Tropical Health and Medical Research
Vol. 5, No. 2, August 2023, pp. 68-78
ISSN (Online): 2684-740X
Journal homepage: https://tropicalhealthandmedicalresearch.com

Predictors of Unintended Pregnancy and Sexual Reproductive Health Conditions in Survivors of Violence

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ABSTRACT: The effect of violence on women's sexual reproductive health is of significant importance; this study aimed to study the association between gender-based violence with unintended pregnancy and common sexual reproductive health conditions. The size of the study sample was 102, who were survivors of violence. Direct interviews collected the data, and the researchers used a structured 30-question questionnaire. Results showed that early marriage was significantly associated with unintended pregnancy. The mean of unintended pregnancy for the marriage age group <=18 years was 1.79, which is higher than the mean of the>18 years marriage age group. The t-value is 2.616, and the significance value is 0.010, meaning there are statistically significant differences in unintended pregnancy in favour of the age group <=18 years. Results also indicated the prevalence of unmet needs for contraception in the study sample was 55% among survivors. 26% of women received inadequate antenatal visits primarily due to financial reasons, and almost half (47%) of births were delivered by the Cesarian section; the most popular method is IUD. In conclusion, gender-based violence is a consistent and strong risk factor for unintended pregnancy, especially in the child marriage age group, so it's necessary to overlook sexual reproductive health among survivors of violence as it might be threatened.
Keywords: Intimate partner violence; Jordan; maternal health; unintended pregnancy.

INTRODUCTION

The world health organization defines violence as "any act of violence that results in, or is likely to result in, physical, sexual, or mental harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or private life". Sexual reproductive health (SRH) is defined as physical, emotional, mental, and social well-being regarding sexuality and the reproductive system[1]. Sexual health goes beyond disease, dysfunction, or infirmity, requiring respectful relationships and the possibility of pleasurable and safe sex[2]. gender-based violence might have significant consequences on women's reproductive health. Men who are violent toward their female partners can interfere with the women's reproductive autonomy by forcing them to have sex which violates the fundamental human rights of women, resulting in unintended/unwanted pregnancies and indirectly associated with the increase in the number of girls and women who are infected with SIT or HIV during their adolescence and adulthood, and maternal morbidity and mortality[3]. Additionally, women who experience emotional or physical violence or other forms of abuse within their relationships may also have less ability to negotiate the Use of condoms or other contraceptives with their husbands to prevent

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these adverse outcomes. The relationship between violence and unwanted Pregnancy is essential to understanding the burden and the negative consequences of disease related to gender-based violence. Situations of conflict, post-conflict and displacement from the original country may exacerbate existing violence and evoke new violence, such as by intimate partners**.** Gender-based violence puts the reproductive health and mental health of women at risk. Therefore, it is necessary to educate women about GBV as a form of violence, the severe consequences it can bring to women and the importance of reporting[4].

Gender-based violence, and intimate partner violence, significantly impact women's health. Usually, women have no power to refuse the sex request of their husbands since they fear losing their economic support husbands. Furthermore, although women understand and recognize forced sex as a form of Intimate partner violence, they choose not to report that. A study shows that women think it would be "very improper" to report spousal rape, although it was prevalent among women[5]. Also, seeing the government doing nothing contribute to wives' decision about non-disclosure. Research has shown that women subjected to violence by their partners have greater chances of miscarriages, premature birth and low birth-weight babies[6]. Despite the pervasiveness of child marriage, especially in low to middle-income countries and its significant adverse consequences on reproductive health, there is relatively limited evidence available on this effect, which has hindered efforts to improve the targeting of adolescent health programs. According to a study conducted in four South Asian countries: India, Bangladesh, Nepal, and Pakistan, to assess the association of child marriage with fertility and maternal health care use, the results of the study suggest that child marriage is significantly associated with a history of repeat childbirth, not using contraception before first childbirth, and unintended Pregnancy[7]. Good antenatal care visits are a predictor of safe pregnancy care. In a study to investigate the consequences of domestic violence on pregnant women, Indian women who had experienced violence were less likely to receive antenatal care or home visits by health workers and had a higher risk of perinatal and neonatal mortality[8].

