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## Intimate partner violence response norms: scale reliability and multilevel associations with intimate partner violence among youth in Nairobi, Kenya

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## Intimate partner violence response norms: scale reliability and multilevel associations with intimate partner violence among youth in Nairobi, Kenya

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## ABSTRACT

Objectives: Intimate partner violence (IPV) threatens women’s health and safety. Support services can mitigate impact, yet few survivors seek services in part due to social norms that discourage use. Little agreement exists on how to measure norms and attitudes related to IPV help-seeking. The objectives were to 1) create an IPV Response Scale and examine its psychometric properties and 2) examine associations of past-6-month IPV among young women with the IPV Response Scale at the individual-level (individual attitudes) and the by-gender community aggregated averages (community norms) among youth in Nairobi, Kenya.

Design: This cross-sectional, secondary analysis utilizes data from phone-based surveys with a cohort of young men and young women recruited via respondent-driven sampling from April-May 2021. Cross-sectional exploratory factor analysis assesses underlying latent constructs of seven survey items. Multilevel mixed effects models are used to assess associations with IPV experience for young women.

Setting and Participants: A youth cohort of 586 men and 591 women ages 15-24 years in Nairobi, Kenya.

Primary Outcome Measure: Past-6 month physical or sexual IPV.

Results: The resulting IPV Response Scale had acceptable internal reliability (Cronbach’s alpha>0.60). IPV prevalence was 17.5%, among whom 21.7% had sought any help for past-six-month IPV. A one-unit increase in the community aggregate IPV Response Scale among young women was associated with reduced odds of IPV (aOR: 0.15, 95% CI: 0.04, 0.57). However, the individual-level IPV Response Scale was not associated with IPV, nor was men’s community aggregate IPV Response Scale.

Conclusions: The resulting IPV Response Scale had adequate psychometric properties. Results suggest that a young woman living in a community where the norm among women enables IPV response has a reduced risk of IPV. Programs and policies to change the collective normative climate on IPV response among young people may help reduce IPV and increase help-seeking.

## STRENGTHS AND LIMITATIONS

- Reliable measures of norms for IPV help-seeking and response are limited, particularly among youth. Our study provides a reliable scale, building on past research.
- Our study applies a multilevel approach to examine the influence of IPV response attitudes at both individual and community levels on IPV among young women in Nairobi, which extends the field past a historical focus on individual-level influences.
- The cross-sectional, retrospective data limits our ability to explore causal relationships.
- Our IPV-experienced sample size is small, and help-seeking was quite limited, which limited statistical power to examine normative influences on help-seeking experiences.

## BACKGROUND

Gender equality is a key component of the Sustainable Development Goals, reflected in Goal 5.<sup>1</sup> Yet nearly one in three women globally experience intimate partner violence (IPV), i.e., physical, sexual, or emotional violence perpetrated by an intimate partner.<sup>2</sup> IPV onset often occurs in adolescence,<sup>3</sup> and experiencing IPV early in life increases risk for adulthood victimization.<sup>4,5</sup> Further, interpersonal violence is the fifth leading source of disability-adjusted life years lost among youth ages 10-24 globally.<sup>6</sup> Adolescent girls and young women (AGYW) are at high risk for IPV: data across 15 low- and middle-income countries suggest that past-year physical IPV among girls ages 13-19 is as high as 23%.<sup>7</sup> IPV among AGYW may be even higher in Kenya, where an estimated 25% of those ages 13-19 report past 12-month physical IPV.<sup>8</sup> As such, the Kenyan government has highlighted the need to expand survivor support services and has included this as a key action item within Kenya's roadmap for advancing gender equality.<sup>9</sup>

Identifying and supporting survivors of IPV is one of the three pillars of comprehensive violence prevention and response, along with primary and secondary prevention and offender accountability.<sup>10</sup> Disclosing abuse and obtaining psychosocial or medical support is beneficial;<sup>11-13</sup> it can reduce post-traumatic stress,<sup>13</sup> self-blame,<sup>14</sup> and re-victimization.<sup>15-17</sup> Yet, globally, most women who experience IPV do not seek help.<sup>18</sup> Low rates of help-seeking were first established in the World Health Organization multi-country study in 2006, with little evidence of meaningful change since then.<sup>19</sup> Women seek informal help from friends or family more often than they seek formal help from legal or health systems due to trust, comfort, and accessibility.<sup>20</sup> Norms are understood to be a key contextual factor affecting IPV experience and response, as characterized by Heise's ecological model of gender-based violence.<sup>21</sup> Social norms around blame, tolerance, and gender inequity are believed to discourage women from seeking both formal and informal support.<sup>22-25</sup> Youth, in particular, may be less able to navigate informal and formal support systems for help when IPV occurs, while simultaneously being more influenced by the normative expectations of their male and female peers.

While personal attitudes are internally motivated judgements about behavior, social norms are the perceived or actual beliefs of the people in one's social network or community.<sup>26</sup> Evidence exists that social norms may have more impact than individual-level attitudes on IPV experience

and help-seeking. For instance, a qualitative study in Tanzania found that women who individually believed that IPV should be acted upon were often blocked from formal and informal help-seeking due to prevailing societal norms.<sup>20</sup> A qualitative study in Rwanda found even if women had personal attitudes that supported leaving abusive relationships, the social norms in their community around family and marriage often prevented IPV response.<sup>27</sup> While the role of norms in women's help-seeking is recognized, a knowledge gap persists in effectively measuring specific attitudes and norms related to IPV help-seeking in low- and middle-income settings.<sup>25,28-31</sup> One scale capturing help-seeking attitudes is the IPV Help-Seeking Norms Scale (IPV-Help), which was tested in Nepal among married women, though has not been fielded in other settings, including Kenya.<sup>32</sup> The IPV-Help scale has item overlap with the Partner Violence Norms Scale (PVNS), a scale also tested in Nepal with strong confirmatory factor analysis fit statistics (RMSEA=0.07) and Cronbach's alpha (0.85).<sup>33</sup> While several scales exist that capture attitudes towards IPV response, few have been tested among youth in low- and middle-income contexts.<sup>34,35,36,37,33,38</sup> Few studies go beyond attitudes to study norms, examining individual-level attitudes without considering aggregate community metrics.<sup>39</sup>

The objectives of the study were to 1) create an IPV Response Scale that captures attitudes towards IPV and IPV help-seeking and examine its psychometric properties and 2) examine associations of past-6 month IPV among young women with the IPV Response Scale at the individual-level (individual attitudes) and the by-gender community aggregated averages (community norms) among youth in Nairobi, Kenya. To enhance relevance and extend past research, items were drawn from the IPV-Help Scale and refined based on local priorities; the final tested scale included a subset of items from the World Values Survey<sup>40</sup> on tolerance of gendered economic disparities to enhance local relevance.

## METHODS

### Study sample

The study population was a subsample drawn from the Nairobi Youth Respondent Driven Sampling Survey (YRDSS), an ongoing cohort study of adolescents and young adults. Eligible participants for the original cohort in 2019 were age 15-24 years, unmarried, and residing in Nairobi for at least one year. In 2021, 87% (1,177/1,317) were re-contacted, consented, and



surveyed. The 2021 sample of young men (n=586) and young women (n=591), ages 16-26, was the analytic sample for the present analysis. Additional sampling and recruitment details can be found elsewhere.<sup>41</sup>

Trained resident enumerators (REs) collected data in English or Swahili using OpenDataKit (ODK) on tablets or smart phones. Data collection was conducted by phone. REs were trained in sensitive data collection and received specialized training specific to gender-based violence (GBV) protections and all data were collected following best practices for GBV research.<sup>42</sup> REs asked participants about their safety and privacy before beginning data collection. REs gave participants a “safe phrase” to discreetly report a privacy breach during data collection. If the safe phrase was used, participants were given the option to reschedule. Participants were instructed that they could skip any question they did not wish to answer. GBV support services were provided within a larger list of supports to minimize risk. Participants received 500 KES or US\$5 per survey completed.

## Measures

*IPV Response Items:* Seven items were explored: (1) husbands may use force to reprimand their wives because men should be in control of their families, (2) a woman who complains about her husband’s violent behavior is considered disloyal, (3) a woman who seeks help from police for domestic violence brings shame on her family, (4) women’s groups who get involved in situations of domestic violence usually make the situation worse, (5) when jobs are scarce, men should have more right to a job than women, (6) if a woman earns more money than a boyfriend or husband, it can cause problems, and (7) having a job is the best way for a woman to be an independent person. Respondents indicated their level of agreement on a 5-point Likert scale (strongly agree, mostly agree, neutral, mostly disagree, or strongly disagree). Items and sources are presented in Annex 1.

*IPV measure:* IPV measures utilized behavioral assessment per best practices.<sup>43</sup> Specifically, the survey asked women participants only: “In the past 6 months, has a partner ever pushed you, thrown something at you that could hurt you, punched or slapped you?” and “In the past 6 months, have you had sex with a partner when you did not want to due to threats, pressure, or force?” The binary measure of IPV was coded as “1” if the respondent answered “once,” “a few times,” or “often” and “0” if she responded “never” to either of the mentioned IPV survey items.



*Help-seeking:* Women who reported any IPV were asked: “Did you seek help for any experiences of harm or unwanted sex?” The binary measure of help-seeking was coded as “1” if the respondent answered “yes” and “0” if the respondent answered “no.”

*Covariate variables:* Measures included in multivariate models were current job status (work for pay vs. caregiver or student), age (below vs. above 19), school completed (above vs. below secondary), and ability to meet basic needs. Ability to meet basic needs was assessed via a 4-point Likert scale (very able, somewhat able, not very able, not at all able) and dichotomized for analysis as very able/ somewhat able vs. not very able/ not at all able.

## Statistical Analysis

Sample characteristics were explored overall and by gender. Among young women only, IPV and help-seeking statistics were reported. The percent agreement with each of the seven items under consideration for a scale was presented. Adjusting for weighting and clustering, agreement with each item and significance by gender was assessed. Using exploratory factor analysis both overall and by gender, evidence of an underlying latent construct to justify a scale was assessed. For the items that fell together based on eigenvalue ( $>1$ ) and factor loadings ( $>0.40$ ), two measures of the scale were constructed: unadjusted and adjusted.<sup>44</sup> The unadjusted scale was created by adding up the responses of each variable. The adjusted scale was weighted for each variable differently depending on how much it loaded onto the latent factor by gender. Specifically, each survey item response was multiplied by its factor loading based on gender-specific factor analysis, and then the sum of these vectors was used to create the adjusted scale. Therefore, survey items with smaller factor loadings were weighted less and those with larger factor loadings were weighted more in the resultant adjusted scale. The average unadjusted and adjusted scale scores by the covariates listed above, overall and by gender, and by IPV and help-seeking among young women, were explored. Significance testing of whether the scale varied by covariate, stratified by gender, was assessed using linear regression. The Cronbach’s alpha by gender and covariate values was presented.

For both unadjusted and adjusted scale measures, an aggregate scale scores by Nairobi subcounty (n=18) was created through taking the weighted mean score for both young men and women separately. While the scale at the individual-level is a proxy of individual attitudes, the subcounty aggregate scale is a proxy of the gender-based community norm. Next, the distribution of individual-level scale scores within and across subcounties overall and by gender was explored using box plots. Given clustering of individuals within subcounties as demonstrated by the box plots, multilevel modeling was used to correct standard errors to accurately estimate subcounty/community influences on the outcome of interest.<sup>45</sup>

Mixed effects multilevel logistic regression with random intercepts for subcounty associated individual-level IPV with individual-level attitudes and gender-based community norms, adjusting for age, education, whether the woman is working, and ability to meet basic financial needs, using both the unadjusted and adjusted scales measures separately. Adjusted odds ratios (aOR) were presented between the scale score and IPV at the individual-level (comparing differences in the outcome between two people with differing individual attitudes who live in the same subcounty) and at the subcounty-level (comparing differences in the outcome between two people with the same individual attitudes but living in subcounties with differing aggregate norms scores), for IPV experience among young, partnered women. IPV was not measured among young men.

All analyses were conducted using Stata 17.0 (College Station, TX) with statistical analysis set a priori at  $p < 0.05$ . The analytic sample was restricted to observations with no missing values for the seven attitudes measures. No missing values were present across independent or covariate variables within the analytic sample. All estimates were weighted unless otherwise noted.

### Patient and Public Involvement

This community-engaged study sought public and end-user input at all phases. During the formative research stage prior to the 2019 cohort recruitment, input from community-based, youth-serving organizations informed the study recruitment strategy for feasibility, survey measures and constructs to ensure relevance, and study logistics to maximize participant comfort and confidentiality. All recruitment and procedures were conducted by trained resident enumerators

selected from underlying communities, and who provided inputs on measures for clarity and aided in results interpretation. Findings were disseminated in November 2020 and again in September 2021 with stakeholders spanning policy sector, government representatives, elders/faith leaders, community-based organizations, and youth leaders from the study communities.

## RESULTS

Over half of the sample, 67.1%, had above primary education with similar percentages between young men and young women (Table 1). About 77% of the sample was 20-26 years old, and all participants were older than 15 at the time of survey. Approximately half of the sample's main activity was paid work, whereas the other half was school, caregiving, or something else. Young men were more likely to report paid work as their main activity than young women (60.1% vs. 43.1%). Slightly less than half, 45.6%, reported being unable to meet basic financial needs. Young women were more likely to report being unable to meet basic needs, 50.9%, compared to men, 38.1%. Over half of the sample, 64.8%, reported having a romantic partner within the past six months. Among young women who reported having a romantic partner in the past six months (n=404), 17.5% reported any sexual or physical IPV within the past six months. Among AGYW who reported any IPV (n=67), 21.7% reported seeking help from either formal or informal sources.

