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Criminal psychology perspectives on sexual and gender-based violence and their impact on reproductive health outcomes in China

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Abstract

This study explores sexual and gender-based violence (SGBV) through a criminal psychology lens, focusing on its effects on reproductive health outcomes among 342 women in urban and semi-urban areas of China. Employing a quantitative cross-sectional approach and structural equation modeling, it examines the direct, indirect, and moderating relationships between SGBV, psychological trauma, cognitive acceptance of violence, and reproductive health outcomes. The findings reveal a significant association between SGBV and negative reproductive health consequences, such as unintended pregnancies, delayed prenatal care, and repeated induced abortions. Psychological trauma emerges as a partial mediator, highlighting emotional distress as a critical factor connecting exposure to violence with reproductive vulnerabilities. Additionally, cognitive acceptance of violence moderates the relationship between exposure to violence and trauma, with higher acceptance amplifying the effects of trauma. The model accounts for a substantial portion of the variance in both trauma and health outcomes. These results underline the importance of integrating criminal psychological frameworks into reproductive health initiatives and violence prevention strategies. Tackling both trauma and cultural norms surrounding violence, alongside legal and medical interventions, is essential to mitigate the reproductive health risks associated with SGBV among women in China. *(Afr J Reprod Health 2026; 30 [9s]: 36-47).*

Keywords: Sexual and gender based violence, Criminal psychology, Psychological trauma, Reproductive health outcomes, Women health, China

Résumé

Cette étude examine les violences sexuelles et basées sur le genre (SGBV) sous l'angle de la psychologie criminelle, en se concentrant sur leurs effets sur les résultats de santé reproductive chez 342 femmes dans des zones urbaines et semi-urbaines de Chine. En utilisant une approche quantitative transversale et une modélisation par équations structurelles, elle examine les relations directes, indirectes et modératrices entre les SGBV, le traumatisme psychologique, l'acceptation cognitive de la violence et les résultats de santé reproductive. Les résultats révèlent une association significative entre les SGBV et des conséquences négatives sur la santé reproductive, telles que des grossesses non désirées, des soins prénatals retardés et des avortements provoqués répétés. Le traumatisme psychologique apparaît comme un médiateur partiel, soulignant que la détresse émotionnelle est un facteur crucial liant l'exposition à la violence aux vulnérabilités reproductives. De plus, l'acceptation cognitive de la violence modère la relation entre l'exposition à la violence et le traumatisme, une acceptation plus élevée amplifiant les effets du traumatisme. Le modèle explique une part substantielle de la variance dans les traumatismes et les résultats de santé. Ces résultats soulignent l'importance d'intégrer les cadres de la psychologie criminelle dans les initiatives de santé reproductive et les stratégies de prévention de la violence. Traiter à la fois les traumatismes et les normes culturelles entourant la violence, parallèlement aux interventions juridiques et médicales, est essentiel pour atténuer les risques pour la santé reproductive associés aux SGBV chez les femmes en Chine. *(Afr J Reprod Health 2026; 30 [9s]: 36-47).*

Mots-clés: Violences sexuelles et basées sur le genre, Psychologie criminelle, Traumatisme psychologique, Résultats de santé reproductive, Santé des femmes, Chine

Introduction

Sexual and gender-based violence constitutes a major public health and criminological concern worldwide due to its profound psychological social and physiological consequences. In China sexual and gender-based violence remains a sensitive and underreported phenomenon shaped by cultural norms power relations and structural inequalities. Criminal psychology provides an important lens for understanding the behavioral motivations cognitive distortions and social conditions that contribute to perpetration and victimization. From this perspective sexual and gender-based violence is not

only a criminal act but also a psychological process that produces long term harm to victim's health and wellbeing[1,2].

