

Spousal Violence and Mental Health Status in Women Attending Maternal Health Care Center in Sedfa City, Assiut Governorate, Egypt

¹Manal MM Darwish, ¹Mohammad H Qayed, ²Safaa H Ahmed

¹Public Health and Community Medicine Faculty of Medicine- Assiut University, Assiut, Egypt. ²Director of Family planning –Sedfa District, Assiut Governorate

Submitted:25-07-2020 Revised:1-09-2020 Accepted:1-09-2020

Abstract

Background: Violence against women is a universal phenomenon that affects not only women physical and mental health but also affects their behavior and their every day's activity. **Objective:** To measure the prevalence of violence and explore its effect on the mental health status of women. **Method:** A cross-sectional comparative study was carried out on 500 women attending the Sedfa health center during the last year from October 2016 using a semi-structured questionnaire personal interview and WHO Self-Reporting Questionnaire (SRQ-20). Study proposal was approved by Faculty of Medicine IRB before data collection. Also, an official permission from Assiut health directorate was obtained. Appropriate hypothesis testing tests were used and p-value ≤ 0.05 was used as the significance level. **Results:** In the year prior to the study, 4 out of 10 participants were victims of verbal violence, husbands were the committer in 71.3% of all violent events, less than one fifth (17.6%) of violence victims in the present study sought help, and woman's family is the source of support in more than three quarters of those who asked for help. Predictors for exposure to violence were husband's drug abuse and living in extended family (OR = 8.2, 1.7 respectively). Generally, women exposed to violence achieved higher scores of SRQ-20 with 49.0% were classified as affected mental health status. Exposure to violence significantly increases poor mental health status risk by about 3 times (OR = 2.86, $P < 0.001$). **Conclusions:** Women in Sedfa city are exposed to spousal violence which has a negative effect on their mental health status.

Keywords: *Mental health, violence, partner violence, violence against women.*

Corresponding author: Manal Mohamed Mostafa Darwish E-mail: manaldarwish@aun.edu.eg manaldarwish@hotmail.com

Introduction

World Health Organization (WHO) defines domestic violence as any behavior that leads to physical, mental, or sexual harm.¹ WHO estimates that 35% of women are exposed to a form of violence where the sexual violence may be by intimate partner or a non-partner.² In Africa, a woman is estimated to be exposed to violence ranged from 17% to 48%.³ A study conducted in US estimated that in a woman's life, violence induced by partner -physical/sexual- could be as high as 70%.²

The Egyptian Center for Women's Rights (ECWR) proved that women are

often subjected to violence not only of family and community members, but also of those officially responsible for their protection such as police and health care workers.

The demographic and health survey of Egypt (EDHS-2014) showed that about one third (30%) of surveyed ever-married women in reproductive age were victims of some form of violence with physical violence as the most common form (25%) followed by psychological insults (19%) and lastly sexual violence which accounted for 4%.⁵ The survey confirmed that about one third of those

exposed to husband induced violence were injured, and 7% have serious injuries and another 7% reported exposure to physical violence during pregnancy.⁵

Mental health consequences of violence vary and may appear in the form of depression and anxiety, eating and sleeping disorders, feelings of shame and guilt, phobias and panic disorders, physical inactivity, poor self-esteem, post-traumatic stress disorder, psychosomatic disorders, smoking, alcohol and drug abuse, suicidal behavior and self-harm and unsafe sexual behavior.⁶

Rationale for carrying out this study was the fact that spousal violence is common in Egypt and in particular in rural Upper Egypt. In addition, linking mental health status of women to their exposure to violence which would affect not only women health but children and whole family's health as well

This study aimed to measure the prevalence of different types of spousal violence and to assess its effect on mental health status of women

Method

A cross sectional comparative study was carried out in the period from October 2016 to September 2017

The study was conducted at Sedfa Maternal and Child Health Center. Eligible women attended either antenatal care, family planning or well-baby clinics were invited to participate in the study.

All ever married women attended any of the above-mentioned clinics in Sedfa MCH Center during the period of the study were invited to participate in the study, those who agreed were included. Only never married females were excluded.