Among the survey items considered within the IPV Response Scale, AGYW consistently had more enabling IPV response attitudes than young men (Table 2), and four of seven items significantly differed by gender. Specifically, young men were significantly more likely to agree with the statements: "husbands may use force to reprimand their wives because men should be in control of their families" ( $p<0.001$ ), "women's groups who get involved in situations of domestic violence usually make the situation worse" ( $p<0.001$ ), and "when jobs are scarce, men should have more right to a job than women" ( $p<0.001$ ). Young women were significantly more likely than young men to agree with the statement "having a job is the best way for a woman to be an independent person" ( $p<0.001$ ).

Exploratory factor analysis of the seven items with promax rotation suggested two underlying factors with eigenvalues 1.87 and 1.44, grouping items 1-4 and 5-7 separately. For the group of items 5-7, there were small factor loadings of 0.34, 0.45, and 0.03, respectively, and a low

Cronbach's alpha of 0.32. These three items therefore did not suggest strong enough inter-reliability to justify a sub-scale. Items 1-4 demonstrated factor loadings greater than 0.50 and a Cronbach's alpha of 0.71 (Table 3). Items 1-4, dropping items 5-7, were therefore used to create the IPV Response Scale. Young men typically displayed stronger factor loadings than young women and the Cronbach's alpha for young men was higher than for young women (0.74 vs. 0.67).

Higher values of the IPV Response Scale signified more egalitarian attitudes. Among the full sample, the unadjusted IPV Response Scale ranged from 4-20 with mean 15.0 (SD= 3.0); the IPV Response Scale adjusted for factor loadings ranged from 2.2 – 12.4 with mean 8.7 (SD=1.8). The unadjusted IPV Response Scale was lower among young men (mean=14.3) as compared to young women (mean=15.5), but the adjusted IPV Response Scale were higher on average among young men (mean=8.9) as compared to young women (mean=8.6) due to lower factor loadings among young women (Table 4).

Overall and among young men and women separately, there was no significant difference in the IPV Response Scale between participants with below and above primary education (Table 4). Among men, the IPV Response Scale was significantly more egalitarian among those whose main activity was paid work ( $p=0.045$ ). Women who were not able to meet basic needs were significantly lower on the IPV Response Scale as compared to women who were able to meet basic needs (unadjusted: 15.8 vs. 15.2,  $p=0.024$ ; adjusted: 8.8 vs. 8.4,  $p=0.023$ ). The IPV Response Scale did not differ by whether participants were partnered ( $p>0.05$ ). Alpha levels were comparable by whether basic needs were met for men, though internal consistency was higher among women who had their basic needs met as compared to women who did not (0.71 vs. 0.61). The alpha scores were lower among partnered young people (0.69) as compared to non-partnered young people (0.76).

For the sub-sample of partnered AGYW ( $n=404$ ), those who had experienced IPV were significantly lower on the IPV Response Scale than AGYW who had not experienced IPV for both adjusted and unadjusted scales ( $p<0.01$ ) (Table 4). The IPV Response Scale's internal consistency was lower among partnered AGYW that had experienced IPV than partnered women who had not experienced IPV (alpha levels of 0.61 vs. 0.66). For the subsample of AGYW who had experienced

IPV (n=67), there was not a significant difference in the IPV Response Scale score between those who sought and did not seek help. The alpha level for the scale was lower among AGYW who did seek help (0.59 vs. 0.68).

Differences in variation of the IPV Response Scale across subcounties signified some evidence of subcounty clustering and the need to adjust for clustering in inference modeling (Annex Figure 1). Table 5 presents results from mixed effects logistic regression. In adjusted analyses, no significant association between the IPV Response Scale at the individual-level and IPV experience was identified using both unadjusted (aOR: 0.86; 95% CI: (0.73, 1.02)) and adjusted (aOR: 0.78; 95% CI: (0.58, 1.05)) scales. On average, the young woman who lived in a subcounty with one-unit increased aggregate IPV Response Scale among young women had significantly reduced odds of experiencing IPV for both the unadjusted (aOR: 0.30; 95% CI: (0.14, 0.64)) and adjusted (aOR: 0.15; 95% CI: (0.04, 0.57)) scales, comparing AGYW of the same earner status, age, education completion, and ability to meet basic needs living in different subcounties. No significant association was identified between the aggregate IPV Response Scale among young men and women's IPV experience.

## DISCUSSION

Reliable measures of attitudes and norms that affect help-seeking are limited. Our study provides a reliable IPV Response Scale to deliver valuable insight into the youth-held attitudes towards IPV responses that may drive help-seeking. Applying a multilevel modeling approach to identify correlations between individual attitudes and collective norms with IPV, findings suggest that community-level norms on IPV response and help-seeking may be more strongly associated with IPV than individual attitudes on IPV experience, highlighting the link of the community normative context of IPV response on IPV experiences themselves. While individual attitudes did not correlate with IPV, women living in subcounties with more protective *community* norms for IPV response were significantly less likely to report IPV experience. Interestingly, the community norms among young men were not correlated with young women's IPV experience. With increased recognition of IPV among youth and a resurgence of interest in access to support services comes a critical need to monitor norms that influence help-seeking; the IPV Response Scale can help monitor community norms that may enable or inhibit access to those services.



While adequately reliable overall, the IPV Response Scale was had less internal consistency among young women than young men and even less reliable among partnered AGYW who had experienced IPV. Further work is needed to continue to hone this scale and expand it into a more reliable tool. The limited reliability for AGYW who have experienced IPV may reflect limited statistical power due to this smaller subsample; there may also be high variability in attitudes toward help-seeking within this population, in part perhaps based on varied lived experiences with prior help-seeking. Results highlight the importance of measuring norms among young women to better understand and promote IPV help-seeking; further research is needed to continue to improve measures in this area.

Less than a quarter of the AGYW sample sought help for IPV experience, despite availability of services in Nairobi, including the Gender Violence Recovery Centre<sup>46</sup> and trained health care providers.<sup>47</sup> The Kenyan Government's 2021 GBV Roadmap calls for a multi-sectoral approach to GBV response, including coverage of GBV response in the essential minimum package of the Universal Health Coverage by 2022.<sup>9</sup> Further, global GBV strategy calls for supportive environments for help-seeking<sup>48</sup>; this cannot be achieved through infrastructure only, and community mobilizing to change women's collective attitudes towards IPV response is needed. The finding that the men's collective community norm did not correlate with IPV experience calls for more research on how to involve young men in IPV cessation efforts.

The study has several limitations. First, cross-sectional, retrospective data limits our ability to explore causal relationships. This is particularly challenging in examining attitudes among those with IPV experience. Surveys were conducted via mobile phone, which may have caused response bias; however, post-estimation weights improve generalizability to the youth population in Nairobi. Further, while measures based on local priorities were used, we did not conduct qualitative formative research, which would have been informative for refining items for this Kenyan context. The IPV-experienced sample size is small, which limited statistical power to explore associations between the scale and IPV and was prohibitive for examining help-seeking. Further, we do not know the nature or source of help-seeking, nor composition of formal vs informal supports. The broader trend of norms among women and IPV may suggest that having young women in one's community who support positive responses to IPV may reduce IPV experience, however, future research with larger sample sizes and statistical power should explore

these research questions further. Lastly, scale reliability was low among partnered women who experienced IPV, which means the IPV Response Scale was less strong in capturing individual-level attitudes towards IPV response among women who experienced IPV. Further research on IPV response norms measurement among young women who have experienced partner violence is recommended.

Programmatic recommendations include measuring not only individual attitudes but also community-level norms on violence and help-seeking. In doing so, practitioners can channel local resources based on the specific community norms that construct barriers to survivors seeking care. Several IPV prevention programs have acknowledged and implemented community norms change, such as the SASA! Initiative in Uganda and the Ghana Gender Centre's Rural Response Strategy (RRS). SASA! uses community mobilization to change gender equality norms that affect IPV, with additional focus on community response to helping women who experience IPV; findings show significant reductions in acceptance of IPV among women and reductions in past-year physical IPV.<sup>49</sup> RRS leverages community-based action teams to challenge community member attitudes and support referral to social services for IPV help-seeking, finding significantly reduced sexual IPV among women after 18 months.<sup>50</sup> In line with these program evaluations, study findings suggest the importance of changing collective attitudes for IPV prevention. Given the high rates of youth IPV and lack of understanding of norms around help-seeking among youth in Kenya, it is critical going forward to understand norms among youth that influence IPV risk.



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MRD, PG, and MT conceptualized and designed the present study. Protocol development, including measures and safety protocol, was completed by MRD, PG, MT, and GWN. Analysis was conducted by AW and SW. Manuscript preparation and writing were completed by AW and SW. GWN, PG, BD, KB, and MRD edited and interpreted the data. All authors read and approved the final version of this manuscript.

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Data are available upon request from pmadata.org.

**Research Ethics Approval:**

Procedures were approved by the Ethics Review Committee at Kenyatta National Hospital/University of Nairobi (P310/06/2020) and the Institutional Review Boards at Johns Hopkins Bloomberg School of Public Health (IRB 00012952).

## TABLES

<b>Table 1: Sample Characteristics, weighted</b>			
	All % (n=1,177)	Men % (n=586)	Women % (n=591)
<b>Education</b>			
Primary or below	32.9	31.8	33.6
Above primary	67.1	68.2	66.4
<b>Age</b>			
16-19 years	22.7	20.2	24.4
20-26 years	77.3	79.8	75.6
<b>Main activity</b>			
Student/ caregiver/ other	49.9	39.9	56.9
Paid work	50.1	60.1	43.1
<b>Basic financial needs</b>			
Able to meet needs	54.4	61.9	49.1
Not able to meet needs	45.6	38.1	50.9
<b>Partnered, within past 6 months</b>			
Non-partnered	35.2	33.5	36.4
Partnered	64.8	66.5	63.6
<b>IPV~ past 6 months, among ever partnered women (n=404)</b>			
No	--	--	82.5
Yes	--	--	17.5
<b>Help-seeking, among women who experienced IPV (n=67)</b>			
No	--	--	78.3
Yes	--	--	21.7
~Inclusive of sexual and physical IPV past 6 months among partnered women			



Table 2: Survey items, (n=1,177; 586 men, 591 women), unweighted														
	Strongly agree (1) row (%)		Mostly agree (2) row (%)		Neutral (3) row (%)		Mostly disagree (4) row (%)		Strongly disagree (5) Row (%)		Mean score		p-value difference between genders~	
	W	M	W	M	W	M	W	M	W	M	W	M		
1.Husbands may use force to reprimand their wives because men should be in control of their families <sup>+</sup>	2.0	4.3	9.6	16.9	1.7	4.1	59.1	52.7	27.6	22.0	4.0	3.7	<0.001	
2.A woman who complains about her husband’s violent behavior is considered disloyal <sup>+</sup>	2.9	3.1	13.4	12.8	3.2	5.8	56.4	54.4	24.2	23.9	3.9	3.8	0.696	
3.A woman who seeks help from police for domestic violence brings shame on her family <sup>+</sup>	1.4	3.1	10.0	12.6	5.3	4.3	58.7	54.8	24.7	25.3	4.0	3.9	0.115	
4.Women’s groups who get involved in situations of domestic violence usually make the situation worse <sup>++</sup>	2.7	4.4	14.4	22.9	10.5	11.1	57.2	46.8	15.2	14.9	3.7	3.4	<0.001	
5.When jobs are scarce, men should have more right to a job than women*	2.0	3.8	8.0	13.8	5.4	9.2	59.7	52.9	24.9	20.3	4.0	3.7	<0.001	
6.If a woman earns more money than a boyfriend or husband, it can cause problems*	8.3	10.4	35.5	34.1	8.0	9.6	36.9	32.8	11.3	13.1	3.1	3.0	0.646	
7.Having a job is the best way for a woman to be an independent person*	46.4	25.4	46.9	55.3	1.7	5.8	4.2	11.1	0.9	2.4	1.7	2.1	<0.001	
~p-value of t-test comparing survey item between genders														
<sup>+</sup> From IPV-Help (Annex 1)														
*From the World Values Survey (Annex 1); items (5-7) not included in further analysis														

Table 3: Factor loadings results from factor analysis, overall and by gender			
	Overall	Young Men	Young Women
Husbands may use force to reprimand their wives because men should be in control of their families	0.56	0.60	0.49
A woman who complains about her husband's violent behavior is considered disloyal	0.63	0.63	0.66
A woman who seeks help from police for domestic violence brings shame on her family	0.65	0.67	0.62
Women's groups who get involved in situations of domestic violence usually make the situation worse	0.53	0.59	0.45
Eigenvalue	1.42	1.55	1.26
Alpha	0.71	0.74	0.67
Observations	1,177	586	591