A growing body of evidence indicates that exposure to sexual and gender-based violence is closely linked to adverse reproductive health outcomes. Studies conducted in China have documented associations between intimate partner violence and unintended pregnancy induced abortion preterm birth and poor maternal mental health[3,4]. Victims of violence often experience reduced autonomy impaired decision making capacity and fear based compliance which directly affect contraceptive use sexual negotiation and healthcare seeking behavior. These patterns align with criminal psychology theories that emphasize coercive control learned helplessness and trauma driven risk behavior[5,6].

Reproductive health consequences of sexual and gender-based violence are further compounded by psychological trauma including anxiety depression and post-traumatic stress symptoms. Empirical research among pregnant women and women seeking abortion services in China shows that exposure to violence significantly increases the risk of prenatal anxiety perinatal depression and suicidal ideation[7]. These psychological outcomes can disrupt hormonal regulation immune functioning and prenatal care adherence thereby increasing risks for both maternal and infant health. From a criminal psychology perspective trauma alters cognitive appraisal emotional regulation and threat perception which may lead to repeated exposure to abuse and continued reproductive health vulnerability[8].

Certain populations in China experience heightened exposure to sexual and gender-based violence and reproductive health risks. Female sex workers sexual minority women and adolescents face elevated levels of coercion exploitation and technology facilitated sexual violence[9,10]. Research indicates that client perpetrated violence and intimate partner abuse among these groups are associated with inconsistent condom use higher rates of sexually transmitted infections and repeated unintended pregnancies [7, 8]. These findings underscore the interaction between structural vulnerability criminal victimization and reproductive health outcomes.

Despite increasing empirical evidence on violence and health outcomes existing research in China often treats sexual and gender-based violence as a public health issue without sufficient integration of criminal psychology perspectives. Limited attention has been given to how cognitive normalization of violence rape myth acceptance and internalized gender norms influence reproductive decision making and health behaviors[9]. Understanding these psychological mechanisms is essential for developing effective prevention intervention and policy responses that address both criminal behavior and health consequences.

This study addresses this gap by examining sexual and gender-based violence through a criminal psychology framework and assessing its impact on reproductive health outcomes in China. By synthesizing psychological behavioral and health related dimensions the study aims to contribute to a more integrated understanding of how violence shapes reproductive health risks. The findings are expected to inform evidence-based policies and interventions that bridge criminal justice public health and reproductive healthcare systems.

Literature review

Criminal psychology perspectives on sexual and gender based violence

Criminal psychology conceptualizes sexual and gender-based violence as a product of individual cognitive distortions emotional dysregulation and social learning processes. Theories such as social learning theory and cognitive behavioral models suggest that violent behaviors are learned through observation normalization and reinforcement within family and social environments. In the Chinese context acceptance of intimate partner violence and rape myth endorsement have been empirically documented and are associated with gender norms that legitimize male dominance and female submissiveness[10,11]. These psychological mechanisms contribute to both perpetration and victim compliance.

Trauma theory further explains how repeated exposure to violence alters victim's cognitive appraisal emotional regulation and risk perception. Childhood sexual abuse and adolescent victimization have been shown to increase vulnerability to later victimization depression and maladaptive coping behaviors among Chinese women[12]. Criminal psychology research highlights that trauma induced cognitive patterns such as learned helplessness self-blame and fear-based compliance reduce victims' ability to resist abuse or negotiate safer sexual practices which directly affects reproductive health outcomes[13].

Technology facilitated sexual violence has emerged as a new form of victimization particularly among adolescents and young women in China. Psychological research indicates that online harassment coercion and image-based abuse produce significant emotional distress anxiety and depressive symptoms which parallel the effects of offline sexual violence[13]. These experiences contribute to behavioral withdrawal secrecy and reduced help seeking which exacerbate health related vulnerabilities.

Sexual and gender based violence and reproductive health outcomes

A substantial body of public health research demonstrates that sexual and gender-based violence is strongly associated with adverse reproductive health outcomes in China. Empirical studies have documented higher rates of unintended pregnancy induced abortion preterm birth and poor maternal outcomes among women exposed to intimate partner violence[14]. Violence reduces reproductive autonomy and undermines women capacity to make informed decisions regarding contraception pregnancy timing and healthcare utilization.

