

Psychometric Analysis of an Intersectional Stigma Scale for Women Who Have Experienced Intimate Partner Violence in Botswana

Ari Robert Ho-Foster

hofostera@ub.ac.bw

University of Botswana School of Medicine <https://orcid.org/0000-0001-9817-8090>

Mercilene Tanyaradzwa Machisa

South African Medical Research Council <https://orcid.org/0000-0001-7275-1100>

Lorato Ruth Moalusi

Botswana Gender Based Violence Prevention and Support Centre <https://orcid.org/0009-0009-1576-3733>

Lawrence Hsin Yang

Duke University <https://orcid.org/0000-0001-7779-7423>

Nicola Christofides

University of the Witwatersrand <https://orcid.org/0000-0002-3559-6401>

Research Article

Keywords: (> 5): Intimate Partner Violence, Intersectional Stigma, Mental Health, Botswana, Gender norms, Violence Against Women, Culture, What Matters Most, Psychometric testing

Posted Date: October 5th, 2026

DOI: <https://doi.org/10.21203/rs.3.rs-11224193/v1>

License:   This work is licensed under a Creative Commons Attribution 4.0 International License.

[Read Full License](#)

Additional Declarations: The authors declare no competing interests.

Abstract

Background

Intimate Partner Violence (IPV) is pervasive in Botswana. IPV stigma may affect the mental health of women survivors. We developed and validated a new scale for intersectional stigma for women who experienced IPV in Botswana.

Methods

We used a known-groups design. With interviews held in 2025 in urban and peri-urban areas with 217 women survivors and 183 women who reported no experience of IPV (non-reporters), we conducted psychometric analyses to develop and test an intersectional stigma scale; hypothesized positive convergence between scale endorsement and: commonly accepted IPV stigma scales; intensity of IPV experienced; harmful gender norms and beliefs; and symptoms of poor mental health. We tested for relationships using Spearman's rank correlation coefficient (ρ) and report them as associations if statistically significant ($p < 0.05$).

Results

Analysis identified the Botswana Culture-Salient Intersectional IPV stigma scale (BCSI-IPVSS), an 11-item, unidimensional scale for perceived stigma with good internal consistency ($\omega = 0.859$) and fit (RMSEA=0.055; TLI=0.984) with observations. Its scale scores correlated positively with other IPV stigma scales ($\rho=0.24-0.40$, $p \leq 0.001$).

Among survivors, we found statistically significant associations between BCSI-IPVSS endorsement and abuse severity ($\rho=0.16$), psychological maltreatment ($\rho=0.26$), harmful community gender norms and beliefs ($\rho=0.52$), and survivor blaming attitudes ($\rho=0.41$). Greater perceived stigma also coincided with poorer mental health: generalized anxiety ($\rho=0.23$), social anxiety ($\rho=0.26$), depression ($\rho=0.36$) and post-traumatic stress ($\rho=0.23$).

Among non-reporters, BCSI-IPVSS endorsement showed statistically significant associations with harmful community gender norms and beliefs ($\rho=0.45$), survivor blaming attitudes ($\rho=0.3$), generalized anxiety ($\rho=0.22$), and low perceived social support ($\rho=-0.25$), but not with social anxiety, depression, or post-traumatic stress.

Conclusions

The BCSI-IPVSS shows overall acceptable psychometric properties in the assessment of IPV stigma among both IPV survivors and non-reporters in Botswana. Future investigation is needed into the links between IPV stigma experience, holding stigmatizing beliefs and poor mental health.

Clinical trial number

Not applicable

Background

Intimate Partner Violence (IPV) can include acts of physical, sexual violence, emotional/psychological abuse, controlling or coercive behaviors towards a current or former intimate partner [1, 2]. In Botswana, IPV is common, with most recent prevalence estimates suggesting 36% of women reported experiencing IPV sometime in their lives, and 26% within the past year [3]. Only a small proportion of women who experience IPV (referred to as *survivors*) seek help [4, 5].

Stigma is recognized as a deterrent to seeking help, engagement in care, and safety planning [6–9] and linked with poor mental health among survivors [10, 11]. It is a social process that involves the labeling, stereotyping, separation from, and discrimination against those affected, leading to feelings of diminished respect, status, and support [12, 13]. The process co-occurs with power imbalances often hidden within accepted cultural circumstances of a society, serving to diminish those affected and maintain social hierarchies [14].

Stangl et al. proposed the Health Stigma and Discrimination Framework (HSDF). The framework broadly categorizes stigma manifestations as either *practices* (stereotypes, prejudice, stigmatizing behavior, discriminatory attitudes) or *experiences* (experienced/enacted stigma and discrimination, internalized, perceived, anticipated, and secondary stigma), but does not differentiate stigma manifestations by their source [15]. This contrasts with Corrigan and Watson who described negative societal stereotypes of the general public towards stigmatized groups as public stigma, and distinguished it from self-stigma - negative beliefs of stigmatized individuals about themselves [16].

Willan et al. reported that South African rape survivors experience stigma simultaneously at individual, interpersonal, and community levels, with internalized shame and self-blame shaped and intensified by external, socially enacted stigma, particularly when multiple stigmatized identities intersect [17]. Concerning experiences of stigma and discrimination specific to IPV, Murray et al. classified accounts of survivors living in the United States as stigma *components* [18]. These included: survivor isolation; dismissing/denying survivor's experiences; blatant unprofessionalism; victim blaming; loss of status; shaming; denial of support or other resources, and other forms of discrimination [18, 19]. Among South African IPV survivors, Willan et al. documented additional experiences of multiple forms of IPV-related stigma related to staying or leaving a violent partner and the custody of their children. They distinguished these IPV-related stigmas from rape-related stigma and proposed that they intersected and influenced concealment of their experiences [8].

IPV stigma in Botswana

In Botswana, survivors also face stigma beyond the IPV stigma components described by Murray et al. [18]. Despite legislative reforms to advance gender equality in Botswana law in recent years, customary

gender norms and beliefs persist. They idealize women in subservient roles in the home and accept IPV as normal [20] [21]. A significant portion of Botswana women perceive that their communities expect wives to subjugate themselves to their husbands (e.g., owned by her husband if a bride price is paid for her; needing her husband's permission to do paid work; unable to refuse sex with her husband, etc.) [9]. Married women are also counselled to fulfil these roles during premarital advice giving (*go laya*), to persevere through their marriage and to resolve marital conflicts privately within the family [22–24]. In Botswana, single women and single mothers experience shame, marginalization, exclusion from traditional marriage processes and events, and labelling as not having reached full adulthood [13, 25, 26]. Beyond anticipating loss of their marriage status, divorced women are looked down upon, subjected to gossip, and seen as failures [27, 28]. In a nation where a large majority of the population identify themselves as Christian [29], some divorcees perceived stigma from others attending church; some are even required to step down from church responsibilities following their divorce [30].

The researchers propose that when women survivors of intimate partner violence (IPV) seek assistance beyond internal, family-based conflict resolution - such as formal support from shelters, social services, law enforcement, or magistrate courts - or undertake actions aimed at preventing further harm (e.g., relocating to a shelter, ending cohabitation, or pursuing separation or divorce), some experience a loss of social status due to perceived nonconformity with culturally salient gender roles and norms. Although this stigma for violating gendered expectations surrounding family cohesion and women's prescribed roles is conceptually distinct from IPV-related stigma and discrimination; women IPV survivors may experience these multiple, intersecting forms of stigma simultaneously.

IPV stigma, intersectionality, and culture

Recently, public health scholars have recognized that stigma for health conditions is experienced at the intersection of multiple interlocking social identities as articulated by intersectionality theory first described by Crenshaw [15, 31–33]. A full understanding is needed of how multiple stigmatized social identities jointly influence the experiences, opportunities, and health consequences these groups face, to develop interventions that better address the multi-dimensional effects of IPV [34, 35].

Several scholars have shown the important role culture plays in shaping the identities of women, their experiences of IPV, and of IPV stigma in Botswana [22, 36]. How culture shapes stigma experiences may be conditioned by gender, HIV status, socio-economic position, race or ethnicity, migration status, sexual orientation, and other factors. Integrating culture-salient gender norms and beliefs into scale development, may improve the measurement of intersectional IPV stigma in Botswana. Yang et al. developed the *What Matters Most* (WMM) framework to understand how culture influences stigma [37]. They suggest that culture, as expressed by WMM or the core lived engagements that comprise daily life within a local cultural context, greatly influences an individual's experience of stigma. This occurs because stigma threatens the individual's capability of achieving core lived values that represent "respected personhood" within a local cultural setting [37–39]. As such, an individual experiences stigma most acutely when they are unable to participate in culture-salient activities to achieve core values in

their local setting. Several recent reviews also recognized the WMM approach as one of the only methods to operationalize intersectional stigma instrument development at the item level [33, 40].