Sampling technique and sample size: Random selection yielded 3 working days namely Saturdays, Sundays, and Thursdays. Then, every 5th eligible

woman was randomly selected. Sample size was calculated using EpiInfo 7 stat calc using population size of 1000 (according to the average monthly flow rate), expected frequency of violence according to EDHS 2014 of 30% with confidence limit of 5% and design effect of 2. The sample size calculated was 489 which was increased by the researcher to 500 women.

Data Collection Tools: Data were collected using semi-structured questionnaire via personal interview. The questionnaire is composed of 3 sections: Section I; included personal characteristics of the study participants (sociodemographic characteristics, reproductive history, and some social aspects of marital life), Section II; included Exposure to violence, Section III; included assessment of mental health status

For assessment of mental health status, we used WHO Self-Reporting Questionnaire (SRQ-20) which is developed by the World Health Organization to screen for common mental disorders. The SRQ-20 is a group of 20 yes/no questions, and a respondent's score is the number of questions to which she answers "yes." The tool is designed so that the higher the score, the more likely the respondent has a mental disorder. The cutoff value for the SRQ, to conclude the presence of mental disorder must be validated within a population by comparing scores of people who have been professionally diagnosed with mental illness with the scores of people diagnosed as having no mental illness.⁷ A literature review for published studies using the SRQ-20 in Egypt yielded only one study,⁸ and the Survey of Young People in Egypt (SYPE) study used a SRQ-20 cutoff score of 8 or more as a positive screen for mental disorder. In this study also, we used 8 as cutoff with its demonstrated internal consistency and clinical validity (Cronbach's alpha= 0.906).⁹

Operational definitions: *Skilled labor occupations* refer to a line of work that requires technical skills or specialized

Table (1): Socio-demographic Characteristics of The Study Participants and Their Husbands, 2016 -2017

Variables	Frequency (n=500)	%
Wife's current age: (years)		
< 30	206	41.2
30-35	145	29.0
> 35	149	29.8
Wife's age at marriage: (years)		
< 20	149	29.8
20-<25	273	54.6
≥ 25	78	15.6
Wife's education:		
Illiterate	100	20.0
Basic education	32	6.4
Secondary education	235	47.0
University and higher	133	26.6
Wife's occupation:		
Working for cash	179	35.8
Not working for cash	321	64.2
Husband's education:		
Illiterate	75	15.0
Basic	37	7.4
Secondary	245	49.0
University and higher	143	28.6
Husband's occupation:		
Professional	58	11.6
Skilled	75	15.0
Unskilled	284	56.8
Agriculture and sales	83	16.6
Type of family she lives with:		
Nuclear family	257	51.4
Extended family	243	48.6

training such as doctors, architects, accounts and financial consultants, electricians, plumbers, and law enforcement officers.¹⁰

Unskilled labor occupations typically do not require workers to have any kind of special training or skills e.g. farm laborers, cashiers, grocery clerks, cleaners, and sweepers.¹⁰

Physical violence was defined as being slapped or beaten, or the husband throwing things to harm the wife, being pushed, or kicked or dragged, or being threatened with a weapon.¹

Sexual violence referred to a wife being forced to have sex against her will or other forms of coerced sex.¹

Verbal "Emotional or psychological" violence was defined as being insulted/ ignored (specially in front of others), threatened with harm, either to herself or her children.¹

Exposure to violence is defined as exposure to any of the above forms within a year prior to interview

Poor mental health status is said to be reached when the woman scores 8 and

Table (2): Exposure to Violence among Study Participants in The Year Prior To the Interview, 2016-2017

Variables	N (500)	%
Exposure to verbal abuse (insults):	200	40.0
Perpetrator*: n=200		
Husband	129	71.3
Mother-in law/sister -in law	63	34.8
Father/brother	4	2.2
Refused to answer	10	5.5
Exposure to physical violence:	154	30.8
Perpetrator*: n= 154		
Husband	92	80.7
Mother-in law /sister -in law	25	21.9
Father/brother	2	1.8
Refused to answer	6	5.3
Exposure to sexual violence:	129	25.8
Seeking help upon exposure to violence:		
Yes	88	17.6
No	385	77.0
Refused to answer	27	5.4
Source of help (n=88):		
Her family	66	75.0
Husband's family	13	14.8
Others	9	10.2
Reason for not asking for help: (n= 385)		
Violence is acceptable	114	29.6
Fear from husband	109	28.3
Do not know whom to seek	63	16.4
Other reasons	99	25.8
Source of help in case of exposure to violence		
Wife's family	335	67.0
Husband's family	80	16.0
Officials [†]	35	7.0
Others	49	9.8