Table 4: IPV Response Scale by sample characteristics, weighted (n=1,177; 586 men; 591 women)									
	Unadjusted IPV Response Scale <sup>±</sup>			Adjusted IPV Response Scale*			Alpha		
	All	M	W	All	M	W	All	M	W
Overall	15.0	14.3	15.5	8.7	8.9	8.6	0.71	0.74	0.67
Education									
Primary or below	15.0	14.3	15.5	8.7	8.9	8.7	0.72	0.78	0.61
Above primary	15.0	14.4	15.4	8.7	9.0	8.6	0.71	0.73	0.69
p-value <sup>+</sup>	0.803	0.847	0.655	0.945	0.781	0.622	--	--	--
Age									
16-19 years	15.2	14.3	15.7	8.8	8.9	8.7	0.73	0.77	0.61
20-26 years	14.9	14.3	15.4	8.7	8.9	8.6	0.71	0.73	0.67
p-value <sup>+</sup>	0.363	0.978	0.368	0.542	1.000	0.333	--	--	--
Main activity									
Student/ caregiver/ other	15.0	13.8	15.5	8.6	8.6	8.6	0.71	0.75	0.66
Paid work	15.0	14.7	15.4	8.9	9.2	8.6	0.71	0.73	0.68
p-value <sup>+</sup>	0.797	0.045	0.556	0.112	0.040	0.632	--	--	--
Basic financial needs									
Able to meet needs	15.0	14.1	15.8	8.8	8.8	8.8	0.73	0.73	0.71
Not able to meet needs	15.0	14.6	15.2	8.7	9.1	8.4	0.69	0.75	0.61
p-value <sup>+</sup>	0.871	0.229	0.024	0.353	0.229	0.023	--	--	--
Partnered									
Non-partnered	15.2	14.4	15.8	8.9	8.9	8.8	0.76	0.80	0.68
Partnered	14.9	14.3	15.3	8.7	8.9	8.5	0.69	0.71	0.66
p-value <sup>+</sup>	0.179	0.938	0.078	0.230	0.953	0.064	--	--	--
Physical or Sexual IPV past 6 months, among ever partnered women									
No	--	--	15.5	--	--	8.6	--	--	0.66
Yes	--	--	14.1	--	--	7.9	--	--	0.61
p-value <sup>+</sup>	--	--	0.003	--	--	0.004	--	--	--
Help-seeking, among women who experienced IPV									
No	--	--	14.4	--	--	8.0	--	--	0.68
Yes	--	--	13.3	--	--	7.4	--	--	0.59
p-value <sup>+</sup>	--	--	0.254	--	--	0.278	--	--	--
<sup>±</sup> Sum of four items (higher is more egalitarian); significantly differs by gender (p<0.001)									
*Sum of four items (higher is more egalitarian) adjusting for survey item factor loadings by gender; significantly differs by gender (p=0.034)									
<sup>+</sup> P-value of linear regression of demographic variable on score adjusting for weighting									

**Table 5: Mixed effects logistic regression of individual attitudes and aggregate norms (adjusted and unadjusted) on women's past 6-month physical or sexual IPV experiences, weighted**

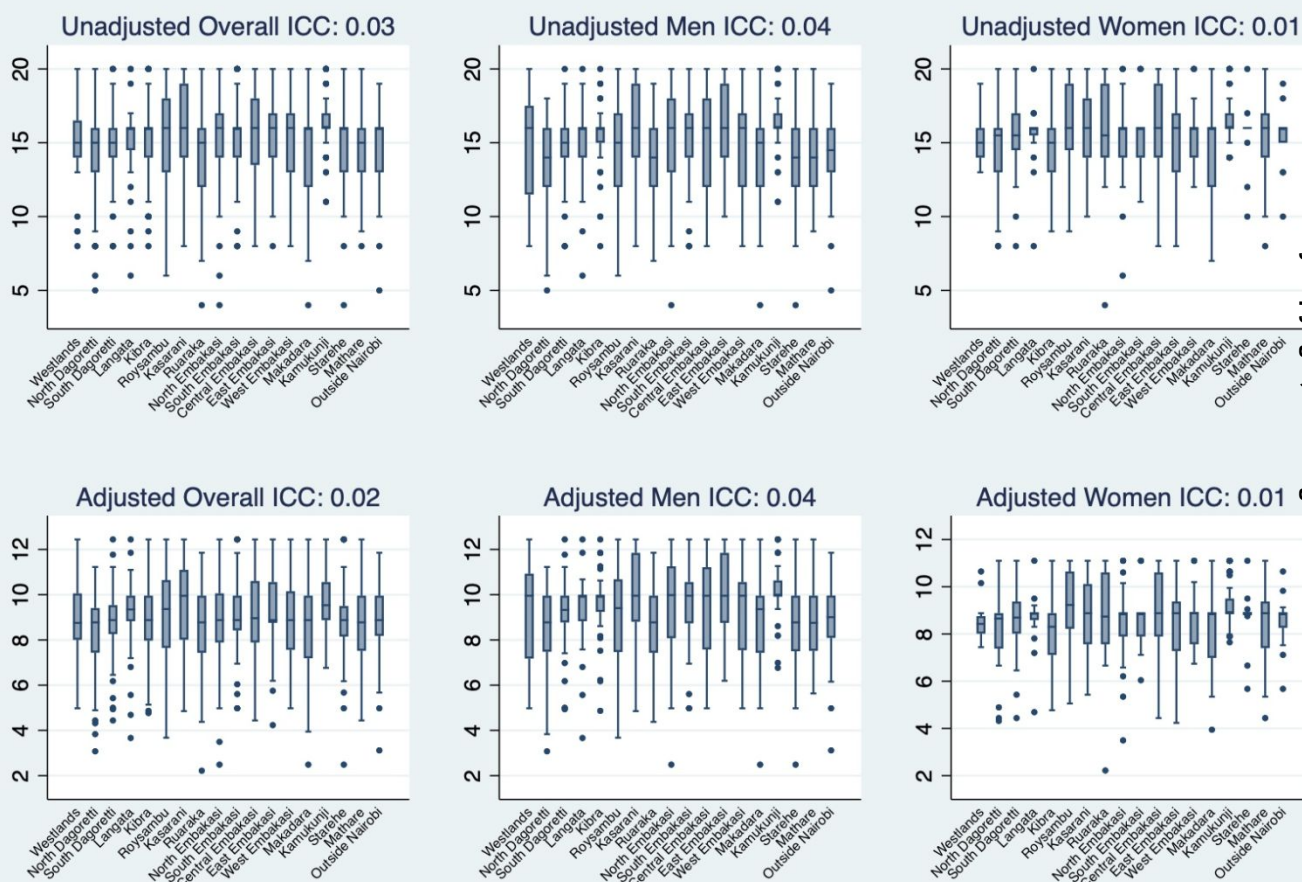
	Physical or Sexual IPV past 6 months aOR (95% CI)	
	Unadjusted Scale	Adjusted Scale
<b>Individual-level</b>		
Women's IPV response attitudes <sup>+</sup>	0.86 (0.73,1.02)	0.78 (0.58,1.05)
<b>Subcounty-level</b>		
Men's aggregate IPV response norms <sup>+</sup>	1.13 (0.83,1.55)	1.17 (0.71,1.94)
Women's aggregate IPV response norms <sup>+</sup>	0.30** (0.14,0.64)	0.15** (0.04,0.57)
Observations	404	404
*p<0.05; **p<0.01; ***p<0.001 aOR = adjusted odds ratio Models account for survey weighting and clustering at the subcounty level, adjust for age, education, whether the woman is working, and ability to meet basic financial needs <sup>+</sup> Higher = more protective		

Supplemental Material

Annex Table 1: Survey item sources

IPV help-seeking norms scale (IPV-Help) <sup>1</sup>	World Values Survey - Right to Employment <sup>2</sup>	Partner Violence Norms Scale (PVNS) <sup>3</sup>	Current Scale Analysis
		A husband who helps his wife with the household chores will not be respected by his family	
		A man who makes important decisions jointly with his wife will be considered a weak man by his family	
		A man's family will think he is a disloyal son if he takes his wife's opinion over his mother's opinion	
		A woman who openly expresses her sexual desires to her husband is perceived to be vulgar	
Husbands may use force to reprimand their wives because men should be in control of their families		Husbands may use force to reprimand their wives because men should be in control of their families	Included
A woman who complains about her husband's violent behavior is considered a disloyal wife by her in-laws		A woman who complains about her husband's violent behavior is considered a disloyal wife by her in-laws	Included
A woman who does not tolerate violence from her husband is dishonoring her family and should not be welcomed home		A woman who does not tolerate violence from her husband is dishonoring her family and should not be welcomed home	
A woman who seeks help from the police for domestic violence brings shame on her family and should not be welcomed home			Included
A person who intervenes when a woman is being beaten by her husband would be considered to be interfering in the couple's private affairs.		A person who intervenes when a woman is being beaten by her husband would be considered to be interfering or meddling in the couple's private affairs	
Mediation is the best solution for families who experience domestic violence			
A woman should tolerate violence to keep her family together			
Women's groups who get involved in a case of domestic violence usually make the situation worse.			Included
Men should seek the advice of community leaders before allowing a female family member to seek help from a security and justice provider			
	When jobs are scarce, men should have more right to a job than women.		Did not fit with other items
	When jobs are scarce, employers should give priority to people of this country over immigrants.		
	If a woman earns more money than her husband, it's almost certain to cause problems.		Did not fit with other items
	Having a job is the best way for a woman to be an independent person.		Did not fit with other items
<sup>1</sup> Clark, C. Development and Measurement Properties of the IPV Help-Seeking Norms Scale. Unpublished presentation			
<sup>2</sup> Inglehart, R., C. Haerpfer, A. Moreno, C. Welzel, K. Kizilova, J. Diez-Medrano, M. Lagos, P. Norris, E. Ponarin & B. Puranen et al. (eds.). (2014). WVS 2010-2012 Wave, revised master, June 2012. <a href="https://www.worldvaluessurvey.org/WVSDocumentationWV6.jsp">https://www.worldvaluessurvey.org/WVSDocumentationWV6.jsp</a>			
<sup>3</sup> Clark, Cari Jo, et al. "Social norms and women's risk of intimate partner violence in Nepal." Social science & medicine 202 (2018): 162-169.			

### Annex Figure 1: Distribution of IPV response attitudes scale within and across subcounties



Adjusted scale = scale summing responses to survey items, adjusting for survey item loadings by gender on factor

# BMJ Open

## Intimate partner violence help-seeking norms: scale reliability and cross-sectional multilevel associations with intimate partner violence among youth in Nairobi, Kenya

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# Intimate partner violence help-seeking norms: scale reliability and cross-sectional multilevel associations with intimate partner violence among youth in Nairobi, Kenya

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## ABSTRACT

**Objectives:** Intimate partner violence (IPV) threatens women's health and safety. Support services can mitigate impact, yet few survivors seek services in part due to social norms that discourage use. Little agreement exists on how to measure norms and attitudes related to IPV help-seeking. The objectives were to 1) refine an IPV Help-seeking Attitudes Scale and examine its psychometric properties 2) explore differences in attitudes between young men and young women, and 3) examine associations of past-6-month IPV among young women with the scale at the individual-level (individual attitudes) and the by-gender community aggregated averages (community norms) among youth in Nairobi, Kenya.

**Design:** This cross-sectional, secondary analysis used data from a phone-based survey with a cohort of young men and young women recruited via respondent-driven sampling from April-May 2021. Cross-sectional exploratory factor analysis assessed underlying latent constructs. Multilevel mixed effects models assessed associations with IPV experience for young women.

**Setting and Participants:** A youth cohort of 586 men and 591 women ages 15-24 years in Nairobi, Kenya.

**Primary Outcome Measure:** Past-6 month physical and/or sexual IPV.

**Results:** The IPV Help-seeking Attitudes Scale had acceptable internal reliability (Cronbach's  $\alpha > 0.60$ ). IPV prevalence was 17.5%, among whom 21.7% had sought any help for past-six-month IPV. A one-unit increase in the community aggregate IPV Help-seeking Attitudes Scale among young women was associated with reduced odds of IPV (aOR: 0.17, 95% CI: 0.03, 0.98). However, the individual-level attitudes scale was not associated with IPV, nor was men's community aggregate scale.

**Conclusions:** The IPV Help-seeking Attitudes Scale had adequate psychometric properties. Results suggest that young women living in a community where the norm among women enables IPV response may have a reduced risk of IPV. Community norms change to better enable IPV response among young people may help reduce IPV and increase help-seeking.

## STRENGTHS AND LIMITATIONS

- Reliable measures of norms surrounding IPV help-seeking are limited, particularly among youth. Our study demonstrates reliability of a scale inclusive of a sub-set of items from an existing scale.
- Our study applies a multilevel approach to examine the influence of IPV help-seeking attitudes at both individual and community levels on IPV among young women in Nairobi, which extends the field past a historical focus on individual-level influences.
- The secondary analysis approach limits the study to scale refinement rather than a full scale development study.
- Our IPV-experienced sample size is small, and help-seeking was quite limited, which limited statistical power to examine normative influences on help-seeking experiences.

## BACKGROUND

Gender equality is a key component of the Sustainable Development Goals, reflected in Goal 5.<sup>1</sup> Yet nearly one in three women globally experience intimate partner violence (IPV), i.e., physical, sexual, or emotional violence perpetrated by an intimate partner.<sup>2</sup> IPV onset often occurs in adolescence,<sup>3</sup> and experiencing IPV early in life increases risk for adulthood victimization.<sup>4,5</sup> Adolescent girls and young women are at high risk for IPV: data across 15 low- and middle-income countries suggest that past-year physical IPV among girls ages 13-19 is as high as 23%.<sup>6</sup> IPV among adolescent girls and young women may be even higher in Kenya, where an estimated 25% of those ages 13-19 report past 12-month physical IPV.<sup>7</sup> As such, the Kenyan government has highlighted the need to expand survivor support services and has included this as a key action item within Kenya's roadmap for advancing gender equality.<sup>8</sup>

Integrating gender-based violence prevention and response across sectors is one of the three pillars of comprehensive violence prevention and response,<sup>9</sup> along with focus on at-risk populations such as girls and young women. Safe spaces for survivors to disclose abuse and obtain psychosocial or medical support is a key part of response;<sup>10-12</sup> it can reduce post-traumatic stress,<sup>12</sup> self-blame,<sup>13</sup> and re-victimization.<sup>14-16</sup> Yet, globally, most women who experience IPV do not seek help.<sup>17</sup> Low rates of help-seeking were first established in the World Health Organization multi-country study in 2005, with little evidence of meaningful change since then.<sup>18</sup> Women seek informal help from friends or family more often than they seek formal help from legal or health systems due to trust, comfort, and accessibility.<sup>19</sup> Norms are understood to be a key contextual factor affecting IPV experience and help-seeking, as characterized by Heise's ecological model of gender-based violence.<sup>20</sup> Social norms supporting IPV tolerance and gender inequity in economic and social spaces are believed to discourage women from seeking both formal and informal support.<sup>21-24</sup> Youth, in particular, may be less able to navigate informal and formal support systems for help when IPV occurs, while simultaneously being more influenced by the normative expectations of their peers.