Psychological trauma serves as a key mediating mechanism linking violence to reproductive health risks. Prenatal anxiety depression and stress responses have been observed at significantly higher levels among abused women during pregnancy[15]. These mental health conditions are associated with hormonal imbalance poor prenatal care adherence and increased obstetric complications. Criminal psychology emphasizes that trauma disrupts executive functioning and decision making which may lead to inconsistent contraceptive use delayed care seeking and repeated unintended pregnancies[16].

Certain groups experience compounded reproductive health risks due to intersecting vulnerabilities. Female sex workers in China face high levels of client perpetrated violence which is associated with condom failure sexually transmitted infections and repeated abortions[17]. Psychological coercion and fear of violence significantly impair condom negotiation and health seeking behavior[18]. Similar patterns have been observed among sexual minority women who report elevated exposure to sexual coercion and reproductive health risks[17].

Cognitive and social normative mechanisms

Criminal psychology highlights the role of cognitive normalization of violence in sustaining cycles of abuse and health risk. Acceptance of intimate partner violence has been shown to predict tolerance of abuse and reduced reporting among Chinese women[19]. Rape myth acceptance reinforces victim blaming and discourages disclosure which limits access to reproductive healthcare and psychological support[17,18]. These cognitive distortions operate at both individual and societal levels influencing health behavior and institutional response.

From a socio psychological perspective internalized gender norm shape reproductive decision making and risk behavior. Women socialized to prioritize family harmony and male authority may accept coercive sexual relations and forego reproductive autonomy. These norms have been empirically linked to reduced contraceptive use and higher abortion rates[20]. Criminal psychology frameworks emphasize that such norms function as informal controls that perpetuate victimization and health inequality.

Research gap

Although extensive research exists on sexual and gender-based violence and reproductive health in China most studies adopt a public health perspective without explicitly integrating criminal psychology theory. Limited empirical work examines how cognitive distortions trauma responses and normative beliefs mediate the relationship between violence and reproductive

health outcomes. There is a need for integrative models that link psychological mechanisms of victimization with measurable reproductive health consequences. This study addresses this gap by applying a criminal psychology framework to examine the pathways through which sexual and gender-based violence affects reproductive health outcomes in China.

Conceptual framework and hypotheses development

The conceptual framework proposes that exposure to sexual and gender based violence directly influences adverse reproductive health outcomes among women in China. Psychological trauma is positioned as a mediating variable capturing emotional distress anxiety depression and trauma related symptoms resulting from victimization. Cognitive normalization of violence is conceptualized as a moderating variable reflecting acceptance of violence rape myth endorsement and internalized gender norms. These psychological mechanisms shape how violence translates into reproductive health risks such as unintended pregnancy induced abortion and adverse maternal outcomes. Figure 1

The conceptual framework diagram illustrates the theoretical relationships between sexual and gender based violence psychological trauma cognitive normalization of violence and reproductive health outcomes among women in China. The framework integrates criminal psychology and public health perspectives to explain how exposure to violence translates into adverse reproductive health consequences through psychological and cognitive mechanisms.

Sexual and gender-based violence is positioned as the primary exogenous variable. This construct represents experiences of physical sexual emotional or technology facilitated violence. The framework proposes that exposure to sexual and gender-based violence directly contributes to psychological trauma as indicated by Hypothesis H1. This pathway reflects criminal psychology theories which emphasize that violent victimization disrupts emotional regulation cognitive appraisal and stress response systems leading to anxiety depression and post traumatic stress symptoms. Psychological trauma occupies a central mediating position in the framework. It captures the emotional and mental health consequences of violence including anxiety depression and trauma related symptoms. Hypothesis H3 proposes a direct relationship between psychological trauma and reproductive health outcomes. This path reflects evidence that trauma affects reproductive decision making hormonal regulation prenatal care utilization and sexual risk behavior which in turn increases the likelihood of unintended pregnancy induced abortion and adverse maternal outcomes.

