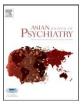
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Asian Journal of Psychiatry

# journal homepage: www.elsevier.com/locate/ajp

# Family violence influences mental health of school girls in Iran: Results of a preliminary study

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#### ARTICLE INFO

Article history: Received 8 December 2011 Accepted 27 January 2012

Keywords: Family violence General health questionnaire Child abuse Child health Female Depression Anxiety Humiliation Neglect

#### ABSTRACT

*Introduction:* The family plays the first and may be the most important role in the development of individuals' personality, health and function. The current study aimed to evaluate different aspects of violence against a sample of school girls of Iranian population and its effect on their mental health. *Methods:* A cluster, randomized sample consisting of 399 school girls was selected from all of the high schools in Tabriz city, northwest of Iran. Students were asked to participate in this study anonymously. Signs and symptoms of depression and anxiety were assessed by the General health questionnaire-28 (GHQ-28) measuring their social function and physical situation as well. Another inquiry form involving questions about different kinds of violence and neglect gathered information about their situation during the recent year.

*Results:* The mean (SD) age of the students was 14.9 (0.8) and all were under 18. The mean (SD) total score of GHQ-28 was 24.18(13.61). The sub-threshold score in GHQ-28 (under 23) was observed in 44.1% of students which indicates considerable problems in mental health status. The type of reported violence was not significantly associated with an abnormal score of GHQ-28.

A higher score of somatic symptoms was related to verbal violence at home by parents and the educational level of mother. High score on social dysfunction was predicted by lower educational level of mother. The depression scale was related to humility, neglect and discrimination at home. The factors were not predicting the score of anxiety or insomnia subscales.

*Discussion:* The current study observed a noticeable amount of problems in the mental health of teenage girls in a sample of the Iranian population. The educational level of the mother plays an important role in the mental health of school girls.

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# 1. Introduction

Family violence is a wide spread problem with numerous features and consequences. This condition has the wide range of physical, verbal, sexual and psychological aspects occurring with some differences among communities. The mental health of the children witness to or victimized by such conditions is deeply influenced as well as their parents.

As reported by several epidemiologic studies, child abuse is mostly associated with an intimate partner. Exposure to family violence during childhood is well studied in some countries. Theoretically, the valuable sense of security and protection will not grow in such environment. The consequences seem to be demonstrated during different periods of life, either in victims

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of violence or witnesses to it. Childhood exposure to family violence is reported to be associated with their further psychosocial functioning during adolescence (Ritter et al., 2002). Studies also report that several behavioral problems and a history of family violence continue to affect the victim later in adulthood and is associated with an increased risk of nonreciprocal and reciprocal intimate partner violence (McKinney et al., 2009).

Violence against women crosses all ethnic, economic and social levels. Cross-cultural research reveals that certain categories of children, such as children with certain psychiatric conditions (Alizadeh et al., 2007) and females, are more vulnerable to maltreatment in many countries (Finkelhor and Korbin, 1988; Vameghi et al., 2010). A population-based survey revealed that childhood experiences of abuse and of witnessing family violence plays an important role in women's current risk for intimate partner violence, poor physical health, and frequent mental distress (Bensley et al., 2003).

The data about prevalence, different aspects of and significances of family violence is lacking seriously in Iran. This topic may

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<sup>1876-2018/\$ –</sup> see front matter @ 2012 Elsevier B.V. All rights reserved. doi:10.1016/j.ajp.2012.01.008

be more complicated considering the variety of cultures within this country and therefore, their different approaches toward the family unit, relations, priorities and methods for problem solving. The objective of this study was first to evaluate the prevalence of exposure to family violence in a sample of female adolescents in this community, and then to evaluate its effect on their physical and mental health condition.

# 2. Methods

# 2.1. Subjects and the protocol

This was a cross-sectional study evaluating school girls in high schools of Tabriz, capital city of East Azerbaijan province. The majority of the population in this province has Azeri ethnic back ground, thus the sample is believed to have a unique cultural background. According to a pilot study using the designed family violence questionnaire, the sample size was estimated to be at least 380 individuals.

The study sample was selected using a randomized clustering method by selecting 6 clusters from 6 high schools around the city. The study was approved by the regional ethic committee and the authorities of ministry of education in the province licensed for the process. Following the agreement of the parents-school collaboration of each school, a detailed explanation about the study was given by a trained and supervised research assistant to the students. The explanation included the privacy of students in giving answers by assuring that their names would not be listed on the questionnaires. All participants gave written informed consent.

# 2.2. Questionnaires

Table 1

The General Health Questionnaire-28 (GHQ-28) measured current mental health using a Likert scoring style (0-1-2-3). The GHQ-28 is a well-known instrument for measuring minor psychological distress and has been validated for use in the Farsi language (Montazeri et al., 2003). The scaled version of the GHQ-28 has been developed on the basis of four principal components evaluating somatic symptoms, anxiety/insomnia, social dysfunction and severe depression. The threshold for GHQ-28 was set at 23/24 (Goldberg et al., 1997), however some researchers suggest the use of median score as threshold (Willmott et al., 2004).