Our research team found several scales developed outside Botswana to measure stigma among IPV survivors. In the United States, Crowe et al. developed and validated the Intimate Partner Violence Stigma Scale (IPVSS) [10]. It measured four sources (domains) of IPV stigma [18]: internalized stigma, anticipated stigma, perpetrator stigma, and isolation but did not distinguish enacted stigma among participant responses. IPVSS endorsement also correlated with overall frequency of IPV and symptoms of social anxiety and depression [10]. In Australia, Brunton and Harris developed and validated a single-domain, 11-item IPV Internalized Self-stigma Scale (IPVIS) [11]. IPVIS endorsement correlated with poorer mental health, including depression, general anxiety, self-efficacy, and social isolation, and less perceived social support [11]. The research team noted that Jewkes et al.'s Rape Stigma Scale (RSS) is the only scale for IPV stigma validated for use in a sub-Saharan African country [41]. Developed and validated in South Africa, its nine-items measure two domains: internal (self-stigma revealed through attitudes reflecting self-blame and shame) and external stigma (enacted or perceived experiences of social devaluing consequential of rape). Although their study did not examine rape stigma associated with mental health outcomes, it did report that both internal and external rape stigma strongly associated with inequitable gender attitudes and noted the "intersectionality of rape stigma and gender inequality" [41].

None of the existing measures reviewed above, were designed to quantify intersectional stigma for women who experienced IPV. Guided in part by the WMM framework, the team adapted and modified items from Link's Perceived Discrimination-Devaluation Scale [42] (see Appendix 1) to measure intersectional stigma among IPV survivors in Botswana. This paper describes scale development and evaluation of its psychometric properties.

Methods

To develop scale items, formative research was first conducted through key informant interviews (KII) with 21 IPV service providers from September 2023 to October 2023. Next, with Botswana survivors of IPV and women who reported no experience of IPV (referred to as *non-reporters*), we held six focus group discussions (FGD) in March 2024 and 39 in-depth interviews (IDI) between November 2024 and January 2025. We constructed an initial set of scale items by adapting Link's Discrimination-Devaluation Scale [42, 43] based on domains of IPV stigma experience described in KII. We then assessed comprehension, relevance and coverage of eliciting stigma with FGD participants, and to stimulate discussion for why they agreed or disagreed with each statement. A rapid thematic analysis of these responses from urban and peri-urban participants noted culture-salient stereotypes that participants discussed, and identified priorities or core lived capabilities found to "matter most" to them. Many capabilities had been reported in prior studies [44, 45]: (1) *Botho*[1] [46], (2) being a supportive wife, (3) children, (4) community standing, (5) maintaining family, (6) self-care, and two additional culture-salient attributes previously undocumented (i.e., (7) perseverance and (8) wisdom from experience).

Participants also revealed that, through acting to prevent further harm to themselves (and their children, if they had them), some survivors either directly experienced or anticipated negative reactions to leaving their partner and did not continue to persevere in the relationship. Some non-reporters of IPV negatively reacted to survivors who left relationships with children they had with the violent partner, explaining that marriage and having children raised by two parents should be prioritized.

Scale items were then further revised to integrate culture-salient priorities or capabilities into their wording prior to administration in IDI. Many of these capabilities (e.g., respecting one's husband, raising children, perseverance) are not only regarded and promoted in communities as desired attributes for women, but women who appear not to prioritize them may experience criticism or even stigma from family and community members. Constructed intersectional stigma items referred to culture-salient stereotypes of one stigmatized identity as characteristics that would further discredit someone inhabiting a second stigmatized identity, resulting in statements that linked stigma for survivors with stigma for failing to prioritize culture-salient core values. Intersectional stigma items elicit stigma to at least two identities that each can independently elicit stigma, distinguishing such items from items eliciting culture-specific stigma for a single identity. An initial 25 culture-salient, intersectional stigma items were developed for themes gathered from the formative research participants (see Appendices 1 and 2). Instrument items and translations were refined during pre-testing in February 2025 and obtained full Institutional Review Board approval for the final instrument on 26 March 2025.

Study sample, sampling methods and data collection

This study recruited participants from two urban (Gaborone, Francistown) and two peri-urban (Molepolole, Gantsi) areas. Sampling for women survivors of IPV occurred through multiple convenience sampling strategies. (i) The research team approached pre-existing clients of Gender Based Violence support services situated in the four areas; they first invited all current clients receiving survivor support services to participate, before consecutively sampling any new clients, as well as approaching past clients with contacts documented in service records. (ii) While confirming eligibility of non-reporters participants (see below), any women who disclosed prior experience of physical, sexual or emotional abuse (i.e., in their lifetime) by their current or any past partner during screening using the Woman Abuse Screening Tool were also included among the sample of IPV survivors [47]. (iii) A third set of survivors were identified during the interview when disclosing IPV experiences with current or former intimate partners as per WHO definitions [48].

A convenience sample of non-reporters who had not disclosed experiencing IPV was selected from the same four areas. The strategy used was to approach women encountered at transport and shopping areas or during door-to-door community outreach campaigns. In all instances, trained female research assistants, fluent in Setswana and English, secured a quiet venue where they could establish and ensure

safety, maintain privacy, and quickly refer for psychosocial support in case of participant distress, prior to obtaining written, informed consent.

Research assistants interviewed 400 women in total between April and July 2025. The research team had developed REDCap electronic data capture tools (version R13.11.4) hosted at the University of Botswana, to facilitate data collection and management [49] using password-protected tablets and laptops.

Measures

All participants rated preliminary scale items and provided socio-demographic information. To examine perceptions of norms and beliefs favoring inequitable and violent intimate partnerships (referred to as harmful gender norms), participants rated their agreement with scales for community norms and individual beliefs about male dominance of partners and survivor blaming attitudes (C-MDP (11-items), I-MDP (12-items), and SBA (8-items), respectively) [9]. To estimate each participant's level of disagreement with harmful gender norms, the research team converted ordinal ratings into endorsement scores (1=strongly disagree, 2=disagree, 3=agree, 4=strongly agree) for each of 10 pairs of C-MDP and I-MDP items (e.g., the C-MDP item "My community thinks that children belong to a man and his family" and the I-MDP item "I think that children belong to a man and his family" are paired items). The difference between the endorsement scores of each C-MDP and I-MDP pair was calculated before summing the 10 values to generate an overall harmful gender norm disagreement score (higher number suggests more disagreement of personal belief from perceived community endorsement of harmful gender norms).

Participants' psychosocial outcomes were also assessed. Social anxiety, depression, generalized anxiety disorder, post-traumatic stress, self-esteem, perceived social support, and alcohol use disorder were measured using the Brief Fear and Negative Evaluation Scale II (BFNE-II) [50, 51], Centre for Epidemiologic Studies Depression Scale (CES-D) [52], Generalized Anxiety Disorder (GAD-7) scale [53], Abbreviated PTSD Checklist (PCL-C) [54], Rosenberg Self-Esteem Scale [55], Social Support Questionnaire (SSQN, SSQS) [56, 57] and the Alcohol Use Disorders Identification Test (AUDIT) [58], respectively.

Among survivors, the team administered two established IPV stigma scales (IPVSS and RSS) to assess concurrent validity [10, 41], and measured exposure to multiple forms of abuse and neglect using: a 30-item, modified form of the Composite Abuse Scale (CAS) [59, 60] and a 14-item, modified form of the Psychological Maltreatment of Women Inventory (PMWI) [61].

Hypotheses

The research team sought to construct the Botswana Culture-Salient Intersectional IPV Stigma Scale (BCSI-IPVSS): an intersectional stigma scale for survivors that elicited stigma for experiencing IPV and for not conforming with customary gender roles and norms. To assess this, a series of hypotheses were developed to test women survivors and non-reporters of prior IPV experience.

Stigma and frequency of abuse: Among survivors alone, the team proposed concurrent validity with other measures of IPV stigma and hypothesized (A.i.) direct and positive associations between BCSI-IPVSS endorsement and both IPVSS and RSS [10, 41]. The team also proposed that the frequency of IPV exposure experienced would intensify IPV stigma and hypothesized (B.i) BCSI-IPVSS endorsement would show positive associations with both overall frequency of IPV (CAS) and psychological IPV (PMWI) [59-61].