According to a study that adopted a cross-sectional design and data obtained in a South African university between June and November 2018, sexual violence was associated with higher odds of unintended Pregnancy. It showed that adolescents and young adults who reported sexual violence were likelier to have unintended pregnancies. Unintended Pregnancy was higher among young women (20–24 years) survival of violence (54.4%)[9]. Unmet need refers to fecund women who either wish to postpone the next birth (spacers) or stop childbearing (limiters) but are not using contraceptives. In a study investigating unmet needs for family planning and identifying associated factors for women of reproductive age, partner violence was strongly associated with the unmet need for contraceptives among Ethiopian women living in marital unions[10].

Some women reported that they had sex during a very young age when they were unaware of the meaning of sexual behaviours. As a result, they were less likely to use contraceptives without sex education. Some would also result in having sex with multiple partners, even working as a prostitute. Having unwanted sex and pregnancies is a form of Intimate partner violence (IPV) prevalent in industrial and developing countries and countries that receive and accommodate refugees[11].

According to Heise et al., the violence rate against intimate partners is lower when women have authority and power outside the family. However, when women do not have the choice of sex and Pregnancy, partners tend to consider family as a

"private place" where others cannot give advice, even the police. There are several reasons women may have less autonomy under the effect of GBV. First, in some cultures, the number of children can signify the husband's masculinity. Therefore, refusing sex or using contraception may be seen as disrespecting the husband and result in more severe forms of violence. Second, when women suggest contraception, the husband may suspect the wife's fidelity by buying and having condoms[3].

Little research has been conducted to investigate the consequences of violence in low or middle-income countries on sexual reproductive health, given that constraints on survivors of GBV precisely lack of reproductive autonomy, which is considered a critical barrier to their utilization of services, Use of family planning, and prevention of unintended pregnancies. A study is needed to expand existing knowledge byThe current study extends the existing knowledge by assessing associations between violence and unintended Pregnancy, unmet needs for contraception, and the prevalence of common sexual and reproductive health conditions. The research aims to investigate the predictors of unintended Pregnancy and the prevalence of unmet needs in the sample population, in addition to the prevalence of maternal health care conditions/complications in the study sample in terms of pregnancy care, postnatal care and mode of delivery, Breastfeeding, Current Use and trends of contraceptives, Source of sexual information, Common sexual reproductive health conditions, and the association between violence and menses, Pregnancy, and postnatal period.

MATERIALS AND METHODS

Research Design

To study the association of recent exposure to intimate partner violence to unintended Pregnancy and Sexual reproductive health conditions, this research used a qualitative approach and adopted a cross-sectional research design; specialists executed direct interviews with the survivors.

Instruments

The whole sample was investigated using a reproductive health questionnaire. The researchers developed the questionnaire depending on the literature, and the questionnaire items were formulated to fit the study objectives. The questionnaire used many responses, mostly; Yes/No; the other responses covered the possible answers. The specialists filled out the questionnaires through 30-minute interviews per participant, and participants answered the specialists' questions.

Validity

The questionnaire was presented to 9 specialists in medicine & psychology to verify the instrument's validity and to denote their thoughts on the clarity and phrasing of the content and its appropriateness to measure the desired effect. The specialist's consensus approved a criterion of 0.77. The instruments' constructions' validity was verified by applying to a pilot sample of 30 participants distinct from the study sample in the same field of work. Furthermore, the Pearson correlation coefficient was calculated to study each item's relationship to its hypothesized scale or domain. Correlation coefficients among the items with the scale were in the range of 0.357 – 0.841, and they are all statistically significant, indicating that the scale is characterized by a reasonable degree of validity.

Reliability

The instrument's reliability was verified by the Test-Retest method on an exploratory sample distinct from the study sample of 31 participants pilot study. The period between testing and re-testing was ten days. The internal consistency method

Cronbach's Alpha for the domains and the overall scale calculated the correlation coefficients and the reliability factor.

The correlation coefficient values for the domains and the overall scale between testing and re-testing ranged between 0.643 - 0.968. It indicates a strong correlation between individuals' responses upon repeated instrument application. On the other hand, the reliability coefficient of the tool was 0.922, and the consistency coefficient of Cronbach's Alpha for the scale was 0.941, a value indicating high reliability. Accordingly, the instrument was adopted for the current study.