* More than one answer was allowed. [†] Officials include police officers, religious leaders, and doctor/ medical personnel

more using Self-Reported Questionnaire (SRQ-20).⁹

Statistical analysis

The Collected data were coded, entered, revised, cleaned and analyzed using Excel, 2016 and Statistical Package for Social Science (SPSS version 20). Data

derived from descriptive statistical analysis was presented in the form of percentages for categorical variables and as mean \pm SD for quantitative variables. Categorical data were compared using chi-squared test, and continuous data were compared using t- test or other non-parametric equivalent tests. P-value \leq 0.05 was used as cut off point for all significance tests. New variables were generated such as sexual violence and mental health status score. Sexual violence was considered "present" if the woman responded positively to being having sex with her husband against her will or while husband is drunk/addict or was forced to things against her will while in intimate relation. We used SRQ-20 for mental health status of women⁷. A value of "1" was given to "yes" and "0" to "no" with a total score of 20. Participants who scored 8 or more were categorized as mentally affected and those scoring less than 8 as not affected mentally.

Pilot study was done on 25 married women from the same study site to test the clarity of the questionnaire and estimate the required time for interview. Accordingly, the essential modifications were made

Ethical considerations

The study protocol was approved by Assiut University, Faculty of Medicine research ethics committee and official permission from Assiut health directorate was obtained as well. Verbal (oral) informed consent was obtained from all participants after explaining the objectives and the importance of the study. Women who agreed to participate were interviewed privately in specially prepared room in the health facility to ensure confidentiality during the interviews. Participants were assured about their right to withdraw from the study at any time, and that their responses would be kept anonymous and confidential prior to their participation. Confidentiality of data were assured. The

Table (3): Socio-Demographic Characteristics of Study Participants versus Their Exposure to any Type of Violence, 2016 – 2017

Variables	Violence				OR (95% CI)	P-value*
	Exposed		Not exposed			
	No.	%	No.	%		
Wife's Current age: (ys)						
< 30	99	48.1	107	51.9	1.07 (0.70-1.64)	0.745
30-35	73	50.3	72	49.7	1.18 (0.74-1.86)	0.489
> 35 †	69	46.3	80	53.7	--	--
Age at marriage (ys)						
< 20 †	73	49.0	76	51.0	--	--
20-25	127	46.5	146	53.5	0.91 (0.61-1.35)	0.627
≥ 25	41	52.6	37	47.4	1.27 (0.77-2.10)	0.346
Residence:						
Rural †	122	46.0	143	54.0	1.20 (0.85-1.71)	0.304
Urban	119	50.6	116	49.4		
Wife's education:						
Illiterate	61	61.0	39	39.0	1.79 (1.06-3.03)	0.029*
Basic education	15	46.9	17	53.1	1.01 (0.47-2.19)	0.979
Secondary	103	43.8	132	56.2	0.89 (0.58-1.37)	0.606
University or more †	62	46.6	71	53.4	--	--
Wife's occupation:						
Working for cash †	78	43.6	101	56.4	1.34 (0.93-1.93)	0.122
Not working for cash	163	50.8	158	49.2		
Husband's education:						
Illiterate	46	61.3	29	38.7	1.85 (1.05-3.27)	0.033*
Basic education	20	54.1	17	45.9	1.37 (0.67-2.84)	0.391
Secondary	109	44.5	136	55.5	0.94 (0.62-1.42)	0.751
University or more †	66	46.2	77	53.8	--	--
Type of family:						
Nuclear family †	105	40.9	152	59.1	1.84 (1.29-2.62)	0.001*
Extended family	136	56.0	107	44.0		
Husband's smoking:						
Yes	145	52.5	131	47.5	1.48 (1.04-2.10)	0.031*
No †	96	42.9	128	57.1		
Husband' drug addiction:						
Yes	41	87.2	6	12.8	8.64 (3.60-20.77)	0.001*
No †	200	44.2	253	55.8		

χ^2 test was used for comparison, *= statistically significant, †= Reference group

average interview duration was about 15 – 20 min.