Reproductive health outcomes are specified as the dependent variable in the model. This construct encompasses indicators such as unintended pregnancy repeat induced abortion preterm birth and poor maternal health. The direct pathway from sexual and gender based violence to reproductive health outcomes represents Hypothesis H2 and acknowledges that violence can affect reproductive health independently of psychological trauma through mechanisms such as sexual coercion reproductive control and forced intercourse.

Cognitive normalization of violence is positioned as a moderating construct in the framework. This variable reflects acceptance of intimate partner violence rape myth endorsement and internalized gender norms. Hypothesis H5 proposes that cognitive normalization of violence moderates the relationship between sexual and gender based violence and psychological trauma such that higher normalization strengthens the psychological impact of violence. This reflects criminal psychology research showing that normalization intensifies self blame suppresses help seeking and deepens trauma responses.

The framework also incorporates a moderated mediation effect as articulated in Hypothesis H6. Cognitive normalization of violence is proposed to influence the indirect relationship between sexual and gender-based violence and reproductive health outcomes through psychological trauma. This implies that women who normalize violence are more likely to experience severe trauma which subsequently increases reproductive health risks.

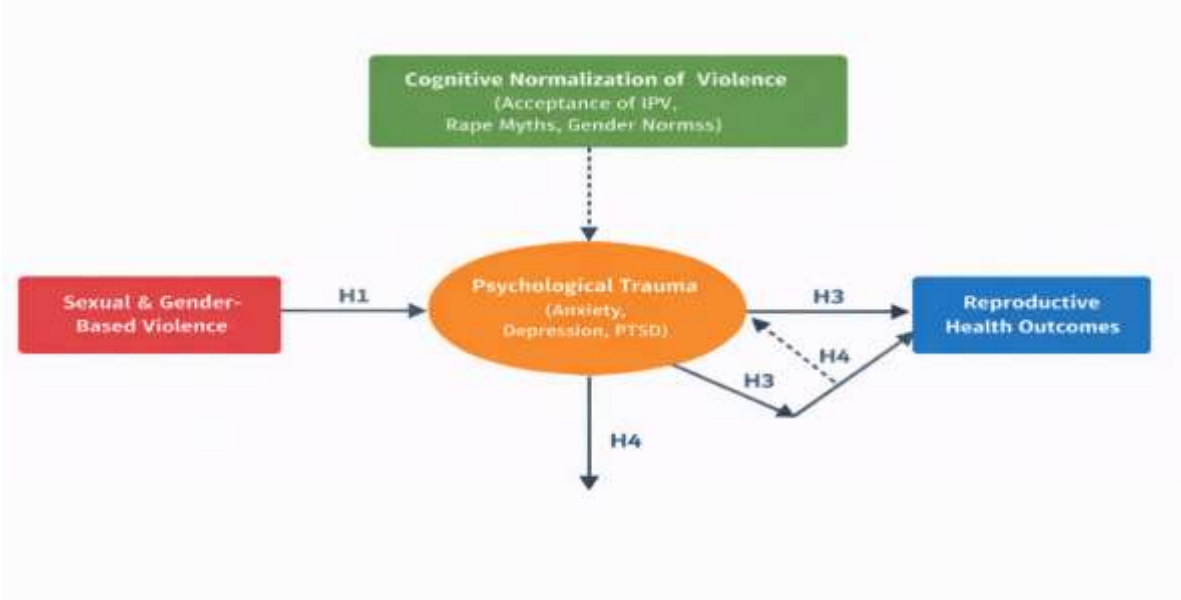

Figure 1: Conceptual framework

Methods

This study employs a quantitative cross-sectional research design to examine the relationships between sexual and gender based violence psychological trauma cognitive normalization of violence and reproductive health outcomes among women in China. A survey based methodology was adopted to enable systematic measurement of psychological and behavioral constructs and empirical testing of the direct mediating and moderating relationships proposed in the conceptual framework. The study is explanatory in nature and integrates criminal psychology perspectives with public health and reproductive health research.