Procedures

The Research Ethical Committee at the Institute for Family Health approved this research (Ethical certificate number 2020/7). Participants' consent was obtained from the participants before starting the questionnaire. Using a pilot study sample, the researchers ensured the instrument's reliability and validity. The data were collected via a direct interview, while the confidentiality of the collected information was guaranteed.

Data Collection

Data were collected from Jan 1st, 2021, until July 7th, 2022, in the form of an interview-based questionnaire comprised of demographic information about participants and the reproductive health questionnaire.

Data Analysis

All data were analyzed using the SPSS software. The Pearson correlation coefficient was used to measure internal item consistency and Item discriminative validity. Cronbach's alpha coefficients determined the whole scale. A t-test was performed to examine the existence of statistical significance between the means to test the first question. A level of $p < 0.05$ was considered statistically significant. Finally, the frequencies and percentages were calculated and supported by graphs to answer the second question.

Study Variables

Age of marriage: The age group has the following categories: Under 15; 14.7%, 16 to 18 years old; 40.2%, 19 to 29 years old; 41.2%, 30 to 39 years old; 3.9%. Education level: it has the following categories: illiterate; 23.5%, less than a high school education; 59.8%, a high school degree or diploma; 12.7%, bachelor's degree; 3.9%. The inclusion criteria included: married women with at least one Pregnancy and recent exposure to partner violence.

RESULTS AND DISCUSSION

Characteristics of Participants

The inclusion criteria were married women survivors of recent violence and being treated at the Institute for family health. The number of study sample participants was 102 females. The study sample distribution according to the participant's age, marriage age, type of marriage, educational background, employment status and consanguinity are shown in table 1. Informed consent was signed before initiating the interviews and after explaining the aim of the study. Approval to conduct the research was obtained after reviewing the questionnaire by the research ethics committee.

Most respondents were aged 31-35 years 28.4% and had less than a high school education 59.8%, were unemployed and looking for a job 75.5%, were married at 19 to 29 years 41.2%, were married traditionally 69.6%, were married to a non-relative 51.0%. Little research has been conducted to investigate the consequences of violence in low or middle-income countries on sexual reproductive health, given that constraints on survivors of GBV precisely lack of reproductive autonomy, which is

considered a critical barrier to their utilization of services, Use of family planning, and prevention of unintended pregnancies.

Table 1. Distribution of the Study Sample

Variable	Level	Frequency	Per cent
Age of participant	17 to 24 years old	1	1.0%
	25 to 30 years old	10	9.8%
	31 to 35 years old	29	28.4%
	36 to 40 years old	19	18.6%
	41 to 45 years old	24	23.5%
	46 to 49 years old	10	9.8%
	+50 years old	9	8.8%
Marriage age	Under 15 years old	15	14.7%
	16 to 18 years old	41	40.2%
	19 to 29 years old	42	41.2%
	30 to 39 years old	4	3.9%
Type of marriage	Forced marriage	10	9.8%
	By love and choice	21	20.6%
	Traditional marriage	71	69.6%
Educational background	Illiterate	24	23.5%
	Less than high school education	61	59.8%
	High school degree or diploma	13	12.7%
	Bachelor degree	4	3.9%
Employment status	Employed full time	14	3.7%
	Unemployed	11	10.8%
	Unemployed (Looking)	77	75.5%
Consanguinity	With a relative	50	49.0%
	With a non-relative	52	51.0%

Table 2. Prevalence of Unintended Pregnancy

Age of marriage	Intended Pregnancy	Unintended Pregnancy	Total
Under 15	2	13	15
16 to 18 years old	10	31	41
19 to 29 years old	21	21	42
30 to 39 years old	0	4	4
Total	33	69	102

Comparisons Related to the Marriage Age Variable

According to DHS 2017-2018 / Jordan, 86% of births/current pregnancies in the five years before the survey was conducted, 8% were mistimed, and 6% were unwanted. Unintended Pregnancy is defined as Pregnancy that is either unwanted, such as the Pregnancy occurring when no children or no more children were desired, or Pregnancy is mistimed, such as Pregnancy occurring earlier than desired. The concept of unintended Pregnancy aids in understanding the population's fertility and the unmet need for contraception. Most unintended pregnancies result from not using contraception or using it consistently or correctly.