While personal attitudes are internally motivated judgements about behavior, social norms are the perceived or actual beliefs of the people in one's social network or community.<sup>25</sup> Evidence exists

that social norms may have more impact than individual-level attitudes on IPV experience and help-seeking. For instance, a qualitative study in Tanzania found that women who individually believed that IPV should be acted upon were often blocked from formal and informal help-seeking due to prevailing societal norms.<sup>19</sup> A qualitative study in Rwanda found even if women had personal attitudes that supported leaving abusive relationships, the social norms in their community around family and marriage often prevented IPV response.<sup>26</sup> While the role of norms in women's help-seeking is recognized, a knowledge gap persists in effectively measuring specific attitudes and norms related to IPV help-seeking in low- and middle-income settings.<sup>24,27-30</sup> One scale capturing help-seeking attitudes is the IPV Help-Seeking Norms Scale (IPV-Help), which was tested in Nepal among married women, though has not been fielded in other settings, including Kenya.<sup>31</sup> The scale performed relatively well, with author recommendations to test among men and youth. The IPV-Help scale has item overlap with the Partner Violence Norms Scale (PVNS), a scale also tested in Nepal with strong confirmatory factor analysis fit statistics (RMSEA=0.07) and Cronbach's alpha (0.85).<sup>32</sup> While several scales exist that capture attitudes towards IPV help-seeking, few have been tested among both young men and women in low- and middle-income contexts.<sup>33,34,35,36,32,37</sup> Few studies go beyond attitudes to study norms, examining individual-level attitudes without considering aggregate community metrics.<sup>38</sup> While several data sources measure IPV justification among women and men, namely the Demographic and Health surveys, few explore individual attitudes towards IPV help-seeking. Even fewer studies survey men on factors influencing women's IPV help-seeking. This gap limits a fuller understanding of the social norms landscape around community responses to IPV cases, in which men play a critical role.

Given the need for research on attitudes influencing IPV help-seeking, this secondary analysis among young men and young women in Nairobi, Kenya aimed to: 1) examine the psychometric properties of a scale (IPV Help-seeking Attitudes) generated from existing items to capture attitudes towards IPV justification, community intervention, and informal and formal service help-seeking; 2) explore differences between young men and women; and 3) examine associations of past-6 month IPV among young women with the scale at the individual-level (individual attitudes) and the by-gender community aggregated averages (community norms). In exploring by-gender community norms, we explore the question of whether there are differences in the effects of men versus women peers' attitudes on IPV experience among young women. To enhance relevance

and extend past research, items were drawn from the IPV-Help Scale and refined based on local priorities; the full set of tested items included three items from the World Values Survey<sup>39</sup> on tolerance of gendered economic disparities to enhance local relevance and context.

## METHODS

### Study sample

The data for this study's secondary data analysis drew from a subsample of youth participants within the larger Nairobi Youth Respondent Driven Sampling Survey (YRDSS), an ongoing cohort study of adolescents and young adults. Eligible participants for the original cohort in 2019 were age 15-24 years, and residing in Nairobi for at least one year. In 2019, all respondents were unmarried but 61% reported being involved in a romantic relationship. Participants were recontacted in 2020 and subsequently six months later in 2021, where 87% (1,177/1,317) of the original sample verbally consented and was surveyed. In this round, help-seeking attitude questions were integrated for the first time in response to local needs. The 2021 sample of young men (n=586) and young women (n=591), ages 16-26, was the analytic sample for the present secondary analysis. Additional sampling and recruitment details can be found elsewhere.<sup>40</sup>

Trained resident enumerators (REs) collected data in English or Swahili using OpenDataKit (ODK) on tablets or smart phones. Data collection was conducted by phone. Questions on IPV were asked only among partnered young women. REs were trained in sensitive data collection and received specialized training specific to gender-based violence (GBV) protections and all data were collected following best practices for GBV research.<sup>41</sup> REs asked participants about their safety and privacy before beginning data collection. REs gave participants a "safe phrase" to discreetly report a privacy breach during data collection. If the safe phrase was used, participants were given the option to reschedule. Participants were instructed that they could skip any question they did not wish to answer. GBV support services were provided within a larger list of supports to minimize risk. Participants received 500 KES or US\$5 per survey completed.

### Measures

*Survey items considered for scale refinement:* Seven items were explored: (1) husbands may use force to reprimand their wives because men should be in control of their families, (2) a woman

who complains about her husband's violent behavior is considered disloyal, (3) a woman who seeks help from police for domestic violence brings shame on her family, (4) women's groups who get involved in situations of domestic violence usually make the situation worse, (5) when jobs are scarce, men should have more right to a job than women, (6) if a woman earns more money than a boyfriend or husband, it can cause problems, and (7) having a job is the best way for a woman to be an independent person. Respondents indicated their level of agreement on a 5-point Likert scale (strongly agree, mostly agree, neutral, mostly disagree, or strongly disagree). Items (1)-(4) were drawn from the IPV-Help Scale and items (5)-(7) from the World Values Survey (Annex Table 1). Economic agency and participation among women is known to be a key factor in help-seeking, for instance working women have been found to be more likely to seek help for IPV.<sup>42</sup> Though items (5)-(7) do not explicitly target help-seeking, we were interested in exploring attitudes towards broader economic gender equity in alignment with help-seeking attitudes.

*IPV:* IPV measures utilized behavioral assessment per best practices.<sup>43</sup> Specifically, the survey asked women participants only: "In the past 6 months, has a partner ever pushed you, thrown something at you that could hurt you, punched or slapped you?" and "In the past 6 months, have you had sex with a partner when you did not want to due to threats, pressure, or force?" The binary measure of IPV was coded as "1" if the respondent answered "once," "a few times," or "often" and "0" if she responded "never" to either of the mentioned IPV survey items.

*Help-seeking:* Women who reported any IPV were asked: "Did you seek help for any experiences of harm or unwanted sex?" The binary measure of help-seeking was coded as "1" if the respondent answered "yes" and "0" if the respondent answered "no."

*Covariates:* Measures included in multivariate models were current job status (work for pay vs. caregiver or student), age (below vs. above 19 for bivariate analysis, continuous for multivariate regression modeling), school completed (above vs. below secondary), and ability to meet basic needs. Ability to meet basic needs was assessed via a 4-point Likert scale (very able, somewhat able, not very able, not at all able) and dichotomized for analysis as very able/ somewhat able vs. not very able/ not at all able.



*Sub-county aggregate norms:* To capture community norms rather than individual attitudes, an aggregate scale score by Nairobi subcounty (n=18) was created through taking the weighted mean score for young men and women separately. While the scale at the individual-level is a proxy of individual attitudes, the subcounty aggregate scale is a proxy of the gender-specific community norm.

## Statistical Analysis

### *Exploration of survey items*

Sample characteristics were explored overall and by gender. Among young women only, IPV and help-seeking prevalence was reported. The percent agreement with each of the seven items under consideration for a scale was presented for both genders. Adjusting for weighting and survey design, agreement with each item and significance across genders was assessed.

### *Scale refinement*

Exploratory factor analysis of the seven survey items considered for scale refinement employed a polychoric correlation matrix with promax rotation to examine evidence of an underlying latent construct, both overall and by gender. For the items that fell together based on eigenvalue ( $>1$ ) and factor loadings ( $>0.40$ ), a scale was constructed.<sup>44</sup> Analysis of scale reliability focused on inter-item reliability, using both the Cronbach's Alpha Coefficient and the Omega Coefficient.

### *Scale associations*

Scale average scores by covariates listed above, overall and by gender, and by IPV and help-seeking among partnered young women, were explored. Significance testing of whether the scale varied by covariate, stratified by gender, was assessed using linear regression. The distribution of individual-level scale scores within and across subcounties overall and by gender was explored using box plots. Given clustering of individual responses to scale survey items within subcounties, multilevel modeling was used to correct standard errors to accurately estimate subcounty/community influences on the outcome of interest.<sup>45</sup> Mixed effects multilevel logistic regression with random intercepts for subcounty associated individual-level IPV with individual-level attitudes and gender-specific sub-county aggregate norms measures, adjusting for age, education, whether the woman is working, ability to meet basic financial needs and recruitment

clustering. Adjusted odds ratios (aOR) were presented between the scale score and IPV at the individual-level (comparing differences in the outcome between two people with differing individual attitudes who live in the same subcounty) and at the subcounty-level (comparing differences in the outcome between two people with the same individual attitudes but living in subcounties with differing aggregate norms scores), for IPV experience among young, partnered women. IPV was not measured among young men. Given the small sample size of young women who experienced IPV, we were unable to associate the scale with help-seeking itself.

All analyses were conducted using Stata 17.0 (College Station, TX) with statistical analysis set a priori at  $p < 0.05$ . The analytic sample was restricted to observations with no missing values for the seven attitudes measures. No missing values were present across independent or covariate variables within the analytic sample. Sampling weights accommodate the RDS study design using RDS-II (Volz-Heckathorn) weights, post-estimation adjustment based on 2014 KDHS population data (age, sex, education levels), and modest adjustment for loss-to-follow-up. All presented estimates are weighted unless otherwise noted, and statistical testing accounts for clustering among participants recruited by the same recruiter at baseline.

## Patient and Public Involvement

The data used for this analysis was drawn from a broader community-engaged Kenya-based study which engaged public and youth input at all phases. During the formative research stage prior to the 2019 cohort recruitment, input from community-based, youth-serving organizations informed the study recruitment strategy for feasibility, survey measures and constructs to ensure local relevance, and study logistics to maximize participant comfort and confidentiality. All recruitment and procedures were conducted by trained resident enumerators selected from underlying communities, and who provided inputs on measures for clarity and aided in results interpretation. The ongoing cohort data collection aims to collect measures on violence risk, help-seeking, and norms among youth in Nairobi that are grounded in local needs. Measures on help-seeking attitudes were added for the 2021 survey round in response to in-country priorities to extend what is available in other publicly available datasets, such as the Kenya Demographic and Health Surveys.



## RESULTS

### *Exploration of survey items*

Over half of the sample, 67.1%, had above primary education with similar percentages between young men and young women (Table 1). About 77% of the sample was 20-26 years old, and all participants were older than 15 at the time of survey. Approximately half of the sample's main activity was paid work, whereas the other half was school, caregiving, or something else. Young men were more likely to report paid work as their main activity than young women (60.1% vs. 43.1%). Slightly less than half, 45.6%, reported being unable to meet basic financial needs. Young women were more likely to report being unable to meet basic needs, 50.9%, compared to men, 38.1%. Over half of the sample, 64.8%, reported having an intimate partner within the past six months. Among young women who reported having an intimate partner in the past six months (n=404), 17.5% reported any sexual or physical IPV within the past six months. Among young women who reported any IPV (n=67), 21.7% reported seeking help from either formal or informal sources.

Young women consistently had more enabling IPV help-seeking attitudes than young men (Table 2), and four of seven survey items significantly differed by gender. Specifically, young men were significantly more likely to agree with the statements: "husbands may use force to reprimand their wives because men should be in control of their families" ( $p<0.001$ ), "women's groups who get involved in situations of domestic violence usually make the situation worse" ( $p<0.001$ ), and "when jobs are scarce, men should have more right to a job than women" ( $p<0.001$ ). Young women were significantly more likely than young men to agree with the statement "having a job is the best way for a woman to be an independent person" ( $p<0.001$ ).

### *Scale refinement*

Exploratory factor analysis of the seven items with promax rotation suggested two underlying factors with eigenvalues 2.46 and 1.70, grouping items 1-4 on Factor 1 and items 5-7 on Factor 2. For items 5-7 (Factor 2), there were small factor loadings of 0.34, 0.50, and 0.12, and a low three-item Cronbach's alpha of 0.32. These three items therefore did not suggest strong enough inter-reliability to justify a separate sub-scale. Running items 1-4 together in factor analysis demonstrated factor loadings greater than 0.60 and a Cronbach's alpha of 0.71 (Table 3).

Therefore, only items 1-4 were included in the final IPV Help-seeking Attitudes Scale. Young men typically displayed stronger factor loadings than young women and the Cronbach's alpha for young men was higher than for young women (0.74 vs. 0.67). Checking internal reliability using the Omega coefficient generated similar output to the Cronbach's alpha. Higher values of the IPV Help-seeking Attitudes Scale signified more egalitarian attitudes. Among the full sample, the IPV Help-seeking Attitudes Scale ranged from 4-20 with mean 15.0 (SD= 3.0). The scale was lower among young men (mean=14.3) as compared to young women (mean=15.5) (Table 4).

### *Scale associations*

Overall and among young men and women separately, there was no significant difference in the IPV Help-seeking Attitudes Scale between participants with below and above primary education (Table 4). Among men, the scale was significantly more egalitarian among those whose main activity was paid work ( $p=0.045$ ). Women who were not able to meet basic needs were significantly lower on the scale as compared to women who were able to meet basic needs (15.8 vs. 15.2,  $p=0.024$ ). Among women, the scale slightly differed by partnership status, with partnered women having lower scores ( $p<0.10$ ). Alpha levels were comparable by whether basic needs were met for men, though internal consistency was higher among women who had their basic needs met as compared to women who did not (0.71 vs. 0.61). The alpha scores were lower among partnered young people (0.69) as compared to non-partnered young people (0.76).

For the sub-sample of partnered young women ( $n=404$ ), those who had experienced IPV were significantly lower on the IPV Help-seeking Attitudes Scale than those who had not experienced IPV ( $p<0.01$ ) (Table 4). The scale's internal consistency was lower among partnered young women that had experienced IPV than partnered women who had not experienced IPV (alpha levels of 0.61 vs. 0.66). For the subsample who had experienced IPV ( $n=67$ ), there was not a significant difference in the scale score between those who sought and did not seek help. The alpha level for the scale was lower among those who did seek help (0.59 vs. 0.68).