The study population comprises adult women aged eighteen years and above residing in urban and semi urban areas of China. The focus on women reflects the disproportionate exposure to sexual and gender based violence and its documented impact on reproductive health. Participants were eligible if they reported current or past exposure to intimate partner violence sexual coercion or related forms of gender based violence within interpersonal or intimate relationships. This criterion ensured that respondents possessed relevant experiences necessary to meaningfully evaluate psychological trauma cognitive normalization and reproductive health outcomes.

The study was conducted in three major Chinese cities representing different socio-economic and demographic contexts: Harbin (Heilongjiang Province), Wuhan (Hubei Province), and Shenzhen (Guangdong Province). These cities were selected to capture regional diversity in economic development, urbanization levels, and access to reproductive health services. Harbin represents a large northeastern city with a strong academic and institutional environment, Wuhan represents a central Chinese metropolitan area with a large population and diverse socio-economic structure, while Shenzhen represents a rapidly developing southern economic hub characterized by large migrant populations and changing gender relations. Including cities from different regions improves the representativeness of the sample and allows examination of sexual and gender-based violence and reproductive health outcomes across varied urban and semi-urban contexts in China.

The required sample size was determined based on structural equation modeling (SEM) requirements. According to Hair *et al*., SEM studies should maintain a minimum ratio of 10 respondents per estimated parameter to ensure statistical stability and model reliability.

Considering the number of constructs and measurement items included in the conceptual framework, the minimum recommended sample size was approximately 300 participants. To account for incomplete responses and potential data cleaning, the study targeted between 350 and 400 respondents. A total of 368 questionnaires were collected, and 342 valid responses were retained after removing incomplete submissions. This sample size exceeds the recommended threshold and is considered sufficient for SEM analysis.

Questionnaire design

Section 1: Demographic characteristics

This section collected information on age, marital status, education level, residence type (urban or semi-urban), and reproductive history. These variables were included to provide contextual understanding of the participants and control for potential socio-demographic influences.

Section 2: Sexual and gender-based violence (SGBV)

This section measured respondents' exposure to different forms of violence, including physical violence, sexual coercion, emotional abuse, and technology-facilitated harassment. The items capture experiences of violence within intimate or interpersonal relationships and directly address the study objective of examining the impact of violence exposure.

Section 3: Psychological trauma

This section assessed emotional and psychological consequences of violence exposure, including symptoms of anxiety, depression, emotional distress, and trauma-related stress. The inclusion of these items corresponds to the study hypothesis that psychological trauma mediates the relationship between violence and reproductive health outcomes.

Section 4: Cognitive normalization of violence and reproductive health outcomes

This section measured acceptance of violence, rape myth endorsement, and internalized gender norms, as well as reproductive health indicators such as unintended pregnancy, repeat induced abortion, delayed prenatal care, and pregnancy-related complications. These items reflect both the moderating role of cognitive normalization and the dependent variable representing reproductive health outcomes.

All items were measured using **a** five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree)**.**

The measurement items were adapted from previously validated instruments widely used in research on violence, trauma, and reproductive health. Items measuring sexual and gender-based violence were adapted from established intimate partner violence measurement frameworks. Psychological trauma items were adapted from validated mental health and trauma assessment scales used in violence research. Cognitive normalization of violence was measured using items derived from rape myth acceptance and intimate partner violence acceptance scales previously validated in Chinese contexts. Reproductive health outcome indicators were adapted from prior studies examining the relationship between violence exposure and reproductive health among Chinese women. These validated scales were slightly adapted to ensure cultural relevance and clarity for the Chinese study population.

Data were collected using a structured self administered questionnaire distributed primarily through online channels with limited paper based administration where digital access was constrained. The questionnaire was developed in Chinese language to ensure cultural appropriateness clarity and sensitivity. A pilot test involving thirty respondents was conducted to assess item comprehension response burden and emotional sensitivity. Minor revisions were made following pilot feedback..