Community norms and beliefs towards IPV: The BCSI-IPVSS was developed to measure intersectional aspects of IPV stigma eliciting both stigma for IPV and stigma for women who, through their actions to mitigate the impact of IPV on themselves and their children, appear not to conform with local, culture-salient expectations for how women should achieve core values (e.g., ceased to persevere within a violent intimate relationship and left the relationship; sought help for herself outside her family). As these expectations can include harmful gender norms about intimate partnerships for both IPV survivors and non-reporters, the researchers hypothesized (C.i., C.ii.) BCSI-IPVSS endorsement would show a positive association with the perception that harmful gender norms about intimate partnerships were common in their community (C-MDP, SBA) [9]. As personal endorsement of harmful gender norms and beliefs appears distinct from perceived community norms and beliefs, the researchers hypothesized (D.i., D.ii.) divergent validity between BCSI-IPVSS scores and an attenuated correlation with individual norms and beliefs about male dominance (I-MDP) among both survivors and non-reporters [9].

The researchers considered the harmful gender norms disagreement score as a proxy for non-conformity to gender roles and norms. This study hypothesized greater disagreement between perceived community acceptance and personal beliefs of customary gender norms would coincide with greater BCSI-IPVSS endorsement, reflecting positive convergent validity among both survivors and non-reporters (E.i., E.ii.).

Psychosocial outcomes: BCSI-IPVSS items frame statements as beliefs of the respondent's group (e.g., "Most Batswana believe...") to measure perceived IPV stigma. Although both IPV non-reporters and survivors can agree with such statements, it is the further application of perceived stigma to oneself that coincides with internalized stigma [62] and manifests as injury to mental health [63, 64].

Among survivors, the research team suggested that perceived IPV stigma would link with social anxiety, i.e., perceived fear of devaluation if identified as a survivor in social contexts, and that BCSI-IPVSS scores would show a positive association with symptoms of social anxiety (BFNE-S) (F.i.) and generalized anxiety (GAD-7) (G.i.) [10, 65]. Among women who had not reported experience of IPV, IPV stigma should not feature as prominently and so the research team hypothesized diminished correlations with social (F.ii.) or generalized anxiety (G.ii.). Even if the sample perceived culture-salient,

intersectional IPV stigma, the team anticipated this would be less prominent for this group than for survivors.

The research team proposed that survivors would encounter cues to their IPV experiences in culture-salient social engagement with family and in communities if they perceived stigma towards IPV survivors. The team also hypothesized (H.i.) that among survivors, BCSI-IPVSS endorsement would show a positive association with symptoms of post-traumatic stress (PCL-C) [66], and (H.ii.) in the absence of IPV past trauma among non-reporters, the team anticipated negligible or attenuated associations between post-traumatic stress and BCSI-IPVSS endorsement.

Prior studies suggest that survivors who perceived stigma towards women who experience IPV may have depressive symptoms from experiencing these sentiments directly (enacted stigma), or through self-stigma, if perceived stigma was internalized [63, 64]. The team hypothesized (I.i.) BCSI-IPVSS endorsement would show a positive correlation with depression (CES-D) [10] among survivors. As non-reporters should not face stigma as an IPV survivor but may experience gender non-conforming stigma, the team expected to find (I.ii.) this correlation attenuated or diminished among them.

Self-esteem is considered a predominately stable feature within individuals over their lifespan [67], and so the study team hypothesized (J.i.) negligible or attenuated associations between perceived stigma and self-esteem among survivors, as this was observed for another stigmatized condition [44]. Among non-reporters, the research team hypothesized negligible or attenuated correlations between perceived stigma for IPV survivors and so the team hypothesized (J.ii.) BCSI-IPVSS endorsement would not show any correlation with self-esteem.

Based on a prior stigma study in Botswana, divergent validity between perceived IPV stigma and perceived social support (quantity and satisfaction) was anticipated, and so the researchers hypothesized (K.i., K.ii.) to find negligible associations between BCSI-IPVSS endorsement and social support (SSQN or SSQS) among both survivors and non-reporters [44].

Our study included measures for alcohol use disorder on an exploratory basis and did not establish any related hypotheses a priori to test construct validity of the BCSI-IPVSS scale.

Data analysis

Data analysis was performed by conducting an exploratory factor analysis (EFA) on a training dataset, and confirmatory factor analysis (CFA) on a test dataset. Both survivors and non-reporters were included in both datasets because culture-salient attributes that ‘matter most’ for women are conceptually shared by all members of a local cultural group. Division of the full study dataset to separate training and test datasets occurred on a 1:1 ratio by random selection, with stratified sampling by survivorship and locality to ensure those characteristics were as common in each dataset.

Exploratory factor analysis (principal-factor method) was then conducted on training data (including both survivors and non-reporters of IPV), to explore underlying latent factors linked to the 25 developed scale items. An initial polychoric correlation matrix revealed several strongly correlated variables. Correlated variables were then reviewed and we excluded variables deemed semantically redundant to a retained variable and strength of collinearity (>0.7), until the determinant of the correlation matrix was greater than zero (>0.0001). The candidate set of variables were then assessed for suitability for data reduction using Bartlett's test of sphericity ($p<0.05$) [68], and sufficient intra-correlation for factor analysis using Kaiser-Meyer-Olkin (KMO) test (>0.5) [69]. The number of factors extracted was guided by Velicer's minimum average partial (MAP) correlation approach [70, 71]. The analysis then reviewed factor loading estimates, and excluded variables loading <0.4 , before re-estimating the MAP and factor loadings.

Confirmatory factor analysis was then performed on test data using the Weighted Least Squares with Mean and Variance adjustment (WLSMV) estimation method [72]. This method is specifically designed for ordinal item data involving fewer than five response categories and smaller datasets [73]. The analysis tested factor loadings and correlated errors for statistical significance. Model fit indices were assessed using the following test criteria: root mean square error of approximation (RMSEA) ($RMSEA<0.08$) [74], standardized root mean squared residual (SRMR) ($SRMR<0.08$) [75], Comparative fit index (CFI) ($CFI>0.95$) [76] and Tucker-Lewis Index (TLI) ($TLI>0.95$) [77] [74, 78].

The team then calculated McDonald's Omega (ω) to estimate internal consistency between the items of each factor identified [79, 80], and assessed differences between continuous variable distributions using t-test and Wilcoxon Rank-Sum test, depending on distribution normality. See Appendix 2. Item-Retention Decision Table for additional details.

To evaluate construct validity of the BCSI-IPVSS as a measure of intersectional IPV stigma, the team analyzed for trend associations among survivors and non-reporters separately, testing the hypotheses stated above. Spearman's (r) was then calculated to estimate correlation between scales and regression used to test for differences in correlations (interaction) between sub-groups. Tabulated results handled missing data by pairwise deletion. To assess the influence of missing data on these results, we performed sensitivity analyses on selected results by modelling missing data using Multiple Imputation by Chained Equations (MICE). See Appendix 3 for details. The team considered statistical significance at the 5% level. Analyses occurred in Stata 19.0 [81] and Mplus 9.1 [82].

[1] *Botho* is described by Rankopo and Diraditsile as 'a social contract of mutual respect, responsibility and accountability by the members of a society towards each other.'

Results

Participant characteristics

Of the 217 participating survivors, 6.0% (13/217) were identified as survivors of IPV during the course of the interview; the remaining 183 were non-reporters. Overall, the average age of participants was 35.0 years (SD = 12.1) and 45.9% resided in urban areas. About two-thirds (67.0%) were in relationships and nearly four-fifths (79.0%) had children. About 70.1% spoke Setswana at home and 63.7% reported completion of secondary school or higher. Only 36.3% were employed at the time of the interview while a majority (60.8%) reported that they had faced food insecurity in their household in the past month.

Compared with non-reporters, participating survivors were older (mean age in years (SD): 36.9(12.7) vs. 32.6(11.0), $p = 0.001$), have children (88.9% vs. 67.2%, $p < 0.001$), and face food insecurity (70.0 vs. 49.7, $p < 0.001$). Non-reporters were more likely to reside in urban areas (56.0% vs. 37.0%, $p < 0.001$) and speak Setswana at home (77.5% vs. 63.6%, $p = 0.02$). See Table 1.

Table 1
Demographic and mental health characteristics (n = 400)
[Place Table 1.xlsx here]

Concerning stigma measures, endorsement of BCSI-IPVSS appeared similar among survivors and non-reporters (mean (SD): 39.6 (14.3) vs. 38.0 (14.3), $p = 0.24$).