Results showed that 67,6% of the study sample had unintended Pregnancy, with the highest percentage in the age group under 18, representing 43%. This finding

is consistent with the study of Ajayi et al., where sexual violence was associated with higher odds of having an unintended pregnancy and showed that when adolescents and young adults reported having experienced sexual violence, they were more likely to have an unintended pregnancy[9]

To study the effect of the variable age of marriage on unintended Pregnancy and if it is statistically significant and the number of clinic visits during Pregnancy, the means and standard deviations of the responses were calculated, as shown in Table 2. Also, a t-test was performed to determine if the differences between the means were statistically significant at the significance level $\alpha = 0.05$.

Table 2 shows that the mean of unintended Pregnancy for the marriage age group <=18 years is 1.79, which is higher than the mean of the>18 years marriage age group. Furthermore, the t-value is 2.616, and the significance value is 0.010, which means there is a significant difference between the means of the marriage age groups that refer to unintended Pregnancy. These differences favour the age group <=18 years.

Table 3. Means, Standard Deviations and T-test of the Marriage Age Groups for Unintended Pregnancy and No. of Clinic Visits Variables

Dependent variable	Independent variable	N	Mean	Standard deviation	t-value	Sig.
Unintended Pregnancy	<= 18 years	56	1.79	.414	2.616	.010
	> 18 years	46	1.54	.504		
No. of Clinic Visits	<= 18 years	56	2.89	.928	1.695	.093
	> 18 years	46	3.20	.859		

The results also show that the mean number of visits for the marriage age group >18 years is 3.20, which is higher than the mean for the marriage age group <=18 years. The t-value is 1.695, and the significance value is 0.093, meaning there are no significant differences between the marriage age groups and the number of visits.

The researchers explain this finding that sexual violence could lead to unintended Pregnancy through non-use of contraceptive methods, underreporting of incidences of sexual violence, and lack of requisite care to address the potential impacts of sexual violence, including unintended Pregnancy. In addition, the decreased awareness of post-unprotected intercourse intervention is a vital contributor. This result is consistent with the study of Godha, D., Hotchkiss, D. R., & Gage, A. J., which suggested that child marriage is significantly associated with a history of rapid repeat childbirth, current modern contraceptive Use, not using contraception before first childbirth, and unintended Pregnancy. It is also consistent with the study by Ajayi A.I., Ezegbe H.C which showed that when adolescents and young adults reported having experienced sexual violence, they were more likely to have an unintended pregnancy where unintended Pregnancy was higher among young women (20–24 years) survival of violence 54.4%.

The unmet need for contraception is essential for monitoring reproductive health policy and programming. It is also used as a building block for estimating the proportion of women whose family planning needs are satisfied by modern methods. The percentage of unmet needs for contraception was 55 % among the study sample compared to Fourteen per cent of married women aged 15-49, according to the 2017-18 Population and Family Health Survey Key Findings in Jordan. This is consistent with the results of the study conducted by Deyessa, N., & Argaw, A., which showed that partner was strongly associated with an unmet need for contraceptives among

Ethiopian women living in marital unions and inadequate Use of maternal health services. However, the associations are not always consistent across countries. Furthermore, women who married in early adolescence or childhood show a higher propensity toward most adverse outcomes than those who married in middle adolescence[10].

There is an immense need to strengthen the delivery of contraceptives, including condoms, so that such unintended pregnancies can be averted; moreover, increased awareness of emergency contraceptive use can be protective against unintended Pregnancy. In addition, there is a definite need to address the root cause of the problem, wherein we target gender equality, improving the education of women and girls, and providing them with more vocational opportunities to ensure their livelihood and survival[11]. The researchers recommend the economic empowerment of women and information, education, and counselling about the adverse effects of GBV on sexual and reproductive health. Pursuing gender equity across all markers necessitates the study of GBV's association with the sexual well-being of women survivors of IPV. Separate research is warranted for this population.