Data analysis followed a two stage procedure. Descriptive statistics were first computed to summarize demographic characteristics and prevalence patterns of key variables. The measurement model was evaluated through internal consistency reliability composite reliability and convergent validity assessments. Structural equation modeling was then employed to

test hypothesized direct mediation and moderation relationships simultaneously. Bootstrapping with five thousand resamples was used to estimate the significance of indirect effects and interaction terms. Moderated mediation was examined by assessing conditional indirect effects at varying levels of cognitive normalization of violence.

Ethical considerations

This study was carried out in alignment with the ethical principles specified in the Declaration of Helsinki. The review process verified that the research protocol adequately addressed potential risks to participants, such as psychological distress, breaches of confidentiality, and risks of stigmatization. Participation was fully voluntary, and all participants were provided with a comprehensive information sheet detailing the study's purpose, procedures, potential risks, and expected benefits. Each participant gave written informed consent before taking part in the study. The consent form clearly highlighted the anonymity of participation, the absence of personally identifiable data collection, and the participants' right to withdraw at any point without facing any penalties or consequences. Considering the sensitive nature of the topics—sexual and gender-based violence, psychological trauma, and reproductive health—special precautions were taken to minimize any potential harm. Trigger warnings were added at the beginning of sensitive sections within the questionnaire. All data were collected and stored electronically on a password-protected, encrypted server accessible only to the principal investigators. The data will be retained for five years following the completion of the study for academic verification purposes, after which it will be securely destroyed. To mitigate any emotional distress caused by responding to the questionnaire, participants were given a list of free psychological support services, hotlines, and women's support organizations in China at the end of the survey. A protocol was also established to refer participants experiencing acute distress during the study to a licensed counselor affiliated with a partner organization. The research complied strictly with Chinese regulations regarding scientific research and the protection of women's rights and health. Careful review ensured that the study design and materials were culturally sensitive, avoiding the reinforcement of stigma or harmful stereotypes.

Results

Respondent characteristics

A total of 368 questionnaires were returned of which 342 were complete and valid for analysis. The respondents represent adult women aged eighteen years and above residing in urban and semi urban regions of China. Most respondents reported regular interaction with intimate partners and prior engagement with reproductive health services. The largest proportion of respondents (40.9%) were aged between 25 and 34 years. Table 1

Descriptive statistics

Table 2 presents the descriptive statistics for all study constructs. Mean values for sexual and gender-based violence psychological trauma and cognitive normalization of violence are above the midpoint indicating non trivial prevalence of violence exposure trauma symptoms and normative acceptance within the sample. Reproductive health outcomes also show elevated mean values reflecting substantial reproductive health vulnerability.

Reliability and convergent validity

The measurement model was evaluated for internal consistency and convergent validity. As shown in Table 3 Cronbach alpha and composite reliability values for all constructs exceed the recommended threshold of 0.70 indicating strong internal consistency. Average variance extracted values exceed 0.50 demonstrating that the indicators adequately capture the underlying

Discriminant validity

Discriminant validity was assessed using the Fornell Larcker criterion. As presented in Table 4 the square root of the average variance extracted for each construct exceeds its correlations with other constructs confirming adequate discriminant validity. This indicates that sexual and gender based

Table 1: Respondent demographic profile

Characteristic	Category	Frequency	Percentage
Age	18 to 24	62	18.1
	25 to 34	140	40.9
	35 to 44	92	26.9
	45 and above	48	14.1
Residence	Urban	216	63.2
	Semi urban	126	36.8
Marital Status	Married or cohabiting	238	69.6
	Single divorced or separated	104	30.4

Table 2: Descriptive statistics

Construct	Mean	Standard Deviation
Sexual and Gender Based Violence	3.21	0.81
Psychological Trauma	3.47	0.76
Cognitive Normalization of Violence	3.08	0.79
Reproductive Health Outcomes	3.36	0.74

violence psychological trauma cognitive normalization of violence and reproductive health outcomes represent distinct yet related dimensions.