Regarding community norms and beliefs towards IPV, survivors reported slightly higher endorsement of community norms about male dominance (28.4 (7.3) vs. 26.1 (7.1), $p = 0.002$) compared with non-reporters. Neither average personal endorsement of gender norms and beliefs nor average disagreement with harmful gender norms varied significantly between survivors and non-reporters (I-MDP: 21.6 (5.9) vs. 20.5 (5.5), $p = 0.051$; harmful gender norms disagreement: 8.7 (7.5) vs. 7.3 (6.5), $p = 0.15$). Average endorsement of survivor blaming attitudes appeared similar (14.1 (5.9) vs. 14.7 (6.0), $p = 0.32$).

Concerning psychosocial measures, survivors' responses indicated higher levels of social anxiety (10.9 (9.6) vs. 6.2 (7.9), $p < 0.001$), depression (32.0 ($\pm$ 16.3) vs. 19.1 (15.2), $p < 0.001$), general anxiety (8.7 (7.4) vs. 4.9 (6.0), $p < 0.001$), post-traumatic stress (8.8 (7.4) vs. 4.9 (6.0), $p < 0.001$), and alcohol use disorder (5.6 (8.0) vs. 2.5 (5.2), $p < 0.001$). Survivor responses reflected poorer self-esteem (20.2 (5.7) vs. 22.3 (5.1), $p < 0.001$), and less satisfaction with their social support (5.7 (0.7) vs. 5.8 (0.5), $p = 0.01$). See Table 2.

Table 2
Gender Attitudes and Beliefs and Measures of Psycho-Social Health
[Place Table 2.xlsx here]

Exploratory Factor Analysis (EFA)

Using the training dataset, after discarding five items with high inter-item correlation, the team performed EFA on a pool of 19 items. Although Velicer’s MINAP criteria recommended extracting only one factor, we initially extracted two factors with Eigenvalues exceeded 1.0 ($\lambda_1 = 4.99$, $\lambda_2 = 1.28$) that accounted for 80.1% of the variability. Discarding items beginning with the weakest loadings until all items met retention criteria, revealed one factor with 11-items significantly clustered around culture-salient stigma of women who have experienced IPV (items: 2, 6, 8, 13, 14, 17, 18, 19, 21, 22, 24) and a second factor with 3-items significantly clustered around culture-salient acceptance of women who have experienced IPV (items: 1, 7, 11); no items were significantly cross-loaded on both factors. However, as the second factor showed poor internal consistency ($\omega = 0.618$), pursuit of the second factor was halted. The final EFA extracted a single factor. Discarding items first with the weakest loadings until all items met retention criteria (see Appendix 2) revealed a final single 11-item factor version with an Eigenvalue exceeding 1.0 ($\lambda_1 = 3.93$) that accounted for 83.3% of the variability. See Table 3.

Table 3
Scale item mean response score, percentage by agreement level, factor loadings, and internal consistency (n = 201)

[Place Table 3.xlsx here]

Confirmatory Factor Analysis (CFA)

The team performed CFA on the test dataset fitted the observed variable items to a single factor. The absolute model fit index RMSEA suggested a reasonable error of approximation (RMSEA = 0.055 90% C.I. 0.019–0.085) and good incremental model fit indices (CFI = 0.992 and TLI = 0.984). The model’s residuals observed were also within accepted cut-off values (SRMR = 0.024). We have tabulated descriptive statistics and Spearman correlations among test set items (Table 4) and standardized factor loading estimates and correlated error estimates (Table 5).

Table 4
Descriptive statistics of the variables observed in the Confirmatory Factor Analysis (test dataset n = 199)

[Place Table 4.xlsx here]

Table 5
Standardized factor loadings and correlated errors of the Confirmatory Factor Analysis (test dataset n = 199)

[Place Table 5.xlsx here]

Scale Reliability

The final 11-item version of the BCSI-IPVSS scale showed a good internal consistency, with MacDonald’s Omega calculated at 0.859 overall (0.854 in the training set and 0.864 in the test dataset).

Scale Validity

Perceived stigma among survivors of IPV

The team assessed for concurrent validity between BCSI-IPVSS scale endorsement and endorsement of the two established IPV stigma measures among survivors. Concerning the IPVSS, the analysis found positive, moderate correlations between the BCSI-IPVSS scale and the overall IPVSS scale ($\rho = 0.38$) and its anticipated stigma subscale ($\rho = 0.44$). BCSI-IPVSS endorsement showed positive associations with the internalized stigma, perpetrator stigma and isolation IPVSS subscales ($\rho = 0.28, 0.20, 0.28$), and with the overall RSS scale and its external and internal stigma subscales ($\rho = 0.25, 0.18, 0.26$) (Table 6).

Table 6

Correlations between BCSI-IPVSS, established stigma measures, and associated psychosocial outcomes (n = 400)

[Place Table 6.xlsx here]

Among survivors the research team examined each of the BCSI-IPVSS, IPVSS and RSS separately for convergence with composite abuse (CAS) and psychological (PMWI) abuse measures of IPV frequency. Results show BCSI-IPVSS endorsement associated with overall composite abuse and its subscale measures for severe and emotional abuse ($\rho = 0.17, 0.18, 0.21$), but not with physical abuse or harassment ($\rho = 0.08, 0.11$). For psychological maltreatment, BCSI-IPVSS endorsement was associated with overall psychological maltreatment and emotional/verbal and dominance-isolation subscales ($\rho = 0.25, 0.32, 0.17$). In contrast, moderate-to-strong associations were detected between endorsement of both IPVSS and RSS, and all overall and subscales measures for composite abuse and psychological maltreatment. See Table 6 for details.

Concerning gender roles and norms among survivors, the BCSI-IPVSS scale showed positive, moderate associations with endorsement of community norms and beliefs about male dominance over partners (C-MDP) and blaming attitudes towards IPV survivor (SBA) ($\rho = 0.50, 0.38$). This study did not observe a significant association between BCSI-IPVSS endorsement and individual norms and beliefs (I-MDP) ($\rho = 0.02$). Endorsements of the IPVSS and RSS scales each showed positive associations with C-MDP endorsement ($\rho = 0.34, 0.19$); neither stigma scale displayed significant correlation with endorsement of

I-MDP or SBA (IPVSS: $\rho = 0.01, 0.12$; RSS: $\rho = -0.03, 0.09$). The analysis also found a moderate positive association between level of disagreement with harmful gender norms and BCSI-IPVSS endorsement ($\rho = 0.47$). See Table 6.

Regarding psychosocial constructs, moderate, positive associations were found between BCSI-IPVSS endorsement and depression (CES-D) ($\rho = 0.36$), and positive associations detected with social anxiety (BFNE-S) ($\rho = 0.25$), general anxiety (GAD-7) ($\rho = 0.21$), and post-traumatic stress symptoms (PCL-C) ($\rho = 0.22$). Similarly, the analysis noted moderate-to-strong associations between IPVSS and RSS endorsements and depression ($\rho = 0.62, 0.53$), social anxiety ($\rho = 0.40, 0.30$), general anxiety ($0.37, 0.46$), and post-traumatic stress ($\rho = 0.50, 0.61$) (Table 6).

Analyses revealed some differences between the stigma scales and their associations with several psychosocial measures. Concerning self-esteem, a significant, negative association with IPVSS endorsement ($\rho = -0.23$) was observed, but not with BCSI-IPVSS or RSS endorsement ($\rho = -0.10, -0.03$). Results also suggested a weak but positive associations between RSS endorsement and the perceived number (SSQN) and satisfaction (SSQS) with social support ($\rho = 0.19, 0.14$); no associations with the two social support measures and endorsement of either IPVSS ($\rho = 0.11, 0.00$) or BCSI-IPVSS ($\rho = -0.04, 0.00$) were detected. See Table 6.

The analyses did not identify any significant associations between alcohol use disorder and any of the three stigma scales (Table 6).

Perceived stigma among non-reporters of IPV

The researchers also examined BCSI-IPVSS endorsement among participating non-reporters and looked for possible associations with gender norms and beliefs and measures of psychosocial health. Among non-reporters, BCSI-IPVSS endorsement positively correlated with subjective norms and beliefs about male dominance over partners (C-MDP) ($\rho = 0.46$) and survivor blaming attitudes (SBA) ($\rho = 0.25$). BCSI-IPVSS endorsement was also strongly associated with level of disagreement with harmful gender norms ($\rho = 0.52$). No association was found between the BCSI-IPVSS and personal endorsement of male dominance over their partners (I-MDP) ($\rho = 0.04$) (Table 6).

In terms of psychosocial constructs, the research team found endorsement of BCSI-IPVSS items by non-reporters positively correlated with symptoms of general anxiety ($\rho = 0.20$) and negatively associated with perceived number of social supports (SSQN) ($\rho = -0.19$). The team did not find BCSI-IPVSS significantly associated with any other psychosocial measures. See Table 6.