Antenatal Care, Delivery, and Postnatal Care

This study showed that almost all IPV survivors married women (98%) aged 15-49 Received at least one antenatal care (ANC) visit from a skilled provider (doctor or nurse/midwife). In a study conducted by Claire Bahati et al. in Rwanda, the results showed that women who had experienced physical violence by their partners during the preceding 12 months were less likely to receive more than four ANC visits, and they were less likely to attend the first ANC visits within the first three months[13].

IFH researchers refer to the high percentage of sufficient antenatal visits due to the financial support the Syrian refugees attain, where services are free of charge; the place they receive service also provides gender-based violence services. Almost all (98%) of births in the study sample were delivered in a health facility, which is compatible with the Jordanian Demographic and Health Statistics (DHS) percentage of 98% in Jordan. In the study sample 52% of women aged 15-49 did not receive a postnatal checkup. About 12%, according to Jordan DHS, received no postnatal check[13].

Cesarian-Sections

According to Jordan DHS, almost half (47%) of births are delivered by cesarian section compared to (26%) of births by C-section, where in this study cesarian section births are most common in the marriage age group below 15, with the most common indication being previous cesarian section[14].

Breastfeeding

WHO recommends that children receive only breastmilk (exclusive breastfeeding) for the first six months of life. The percentage of Exclusive breastfeeding (defined as having no menses and baby age was less than six months) in the study sample is 65% compared to 26%, which is the percentage of children under six months who are exclusively breastfed in Jordan. Most survivors had positive attitudes toward breastfeeding; however, the breastfeeding duration was less than six months in most cases[13].

Current Use and Trends of Family Planning

78.1% married women aged 15-49 currently use a modern method of family planning, and 21.9% use a traditional method. IUDs are the most popular modern method 50.0%, consistent with the DHS 2017-2018, where IUDs were used by 19% of married women, followed by oral pills 15% as appears in figure (1).

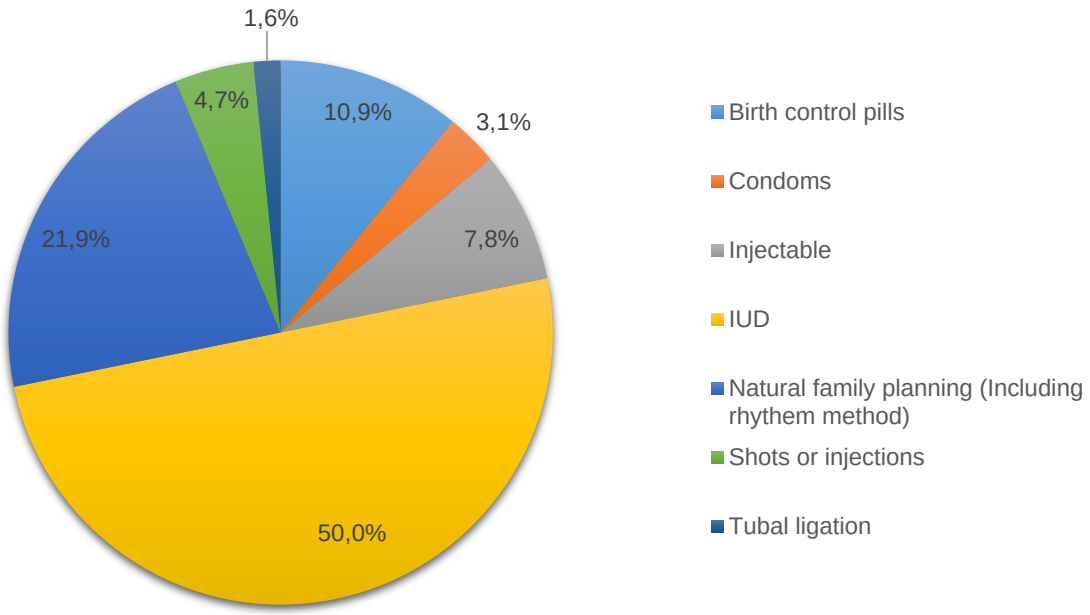

Figure 1. Kind of Birth Control Used

Women's Nutritional Status, Source of Sexual Information, Sexual Reproductive Health Conditions