Differences in variation of the IPV Help-seeking Attitudes Scale across subcounties signified some evidence of subcounty clustering and the need to adjust for clustering in inference modeling (Annex Figure 1). Table 5 presents results from mixed effects logistic regression. In adjusted

analyses, no significant association between the IPV Help-seeking Attitudes Scale at the individual-level and IPV experience was identified (aOR: 0.88; 95% CI: (0.75, 1.04)). A young woman who lived in a subcounty with a one-unit increased aggregate IPV Help-seeking Attitudes Scale among young women had significantly reduced odds of experiencing IPV (aOR: 0.17; 95% CI: (0.03, 0.98)), compared to a young woman of the same earner status, age, education completion, and ability to meet basic needs but living in a subcounty with a one-unit lower norms score among women. No significant association was identified between the aggregate IPV Help-seeking Attitudes Scale among young men and women's IPV experience.

## DISCUSSION

Reliable measures of attitudes and norms that affect help-seeking are limited. This study explores a shortened version of the IPV-Help scale, previously tested among married women in Nepal,<sup>31</sup> and refined for an urban youth population in Nairobi, Kenya. The refined scale (IPV Help-Seeking Attitudes Scale) demonstrated strong performance among urban youth, affording valuable insight into measurement performance and youth-held attitudes towards IPV help-seeking. Findings suggest that community-level IPV help-seeking norms (attitudes aggregated at the subcounty level) may be more strongly associated with IPV experience than individual attitudes, highlighting a link between the community help-seeking normative context and IPV experience. Specifically, while individual help-seeking attitudes did not correlate with IPV, women living in subcounties with more protective women's *community* norms for IPV help-seeking were less likely to report IPV experience. Interestingly, the community norms on IPV help-seeking among young men were not correlated with young women's IPV experience. With increased recognition of IPV among youth and a resurgence of interest in access to support services comes a critical need to monitor norms that influence help-seeking; the IPV Help-seeking Attitudes Scale may be a valuable first step to monitoring community norms that may enable or inhibit access to those services.

While adequately reliable overall, the IPV Help-seeking Attitudes Scale was less internally consistent among young women (0.67) than young men (0.74) and even less reliable among partnered young women who had experienced IPV (0.61). The limited internal reliability for young women who have experienced IPV means the IPV Help-seeking Attitudes Scale was less strong in capturing individual-level attitudes towards IPV help-seeking among women who experienced IPV. This lower internal reliability may reflect limited statistical power due to this smaller

subsample; there may also be high variability in attitudes toward help-seeking within this population, potentially due to varied lived experiences with prior help-seeking. Results highlight the importance of measuring attitudes and norms among young women, particularly those with lived experiences of violence, to better understand and promote IPV help-seeking. Further research is needed to continue to improve measures in this area, particularly among young women who have experienced partner violence.

Attitudes and social norms around help-seeking are one component of a myriad of barriers to seeking help, inclusive of availability and accessibility to formal services, quality of services, legal landscapes, and financial factors. Less than a quarter of the young women sought help for IPV experience, despite relatively strong availability of services in Nairobi, including the Gender Violence Recovery Centre<sup>46</sup> and trained health care providers.<sup>47</sup> The Kenyan Government's 2021 GBV Roadmap calls for a multi-sectoral approach to GBV response, including coverage of GBV response in the essential minimum package of the Universal Health Coverage by 2022.<sup>8</sup> Further, global GBV strategy calls for supportive environments for help-seeking<sup>9</sup>; this cannot be achieved through infrastructure only, rather, community mobilizing is needed to create a normative environment that facilitates, rather than impedes, accessing IPV support services. The finding that the men's collective community norm did not correlate with IPV experience calls for more research on how to involve young men in IPV cessation efforts.

The study has several additional limitations. Foremost, this study was secondary data analysis utilizing data collected with an ongoing cohort of youth; the larger study was not specifically focused on IPV help-seeking attitudes nor on scale development surrounding this issue. Individual survey measures did not address broader structural factors that impact help-seeking, such as gender equitable cash control and decision-making. Individual items for the scale drew from existing, validated scales and were chosen based on local priorities with inputs from Kenya-based partners working with youth in Nairobi. The study did not include qualitative formative scale development elements, nor was a fuller set of items included, both of which would have been informative for refining items specific for a young population and the Kenyan context. Results provide a foundation for a more detailed scale development study on this topic in which rigorous criterion validity, construct validity, and test-retest reliability testing can be applied. Cross-sectional, retrospective data limit causal inference. This is particularly challenging in examining attitudes

among those with IPV experience. Surveys were conducted via mobile phone, which may have caused response bias and threaten external validity; however, post-estimation weights improve generalizability to the youth population in Nairobi. The IPV-experienced sample size is small, which limited statistical power to explore associations between the scale and IPV and was prohibitive for examining help-seeking as a critical outcome. Future research with larger sample sizes and statistical power should explore this further, as well as the protective trend linking enabling norms among women and IPV experience. Additional measurement limitations include those related to the nature, quality, and sources of help-seeking; moreover the IPV measure is limited to sexual and/or physical IPV only, and does not inform on other forms of IPV that are common among youth and can vary across the lifecourse, such as tech-facilitated abuse, controlling behavior, economic abuse, and psychological abuse.

Results are actionable for practitioners and policy. Recommendations include addressing not only individual attitudes but also community-level norms on violence and help-seeking. Changing norms to enable, rather than impede, uptake of IPV supports remains an important goal to reduce barriers to care. Several IPV prevention programs that have addressed community norms can be considered as models. Specifically, the SASA! Initiative in Uganda uses community mobilization to change gender equality norms that affect IPV, and strengthen the community response to IPV, with significant reductions in both IPV acceptance among women and reductions in past-year physical IPV.<sup>48</sup> In Ghana, the Gender Centre's Rural Response Strategy used community-based action teams to challenge community member attitudes and support referral to social services for IPV help-seeking, and significantly reduced sexual IPV among women after 18 months.<sup>49</sup> Current study findings add to the body of literature affirming the importance of changing collective attitudes for IPV prevention and response. The high prevalence of IPV among young women, and the normative climate that risks undermining help-seeking, demand action to ensure the health, safety, and well-being of young women and their communities in urban Kenya.

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MRD, PG, and MT conceptualized and designed the present study. Protocol development, including measures and safety protocol, was completed by MRD, PG, MT, and GWN. Analysis was conducted by AW and SW. Manuscript preparation and writing were completed by AW and SW. GWN, PG, BD, KB, and MRD edited and interpreted the data. All authors read and approved the final version of this manuscript. AW is responsible for the overall content [as guarantor].

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TABLES

Table 1: Sample Characteristics, weighted			
	All % (n=1,177)	Men % (n=586)	Women % (n=591)
<b>Education completed*</b>			
Primary or below	32.9	31.8	33.6
Above primary	67.1	68.2	66.4
<b>Age</b>			
16-19 years	22.7	20.2	24.4
20-26 years	77.3	79.8	75.6
<b>Main activity</b>			
Student/ caregiver/ other	49.9	39.9	56.9
Paid work	50.1	60.1	43.1
<b>Basic financial needs</b>			
Able to meet needs	54.4	61.9	49.1
Not able to meet needs	45.6	38.1	50.9
<b>Partnered, within past 6 months</b>			
Non-partnered	35.2	33.5	36.4
Partnered	64.8	66.5	63.6
<b>IPV~ past 6 months, among ever partnered women (n=404)</b>			
No	--	--	82.5
Yes	--	--	17.5
<b>Help-seeking, among women who experienced IPV (n=67)</b>			
No	--	--	78.3
Yes	--	--	21.7
~Inclusive of sexual and physical IPV past 6 months among partnered women			
*Measured in 2020 (6 months prior to 2021 survey)			

**Table 2: Survey items, (n=1,177; 586 men, 591 women), unweighted**

	Strongly agree (1) row (%)		Mostly agree (2) row (%)		Neutral (3) row (%)		Mostly disagree (4) row (%)		Strongly disagree (5) Row (%)		Mean score		p-value difference between genders~
	W	M	W	M	W	M	W	M	W	M	W	M	
1. Husbands may use force to reprimand their wives because men should be in control of their families <sup>+</sup>	2.0	4.3	9.6	16.9	1.7	4.1	59.1	52.7	27.6	22.0	4.0	3.7	<0.001
2. A woman who complains about her husband's violent behavior is considered disloyal <sup>+</sup>	2.9	3.1	13.4	12.8	3.2	5.8	56.4	54.4	24.2	23.9	3.9	3.8	0.696
3. A woman who seeks help from police for domestic violence brings shame on her family <sup>+</sup>	1.4	3.1	10.0	12.6	5.3	4.3	58.7	54.8	24.7	25.3	4.0	3.9	0.115
4. Women's groups who get involved in situations of domestic violence usually make the situation worse <sup>+</sup>	2.7	4.4	14.4	22.9	10.5	11.1	57.2	46.8	15.2	14.9	3.7	3.4	<0.001
5. When jobs are scarce, men should have more right to a job than women <sup>*</sup>	2.0	3.8	8.0	13.8	5.4	9.2	59.7	52.9	24.9	20.3	4.0	3.7	<0.001
6. If a woman earns more money than a boyfriend or husband, it can cause problems <sup>*</sup>	8.3	10.4	35.5	34.1	8.0	9.6	36.9	32.8	11.3	13.1	3.1	3.0	0.646
7. Having a job is the best way for a woman to be an independent person <sup>*</sup>	46.4	25.4	46.9	55.3	1.7	5.8	4.2	11.1	0.9	2.4	1.7	2.1	<0.001

~p-value of t-test comparing survey item between genders

<sup>+</sup>From IPV-Help (Annex 1)

<sup>\*</sup>From the World Values Survey (Annex 1); items (5-7) not included in further analysis

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Table 3: Factor loadings results from factor analysis, overall and by gender			
	Overall	Young Men	Young Women
Husbands may use force to reprimand their wives because men should be in control of their families	0.64	0.67	0.59
A woman who complains about her husband's violent behavior is considered disloyal	0.74	0.71	0.77
A woman who seeks help from police for domestic violence brings shame on her family	0.74	0.75	0.73
Women's groups who get involved in situations of domestic violence usually make the situation worse	0.61	0.65	0.55
Eigenvalue	1.86	1.94	1.77
Cronbach's Alpha	0.71	0.74	0.67
Omega coefficient	0.72	0.74	0.68
Observations	1,177	586	591



Table 4: IPV Help-seeking Attitudes Scale by sample characteristics, weighted (n=1,177; 586 men; 591 women)						
	IPV Help-seeking Attitudes Scale <sup>‡</sup>			Alpha		
	All	M	W	All	M	W
<b>Overall</b>						
	15.0	14.3	15.5	0.71	0.74	0.67
<b>Education</b>						
Primary or below	15.0	14.3	15.5	0.72	0.78	0.61
Above primary	15.0	14.4	15.4	0.71	0.73	0.69
<i>p-value</i> <sup>+</sup>	0.803	0.847	0.655	--	--	--
<b>Age</b>						
16-19 years	15.2	14.3	15.7	0.73	0.77	0.63
20-26 years	14.9	14.3	15.4	0.71	0.73	0.67
<i>p-value</i> <sup>+</sup>	0.363	0.978	0.368	--	--	--
<b>Main activity</b>						
Student/ caregiver/ other	15.0	13.8	15.5	0.71	0.75	0.66
Paid work	15.0	14.7	15.4	0.71	0.73	0.68
<i>p-value</i> <sup>+</sup>	0.797	0.045	0.556	--	--	--
<b>Basic financial needs</b>						
Able to meet needs	15.0	14.1	15.8	0.73	0.73	0.71
Not able to meet needs	15.0	14.6	15.2	0.69	0.75	0.61
<i>p-value</i> <sup>+</sup>	0.871	0.229	0.024	--	--	--
<b>Partnered</b>						
Non-partnered	15.2	14.4	15.8	0.76	0.80	0.68
Partnered	14.9	14.3	15.3	0.69	0.71	0.66
<i>p-value</i> <sup>+</sup>	0.179	0.938	0.078	--	--	--
<b>Physical or Sexual IPV past 6 months, among ever partnered women</b>						
No	--	--	15.5	--	--	0.66
Yes	--	--	14.1	--	--	0.61
<i>p-value</i> <sup>+</sup>	--	--	0.003	--	--	--
<b>Help-seeking, among women who experienced IPV</b>						
No	--	--	14.4	--	--	0.68
Yes	--	--	13.3	--	--	0.59
<i>p-value</i> <sup>+</sup>	--	--	0.254	--	--	--
<sup>‡</sup> Sum of four items (higher is more egalitarian); significantly differs by gender (p<0.001)						
<sup>+</sup> P-value of linear regression of demographic variable on score adjusting for weighting and survey sampling design						

**Table 5: Mixed effects logistic regression of individual attitudes and aggregate norms on women’s past 6-month physical or sexual IPV experiences, weighted**

	Physical or Sexual IPV past 6-months aOR (95% CI)
<b>Individual-level</b>	
Women’s IPV response attitudes <sup>+</sup>	0.88 (0.75,1.04)
<b>Subcounty-level</b>	
Men’s aggregate IPV response norms <sup>+</sup>	1.72 (0.88, 3.35)
Women’s aggregate IPV response norms <sup>+</sup>	0.17* (0.03,0.98)
Observations	404

\*p<0.05; \*\*p<0.01; \*\*\*p<0.001  
aOR = adjusted odds ratio  
Models account for survey weighting and clustering at the subcounty level, adjust for age, education, whether the woman is working, ability to meet basic financial needs, and recruitment clustering.  
+Higher = more protective