To assess the potential impact of missing data on our analysis of associated constructs, we compared estimates of association tested using pairwise deleted data with those derived from ten imputed datasets. We found no substantial differences in either the direction or statistical significance of associations tested. See Appendix 3 for details.

Discussion

This study presents the first scale developed to measure intersectional IPV stigma among women. Its initial findings provide promising support for it as a valid measure for perceived stigma among both survivors and non-reporters among sampled participants in Botswana. The BCSI-IPVSS integrates elements that draw out stigma to non-conformity to customary gender roles and norms consequential to leaving a violent relationship, to better capture the scope of culture-salient, intersectional IPV stigma common in Botswana and other sub-Saharan Africa countries.

This preliminary psychometric analysis demonstrates initial construct validity for BCSI-IPVSS when assessing intersectional IPV stigma among women in Botswana. In terms of its measurement of IPV-related stigma, the preliminary findings suggest strong concurrent validity with all sub-domains of two established measures of IPV stigma (A.i), and positive convergent validity with IPV experience measured through overall scale scores of both CAS and PMWI (B.i). Unlike IPVSS and RSS, BCSI-IPVSS endorsement was not associated with physical abuse or harassment experience measured through CAS subscales. This may reflect differences in item construction and foci between the stigma scales. BCSI-IPVSS items prompt endorsement using general statements of collective stigma stereotypes and prejudices framed in the third person, while both IPVSS and RSS scale items combine a mix of self-reflective (first person) and perceived stigma (third person) statements that include perpetrator stigma, enacted stigma, and discrimination that overlap with IPV experience [10, 41]. Both established stigma scales also include items referring to personal experience of enacted stigma. Several IPVSS items elicit enacted forms of perpetrator stigma and isolation originating from the abusive partner (e.g., IPVSS items: “My abuser monitored my activities” and “My abuser isolated me from family and friends”) that are closely related to abusive partner behaviors (e.g. CAS items: “Followed me physically” and “Hung around outside my house”). Similarities between IPVSS (e.g., “I felt like I deserved it”) and Rosenberg’s self-esteem scale items (e.g. “All in all, I am inclined to feel that I am a failure”) may also explain the negative association exclusively between IPVSS and self-esteem endorsement that was inconsistent with the divergent validity result hypothesized (J.i.).

Although this finding suggests insensitivity to some types of IPV experience, BCSI-IPVSS still showed convergence with all sub-domains of both established IPV stigma scales when administered with survivors. Furthermore, the third person voicing of BCSI-IPVSS scale items enables its administration with participants who have not experienced IPV to elicit perceived stigma.

This study found good positive convergence between BCSI-IPVSS and endorsing harmful gender norms perceived in the community (C-MDP) and survivor blaming attitudes (SBA) among all participants (C.i, C.ii.), and this appears independent of personal beliefs of those harmful gender norms (I-MDP) (D.i., D.ii.). Finding convergent validity among non-reporters is consistent with a hypothesis that the BCSI-IPVSS also measures forms of stigma towards survivors independent of (reported) IPV experience, including towards those perceived to not conform with customary gender roles and norms.

BCSI-IPVSS endorsement also strongly converged with personal disagreement with harmful gender norms among all women (E.i., E.ii.). Taken as a proxy to non-conformity with gender roles and norms

salient in respondent communities, this finding is consistent with our assertion that BCSI-IPVSS measures forms of stigma independent of IPV experience.

Survivor blaming attitudes (SBA) did not appear significantly associated with either IPVSS or RSS, suggesting divergent validity between SBA and both IPVSS and RSS.

As with IPVSS and RSS, the BCSI-IPVSS endorsement positively converged with quantified symptoms of social anxiety (F.i.), post-traumatic stress (H.i), and depression (I.i.) among only survivors, and not among non-reporters (F.ii., H.ii., I.ii.). These findings are consistent with those reported by Crowe et al. [10] and Flicker et al. [83] for depression, and Dardis et al. [84], Flicker et al. [83], and DePrince et al. [66] for post-traumatic stress. Our finding that social anxiety symptoms converge with IPV stigma endorsement only among survivors aligns well with those of Orchowski et al. [65], who found anxiety greater among participants who faced negative social reactions through uncontrolled disclosure of their survivorship.

Endorsement of each of the three stigma scales also converged with symptoms of general anxiety among survivors (G.i). However, this study observed the association between BCSI-IPVSS endorsement and symptoms of generalized anxiety was of comparable strength regardless of whether or not the participant reported IPV ($p = 0.206$ among survivors, vs. $p = 0.202$ among non-reporters) (G.ii.), suggesting the aspects of stigma elicited by the BCSI-IPVSS that converged with generalized anxiety may not be IPV-related but instead related to stigma to non-conformity to gender roles and norms. For all women who endorse survivor stigmatizing statements that negatively judge women for not achieving these core capabilities, symptoms of generalized anxiety may reflect a psychological burden of having to personally live up or conform with the culture-salient expectations for women that they have judged IPV survivors against. Links between symptoms of generalized anxiety and forms of gender discrimination like non-conformity to gender norms have been reported elsewhere by Kira et al. [85]. Further investigation is needed.

Among survivors, the average number of social support respondents could seek help from (SSQN) appeared positively associated with rape stigma (RSS). This contrasts attenuated associations observed with BCSI-IPVSS and IPVSS (K.i.) and previous findings reported by Jewkes et al. [41] when social support was estimated using a different instrument. Further analysis found convergence particularly with the external stigma subscale of RSS and suggests quantified social support may indicate vulnerability or risk exposure to the forms of external stigma indicated by the RSS. That is, those respondents who named fewer social supports may also be less vulnerable to experiencing social isolation or criticism from people they counted as part of their social support network. In contrast, among non-reporters, BCSI-IPVSS was negatively associated with the mean number of social supports implying that among women who had not reported IPV, those who named fewer social supports were more likely to hold stigmatizing attitudes towards survivors compared with those who named more supports. It may be that, for participating women who have not experienced IPV, social networks offer

greater exposure to empathetic perspectives of IPV survivors – some of their supports may themselves be friends who are abuse survivors. Further investigation is needed.

In this study, the BCSI-IPVSS integrates elements that draw out stigma to non-conformity to customary gender roles and norms that survivors defy when leaving a violent relationship. The survivor identity is sanctioned for not being able to maintain her marital relationship (i.e. divorce stigma), maintain her male-partner-inclusive family (i.e. fragmented family stigma), the ideal conditions to care for her children (i.e. bad mother stigma), or that she betrayed distorted obligations implied by her family's exchange of bride price. This study developed BCSI-IPVSS items using the WMM approach to locate key stigma experiences for common, prominent identities shaped by culture to construct scale items (see Appendix 1). This approach is one of only a few that *simultaneously measure stigma to multiple intersecting identities within each item* [33, 40]. This contrasts scale development approaches that derive intersectional stigma scales by assembling items drawn from several scales of individual component stigmatized identities (e.g., Atkins et al. [86] scale for intersectional stigma among female sex workers in Namibia), geometric approaches [87], or non-attributional stigma scales (e.g., Intersectional Discrimination Index [88]). Such scales require less time to develop [86], but in adopting location-agnostic scale items, may under-elicit stigma that might arise or be exacerbated by local, salient cultural beliefs and practices [89].

Limitations and recommendations

The researchers recognize several limitations of our study. The research team undertook a variety of non-probability sampling strategies to identify both survivor and non-reporter participants from both urban and peri-urban areas, and these varied across each of the four locations sampled. Scale development and preliminary validation activities, including frequencies and percentages, are limited to social, cultural and geographic constraints of the samples. As the samples are not designed to be representative of Botswana women, findings should be interpreted carefully.

This study sought to develop and test a tool to measure perceived stigma among survivors of IPV. Although IPV survivors who perceive stigma may also experience anticipated and internalized stigma, BCSI-IPVSS items are not constructed in a manner to distinguish respondents' personal experience from perceived stigma [90]. Sampling included those who identified themselves as 'women' and our analysis presumed all participants had been socialized to be a woman through experiences shaped by prevailing heteronormative gender norms and expectations common in their communities. Due to this design limitation, the BCSI-IPVSS may not perform as well among gender and sexual minorities.

The study implemented numerous strategies to encourage women to disclose any prior IPV experience, however it is possible that a small number of IPV survivors were misclassified and analyzed as non-reporters. Although we do not expect this misclassification to alter findings among IPV survivors, it may result in underestimates of the true difference between IPV survivors and non-reporters, and remotely increase the chances that results found among IPV survivors are also observed among non-reporters.