Results

Five hundred ever- married woman attended Sedfa MCH center and agreed to participate in the study were interviewed about their exposure to

violence and their mental health status as well

Table (1) shows the socio-demographic characteristics of the study participants and their husbands, where 41.2% of the study participants were less than 30 years old and less than one third of participants (29.8%) got married before age of 20.

Table (4): Determinants of Mental Health Status among Study Participants, 2016 -2017

Variables	Mental health status				OR (95% CI)	P-value
	Affected		Not affected			
	No.	%	No.	%		
Wife's Current age: (yrs)						
< 30†	104	50.5	102	49.5	--	--
30-35	59	40.7	86	59.3	0.67 (0.44-1.03)	0.070
> 35	82	55.0	67	45.0	1.20 (0.79-1.83)	0.397
Age at marriage: (years)						
< 20†	66	44.3	83	55.7	--	--
20-<25	142	52.0	131	48.0	1.36 (0.91-2.04)	0.130
≥ 25	37	47.4	41	52.6	1.14 (0.66-1.97)	0.652
Residence:						
Rural	134	50.6	131	49.4	1.14 (0.80-1.62)	0.457
Urban †	111	47.2	124	52.8		
Wife's education:						
Illiterate	61	61.0	39	39.0	2.15 (1.27-3.65)	0.004*
Basic education	14	43.8	18	56.3	1.07 (0.49-2.33)	0.866
Secondary	114	48.5	121	51.5	1.30 (0.84-1.99)	0.236
University or more†	56	42.1	77	57.9	--	--
Wife's occupation:						
Working for cash	91	50.8	88	49.2	1.12 (0.78-1.62)	0.539
Not working for cash †	154	48.0	167	52.0		
Husband's education:						
Illiterate	50	66.7	25	33.3	3.30 (1.83-5.93)	0.000*
Basic education	16	43.2	21	56.8	0.52 (0.27-0.99)	0.047*
Secondary	125	51.0	120	49.0	1.72 (1.13-2.62)	0.011*
University or more †	54	37.8	89	62.2	--	--
Type of family she lives with:						
Nuclear family †	117	45.5	140	54.5	1.33 (0.94-1.89)	0.110
Living with a family	128	52.7	115	47.3		
Husband's smoking:						
Yes	150	54.3	126	45.7	1.62 (1.13-2.31)	0.008*
No†	95	42.4	129	57.6		
Husband's drug addiction:						
Yes	37	78.7	10	21.3	4.36 (2.12-8.98)	0.000*
No †	208	45.9	245	54.1		
Exposure to violence						
Exposed	154	63.9	87	36.1	3.27 (2.27-4.71)	0.000*
Not exposed †	91	35.1	168	64.9		

χ^2 test was applied, * = statistically significant, †= Reference group

About one-half of study participants and of their husbands completed their secondary education (47% & 49% respectively) however, only 35.8 % of women worked for cash. Slightly more than one half of the study participants (51.4%) lived in nuclear family.

Table (2) reveals that 40.0% and 30.8% of the study participants exposed to verbal violence and physical violence respectively during the year prior to the

study and husbands were the main perpetrators for both (71.3% and 80.7% respectively). Only less than one fifth (17.6%) of women exposed to violence sought help mainly from their families (75.0%). Seeking no help in case of exposure to violence was mainly due to either accepting violence within marriage norms or fear from husbands (29.6% & 28.3% respectively).

Table (5): Relationship between Exposures to Any Type of Violence with Mental Health Status among The Study Participants, 2016-2017

Violence	Mental health status				Mean ± SD
	Affected (n= 245)		Not affected (n= 255)		
	No.	%	No.	%	
Yes	154	62.9	87	34.1	47.59 ± 23.14
No	91	37.1	168	65.9	29.59 ± 20.63
P-value	0.001*				0.001†

* χ^2 test was used with statistical significance, † Independent sample t-test was used for comparison between means of mental health scores

Figure (1) shows distribution of different type of violence among ever-married women who have been exposed to any type of violence in the year prior to

interview (n= 241) where verbal violence occupies the top rank (75.1%) followed by sexual then physical violence (53.5% &47.3% respectively)

Table (6): Multiple Logistic Regression for Predictors of Violence among Study Participants, 2016-2017