A family violence questionnaire was arranged and validated at the Department of Psychiatry, Tabriz University of Medical

Results of the questions about violence at home and the reported frequencies as n(%).

Sciences, Tabriz, to gather the estimated information about different aspects of family violence. This questionnaire consisted of 18 questions about physical (4 questions), psychological (9 questions), or sexual (2 questions) abuse, neglect (2 questions) and one general question concerning the student either being victimized or witnessing victimization within the family. The answers consisted of "usually", "often", "sometimes" and "seldom".

#### 2.3. Analysis

All data were coded and then analyzed by the Statistical Package for the Social Sciences (ver. 17). Chi-square and independent samples *t* test were used where appropriate. A logistic regression model was used to examine the prognostic value of studied variables for a decrease in general health status. Data are expressed as the mean  $\pm$  SD. Statistical significance was defined as p < 0.05.

# 3. Results

The entire selected sample agreed to participate. Drop out was about 5% and mostly regarding the General Health Questionnaire-28 (GHQ-28), as participants had a "no answer" choice in questions about violence. Complete answers to the questionnaires were available from 399 school girls.

The mean (SD) age of the students was 14.9 (0.8) years and all aged between 12 and 18. Mothers and fathers of the students were reported to be postgraduates in 37.3% and 33.1% in that order. The median number of siblings was 2.

Results of the questions about family violence are described in Table 1. The question about an overall evaluation about family violence was answered in most. The other questions were answered in about 80% of the sample but the questions about sexual abuse had no answer in almost half.

From the total of 399 students, 9.7% answered "usually" or "often" to their general evaluation of being abused at home which was compatible with the further detailed questions. Psychological abuse was reported by 23.6% of them by a "usually" or "often" answer to at least one question in this category. A similar answer was given by 4.7% of students about neglect and by 2.3% about sexual abuse. The rate for sexual abuse reaches 11.8% considering the answer "sometimes" as well.

The mean (SD) total score of GHQ was 24.18(13.61). The subthreshold score in GHQ (i.e. under 23) was observed in 44.1% of students which indicates considerable problems in mental health

	Frequency	No answer			
	Usually	Often	Sometimes	Seldom	
Overall violence at home	11(2.9)	26(6.8)	86(22.5)	260(67.9)	16(4.0)
Abusive language	11(3.0)	31(8.3)	91(24.5)	239(64.3)	27(6.7)
Abusive language by mother	14(4.0)	17(4.9)	71(20.4)	246(70.7)	51(12.7)
Abusive language by father	15(1.5)	18(5.5)	51(15.7)	201(77.2)	74(18.5)
Witnessing abusive language	14(4.0)	25(7.2)	88(25.3)	221(63.5)	51(12.7)
Physical abuse	8(2.3)	8(2.3)	77(22.5)	249(72.8)	57(14.3)
Witnessing physical abuse	10(3.0)	16(4.8)	76(22.7)	233(69.6)	51(12.7)
Corporal punishment by mother	8(2.4)	9(2.7)	80(23.7)	240(71.2)	62(15.5)
Corporal punishment by father	4(1.3)	3(1.0)	53(17.2)	249(80.6)	90(22.5)
Corporal punishment by siblings	12(3.5)	31(9.0)	94(27.2)	208(60.3)	54(13.5)
Humiliation	13(3.6)	32(8.9)	79(21.9)	237(65.7)	38(9.5)
Witnessing humiliation	10(2.9)	26(7.6)	76(22.1)	232(67.4)	55(13.7)
Humiliation by mother	14(4.0)	20(5.8)	77(22.2)	236(68.0)	52(13.0)
Humiliation by father	10(2.9)	26(7.6)	76(22.1)	232(67.4)	55(13.7)
Discrimination	14(1.4)	23(6.8)	72(11.3)	229(67.8)	61(15.2)
Unkindness	18(5.2)	19(5.5)	74(21.6)	232(67.6)	56(14.0)
Neglect	17(5.0)	17(5.0)	87(25.4)	221(64.4)	57(14.2)
Sexual abuse at home	2(1.1)	2(1.1)	19(10.7)	104(87.0)	222(55.6)
Sexual abuse out of home	5(2.5)	2(1.0)	17(8.4)	178(88.1)	197(46.3)

 Table 2

 Categorical score of general health questionnaire according to different forms of violence reported within the family.

	Score in ge n(%)	iestionnaire,	р	
	>23	≤23	Total	
Psychological abuse	54(57.4)	40(42.6)	94(23.6)	0.728
Neglect	24(61.5)	15(38.5)	39(9.8)	0.454
Physical abuse	10(62.5)	6(37.5)	16(4.6)	0.616
Sexual abuse	4(100)	0	4(2.2)	0.124

status. The type of reported violence was not significantly associated with an abnormal score of GHQ. The results are presented in Table 2.

