

ORIGINAL ARTICLE

Prevalence of Major Depressive Disorder in Survivors of Sexual assault Examined in a Medical College of West Bengal

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Abstract:

Rape is a heinous crime committed against women which has an impact on physical health as well as mental health. Post-traumatic stress disorder and major depressive disorders are commonly encountered by the survivors. This study tries to overview this and find out the prevalence of major depressive disorder in survivors of sexual assault. In general, developing countries are in dearth of data regarding this and the objectives of this study were to find the prevalence of major depressive disorder in adult and adolescent survivors of sexual assault. The study was based on a pre-validated Public Health Questionnaire and scoring was done accordingly. The instruments used were PHQ-9 and PHQ-A in English, Bengali and Hindi. The sample size of the study was 41, out of which 5 refused to give consent. Out of the 36 survivors, 21 (58.33%) were adults and 15 (41.66%) were adolescents. The legal cut-off of 18 years, as prevalent in India was used to classify the study population between adolescents and adults. In 15 adults and 12 adolescents, the perpetrator was known. In 6 adults and 3 adolescent the perpetrator was unknown. Multiple incidences of offence were committed in 24 (66.66%) subjects. Tentative diagnosis of depression was made in 15 (71.4%) adults and 6 (40%) adolescents. In adults, 40% suffered from mild form of major depression. In adolescents, 50% had minimal symptoms and 50% suffered from severe form of major depression. From the study, it can be concluded that Major Depressive Disorder is very much prevalent in the survivors of sexual assault. Interventional, longitudinal studies are required in this field for the proper follow-up and assessment of the survivors.

Keywords: Sexual assault survivor; Psychiatry; Depression; Prevalence.

Introduction:

Sexual assault is perhaps the most heinous crime against humanity which is not only against the body of the survivor but also against her mind. The term "Survivor" often refers to an individual who has survived a trauma and also used when discussing the effects of sexual violence.¹ Sexual violence is a public health problem throughout the world and more so in developing countries and is associated with long-lasting mental and physical morbidity.²⁻⁵ Sexual victimization is associated with emotional, cognitive and behavioral effects.⁶ Depression affects 264 million people worldwide⁷ and as per the WHO Report "Depression and Other Common Mental Disorders - Global Health Estimates 2017", 4.5% of the population of India suffers from depressive disorders.⁸ Survivors are at an increased risk of suffering from anxiety disorders, bulimia or anorexia, alcohol and substance abuse, stress disorders and depression.⁹

In developing countries like India, the total number of incidences of rape have increased from 36735 in 2014 to 38947 in 2016 with an increase of crime rate from 6.1% to 6.3%¹⁰ which clearly shows that there is no decline in incidences of rape even after the

enactment of Criminal Law Amendment Act 2013.

Patient Health Questionnaire (PHQ-9) is used for screening, diagnosing, monitoring and measuring the severity of depression.¹¹ This Patient Health Questionnaire has been modified and validated for children having age of 11 to 17 years and is known as Patient Health Questionnaire 9 modified for adolescents. (PHQ-A).¹² In this study we have used PHQ 9 and PHQ A and DSM IV criteria for diagnosis of Major Depressive Disorders¹³ in the survivors who came for examination in the Department of Forensic and State Medicine. Although DSM 5 criteria are in circulation now, we have not used it as the differences are subtle and Structured Clinical Interview for DSM5 Research Version (SCID-5 RV) are not available for free¹⁴ and the questionnaire are not multilingually validated. Thus, the rationale behind this study is to look at this aspect in these victims so that the health system can come up with new formulations to address the current deficiency.

Methodology:

The objectives of this study were to find the prevalence of Major Depressive Disorder in adult and adolescent survivors of sexual assault and to assess the severity in patients diagnosed with Major Depressive Disorder. A descriptive, cross-sectional, non-interventional study was conducted in the Department of Forensic and State Medicine in a Medical College of Kolkata for a period of 6 months based on pre-validated Public Health Questionnaire namely, PHQ-9 and PHQ-A in English, Bengali and Hindi and scoring was done accordingly. Appropriate

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statistical methods were used to analyze the data. Proper quality control and strict confidentiality was maintained through the study. Prior permission for the study was taken from the Institutional Ethics Committee and the certificate was dated 20th July 2020.