## Supplemental Material

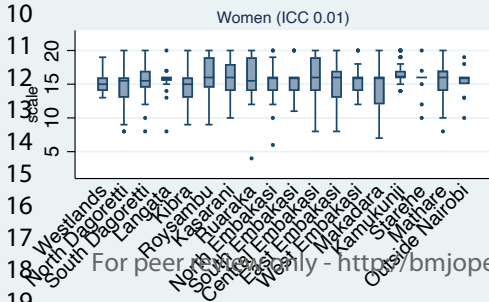
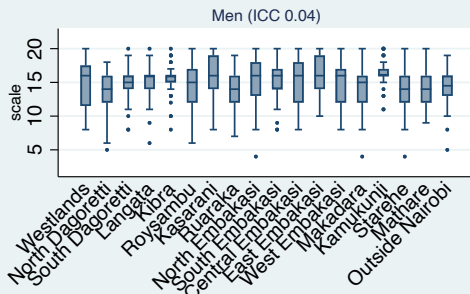
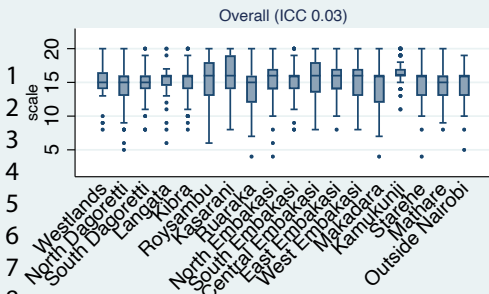
Annex Table 1: Survey item sources

IPV help-seeking norms scale (IPV-Help) <sup>1</sup>	World Values Survey - Right to Employment <sup>2</sup>	Partner Violence Norms Scale (PVNS) <sup>3</sup>	Current Scale Analysis
		A husband who helps his wife with the household chores will not be respected by his family	
		A man who makes important decisions jointly with his wife will be considered a weak man by his family	
		A man's family will think he is a disloyal son if he takes his wife's opinion over his mother's opinion	
		A woman who openly expresses her sexual desires to her husband is perceived to be vulgar	
Husbands may use force to reprimand their wives because men should be in control of their families		Husbands may use force to reprimand their wives because men should be in control of their families	Included
A woman who complains about her husband's violent behavior is considered a disloyal wife by her in-laws		A woman who complains about her husband's violent behavior is considered a disloyal wife by her in-laws	Included
A woman who does not tolerate violence from her husband is dishonoring her family and should not be welcomed home		A woman who does not tolerate violence from her husband is dishonoring her family and should not be welcomed home	
A woman who seeks help from the police for domestic violence brings shame on her family and should not be welcomed home			Included
A person who intervenes when a woman is being beaten by her husband would be considered to be interfering in the couple's private affairs.		A person who intervenes when a woman is being beaten by her husband would be considered to be interfering or meddling in the couple's private affairs	
Mediation is the best solution for families who experience domestic violence			
A woman should tolerate violence to keep her family together			
Women's groups who get involved in a case of domestic violence usually make the situation worse.			Included
Men should seek the advice of community leaders before allowing a female family member to seek help from a security and justice provider			
	When jobs are scarce, men should have more right to a job than women.		Did not fit with other items
	When jobs are scarce, employers should give priority to people of this country over immigrants.		
	If a woman earns more money than her husband, it's almost certain to cause problems.		Did not fit with other items
	Having a job is the best way for a woman to be an independent person.		Did not fit with other items

<sup>1</sup>Clark, C. Development and Measurement Properties of the IPV Help-Seeking Norms Scale. Unpublished presentation. 2017.

<sup>2</sup>Inglehart, R., C. Haerpfer, A. Moreno, C. Welzel, K. Kizilova, J. Diez-Medrano, M. Lagos, P. Norris, E. Ponarin & B. Puranen et al. (eds.). (2014). WVS 2010-2012 Wave, revised master, June 2012. <https://www.worldvaluessurvey.org/WVSDocumentationWV6.jsp>

<sup>3</sup>Clark, Cari Jo, et al. "Social norms and women's risk of intimate partner violence in Nepal." *Social science & medicine* (2018). 202; 162-169.



# BMJ Open

## Intimate partner violence help-seeking norms: scale reliability and cross-sectional multilevel associations with intimate partner violence among youth in Nairobi, Kenya

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# Intimate partner violence help-seeking norms: scale reliability and cross-sectional multilevel associations with intimate partner violence among youth in Nairobi, Kenya

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## ABSTRACT

**Objectives:** Intimate partner violence (IPV) threatens women's health and safety. Support services can mitigate impact, yet few survivors seek services in part due to social norms that discourage use. Little agreement exists on how to measure norms and attitudes related to IPV help-seeking. The objectives were to 1) refine an IPV Help-seeking Attitudes Scale and examine its psychometric properties 2) explore differences in attitudes between young men and young women, and 3) examine associations of past-6-month IPV among young women with the scale at the individual-level (individual attitudes) and the by-gender community aggregated averages (community norms) among youth in Nairobi, Kenya.

**Design:** This cross-sectional, secondary analysis used data from a phone-based survey with a cohort of young men and young women recruited via respondent-driven sampling from April-May 2021. Cross-sectional exploratory factor analysis assessed underlying latent constructs. Multilevel mixed effects models assessed associations with IPV experience for young women.

**Setting and Participants:** A youth cohort of 586 men and 591 women ages 15-24 years in Nairobi, Kenya.

**Primary Outcome Measure:** Past-6 month physical and/or sexual IPV.

**Results:** The IPV Help-seeking Attitudes Scale had acceptable internal reliability (Cronbach's  $\alpha > 0.60$ ). IPV prevalence was 17.5%, among whom 21.7% had sought any help for past-six-month IPV. A one-unit increase in the community aggregate IPV Help-seeking Attitudes Scale among young women was associated with reduced odds of IPV (aOR: 0.17, 95% CI: 0.03, 0.98). However, the individual-level attitudes scale was not associated with IPV, nor was men's community aggregate scale.

**Conclusions:** The IPV Help-seeking Attitudes Scale had adequate psychometric properties. Results suggest that young women living in a community where the norm among women enables IPV response may have a reduced risk of IPV. Community norms change to better enable IPV response among young people may help reduce IPV and increase help-seeking.

## STRENGTHS AND LIMITATIONS

- Reliable measures of norms surrounding IPV help-seeking are limited, particularly among youth. Our study demonstrates reliability of a scale inclusive of a sub-set of items from an existing scale.
- Our study applies a multilevel approach to examine the influence of IPV help-seeking attitudes at both individual and community levels on IPV among young women in Nairobi, which extends the field past a historical focus on individual-level influences.
- The secondary analysis approach limits the study to scale refinement rather than a full scale development study.
- Our IPV-experienced sample size is small, and help-seeking was quite limited, which limited statistical power to examine normative influences on help-seeking experiences.

## BACKGROUND

Gender equality is a key component of the Sustainable Development Goals, reflected in Goal 5.<sup>1</sup> Yet nearly one in three women globally experience intimate partner violence (IPV), i.e., physical, sexual, or emotional violence perpetrated by an intimate partner.<sup>2</sup> IPV onset often occurs in adolescence,<sup>3</sup> and experiencing IPV early in life increases risk for adulthood victimization.<sup>4,5</sup> Adolescent girls and young women are at high risk for IPV: data across 15 low- and middle-income countries suggest that past-year physical IPV among girls ages 13-19 is as high as 23%.<sup>6</sup> IPV among adolescent girls and young women may be even higher in Kenya, where an estimated 25% of those ages 13-19 report past 12-month physical IPV.<sup>7</sup> As such, the Kenyan government has highlighted the need to expand survivor support services and has included this as a key action item within Kenya's roadmap for advancing gender equality.<sup>8</sup>

Integrating gender-based violence prevention and response across sectors is one of the three pillars of comprehensive violence prevention and response,<sup>9</sup> along with focus on at-risk populations such as girls and young women. Safe spaces for survivors to disclose abuse and obtain psychosocial or medical support is a key part of response;<sup>10-12</sup> it can reduce post-traumatic stress,<sup>12</sup> self-blame,<sup>13</sup> and re-victimization.<sup>14-16</sup> Yet, globally, most women who experience IPV do not seek help.<sup>17</sup> Low rates of help-seeking were first established in the World Health Organization multi-country study in 2005, with little evidence of meaningful change since then.<sup>18</sup> Women seek informal help from friends or family more often than they seek formal help from legal or health systems due to trust, comfort, and accessibility.<sup>19</sup> Norms are understood to be a key contextual factor affecting IPV experience and help-seeking, as characterized by Heise's ecological model of gender-based violence.<sup>20</sup> Social norms supporting IPV tolerance and gender inequity in economic and social spaces are believed to discourage women from seeking both formal and informal support.<sup>21-24</sup> Youth, in particular, may be less able to navigate informal and formal support systems for help when IPV occurs, while simultaneously being more influenced by the normative expectations of their peers.

While personal attitudes are internally motivated judgements about behavior, social norms are the perceived or actual beliefs of the people in one's social network or community.<sup>25</sup> Evidence exists

that social norms may have more impact than individual-level attitudes on IPV experience and help-seeking. For instance, a qualitative study in Tanzania found that women who individually believed that IPV should be acted upon were often blocked from formal and informal help-seeking due to prevailing societal norms.<sup>19</sup> A qualitative study in Rwanda found even if women had personal attitudes that supported leaving abusive relationships, the social norms in their community around family and marriage often prevented IPV response.<sup>26</sup> While the role of norms in women's help-seeking is recognized, a knowledge gap persists in effectively measuring specific attitudes and norms related to IPV help-seeking in low- and middle-income settings.<sup>24,27-30</sup> One scale capturing help-seeking attitudes is the IPV Help-Seeking Norms Scale (IPV-Help), which was tested in Nepal among married women, though has not been fielded in other settings, including Kenya.<sup>31</sup> The scale performed relatively well, with author recommendations to test among men and youth. The IPV-Help scale has item overlap with the Partner Violence Norms Scale (PVNS), a scale also tested in Nepal with strong confirmatory factor analysis fit statistics (RMSEA=0.07) and Cronbach's alpha (0.85).<sup>32</sup> While several scales exist that capture attitudes towards IPV help-seeking, few have been tested among both young men and women in low- and middle-income contexts.<sup>33,34,35,36,32,37</sup> Few studies go beyond attitudes to study norms, examining individual-level attitudes without considering aggregate community metrics.<sup>38</sup> While several data sources measure IPV justification among women and men, namely the Demographic and Health surveys, few explore individual attitudes towards IPV help-seeking. Even fewer studies survey men on factors influencing women's IPV help-seeking. This gap limits a fuller understanding of the social norms landscape around community responses to IPV cases, in which men play a critical role.

Given the need for research on attitudes influencing IPV help-seeking, this secondary analysis among young men and young women in Nairobi, Kenya aimed to: 1) examine the psychometric properties of a scale (IPV Help-seeking Attitudes) generated from existing items to capture attitudes towards IPV justification, community intervention, and informal and formal service help-seeking; 2) explore differences between young men and women; and 3) examine associations of past-6 month IPV among young women with the scale at the individual-level (individual attitudes) and the by-gender community aggregated averages (community norms). In exploring by-gender community norms, we explore the question of whether there are differences in the effects of men versus women peers' attitudes on IPV experience among young women. To enhance relevance

and extend past research, items were drawn from the IPV-Help Scale and refined based on local priorities; the full set of tested items included three items from the World Values Survey<sup>39</sup> on tolerance of gendered economic disparities to enhance local relevance and context.

## METHODS

### Study sample

The data for this study's secondary data analysis drew from a subsample of youth participants within the larger Nairobi Youth Respondent Driven Sampling Survey (YRDSS), an ongoing cohort study of adolescents and young adults. Eligible participants for the original cohort in 2019 were age 15-24 years, and residing in Nairobi for at least one year. In 2019, all respondents were unmarried but 61% reported being involved in a romantic relationship. Participants were recontacted in 2020 and subsequently six months later in 2021, where 87% (1,177/1,317) of the original sample verbally consented and was surveyed. In this round, help-seeking attitude questions were integrated for the first time in response to local needs. The 2021 sample of young men (n=586) and young women (n=591), ages 16-26, was the analytic sample for the present secondary analysis. Additional sampling and recruitment details can be found elsewhere.<sup>40</sup>

Trained resident enumerators (REs) collected data in English or Swahili using OpenDataKit (ODK) on tablets or smart phones. Data collection was conducted by phone. Questions on IPV were asked only among partnered young women. REs were trained in sensitive data collection and received specialized training specific to gender-based violence (GBV) protections and all data were collected following best practices for GBV research.<sup>41</sup> REs asked participants about their safety and privacy before beginning data collection. REs gave participants a "safe phrase" to discreetly report a privacy breach during data collection. If the safe phrase was used, participants were given the option to reschedule. Participants were instructed that they could skip any question they did not wish to answer. GBV support services were provided within a larger list of supports to minimize risk. Participants received 500 KES or US\$5 per survey completed.

### Measures



*Survey items considered for scale refinement:* Seven items were explored: (1) husbands may use force to reprimand their wives because men should be in control of their families<sup>1</sup>, (2) a woman who complains about her husband's violent behavior is considered disloyal, (3) a woman who seeks help from police for domestic violence brings shame on her family, (4) women's groups who get involved in situations of domestic violence usually make the situation worse, (5) when jobs are scarce, men should have more right to a job than women, (6) if a woman earns more money than a boyfriend or husband, it can cause problems, and (7) having a job is the best way for a woman to be an independent person. Respondents indicated their level of agreement on a 5-point Likert scale (strongly agree, mostly agree, neutral, mostly disagree, or strongly disagree). Items (1)-(4) were drawn from the IPV-Help Scale and items (5)-(7) from the World Values Survey (Annex Table 1). Economic agency and participation among women is known to be a key factor in help-seeking, for instance working women have been found to be more likely to seek help for IPV.<sup>42</sup> Though items (5)-(7) do not explicitly target help-seeking, we were interested in exploring attitudes towards broader economic gender equity in alignment with help-seeking attitudes.

*IPV:* IPV measures utilized behavioral assessment per best practices.<sup>43</sup> Specifically, the survey asked women participants only: "In the past 6 months, has a partner ever pushed you, thrown something at you that could hurt you, punched or slapped you?" and "In the past 6 months, have you had sex with a partner when you did not want to due to threats, pressure, or force?" The binary measure of IPV was coded as "1" if the respondent answered "once," "a few times," or "often" and "0" if she responded "never" to either of the mentioned IPV survey items.