We had planned to investigate score consistency over time however a majority of follow up interviews to readminister the BCSI-IPVSS occurred more than 14 days after first administration. We recommend future studies assess response stability over time.

The researchers assessed concurrent validity against the IPVSS and RSS. Although studies have shown both scales valid for use in other settings, neither of the scales had been validated for use in Botswana.

Several scale items refer to gender ideals, values, and beliefs and how women should be treated and conduct themselves (gender ideology). Such scale items also refer to social discounting (e.g. “judge negatively”, “consider a failure”, “take less seriously”) and their endorsement reflects both stigma towards women IPV survivors together with belief that a particular gender norm is commonly held among others like them. This study had sampled IPV non-reporters and known-groups design to test if the BCSI-IPVSS could measure stigma unique to IPV survivorship. In a future study, analyses of responses obtained from a sample of men who are less adversely affected by gender roles and norms, could provide further clarity.

This analysis did not assess measurement invariance between sub-groups and recommend future studies involving national samples that are geographically representative and of urban and rural localities. This validation study assessed monotonic correlations of BCSI-IPVSS with mental health indicators. Mental health may be affected through more complex relationships.

Despite these limitations, BCSI-IPVSS offers a local, culturally-attuned instrument to further understand how IPV stigma affects survivors that can be used to monitor stigma mitigation interventions as done for other conditions [91]. The scale can also be used for further examination of direct associations with mental health outcomes or even the interaction of IPV stigma on other factors associated with mental health outcomes (e.g. IPV severity on depression and post-traumatic stress [92]). The researchers recommend further analysis using structural equation modelling to test these associations.

Conclusions

In conclusion, the BCSI-IPVSS shows initial and robust validity for measuring both perceived and public intersectional IPV stigma among participating women. It holds promise as useful tool for assessing intersectional IPV stigma among women with comparable socio-cultural profiles in Botswana and other sub-Saharan African countries.

Abbreviations

AUDIT

Alcohol Use Disorders Identification Test

BCSI-IPVSS

Botswana Culture-Salient Intersectional IPV stigma scale

BFNE-II

Brief Fear and Negative Evaluation Scale II

C-MDP

Community norms about male dominance of partners

CAS

Composite Abuse Scale

CES-D

Centre for Epidemiologic Studies Depression Scale

CFA

Confirmatory Factor Analysis

CFI

Comparative Fit Index

EFA

Exploratory Factor Analysis

GAD-7

Generalized Anxiety Disorder scale

HIV

Human Immuno-deficiency Virus

HSDF

Health Stigma and Discrimination Framework

I-MDP

Individual beliefs about male dominance of partners

IPV

Intimate Partner Violence

IPVSS

Intimate Partner Violence Stigma Scale

MAP

Minimum Average Partial Correlation

PCL-C

Abbreviated PTSD Checklist

PMWI

Psychological Maltreatment of Women Inventory

RMSEA

Root Mean Square Error of Approximation

RSS

Rape Stigma Scale

SBA

Survivor Blaming Attitudes

SSQN

Social Support Questionnaire – Number

SSQS

Social Support Questionnaire – Satisfaction

TLI

Tucker-Lewis Index

WHO

World Health Organization

WMM

What Matters Most

Declarations

Ethical Approval and consent to participate

All procedures of this study were carried out in accordance with ethical standards of the World Medical Association Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Participants, including the 1964 Helsinki Declaration and its later amendments [93]. We obtained approval to conduct the study from the Government of Botswana (MYSC 9/1/1), and the ethics committees of the University of Botswana (UBR/RES/IRB/BIO/342) and the University of Witwatersrand, Johannesburg (M230227 MED23-01-053).

All respondents provided informed consent to participate in the study. All participants granted permission for the researchers to report only non-identifiable information they provided. All interviews were carried out exclusively by trained female researchers who adhered to established safety protocols for violence research, including privacy, confidentiality, and participant safety [94].

Consent for Publication

Not applicable

Availability of data and materials

The data are not publicly available due to reasons of confidentiality as release of the information could compromise the privacy of research participants. Some data may be made available by the corresponding author upon reasonable request.

Competing Interests

The authors declare no competing interests relevant to the content presented in this paper.

Funding

Research reported in this manuscript was funded by the Sexual Violence Research Initiative, a global research initiative. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the SVRI.

Authors' Contributions

Conceptualization: AH, MTM, NC; Methodology: AH, MTM, NC; Formal analysis and investigation: AH, MTM, NC; Writing - original draft preparation: AH; Writing - review and editing: All Authors; Funding acquisition: AH, LRM, Project administration: AH, LRM; Resources: AH, LRM; Supervision: MTM, NC, LHY. AH - Ari Ho-Foster, MTM – Mercilene Tanyaradzwa Machisa, NC - Nicola Christofides, LRM – Lorato Ruth Moalusi, LHY - Lawrence Hsin Yang.

Acknowledgements

This study would not have been possible without the 400 women who agreed to participate and share their experiences. To each of them, the study team expresses its deepest gratitude. Finally, the authors offer a very special thanks to Kemoyamodimo Gabajesane, Onalethata Netu, Tapiwa Offer, and Molly Ramme for their diligence and persistence in interviewing participants. The authors sincerely thank Tebogo Moatshe for his study coordination and Kelemogile Garelebane and Magdeline Mhatasediba for their research assistance support to data quality.

Authors' information

Authors and affiliations

Faculty of Medicine, University of Botswana, Gaborone, Botswana

Ari Ho-Foster

School of Public Health, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, Gauteng, South Africa

Ari Ho-Foster, Mercilene Tanyaradzwa Machisa, Nicola Christofides

Gender and Health Research Unit, South African Medical Research Council, Johannesburg, Gauteng, South Africa

Mercilene Tanyaradzwa Machisa

School of Nursing and Public Health, College of Health Sciences, Howard College Campus, University of KwaZulu Natal, Durban, South Africa

Mercilene Tanyaradzwa Machisa

Botswana Gender Based Violence Prevention and Support Centre, Gaborone, Botswana

Lorato Ruth Moalusi

Duke University School of Nursing, Durham, NC, USA

References

1. Garcia-Moreno C, Jansen H, Ellsberg M, Heise L, Watts C (2005) WHO multi-country study on women's health and domestic violence against women: initial results on prevalence, health outcomes and women's responses, vol 204. World Health Organization, Geneva
2. Oram S, Fisher HL, Minnis H, Seedat S, Walby S, Hegarty K, Rouf K, Angénieux C, Callard F, Chandra PS et al (2022) The Lancet Psychiatry Commission on intimate partner violence and mental health: advancing mental health services, research, and policy. *Lancet Psychiatry* 9(6):487–524
3. Chiramba K, Musariri L, Rasesigo G (2017) Botswana Relationship Study. Ministry of Nationality, Immigration and Gender Affairs, Gaborone, Botswana
4. Machisa M, van Dorp, R Gender Based Violence Indicators Study Botswana, Gaborone (2012) Botswana: GL Botswana/Ministry of Labour and Home Affairs, Women's Affairs Department
5. Palermo T, Bleck J, Peterman A (2013) Tip of the Iceberg: Reporting and Gender-Based Violence in Developing Countries. *Am J Epidemiol* 179(5):602–612
6. Crowe A, Murray CE (2015) Stigma From Professional Helpers Toward Survivors of Intimate Partner Violence. *Partn Abuse* 6(2):157–179
7. McCleary-Sills J, Namy S, Nyoni J, Rweyemamu D, Salvatory A, Steven E (2016) Stigma, shame and women's limited agency in help-seeking for intimate partner violence. *Glob Public Health* 11(1–2):224–235
8. Willan S, Machisa M, Mahlangu P, Khoza Z, Zembe A, Mbowane V, Paile C, Pass D, Jewkes R (2025) Intimate partner violence, stigma, shame self-blame and survivor realities: A qualitative study from Fediša Modikologo in South Africa. *SSM - Mental Health* 8:100571
9. Ho-Foster A, Machisa MT, Moalusi LR, Christofides N (2025) Gender beliefs and norms underlying intimate partner violence stigma among women living in Botswana: Results of an exploratory factor analysis. *PLOS Global Public Health* 5(2):e0004113
10. Crowe A, Overstreet NM, Murray CE (2019) The Intimate Partner Violence Stigma Scale: Initial Development and Validation. *J Interpers Violence*
11. Brunton R, Harris KM (2023) Development and Psychometric Evaluation of the IPV Internalized Stigma Scale. *J Interpers Violence* 38(15–16):9590–9608
12. Goffman E (1963) *Stigma: Notes on the management of spoiled identity*. Englewood Cliffs, New Jersey, USA: Prentice-Hall Inc;
13. Link BG, Phelan JC (2001) Conceptualizing stigma. *Ann Rev Sociol* 27(1):363–385
14. Link BG, Phelan J (2014) Stigma power. *Soc Sci Med* 103:24–32