Results:

A total number of 41 survivors reported to the department during the study period of whom 5 refused to give consent for the study. Hence, total number of respondents in this study was 36 (Fig. 1). The age range was from 35 to 15 years of age. 21 of respondents were adult and 15 were adolescent. Majority of the respondents were Hindu by faith and preferred English as the language of response, details of which are mentioned in Table 1. Among the respondents, 24 were assaulted multiple times and boyfriend was the perpetrator in majority of the cases as further detailed in Table 2. Neither significant relationship exists between age of the survivor and relation of the perpetrator nor between the age of the survivor and the number of times she was assaulted. The median scores of PHQ-9 and PHQ-A are detailed in subsequent tables. A tentative diagnosis of depression was made in 21 respondents, 15 of which were adults and 6 were adolescents (Table 5). Severe major depression was diagnosed in 3 adults and none of the adolescents (Table 6). 3 of the adolescents attempted suicide at least once in a lifetime as shown in Fig. 2. All the respondents in whom a tentative diagnosis of depression was made were referred to Psychiatry Department, the distribution of whom are shown in Fig. 3.

Discussion:

Sexual assault not only involves physical intimidation and injuries, the psychological effects it imparts on the survivor are profound. They suffer from post-traumatic stress disorder, anxiety, major depressive disorders etc. In recent years, most of the studies have pointed out that mental health issues are a big challenge for the healthcare system with major depressive disorder (MDD) having the highest lifetime prevalence (almost 17%).¹⁵

A study conducted in USA showed that 25% of women claimed to have experienced sexual assault at some point of their college life.¹⁶ A study also found that age was associated with depression which shows that sexual assault in a tender age helps to cope up better with the adversities than that in the elderly age group.¹⁷ Australian studies have shown that women who have experienced even one incidence of sexual assault have higher anxiety levels than those who have not experienced any such incident.^{18,19} Studies conducted in South Africa emphasizes that factors such as lower levels of education, poverty and poor living areas are associated with vulnerability of a survivor.²⁰ It is not clear that whether survivors who have experienced sexual assault both in childhood and as an adult are more vulnerable to experience mental health issues than those who have experienced assault only as adult.²¹

Studies have shown sexual assault is associated with long term physical and mental health issues, high-risk taking activities and premature death.²²⁻²⁴ In USA, data from the National Women's Study shows lifetime incidence rate of PTSD in women suffering

sexual violence to be 31% in comparison to 5% of non-victims of crime. Moreover, 30% of victims of rape suffered depression once in a lifetime.²⁵ Depression and PTSD may be results of common pathogenic mechanisms.²⁶ Resilience factors clustering like personal competence, strengthening effects of stress, trust in one's own instincts, social support and spirituality maybe underlying mechanisms.²⁷ Drug and alcohol facilitated sexual assault has been associated with history of past substance abuse.²⁸⁻³¹ However, not incapacitated but forceful rape was the strongest predictor of PTSD and depression.³² According to another study, most of the victims who appear to be depressed within the first month are not likely to be classified so after a period of six months.³³ PTSD also occurs as an aftermath of sexual assault and identifying the vulnerable survivors at the earliest and directing appropriate therapies can reduce the disease burden.²⁶

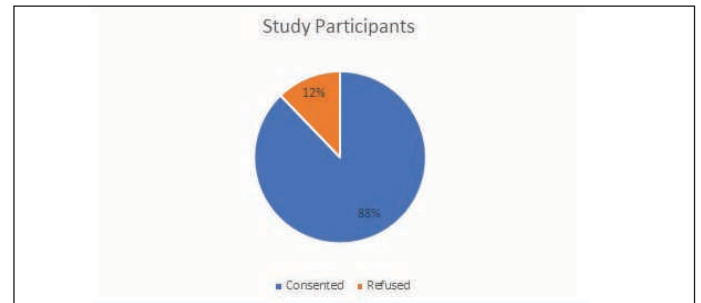


Figure 1.

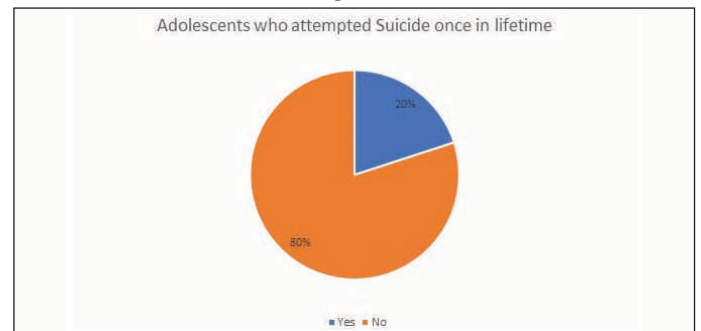


Figure 2.

