as shifting gender attitudes in one area does not necessarily translate in more gender equitable views across other spheres of life.

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Supplementary Data

Supplementary data related to this article can be found at https://doi.org/10.1016/j.jadohealth.2021.03.010.

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