15. Stangl AL, Earnshaw VA, Logie CH, van Brakel W, Simbayi C, Barré L, Dovidio I (2019) The Health Stigma and Discrimination Framework: a global, crosscutting framework to inform research, intervention development, and policy on health-related stigmas. *BMC Med* 17(1):31
16. Corrigan PW, Watson AC (2002) The paradox of self-stigma and mental illness. *Clin Psychol* 9(1):35–53
17. Willan S, Shai N, Majola T, Mabhida M, Mngadi S, Gounden T, Jewkes R, Abrahams N, Machisa M (2024) South African rape survivors' expressions of shame, self-blame and internalized-stigma. *SSM - Mental Health* 5:100310
18. Murray CE, Crowe A, Overstreet NM (2018) Sources and Components of Stigma Experienced by Survivors of Intimate Partner Violence. *J Interpers Violence* 33(3):515–536
19. Murvartian L, Saavedra-Macías FJ, Infanti JJ (2023) Public stigma toward women victims of intimate partner violence: A systematic review. *Aggress Violent Beh* 73:101877
20. World Bank (2025) Botswana: Trends and Opportunities to Advance Gender Equality. World Bank Economic & Sector Work: Women in Development and Gender Study. World Bank, Washington, DC, USA, p 108
21. (CEDAW) CotEoD, Women a: CEDAW Concluding observations on the fifth periodic report of Botswana. In. Edited by Discrimination UNCotEo, Women a: United Nations; (2025)
22. Ellece SE (2011) Be a fool like me: Gender construction in the marriage advice ceremony in Botswana – a critical discourse analysis. *Agenda* 25(1):43–52
23. Ngwako IS (2020) The Process of Customary Marriage in Botswana, vol 1. Impression House, vol. 1. Gaborone, Botswana
24. Ngwako IS (2022) The Process of Customary Marriage in Botswana, Volume 2, vol 2. Souvenir - The Word Philtre, Gaborone, Botswana
25. Solway J (2023) Single in Botswana. In: *Opting Out: Women Messing with Marriage Around the World*. edn. Edited by Davidson J, Hannaford D. New Brunswick, NJ, USA: Rutgers University Press; : 42–56
26. Malinga T, Modie-Moroka T (2023) Lived Experiences of Low-Income Unmarried Women in Rural Botswana: A Narrative Approach. *Global Social Welf* 10(2):153–165
27. Kgadima NP, Leburu GE (2023) Attitude Toward Lobola in Remarriage Following Divorce in African Communities. *Fudan J Humanit Social Sci* 16(1):89–103
28. Moloko-Phiri SS, Mulaudzi FM, Heyns T (2016) Women Abuse under the Guise of Culture and Language Use: Women Narrate their Stories. *Orient Anthropol* 16(2):245–259
29. Faimau G (2025) Trends Of Religious Affiliation and Demographics In Botswana. Botswana Population and Housing Census 2022 Analytical Report Volume 1 Demographic and Social Characteristics, Registration, Youth and Elderly, Education, vol 1. Statistics Botswana, Gaborone, Botswana, pp 101–115
30. Moeti B, Gaotlhobogwe M, Moeti L, Madigele TJ (2024) Experiences of divorced people in Pentecostal churches in Botswana. *Afr J Pentecostal Stud* 1(1):18

31. Bowleg L (2012) The problem with the phrase women and minorities: intersectionality-an important theoretical framework for public health. *Am J Public Health* 102(7):1267–1273
32. Crenshaw K (1991) Mapping the Margins: Intersectionality, Identity Politics, and Violence against Women of Color. *Stanford Law Rev* 43(6):1241–1299
33. Karver TS, Atkins K, Fonner VA, Rodriguez-Diaz CE, Sweat MD, Taggart T, Yeh PT, Kennedy CE, Kerrigan D (2022) HIV-Related Intersectional Stigma and Discrimination Measurement: State of the Science. *Am J Public Health* 112(S4):S420–s432
34. Sievwright KM, Stangl AL, Nyblade L, Lippman SA, Logie CH, Veras MAdSM, Zamudio-Haas S, Poteat T, Rao D, Pachankis JE et al (2022) An Expanded Definition of Intersectional Stigma for Public Health Research and Praxis. *Am J Public Health* 112(S4):S356–S361
35. Turan JM, Elafros MA, Logie CH, Banik S, Turan B, Crockett KB, Pescosolido B, Murray SM (2019) Challenges and opportunities in examining and addressing intersectional stigma and health. *BMC Med* 17(1):7
36. Mookodi G (2004) The dynamics of domestic violence against women in Botswana. Pula: Botsw J Afr Stud 18(1)
37. Yang LH, Kleinman A, Link BG, Phelan JC, Lee S, Good B (2007) Culture and stigma: Adding moral experience to stigma theory. *Soc Sci Med* 64(7):1524–1535
38. Yang LH, Chen F-P, Sia KJ, Lam J, Lam K, Ngo H, Lee S, Kleinman A, Good B (2014) What matters most: A cultural mechanism moderating structural vulnerability and moral experience of mental illness stigma. *Soc Sci Med* 103:84–93
39. Yang LH, Thornicroft G, Alvarado R, Vega E, Link BG (2014) Recent advances in cross-cultural measurement in psychiatric epidemiology: Utilizing 'what matters most' to identify culture-specific aspects of stigma. *Int J Epidemiol* 43(2):494–510
40. Earnshaw VA, Jonathon Rendina H, Bauer GR, Bonett S, Bowleg L, Carter J, English D, Friedman MR, Hatzenbuehler ML, Johnson MO et al (2022) Methods in HIV-Related Intersectional Stigma Research: Core Elements and Opportunities. *Am J Public Health* 112(S4):S413–s419
41. Jewkes R, Mhlongo S, Chirwa E, Seedat S, Myers B, Peer N, Garcia-Moreno C, Dunkle K, Abrahams N (2022) Pathways to and factors associated with rape stigma experienced by rape survivors in South Africa: Analysis of baseline data from a rape cohort. *Clin Psychol Psychother* 29(1):328–338
42. Link BG (1987) Perceived Devaluation-Discrimination Scale. In. APA PsycTests Database: APA PsycTests
43. Link BG (1987) Understanding Labeling Effects in the Area of Mental Disorders: An Assessment of the Effects of Expectations of Rejection. *Am Sociol Rev* 52(1):96–112
44. Yang LH, Ho-Foster AR, Becker TD, Misra S, Rampa S, Poku OB, Entaile P, Goodman M, Blank MB (2020) Psychometric Validation of a Scale to Assess Culturally-Salient Aspects of HIV Stigma Among Women Living with HIV in Botswana: Engaging What Matters Most to Resist Stigma. *AIDS Behav* 25:459–474

45. Yang LH, Poku OB, Misra S, Mehta HT, Rampa S, Eisenberg MM, Yang LS, Cao TXD, Blank LI, Becker TD et al (2021) Stigma, Structural Vulnerability, and What Matters Most Among Women Living With HIV in Botswana, 2017. *American Journal of Public Health* 0(0):e1–e9
46. Rankopo JM, Diraditsile K (2020) The interface between Botho and social work practice in Botswana: Towards Afrocentric models. *Afr J Social Work* 10(1):1–4
47. Brown JB, Lent B, Brett PJ, Sas G, Pederson LL (1996) Development of the Woman Abuse Screening Tool for use in family practice. *Fam Med* 28(6):422–428
48. World Health Organization (2023) Checklist for ensuring the quality of violence against women surveys. World Health Organization, Geneva
49. Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, Conde JG (2009) Research electronic data capture (REDCap)—a metadata-driven methodology and workflow process for providing translational research informatics support. *J Biomed Inf* 42(2):377–381
50. Carleton RN, Collimore KC, Asmundson GJ (2007) Social anxiety and fear of negative evaluation: construct validity of the BFNE-II. *J Anxiety Disord* 21(1):131–141
51. Carleton RN, Collimore KC, McCabe RE, Antony MM (2011) Addressing revisions to the Brief Fear of Negative Evaluation scale: measuring fear of negative evaluation across anxiety and mood disorders. *J Anxiety Disord* 25(6):822–828
52. Radloff LS (1977) The CES-D Scale: A Self-Report Depression Scale for Research in the General Population. *Appl Psychol Meas* 1(3):385–401
53. Spitzer RL, Kroenke K, Williams JBW, Löwe B (2006) A Brief Measure for Assessing Generalized Anxiety Disorder: The GAD-7. *Arch Intern Med* 166(10):1092–1097
54. Lang AJ, Stein MB (2005) An abbreviated PTSD checklist for use as a screening instrument in primary care. *Behav Res Ther* 43(5):585–594
55. Rosenberg M (1965) *Society and the adolescent self-image*. Princeton University, Princeton, NJ
56. Sarason IG, Sarason BR, Shearin EN, Pierce GR (1987) A Brief Measure of Social Support: Practical and Theoretical Implications. *J Social Personal Relationships* 4(4):497–510
57. Sarason IG, Levine HM, Basham RB, Sarason BR (1983) Assessing social support: The Social Support Questionnaire. *J Personal Soc Psychol* 44(1):127–139
58. Babor T, FdIF JR, Saunders J, Grant M (1992) AUDIT. The Alcohol Use Disorders Identification Test. Guidelines for use in primary health care. World Health Organization, In. Geneva, Switzerland, p 41
59. Hegarty K, Bush R, Sheehan M The Composite Abuse Scale: Further Development and Assessment of Reliability and Validity of a Multidimensional Partner Abuse Measure in Clinical Settings. *Violence Vict* 2005(5):529–547
60. Hegarty K, Sheehan M, Schonfeld C (1999) A Multidimensional Definition of Partner Abuse: Development and Preliminary Validation of the Composite Abuse Scale. *J Family Violence* 14(4):399–415