Structural model results

The hypothesized relationships were tested using structural equation modeling. Table 5 presents the standardized path coefficients and significance levels. Sexual and gender-based violence shows a strong positive association with reproductive health outcomes supporting Hypothesis H1. Sexual and gender-based violence also demonstrates a significant positive relationship with psychological trauma supporting Hypothesis H2. Psychological trauma exhibits a significant positive association with reproductive health outcomes supporting Hypothesis H3.

Mediation and moderation analysis

Mediation analysis indicates that psychological trauma partially mediates the relationship between sexual and gender-based violence and reproductive health outcomes. As shown in Table VI the indirect effect is statistically significant supporting Hypothesis H4. Moderation analysis reveals that cognitive normalization of violence significantly moderates the relationship between sexual and gender-based violence and psychological trauma. Higher levels of normalization strengthen the impact of violence on trauma supporting Hypothesis H5. Table 6

Table 3: Reliability and convergent validity

Construct	Cronbach Alpha	Composite Reliability	Average Variance Extracted
Sexual and Gender Based Violence	0.88	0.91	0.68
Psychological Trauma	0.90	0.93	0.72
Cognitive Normalization of Violence	0.86	0.89	0.65
Reproductive Health Outcomes	0.89	0.92	0.70

Table 4: Fornell–larcker criterion

Construct	SGBV	PT	CNV	RHO
Sexual and Gender Based Violence	0.82			
Psychological Trauma	0.61	0.85		
Cognitive Normalization of Violence	0.54	0.49	0.81	
Reproductive Health Outcomes	0.58	0.63	0.46	0.84

Model explanatory power

The coefficient of determination values indicates substantial explanatory power. The model explains forty one percent of the variance in reproductive health outcomes and fifty two percent of the variance in psychological trauma. These values demonstrate that integrating criminal psychology variables with violence exposure provides a robust explanation of reproductive health risks among women.

Table 5: Structural model results

Hypothesis	Path	Beta	t value	p value	Result
H1	SGBV → RHO	0.41	8.92	<0.001	Supported
H2	SGBV → PT	0.64	14.37	<0.001	Supported
H3	PT → RHO	0.46	9.18	<0.001	Supported

Table 6: Mediation and moderation results

Effect	Path	Effect Size	t value	p value
Indirect Effect	SGBV → PT → RHO	0.29	7.41	<0.001
Interaction Effect	SGBV × CNV → PT	0.18	4.26	<0.001

Table 7: Coefficient of determination

Endogenous Variable	R Square
Psychological Trauma	0.52
Reproductive Health Outcomes	0.41

Table 7 reports the coefficient of determination values for psychological trauma and reproductive health outcomes. A value of 0.52 for psychological trauma indicates that sexual and gender based violence and its interaction with cognitive normalization of violence explain fifty two percent of the variance in trauma symptoms. The coefficient of determination for reproductive health outcomes is 0.41 showing that forty one percent of the variance is explained by sexual and gender based violence and psychological trauma.

Discussion

The findings of this study provide strong empirical support for a criminal psychology based explanation of how sexual and gender based violence influences reproductive health outcomes among women in China. The significant direct association between sexual and gender-based violence and adverse reproductive health outcomes confirms prior evidence that violence undermines reproductive autonomy and increases the risk of unintended pregnancy induced abortion and delayed maternal care[1,3,18]. This result reinforces public health research while extending it through a psychological interpretation that emphasizes coercion fear and power imbalance as core mechanisms[23].

The strong relationship observed between sexual and gender based violence and psychological trauma is consistent with criminal psychology and trauma theory[24]. Exposure to violence was found to substantially increase anxiety depressive symptoms and trauma related distress which aligns with previous studies among Chinese women experiencing intimate partner violence and sexual abuse[4,5,8]. These findings support the view that violent victimization produces lasting cognitive and emotional disruptions that shape subsequent health related behavior.