Additionally we evaluated the effect of the items frequently marked "usually" on the children's health condition (i.e. score of four categories of GHQ). On a logistic regression model, a higher score of somatic symptoms was significantly related to abusive language at home by parents (p = 0.034) and lower educational level of mother (p = 0.045). A high score of social dysfunction was also predicted by a lower educational level of the mother (p = 0.023). Depression scale was related to humility, neglect and discrimination at home (p < 0.001). These factors were not predicting the score of anxiety and insomnia subscale.

# 4. Discussion

Exposure to violence has a negative impact on the physical, cognitive and emotional well-being of children. It has been noticed that children who are exposed to family violence are at a high risk for impairment in different aspects of their lives such as cognitive performance (Dubowitz et al., 2002), substance abuse in the future (Smith et al., 2010), several behavioral problems during childhood (Mitchell et al., 2009) and further intimate partner violence in both the physical and mental health of children (especially females) is becoming increasingly well recognized. The topic has been investigated in different settings but one conclusion is hard to reach because of a wide range for definitions and the utilization of different measurements. Besides, it seems that this topic has been largely overlooked in Iran and there are very few studies regarding it (Stephenson et al., 2006; Oveisi et al., 2010).

The current study focused on female students and observed their health status at the same time. It may be considered as a preliminary study which aimed to reveal a general view about family violence toward school girls in this area. The study was set upon children's likelihood of reporting maltreatment, which is indeed influenced by several familial factors itself. To date, there are few reports about family violence against children in Iran, which mostly are published in local journals. As a result of using different questionnaires, it is not possible to provide a good comparison between incident rates of different kinds of violence against children in these reports.

The results underline the importance of mental health and better life situations in females, not only from the undesirable results for female teenagers but also considering the significant effect of their mothers. Whether as a housewife or in work outside the home, mothers are generally the most significant parent in Iranian families and the issue is finely reflected in this study. Teenagers of today will be the mothers of the future and both generations will benefit from the appropriate interventions.

One of the most significant results was that the overall general health condition seems to be poorer compared to students from other countries which may have a similar socio-economic level to Iran (Biro et al., 2010; Dhuria et al., 2009; Ng et al., 2008). Notable

psychological stress has been reported in about one fifth of students, which went up to half in our study sample. This high prevalence of considerable problems in the mental health of students is reflected in previous studies as well, reporting a high rate of depression especially in female students (Bayati et al., 2009). This secondary result of the study has not been studied in detail but should raise concern.

The study had some limitations. The project failed to prepare a population-based design because of the nature of the study, thus it is reporting the pattern of family violence only in girls who are attending high schools in urban populations. It is predictable to some degree that a population based study would report a higher ratio of violence toward girls within their families, considering the results of a previous study indicating higher rates in rural areas (Stephenson et al., 2006). Additionally, the questionnaire did not evaluate the severity of maltreatments and this may be the reason for not finding a relation between different patterns of abuse and their health condition. Further studies have to consider the severity of maltreatment and the need for a standard questionnaire evaluating the severity of maltreatment as well.

Generalization of the results to other geographical parts of the country may be weak. Cultural diversity is a well known characteristic of Iran which is expected to influence relations within family and the approach toward violence in some extent. However, the same rules and about domestic violence and child abuse apply all around the country which, even if independent of cultural beliefs, will have significant influence through time and will decrease aforementioned differences.

The reported rate for experiencing sexual abuse in the current study seems to be less than reports from other countries (Moore et al., 2010), however, a considerable portion of school girls in this study did not give answers to questions about sexual abuse. The stigma of talking about sexual issues in this culture may contribute to the situation, with such a sustained effect that it inhibits them answering a question even in a private setting. However, there might be some individuals who could not write down their positive answer. The situation is suggestive for better means of evaluation in the future. Valid and reliable questionnaires about victimization of children in native language(s) in this region are essential to be used in further interventions in order to measure a more accurate burden and evaluate changes.

In conclusion, this preliminary study emphasizes a serious need to focus on the aspects of family violence in Iran and standarize methods of evaluation in detail. There are reports of promising results for education in reducing child abuse (Oveisi et al., 2010). The reported mental health status of these students and the considerable role of the educational level of the mother and different kinds of violence towards them indicates its significance within strategies of the mental health system.

#### **Role of funding source**

The study was supported by the Clinical Psychiatry Research Center, Tabriz University of Medical Sciences.

#### Contributors

A.F. designed the study and the questionnaire and wrote the protocol. M.T. and Y.S. managed the literature searches and measurements. S.F. undertook the statistical analysis and wrote the first draft of the manuscript. All authors contributed to and have approved the final manuscript.

#### **Conflict of interests**

Authors declare that they have no conflict of interests.

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