61. Tolman RM (1999) The Validation of the Psychological Maltreatment of Women Inventory. *Violence Vict* 14(1):25–37
62. Corrigan PW, Rao D (2012) On the self-stigma of mental illness: stages, disclosure, and strategies for change. *Can J Psychiatry* 57(8):464–469
63. Turan B, Budhwani H, Fazeli PL, Browning WR, Raper JL, Mugavero MJ, Turan JM (2017) How does stigma affect people living with HIV? The mediating roles of internalized and anticipated HIV stigma in the effects of perceived community stigma on health and psychosocial outcomes. *AIDS Behav* 21(1):283–291
64. Farmer HF, Byrne JEM, Mussap AJ (2025) The Role of Gender and Sexuality in the Experience, Internalization, and Mental Health Correlates of Sexual Victimization Stigma. *J Interpers Violence* 40(1–2):279–307
65. Orchowski LM, Untied AS, Gidycz CA (2013) Social Reactions to Disclosure of Sexual Victimization and Adjustment Among Survivors of Sexual Assault. *J Interpers Violence* 28(10):2005–2023
66. DePrince AP, Welton-Mitchell C, Srinivas T (2014) Longitudinal Predictors of Women's Experiences of Social Reactions Following Intimate Partner Abuse. *J Interpers Violence* 29(13):2509–2523
67. Orth U, Robins RW (2013) Understanding the Link Between Low Self-Esteem and Depression. *Curr Dir Psychol Sci* 22(6):455–460
68. Bartlett MS (1951) THE EFFECT OF STANDARDIZATION ON A χ^2 APPROXIMATION IN FACTOR ANALYSIS. *Biometrika* 38(3–4):337–344
69. Kaiser HF, Rice J (1974) Little Jiffy, Mark Iv. *Educ Psychol Meas* 34(1):111–117
70. Velicer WF (1976) Determining the number of components from the matrix of partial correlations. *Psychometrika* 41(3):321–327
71. Stephen S (2002) MINAP: Stata module to calculate minimum average partial correlation for principal components. In., S429601 edn: Boston College Department of Economics
72. Muthén B, du Toit S, Spisic D (1997) Robust inference using weighted least squares and quadratic estimating equations in latent variable modeling with categorical and continuous outcomes. Technical report. In.: UCLA
73. Park CG (2023) Implementing alternative estimation methods to test the construct validity of Likert-scale instruments. *Korean J Women Health Nurs* 29(2):85–90
74. Browne MW, Cudeck R (1992) Alternative ways of assessing model fit. *Sociol methods Res* 21(2):230–258
75. Hu L-t, Bentler PM (1998) Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychol Methods* 3(4):424
76. Bentler PM (1990) Comparative fit indexes in structural models. *Psychol Bull* 107(2):238–246
77. Bentler PM, Bonett DG (1980) Significance tests and goodness of fit in the analysis of covariance structures. *Psychol Bull* 88(3):588

78. Awang Z (2015) SEM made simple: A gentle approach to learning Structural Equation Modeling. MPWS Rich Publication, Bangi Selangor, Malaysia
79. Zumbo BD, Gadermann AM, Zeisser C (2007) : Ordinal versions of coefficients alpha and theta for Likert rating scales. *Journal of Modern Applied Statistical Methods* 2007, 6(1):21–29
80. McDonald RP (1999) Test Theory: A Unified Treatment, 1st edn. Psychology, New York
81. StataCorp (2025) Stata Statistical Software: Release 19. In. College Station. StataCorp LLC, TX
82. Muthén LK, Muthén BO (2026) Mplus. Version 9.1. In. Los Angeles. Muthén & Muthén, CA
83. Flicker SM, Cerulli C, Swogger MT, Talbot NL (2012) Depressive and Posttraumatic Symptoms Among Women Seeking Protection Orders Against Intimate Partners: Relations to Coping Strategies and Perceived Responses to Abuse Disclosure. *Violence Against Women* 18(4):420–436
84. Dardis CM, Davin KR, Lietzau SB, Gidycz CA (2021) Disclosing Unwanted Pursuit Victimization: Indirect Effects of Negative Reactions on PTSD Symptomatology Among Undergraduate Women. *J Interpers Violence* 36(21–22):10431–10453
85. Kira IA, Omidy AZ, Fawzi M, Rice KG, Fawzi M, Lewandowski L, Bujold-Bugeaud M (2015) Are the negative mental health effects of gender discrimination (GD) salient across cultures? Does self-esteem mediate these effects: GD as a continuous traumatic stress and the pathways to its negative dynamics? *Psychology* 6(1):93
86. Atkins K, Saleem HT, Stangl AL, Baral SD, Eakle R, Mali D, Bikinesi L, Ashipala L, Reed JB, Murray SM (2025) Quantifying intersectional stigma in HIV prevention contexts: adaptation and validation of a scale among female sex workers in Namibia. *BMC Public Health* 25(1):4373
87. Kalichman SC, Shkembi B, Eaton LA (2022) Finding the right angle: a geometric approach to measuring intersectional HIV stigma. *AIDS Behav* 26(Suppl 1):27–38
88. Scheim AI, Bauer GR (2019) The Intersectional Discrimination Index: Development and validation of measures of self-reported enacted and anticipated discrimination for intercategory analysis. *Soc Sci Med* 226:225–235
89. Eschliman EL, Liu Y, Rahmah AA, Philip B, Hoang DT, Kokaze H, Khoshnam N, Dunkel E, Ye VR, Choe K et al Development and psychometric properties of three scales employing what matters most to assess cultural aspects of intersectional HIV-related and cancer stigma among people living with HIV in Hanoi, Vietnam. *AIDS Care* 2025:1–17
90. Corrigan P (2004) How stigma interferes with mental health care. *Am Psychol* 59(7):614
91. Yang LH, Eschliman EL, Mehta H, Misra S, Poku OB, Entaile P, Becker TD, Melese T, Brooks MJ, Eisenberg M et al (2022) A pilot pragmatic trial of a what matters most-based intervention targeting intersectional stigma related to being pregnant and living with HIV in Botswana. *AIDS Res Therapy* 19(1):26
92. Woerner J, Wyatt J, Sullivan TP (2019) If You Can't Say Something Nice: A Latent Profile Analysis of Social Reactions to Intimate Partner Violence Disclosure and Associations With Mental Health Symptoms. *Violence Against Women* 25(10):1243–1261

93. World Medical Association (2025) World Medical Association Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Participants. JAMA 333(1):71–74
94. World Health Organization (2001) Putting women first: Ethical and Safety Recommendations for Research on Domestic Violence Against Women. Geneva, Switzerland

Tables

Tables 1 to 6 are available in the supplementary files section

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- [Table1.xlsx](#)
- [Table2.xlsx](#)
- [Table3.xlsx](#)
- [Table4.xlsx](#)
- [Table5.xlsx](#)
- [Table6.xlsx](#)
- [SupplementaryMaterial.docx](#)
- [SupplementaryMaterial1.docx](#)
- [SupplementaryMaterial3.docx](#)
- [SupplementaryMaterial2.docx](#)