Psychological trauma was also found to significantly predict adverse reproductive health outcomes. This result highlights trauma as a key explanatory mechanism linking violence to reproductive vulnerability. Prior research demonstrates that trauma impairs decision making emotional regulation and health seeking behavior which increases reproductive risk through inconsistent contraceptive use delayed prenatal care and repeated unintended pregnancies[5,20]. The present findings empirically confirm these pathways within a single integrated model.

The moderating role of cognitive normalization of violence provides important insight into how cultural and psychological beliefs intensify harm. Women who accepted violence as normal or justified experienced stronger trauma responses following victimization. This finding aligns with research on intimate partner violence acceptance and rape myth endorsement in China which shows that normalization reinforces self-blame discourages disclosure and deepens psychological distress[6,12,22]. From a criminal psychology perspective such beliefs function as internalized control mechanisms that amplify victim harm.

Overall the results demonstrate that sexual and gender based violence affects reproductive health through both direct coercive pathways and indirect psychological mechanisms shaped by

cognitive norms. By integrating criminal psychology with reproductive health research this study advances understanding of violence related health risks and underscores the need for interventions that address not only violent behavior but also trauma and normative belief systems.

Strengths and limitations

This study provides several important contributions. First, it integrates criminal psychology perspectives with reproductive health research, offering a novel interdisciplinary framework for understanding the health consequences of sexual and gender-based violence. Second, the study applies structural equation modeling to simultaneously examine direct, mediating, and moderating relationships, allowing a more comprehensive analysis of psychological mechanisms underlying reproductive health outcomes. Third, the inclusion of women from multiple urban and semi-urban contexts enhances the contextual relevance of the findings.

However, several limitations should be acknowledged. The cross-sectional design limits the ability to establish causal relationships between variables. Self-reported data may also be subject to recall bias or social desirability bias, particularly given the sensitive nature of sexual and gender-based violence. In addition, the purposive sampling strategy may limit the generalizability of the findings to the broader population of women in China. Future studies could employ longitudinal designs and probability sampling methods to further validate and extend the findings.

Conclusion

This study examined sexual and gender based violence from a criminal psychology perspective to understand its impact on reproductive health outcomes among women in China. The findings demonstrate that exposure to sexual and gender based violence significantly increases the risk of adverse reproductive health outcomes both directly and indirectly through psychological trauma. The results confirm that trauma related emotional and cognitive disturbances play a central role in shaping reproductive vulnerability. In addition the study shows that cognitive normalization of violence intensifies psychological harm thereby amplifying health risks.

By integrating criminological and psychological mechanisms with public health outcomes this study contributes to a more comprehensive understanding of how violence affects women reproductive health. The findings highlight that sexual and gender based violence cannot be addressed solely as a behavioral or medical issue but must be understood as a complex psychological process shaped by trauma and social norms. The study provides empirical evidence that criminal psychology offers valuable explanatory insight into violence related health outcomes in the Chinese context.

Policy implications

The findings of this study have important implications for policy and practice in criminal justice public health and reproductive healthcare. First violence prevention strategies should incorporate psychological assessment and trauma informed approaches within reproductive health services. Screening for exposure to sexual and gender based violence and trauma symptoms should be systematically integrated into maternal health family planning and abortion related services to enable early identification and intervention.

Second policies aimed at reducing sexual and gender based violence should address cognitive normalization of violence through education and awareness programs. Public campaigns should challenge acceptance of intimate partner violence and rape myths by promoting gender equality consent and accountability. Such initiatives are critical for reducing psychological harm and encouraging reporting and help seeking behavior.

Third interdisciplinary collaboration between criminal justice agencies healthcare providers and mental health professionals is essential. Trauma informed training for healthcare workers law enforcement and social service providers can improve responses to victims and reduce secondary victimization. Integrating psychological support within reproductive health services can mitigate long term health consequences of violence.

Finally digital and community based interventions should be expanded to reach women

in both urban and semi urban areas. Accessible counseling services legal support and reproductive health education can reduce barriers to care and empower women to exercise reproductive autonomy. Overall, the study underscores the need for policies that simultaneously address violence trauma and reproductive health to effectively protect women wellbeing in China.

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