The researchers took weight and height measurements of survivors of recent IPV aged 15-49; results showed that 49% of the study sample were obese, having a body mass index of 30. Source of sexual information: 40% had no sexual information, and 30% received it from a social circle (as friends, mother, sister, or teacher). Sexual reproductive health conditions: recurrent vaginitis 54%, Infertility (male, female, unexplained) 28%, dyspareunia (37%), low sexual drive (42%). Future studies are required to not only clarify the mechanisms underlying the link between exposure to childhood sexual violence and overweight/obesity, but also to take into account other GBV exposures, such as child marriage, the impact of feeding boys more frequently than girls on nutrition outcomes other than overweight/obesity[15].

Violence During Menses, Pregnancy, Postnatal Period, and Curfew

The study showed that 54.90% think violence increases during Pregnancy, While 47.06% stated that it increases during the postnatal period. Moreover, 86.27% stated that violence increased during curfew, which is consistent with the finding of the family protection department, which mentioned that violence increased during curfew in early 2019 by 33%[16].

The Limitations of The Study

The study is determined by the characteristics of the population, including survivors of intimate partner violence (violence from the husband) in the age range of 18-49 years and who are utilizing the Institute for family health services in Amman. In addition, the inclusion criteria included only women with at least one child. The tools determine the results of this study with their psychometric characteristics.

CONCLUSION

Little research has been conducted to investigate the consequences of violence in low or middle-income countries on sexual reproductive health. The current study

extends the existing knowledge by assessing associations between violence and unintended Pregnancy, unmet needs for contraception, and the prevalence of common sexual and reproductive health conditions. Results showed that child marriage was significantly associated with unintended Pregnancy, where the mean of unintended Pregnancy for the marriage age group <=18 years is 1.79, which is higher than the mean of the>18 years marriage age group. The t-value is 2.616, and the significance value is 0.010, which means there is a significant difference between the means of the marriage age groups that refer to unintended Pregnancy. These differences favour the age group <=18 years. In addition, results showed the status of current Use and trends of Family Planning: 78.1 % of married women aged 15-49 currently use a modern method of family planning, and 21.9% use a traditional method. IUDs are the most popular modern method 50%. The study showed that 49% of the study sample were obese, 54 % complained of recurrent vaginitis, 28% Infertility male, female, unexplained, 37% complained of dyspareunia and 42% of Low sexual drive. In addition, results showed that 40% of the study sample had no source of sexual information before marriage, while 30% received information from a social circle (friends, mother, sister, teacher). Moreover, results showed that survivors have low knowledge of after-sex contraception, implying that if they fail to report or seek care, their risk of unintended pregnancy increases, which is apparent in the lack of knowledge of emergency contraception. In conclusion, it is essential to include the gender perspective in the health policies and the practices implemented in the working process. The study shows that significant barriers remain and suggests that international attempts address refugees' family planning needs remain inconsistent. Unintended Pregnancy is a significant public health burden associated with a wide range of adverse outcomes, especially in humanitarian crisis settings. The need of the hour is to take specific measures to reduce the incidence of unintended Pregnancy and adopt a multi-sectoral approach to improve the quality of life of women.

ACKNOWLEDGEMENT

This work would not have been possible without the support and participation of the Institute for family health/ King Hussein Foundation/ Jordan. I am especially indebted to Dr Ibrahim Aqel, Director of the Institute for Family Health, Dr Osama Samawi, Deputy director of technical affairs, and Dr Hussein Salem, Head of the psychosocial Unit, who are, in addition to being active researchers and authors who participated in the research, they have been supportive of research to provide me with the protected academic time and patients to implement the research. I am grateful to all of those with whom I have had the pleasure to work during this. Each research team has provided extensive personal and professional guidance in each field and taught me a great deal about scientific research and life in general.

CONFLICT OF INTEREST

I certify that we have no affiliations with or involvement in any organization or entity with any financial interest (such as honoraria; educational grants; participation in speakers' bureaus; membership, employment, consultancies, stock ownership, or other equity interest; and expert testimony or patent-licensing arrangements), or non-financial interest (such as personal or professional relationships, affiliations, knowledge or beliefs) in the subject matter or materials discussed in this manuscript.

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