*Help-seeking:* Women who reported any IPV were asked: "Did you seek help for any experiences of harm or unwanted sex?" The binary measure of help-seeking was coded as "1" if the respondent answered "yes" and "0" if the respondent answered "no."

*Covariates:* Measures included in multivariate models were current job status (work for pay vs. caregiver or student), age (below vs. above 19 for bivariate analysis, continuous for multivariate

<sup>1</sup> While focused on tolerance of IPV rather than direct help-seeking, this item is included by the original scale authors because the attitude measure is an important precursor to seeking help. When we drop the item "husbands may use force to reprimand their wives because men should be in control," the alpha drops to 0.67 from 0.71, suggesting this item increases internal consistency.



regression modeling), school completed (above vs. below secondary), and ability to meet basic needs. Ability to meet basic needs was assessed via a 4-point Likert scale (very able, somewhat able, not very able, not at all able) and dichotomized for analysis as very able/ somewhat able vs. not very able/ not at all able.

*Sub-county aggregate norms:* To capture community norms rather than individual attitudes, an aggregate scale score by Nairobi subcounty (n=18) was created through taking the weighted mean score for young men and women separately. While the scale at the individual-level is a proxy of individual attitudes, the subcounty aggregate scale is a proxy of the gender-specific community norm.

## Statistical Analysis

### *Exploration of survey items*

Sample characteristics were explored overall and by gender. Among young women only, IPV and help-seeking prevalence was reported. The percent agreement with each of the seven items under consideration for a scale was presented for both genders. Adjusting for weighting and survey design, agreement with each item and significance across genders was assessed.

### *Scale refinement*

Exploratory factor analysis of the seven survey items considered for scale refinement employed a polychoric correlation matrix with promax rotation to examine evidence of an underlying latent construct, both overall and by gender. For the items that fell together based on eigenvalue ( $>1$ ) and factor loadings ( $>0.40$ ), a scale was constructed.<sup>44</sup> Analysis of scale reliability focused on inter-item reliability, using both the Cronbach's Alpha Coefficient and the Omega Coefficient.

### *Scale associations*

Scale average scores by covariates listed above, overall and by gender, and by IPV and help-seeking among partnered young women, were explored. Significance testing of whether the scale varied by covariate, stratified by gender, was assessed using linear regression. The distribution of individual-level scale scores within and across subcounties overall and by gender was explored using box plots. Given clustering of individual responses to scale survey items within subcounties,

multilevel modeling was used to correct standard errors to accurately estimate subcounty/community influences on the outcome of interest.<sup>45</sup> Mixed effects multilevel logistic regression with random intercepts for subcounty associated individual-level IPV with individual-level attitudes and gender-specific sub-county aggregate norms measures, adjusting for age, education, whether the woman is working, ability to meet basic financial needs and recruitment clustering. Adjusted odds ratios (aOR) were presented between the scale score and IPV at the individual-level (comparing differences in the outcome between two people with differing individual attitudes who live in the same subcounty) and at the subcounty-level (comparing differences in the outcome between two people with the same individual attitudes but living in subcounties with differing aggregate norms scores), for IPV experience among young, partnered women. IPV was not measured among young men. Given the small sample size of young women who experienced IPV, we were unable to associate the scale with help-seeking itself.

All analyses were conducted using Stata 17.0 (College Station, TX) with statistical analysis set a priori at  $p < 0.05$ . The analytic sample was restricted to observations with no missing values for the seven attitudes measures. No missing values were present across independent or covariate variables within the analytic sample. Sampling weights accommodate the RDS study design using RDS-II (Volz-Heckathorn) weights, post-estimation adjustment based on 2014 KDHS population data (age, sex, education levels), and modest adjustment for loss-to-follow-up. All presented estimates are weighted unless otherwise noted, and statistical testing accounts for clustering among participants recruited by the same recruiter at baseline.

## Patient and Public Involvement

The data used for this analysis was drawn from a broader community-engaged Kenya-based study which engaged public and youth input at all phases. During the formative research stage prior to the 2019 cohort recruitment, input from community-based, youth-serving organizations informed the study recruitment strategy for feasibility, survey measures and constructs to ensure local relevance, and study logistics to maximize participant comfort and confidentiality. All recruitment and procedures were conducted by trained resident enumerators selected from underlying communities, and who provided inputs on measures for clarity and aided in results interpretation. The ongoing cohort data collection aims to collect measures on violence risk, help-seeking, and

norms among youth in Nairobi that are grounded in local needs. Measures on help-seeking attitudes were added for the 2021 survey round in response to in-country priorities to extend what is available in other publicly available datasets, such as the Kenya Demographic and Health Surveys.

## RESULTS

### *Exploration of survey items*

Over half of the sample, 67.1%, had above primary education with similar percentages between young men and young women (Table 1). About 77% of the sample was 20-26 years old, and all participants were older than 15 at the time of survey. Approximately half of the sample's main activity was paid work, whereas the other half was school, caregiving, or something else. Young men were more likely to report paid work as their main activity than young women (60.1% vs. 43.1%). Slightly less than half, 45.6%, reported being unable to meet basic financial needs. Young women were more likely to report being unable to meet basic needs, 50.9%, compared to men, 38.1%. Over half of the sample, 64.8%, reported having an intimate partner within the past six months. Among young women who reported having an intimate partner in the past six months (n=404), 17.5% reported any sexual or physical IPV within the past six months. Among young women who reported any IPV (n=67), 21.7% reported seeking help from either formal or informal sources.

Young women consistently had more enabling IPV help-seeking attitudes than young men (Annex Table 2), and four of seven survey items significantly differed by gender. Specifically, young men were significantly more likely to agree with the statements: "husbands may use force to reprimand their wives because men should be in control of their families" ( $p<0.001$ ), "women's groups who get involved in situations of domestic violence usually make the situation worse" ( $p<0.001$ ), and "when jobs are scarce, men should have more right to a job than women" ( $p<0.001$ ). Young women were significantly more likely than young men to agree with the statement "having a job is the best way for a woman to be an independent person" ( $p<0.001$ ).

### *Scale refinement*

Exploratory factor analysis of the seven items with promax rotation suggested two underlying factors with eigenvalues 2.46 and 1.70, grouping items 1-4 on Factor 1 and items 5-7 on Factor 2. For items 5-7 (Factor 2), there were small factor loadings of 0.34, 0.50, and 0.12, and a low three-item Cronbach's alpha of 0.32. These three items therefore did not suggest strong enough inter-reliability to justify a separate sub-scale. Running items 1-4 together in factor analysis demonstrated factor loadings greater than 0.60 and a Cronbach's alpha of 0.71 (Table 2). Therefore, only items 1-4 were included in the final IPV Help-seeking Attitudes Scale. Young men typically displayed stronger factor loadings than young women and the Cronbach's alpha for young men was higher than for young women (0.74 vs. 0.67). Checking internal reliability using the Omega coefficient generated similar output to the Cronbach's alpha. Higher values of the IPV Help-seeking Attitudes Scale signified more egalitarian attitudes. Among the full sample, the IPV Help-seeking Attitudes Scale ranged from 4-20 with mean 15.0 (SD= 3.0). The scale was lower among young men (mean=14.3) as compared to young women (mean=15.5) (Table 3).

### *Scale associations*

Overall and among young men and women separately, there was no significant difference in the IPV Help-seeking Attitudes Scale between participants with below and above primary education (Table 3). Among men, the scale was significantly more egalitarian among those whose main activity was paid work ( $p=0.045$ ). Women who were not able to meet basic needs were significantly lower on the scale as compared to women who were able to meet basic needs (15.8 vs. 15.2,  $p=0.024$ ). Among women, the scale slightly differed by partnership status, with partnered women having lower scores ( $p<0.10$ ). Alpha levels were comparable by whether basic needs were met for men, though internal consistency was higher among women who had their basic needs met as compared to women who did not (0.71 vs. 0.61). The alpha scores were lower among partnered young people (0.69) as compared to non-partnered young people (0.76).

For the sub-sample of partnered young women ( $n=404$ ), those who had experienced IPV were significantly lower on the IPV Help-seeking Attitudes Scale than those who had not experienced IPV ( $p<0.01$ ) (Table 3). The scale's internal consistency was lower among partnered young women that had experienced IPV than partnered women who had not experienced IPV (alpha levels of 0.61 vs. 0.66). For the subsample who had experienced IPV ( $n=67$ ), there was not a significant

difference in the scale score between those who sought and did not seek help. The alpha level for the scale was lower among those who did seek help (0.59 vs. 0.68).

Differences in variation of the IPV Help-seeking Attitudes Scale across subcounties signified some evidence of subcounty clustering and the need to adjust for clustering in inference modeling (Annex Figure 1). Table 4 presents results from mixed effects logistic regression. In adjusted analyses, no significant association between the IPV Help-seeking Attitudes Scale at the individual-level and IPV experience was identified (aOR: 0.88; 95% CI: (0.75, 1.04)). A young woman who lived in a subcounty with a one-unit increased aggregate IPV Help-seeking Attitudes Scale among young women had significantly reduced odds of experiencing IPV (aOR: 0.17; 95% CI: (0.03, 0.98)), compared to a young woman of the same earner status, age, education completion, and ability to meet basic needs but living in a subcounty with a one-unit lower norms score among women. No significant association was identified between the aggregate IPV Help-seeking Attitudes Scale among young men and women's IPV experience.

## DISCUSSION

Reliable measures of attitudes and norms that affect help-seeking are limited. This study explores a shortened version of the IPV-Help scale, previously tested among married women in Nepal,<sup>31</sup> and refined for an urban youth population in Nairobi, Kenya. The refined scale (IPV Help-Seeking Attitudes Scale) demonstrated strong performance among urban youth, affording valuable insight into measurement performance and youth-held attitudes towards IPV help-seeking. Findings suggest that community-level IPV help-seeking norms (attitudes aggregated at the subcounty level) may be more strongly associated with IPV experience than individual attitudes, highlighting a link between the community help-seeking normative context and IPV experience. Specifically, while individual help-seeking attitudes did not correlate with IPV, women living in subcounties with more protective women's *community* norms for IPV help-seeking were less likely to report IPV experience. Interestingly, the community norms on IPV help-seeking among young men were not correlated with young women's IPV experience. With increased recognition of IPV among youth and a resurgence of interest in access to support services comes a critical need to monitor norms that influence help-seeking; the IPV Help-seeking Attitudes Scale may be a valuable first step to monitoring community norms that may enable or inhibit access to those services.



While adequately reliable overall, the IPV Help-seeking Attitudes Scale was less internally consistent among young women (0.67) than young men (0.74) and even less reliable among partnered young women who had experienced IPV (0.61). The limited internal reliability for young women who have experienced IPV means the IPV Help-seeking Attitudes Scale was less strong in capturing individual-level attitudes towards IPV help-seeking among women who experienced IPV. This lower internal reliability may reflect limited statistical power due to this smaller subsample; there may also be high variability in attitudes toward help-seeking within this population, potentially due to varied lived experiences with prior help-seeking. Results highlight the importance of measuring attitudes and norms among young women, particularly those with lived experiences of violence, to better understand and promote IPV help-seeking. Further research is needed to continue to improve measures in this area, particularly among young women who have experienced partner violence.

Attitudes and social norms around help-seeking are one component of a myriad of barriers to seeking help, inclusive of availability and accessibility to formal services, quality of services, legal landscapes, and financial factors. Less than a quarter of the young women sought help for IPV experience, despite relatively strong availability of services in Nairobi, including the Gender Violence Recovery Centre<sup>46</sup> and trained health care providers.<sup>47</sup> The Kenyan Government's 2021 GBV Roadmap calls for a multi-sectoral approach to GBV response, including coverage of GBV response in the essential minimum package of the Universal Health Coverage by 2022.<sup>8</sup> Further, global GBV strategy calls for supportive environments for help-seeking<sup>9</sup>; this cannot be achieved through infrastructure only, rather, community mobilizing is needed to create a normative environment that facilitates, rather than impedes, accessing IPV support services. The finding that the men's collective community norm did not correlate with IPV experience calls for more research on how to involve young men in IPV cessation efforts.

The study has several additional limitations. Foremost, this study was secondary data analysis utilizing data collected with an ongoing cohort of youth; the larger study was not specifically focused on IPV help-seeking attitudes nor on scale development surrounding this issue. Individual survey measures did not address broader structural factors that impact help-seeking, such as gender equitable cash control and decision-making. Individual items for the scale drew from existing, validated scales and were chosen based on local priorities with inputs from Kenya-based partners



working with youth in Nairobi. The study did not include qualitative formative scale development elements, nor was a fuller set of items included, both of which would have been informative for refining items specific for a young population and the Kenyan context. Results provide a foundation for a more detailed scale development study on this topic in which rigorous criterion validity, construct validity, and test-retest reliability testing can be applied. Cross-sectional, retrospective data limit causal inference. This is particularly challenging in examining attitudes among those with IPV experience. Surveys were conducted via mobile phone, which may have caused response bias and threaten external validity; however, post-estimation weights improve generalizability to the youth population in Nairobi. The IPV-experienced sample size is small, which limited statistical power to explore associations between the scale and IPV and was prohibitive for examining help-seeking as a critical outcome. Future research with larger sample sizes and statistical power should explore this further, as well as the protective trend linking enabling norms among women and IPV experience. Additional measurement limitations include those related to the nature, quality, and sources of help-seeking; moreover the IPV measure is limited to sexual and/or physical IPV only, and does not inform on other forms of IPV that are common among youth and can vary across the lifecourse, such as tech-facilitated abuse, controlling behavior, economic abuse, and psychological abuse.