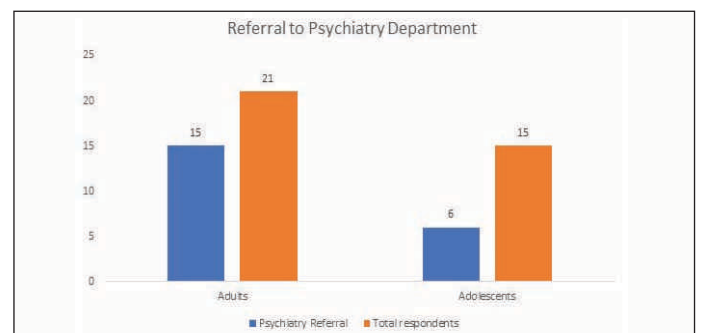


Figure 3.

A 17 min video was used as a tool of psychological intervention. The video consisted of information about the forensic examination and prevention of common trauma related reactions including substance abuse.³⁴ A briefer version of video intervention was tested in 2015 which helped to reduce anxiety symptoms at 2 month follow up. However, no effects were

observed on PTSD symptoms.³⁵ Recently, pleasant imagery and relaxation instruction was used which also reduced substance abuse among survivors of sexual assault. General practitioners are also suited to identify, support, treat and/or appropriately refer women with a history of sexual violence as they are often the first point of contact.²²⁻²⁴ Support groups are required in the society to provide guidance to the survivors and alleviating social anxiety which plays a significant role in healing process of the survivor.³⁷

Research is required to find the risk factors for the development of psychiatric symptoms among survivors which may include, self-blame, substance use, perpetrator relationship and reduced help seeking behaviors. Future studies should include researches based on different ranges of behaviors including interpersonal violence and also tailor-made interventions based on rape experiences. Such longitudinal studies should aim at identifying important correlates of victimization and improving risk reduction and treatment outcomes among survivors.³⁸ Support groups play a pivotal role in alleviating the social anxiety of the survivors.³⁷ Structural interventions are key for reducing vulnerability of women enabling them to fulfill their social and economic development.

In this study, a total number of forty-one survivors fulfilled the criteria for inclusion in the study during the study period. Out of them 36 consented for the proposed study. Among the study participants, 21 were adult and 15 were adolescent. No sampling method was used as the condition studied is rare.

Table 1. Demographic characters of the respondents.

Age of respondent	Number of respondents	Religion of respondents			Language of response		
		Hinduism	Islam	Others	English	Hindi	Bengali
Adult	21	12	06	03	06	09	06
Adolescent	15	08	07	00	08	03	04
Total	36	20	13	03	14	12	10

Table 2. Number of times offences committed and survivor-perpetrator relationship.

Age of respondent	Number of times offences committed		Relationship between survivor and perpetrator			
	Single	Multiple	Close Relatives	Boyfriend	Neighbor	Unknown
Adult	09	12	06	06	03	06
Adolescent	03	12	03	06	03	03
Total	12	24	09	12	06	09

Table 3. Table showing median score of Questions 1 to 9 of PHQ-9 as reported by adults.

Questions	Score (Median)
Little interest or pleasure in doing things	2
Feeling down, depressed or hopeless	2
Trouble falling or staying asleep, or sleeping too much	2
Feeling tired or having little energy	2
Poor appetite and over eating	1
Feeling bad about yourself or that you are a failure or have let yourself or your family down	1
Trouble concentrating on things, such as reading the newspaper or watching the television	1
Moving or speaking so slowly that other people could have noticed, or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	1
Thoughts that you would be better off dead, or of hurting yourself	0

Table 4. Table showing median score of Questions 1 to 9 of PHQ-A as reported by adolescents.

Questions	Score (Median)
Little interest or pleasure in doing things	0
Feeling down, depressed or hopeless	2
Trouble falling or staying asleep, or sleeping too much	2
Feeling tired or having little energy	1
Poor appetite and over eating	0
Feeling bad about yourself or that you are a failure or have let yourself or your family down	1
Trouble concentrating on things, such as reading the newspaper or watching the television	1
Moving or speaking so slowly that other people could have noticed, or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	1
Thoughts that you would be better off dead, or of hurting yourself	0

Table 5. Prevalence of depression among respondents.

Study population	Depression		Total	Prevalence Percent
	Yes	No		
Adults	15	6	21	71.4 %
Adolescents	6	9	15	40 %
Total	21	15	36	

Table 6. Severity of depression among the respondents.

PHQ – 9 Score	Provisional Diagnosis	Number of adults (N= 15)	Number of adolescents (N= 6)
5 -9	Minimal symptoms	3	3
10-14	Major Depression, Mild	6	2
15-19	Major Depression, moderately severe	3	1
≥ 20	Major Depression, severe	3	0

The sample was divided into two groups- adults and adolescents. The median age of the adult group was 24 years and the median age of the adolescent group was 16 years. 67% of the study population was Hindu, 25% Muslim and 8% belonged to other religions. As per the census 2011, in the state of West Bengal 70.54% are Hindu and 27% Muslim.³⁹ So based on religion, the study sample was more or less a representative sample.

Most of the study sample preferred English as the mode of the response followed by Bengali and Hindi. The preference of English as mode of response other than vernacular could possibly be explained by the place of the study which is urban and good level of primary education in the state. The median gap between first incidence and lodging complaint in the adults is 5 months and for adolescents is 6 months. This is not very uncommon scenario in this country and some media reports even calculate that up to 85.2% of sexual violence is underreported.⁴⁰ Most of the studies conducted were 4 to 6 weeks after the incidence which is concurrent with this study as at least a gap of 4 weeks was present in between the study and the last incidence of sexual assault.

This study divided perpetrators into four categories – close relatives including husband and in-laws, boyfriend, neighbor and unknown. In 75% of the subjects the offender was known to the survivor which is lower than the National Crime Records Bureau data 2017 which puts the figure as 93%. Age of the survivor and her relationship with the perpetrator had no significant relationship. This is inconsistent with the common notion that non-adults are more susceptible to sexual assault by close

relatives. Possibly this inconsistency is because of less difference in median age of the two population.

In the study population, 75% were victims of sexual assault for multiple times. This possibly points out the vulnerability of our female population and possible intimidation faced by them in cases where the perpetrator is known. This is consistent with a study conducted in South Africa which also found more than half of the survivors were victimized for multiple times.²⁰ No significant relationship was obtained between age and number of times the survivor was subjected to rape.

The PHQ-9 and PHQ-A was used to make tentative diagnosis of major depressive disorder and also to classify its severity. The PHQ-A has a specific question about attempt to commit a suicide ever in the lifetime and 40% of the adolescent respondents replied affirmatively. In a study conducted in Brazil a suicide risk of 8.6% was assessed in the study population.⁴¹ Possibly this indicates a very alarming situation. Further research and immediate intervention are required from the policymakers to avert any loss of life of the survivors.

In this study, a 71.4% prevalence of depression was recorded in the adult age group and 40% in the adolescent age group. Study from South Africa showed a prevalence of major depressive disorder in 84.3% of the study population.⁴² A study in Australia found out 52.4% women suffering from depression after sexual assault.⁴³ Another study conducted in Brazil, found a prevalence of depression as 10%.⁴¹ The prevalence of depression varies a lot according to countries and the methodology applied for diagnosis. The findings obtained in the study are more or less in concordance with previous studies.

Moderate to severe depression was found in 40% of the adult population and 50% of the adolescent population. In a study conducted in Sweden, 47% of the women were diagnosed to be suffering from moderate to severe depression.¹⁷ This result is in concordance with the previous study.

This study shows that no significant difference exists for risk of development of major depressive disorder between adults and adolescents. Other studies had found that coping up with major depressive disorders is better in survivors who experienced sexual assault in a tender age.¹⁷ This study was cross sectional and drawing out any such inference was beyond the scope of this study.

Conclusion:

A lot of empathy is required while dealing with survivors of sexual assault. Refusal of some survivors to participate in study possibly indicates requirement for better development of soft skills of the researcher. Sensitization regarding bad touch and good touch should be started from the very early formative years of children. Depressive disorder was present in both adults and adolescents indicating the need for screening of psychiatric illness during the clinical forensic examination. Survivors needed referral to Psychiatry Department which strengthens the idea of comprehensive care for survivors under one roof. In developing countries, with poor resources and both sexual assault and psychiatric illness being taboos, it is often under reported, if not unreported. This study is one of the pioneer studies in this part

of the world and shows the importance for more comprehensive care for the vulnerable survivors.

Conflict of interest (if any): A part of this study was done as a part of Short Term Studentship under Indian Council of Medical Research (Ref. No. 2020 – 10475) for a period of two months during 2021 under the guidance of the corresponding author and the report was found to be satisfactory.

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