Results are actionable for practitioners and policy. Recommendations include addressing not only individual attitudes but also community-level norms on violence and help-seeking. Changing norms to enable, rather than impede, uptake of IPV supports remains an important goal to reduce barriers to care. Several IPV prevention programs that have addressed community norms can be considered as models. Specifically, the SASA! Initiative in Uganda uses community mobilization to change gender equality norms that affect IPV, and strengthen the community response to IPV, with significant reductions in both IPV acceptance among women and reductions in past-year physical IPV.<sup>48</sup> In Ghana, the Gender Centre's Rural Response Strategy used community-based action teams to challenge community member attitudes and support referral to social services for IPV help-seeking, and significantly reduced sexual IPV among women after 18 months.<sup>49</sup> Current study findings add to the body of literature affirming the importance of changing collective attitudes for IPV prevention and response. The high prevalence of IPV among young women, and the normative climate that risks undermining help-seeking, demand action to ensure the health, safety, and well-being of young women and their communities in urban Kenya.

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**Author contributions:**

MRD, PG, and MT conceptualized and designed the present study. Protocol development, including measures and safety protocol, was completed by MRD, PG, MT, and GWN. Analysis was conducted by AW and SW. Manuscript preparation and writing were completed by AW and SW. GWN, PG, BD, KB, and MRD edited and interpreted the data. All authors read and approved the final version of this manuscript. AW is responsible for the overall content [as guarantor].

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**Data Sharing Statement:**

Data are available upon request from [pmadata.org](http://pmadata.org).<sup>50</sup>

**Research Ethics Approval:**

Procedures were approved by the Ethics Review Committee at Kenyatta National Hospital/University of Nairobi (P310/06/2020) and the Institutional Review Boards at Johns Hopkins Bloomberg School of Public Health (IRB 00012952).

TABLES

Table 1: Sample Characteristics, weighted			
	All % (n =1,177)	Men % (n=586)	Women % (n=591)
<b>Education completed*</b>			
Primary or below	32.9	31.8	33.6
Above primary	67.1	68.2	66.4
<b>Age</b>			
16-19 years	22.7	20.2	24.4
20-26 years	77.3	79.8	75.6
<b>Main activity</b>			
Student/ caregiver/ other	49.9	39.9	56.9
Paid work	50.1	60.1	43.1
<b>Basic financial needs</b>			
Able to meet needs	54.4	61.9	49.1
Not able to meet needs	45.6	38.1	50.9
<b>Partnered, within past 6 months</b>			
Non-partnered	35.2	33.5	36.4
Partnered	64.8	66.5	63.6
<b>IPV~ past 6 months, among ever partnered women (n=404)</b>			
No	--	--	82.5
Yes	--	--	17.5
<b>Help-seeking, among women who experienced IPV (n=67)</b>			
No	--	--	78.3
Yes	--	--	21.7
~Inclusive of sexual and physical IPV past 6 months among partnered women			
*Measured in 2020 (6 months prior to 2021 survey)			



617  
618  
619  
620  
621  
622  
623

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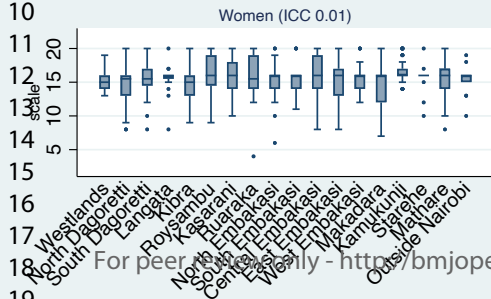
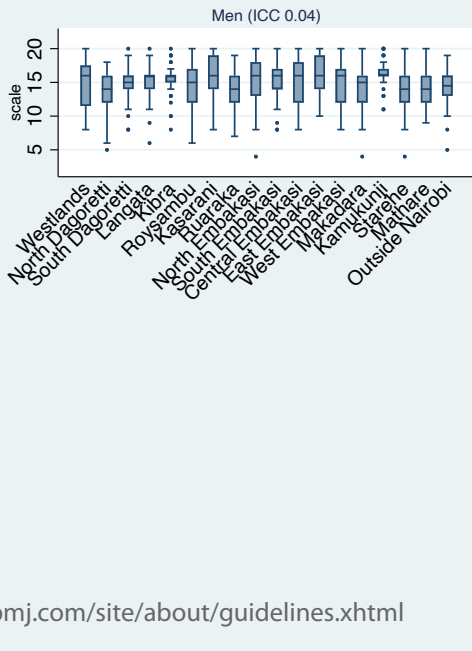
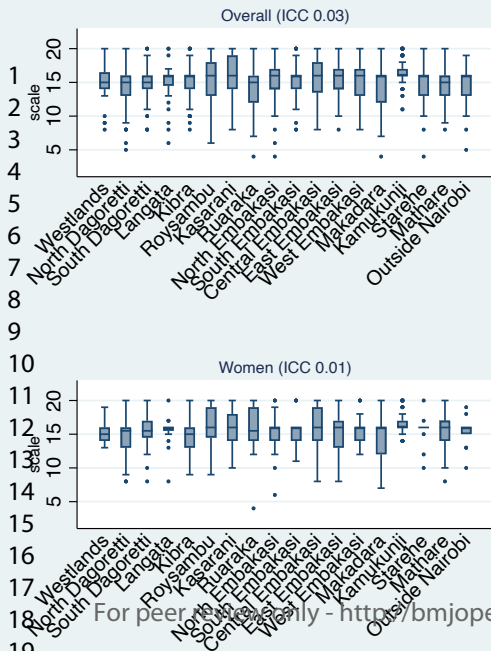
Table 2: Factor loadings results from factor analysis, overall and by gender			
	Overall	Young Men	Young Women
Husbands may use force to reprimand their wives because men should be in control of their families	0.64	0.67	0.59
A woman who complains about her husband's violent behavior is considered disloyal	0.74	0.71	0.77
A woman who seeks help from police for domestic violence brings shame on her family	0.74	0.75	0.73
Women's groups who get involved in situations of domestic violence usually make the situation worse	0.61	0.65	0.55
Eigenvalue	1.86	1.94	1.77
Cronbach's Alpha	0.71	0.74	0.67
Omega coefficient	0.72	0.74	0.68
Observations	1,177	586	591

Table 3: IPV Help-seeking Attitudes Scale by sample characteristics, weighted (n=1,177; 586 men; 591 women)						
	IPV Help-seeking Attitudes Scale <sup>‡</sup>			Alpha		
	All	M	W	All	M	W
<b>Overall</b>						
	15.0	14.3	15.5	0.71	0.74	0.67
<b>Education</b>						
Primary or below	15.0	14.3	15.5	0.72	0.78	0.61
Above primary	15.0	14.4	15.4	0.71	0.73	0.69
<i>p-value</i> <sup>†</sup>	0.803	0.847	0.655	--	--	--
<b>Age</b>						
16-19 years	15.2	14.3	15.7	0.73	0.77	0.63
20-26 years	14.9	14.3	15.4	0.71	0.73	0.67
<i>p-value</i> <sup>†</sup>	0.363	0.978	0.368	--	--	--
<b>Main activity</b>						
Student/ caregiver/ other	15.0	13.8	15.5	0.71	0.75	0.66
Paid work	15.0	14.7	15.4	0.71	0.73	0.68
<i>p-value</i> <sup>†</sup>	0.797	0.045	0.556	--	--	--
<b>Basic financial needs</b>						
Able to meet needs	15.0	14.1	15.8	0.73	0.73	0.71
Not able to meet needs	15.0	14.6	15.2	0.69	0.75	0.61
<i>p-value</i> <sup>†</sup>	0.871	0.229	0.024	--	--	--
<b>Partnered</b>						
Non-partnered	15.2	14.4	15.8	0.76	0.80	0.68
Partnered	14.9	14.3	15.3	0.69	0.71	0.66
<i>p-value</i> <sup>†</sup>	0.179	0.938	0.078	--	--	--
<b>Physical or Sexual IPV past 6 months, among ever partnered women</b>						
No	--	--	15.5	--	--	0.66
Yes	--	--	14.1	--	--	0.61
<i>p-value</i> <sup>†</sup>	--	--	0.003	--	--	--
<b>Help-seeking, among women who experienced IPV</b>						
No	--	--	14.4	--	--	0.68
Yes	--	--	13.3	--	--	0.59
<i>p-value</i> <sup>†</sup>	--	--	0.254	--	--	--
<sup>‡</sup> Sum of four items (higher is more egalitarian); significantly differs by gender (p<0.001)						
<sup>†</sup> P-value of linear regression of demographic variable on score adjusting for weighting and survey sampling design						

**Table 4: Mixed effects logistic regression of individual attitudes and aggregate norms on women’s past 6-month physical or sexual IPV experiences, weighted**

	Physical or Sexual IPV past 6-months aOR (95% CI)
<b>Individual-level</b>	
Women’s IPV response attitudes <sup>+</sup>	0.88 (0.75,1.04)
<b>Subcounty-level</b>	
Men’s aggregate IPV response norms <sup>+</sup>	1.72 (0.88, 3.35)
Women’s aggregate IPV response norms <sup>+</sup>	0.17* (0.03,0.98)
Observations	404

\*p<0.05; \*\*p<0.01; \*\*\*p<0.001  
aOR = adjusted odds ratio  
Models account for survey weighting and clustering at the subcounty level, adjust for age, education, whether the woman is working, ability to meet basic financial needs, and recruitment clustering.  
<sup>+</sup>Higher = more protective



Supplemental Material

Annex Table 1: Survey item sources

IPV help-seeking norms scale (IPV-Help) <sup>1</sup>	World Values Survey - Right to Employment <sup>2</sup>	Partner Violence Norms Scale (PVNS) <sup>3</sup>	Current Scale Analysis
		A husband who helps his wife with the household chores will not be respected by his family	
		A man who makes important decisions jointly with his wife will be considered a weak man by his family	
		A man's family will think he is a disloyal son if he takes his wife's opinion over his mother's opinion	
		A woman who openly expresses her sexual desires to her husband is perceived to be vulgar	
Husbands may use force to reprimand their wives because men should be in control of their families		Husbands may use force to reprimand their wives because men should be in control of their families	Included
A woman who complains about her husband's violent behavior is considered a disloyal wife by her in-laws		A woman who complains about her husband's violent behavior is considered a disloyal wife by her in-laws	Included
A woman who does not tolerate violence from her husband is dishonoring her family and should not be welcomed home		A woman who does not tolerate violence from her husband is dishonoring her family and should not be welcomed home	
A woman who seeks help from the police for domestic violence brings shame on her family and should not be welcomed home			Included
A person who intervenes when a woman is being beaten by her husband would be considered to be interfering in the couple's private affairs.		A person who intervenes when a woman is being beaten by her husband would be considered to be interfering or meddling in the couple's private affairs	
Mediation is the best solution for families who experience domestic violence			
A woman should tolerate violence to keep her family together			
Women's groups who get involved in a case of domestic violence usually make the situation worse.			Included
Men should seek the advice of community leaders before allowing a female family member to seek help from a security and justice provider			
	When jobs are scarce, men should have more right to a job than women.		Did not fit with other items
	When jobs are scarce, employers should give priority to people of this country over immigrants.		
	If a woman earns more money than her husband, it's almost certain to cause problems.		Did not fit with other items
	Having a job is the best way for a woman to be an independent person.		Did not fit with other items
<sup>1</sup> Clark, C. Development and Measurement Properties of the IPV Help-Seeking Norms Scale. Unpublished presentation. 2017. <sup>2</sup> Inglehart, R., C. Haerpfer, A. Moreno, C. Welzel, K. Kizilova, J. Diez-Medrano, M. Lagos, P. Norris, E. Ponarin & B. Puranen et al. (eds.). (2014). WVS 2010-2012 Wave, revised master, June 2012. <a href="https://www.worldvaluessurvey.org/WVSDocumentationWV6.jsp">https://www.worldvaluessurvey.org/WVSDocumentationWV6.jsp</a> <sup>3</sup> Clark, Cari Jo, et al. "Social norms and women's risk of intimate partner violence in Nepal." Social science & medicine (2018). 202; 162-169.			



## Supplemental Material

Appendix Table 2: Survey items, (n=1,177; 586 men, 591 women), unweighted

	Strongly agree (1) row (%)		Mostly agree (2) row (%)		Neutral (3) row (%)		Mostly disagree (4) row (%)		Strongly disagree (5) Row (%)		Mean score		p-value difference between genders~
	W	M	W	M	W	M	W	M	W	M	W	M	
1.Husbands may use force to reprimand their wives because men should be in control of their families <sup>+</sup>	2.0	4.3	9.6	16.9	1.7	4.1	59.1	52.7	27.6	22.0	4.0	3.7	<0.001
2.A woman who complains about her husband's violent behavior is considered disloyal <sup>+</sup>	2.9	3.1	13.4	12.8	3.2	5.8	56.4	54.4	24.2	23.9	3.9	3.8	0.696
3.A woman who seeks help from police for domestic violence brings shame on her family <sup>+</sup>	1.4	3.1	10.0	12.6	5.3	4.3	58.7	54.8	24.7	25.3	4.0	3.9	0.115
4.Women's groups who get involved in situations of domestic violence usually make the situation worse <sup>+</sup>	2.7	4.4	14.4	22.9	10.5	11.1	57.2	46.8	15.2	14.9	3.7	3.4	<0.001
5.When jobs are scarce, men should have more right to a job than women*	2.0	3.8	8.0	13.8	5.4	9.2	59.7	52.9	24.9	20.3	4.0	3.7	<0.001
6.If a woman earns more money than a boyfriend or husband, it can cause problems*	8.3	10.4	35.5	34.1	8.0	9.6	36.9	32.8	11.3	13.1	3.1	3.0	0.646
7.Having a job is the best way for a woman to be an independent person*	46.4	25.4	46.9	55.3	1.7	5.8	4.2	11.1	0.9	2.4	1.7	2.1	<0.001
~p-value of t-test comparing survey item between genders													
<sup>+</sup> From IPV-Help (Annex 1)													
*From the World Values Survey (Annex 1); items (5-7) not included in further analysis													