	Beta	P-value	AOR†	95% C.I.	
				Lower	Upper
Drug abuse	2.098	0.000*	8.150	3.341	19.886
Living in extended family	0.513	0.008*	1.671	1.146	2.435
Husband smoking	0.122	0.525	1.130	0.775	1.648
Wife education: (R: University)		0.113			
Illiterate	0.373	0.187	1.452	0.835	2.527
Basic education	-0.218	0.600	0.804	0.356	1.817
Secondary	-0.235	0.302	0.791	0.507	1.234
Constant	-0.498	0.018*	0.608		

*statistically significant, † Adjusted Odds ratio

Statistically significant association was detected between exposure to violence and living in extended family, husband's smoking and drug abuse (OR= 1.8, P-value ≤0.001, OR= 1.5, P ≤0.031 &OR= 8.6, P ≤0.001 respectively). Also, Chi-square testing for participant's education showed that illiterate women were more than 2 times at increased risk of exposure to violence than university educated with statistically significant difference (OR = 2.2, P= 0.004). Regarding husband's education, illiterate husbands were 3 times more at risk of exposing their wives to violence (OR= 3.3, P <0.0001) followed by those completed secondary education (OR= 1.7, P =0.01) with statistical significant difference whereas men who completed their basic education were less likely to expose their wives to violence with statically significant difference (OR= 0.5, P =0.047) (Table 3).

Figure (2) showed that about half (49.0%) of the study participants scored 8 and more in the SRQ-20 and were classified as being mentally affected. Table (4) shows determinants of mental health status of ever married women where husband's addiction followed by exposure to violence then woman illiteracy and husband's smoking (OR= 4.4, P <0.0001, OR= 3.3, P <0.0001, OR=2.2, P= 0.004& OR= 1.6, P= 0.008) were statistically significantly associated with poorer mental health status in a descending order. Regarding husband's education, wives of illiterate husbands and those who completed only secondary education tend to be more significantly mentally affected than those married to university graduates (OR= 3.3, P <0.001& OR = 1.7, P= 0.011 respectively), whereas women married to men who just completed their basic education are significantly less likely to

be mentally affected (OR=0.5 , P= 0.047)

Table (5) shows the relationship between exposure to violence and mental health status using chi square test (χ^2), where

Table (7): Multiple Logistic Regression for Predictors of Women Mental Health Affection

	Beta	P-value	AOR†	95% C.I.	
				Lower	Upper
Wife education: (R: University)		0.901			
Illiterate	0.107	0.769	1.113	0.545	2.273
Basic education	-0.241	0.599	0.786	0.320	1.930
Secondary	0.011	0.966	1.011	0.605	1.690
Husband education: (R: University)		0.054			
Illiterate	0.938	0.020*	2.556	1.160	5.630
Basic education	0.100	0.818	1.105	0.471	2.593
Secondary	0.523	0.042*	1.688	1.020	2.792
Husband smoking	0.183	0.357	1.201	0.813	1.775
Drug abuse	0.917	0.018*	2.502	1.167	5.366
Violence	1.052	0.000*	2.862	1.946	4.209
Constant	-1.141	0.000*	0.320		

* Statistically significant, † Adjusted Odds ratio
 women exposed to violence scored significantly higher mean scores than those who did not expose to violence (47.59 ± 23.14 vs 29.59 ± 20.63 respectively, $P= 0.001$). In the meantime, using 8 as a cutoff for classification of mental health status shows that majority (62.9%) of those categorized as mentally affected have been exposed to violence compared to slightly more than one third (34.1%) of mentally unaffected group with statistically significant difference ($P < 0.001$)

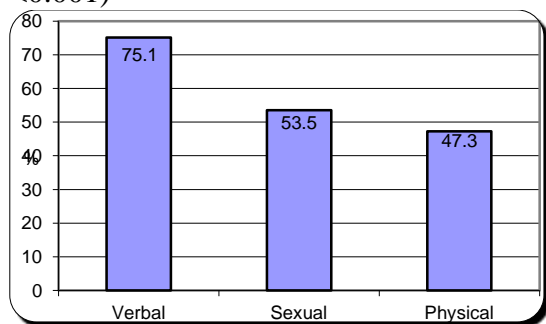


Fig. (1): Distribution of different types of violence among ever-married women exposed to any type of violence (n=241).

Multiple logistic regression test was carried out for prediction of risk factors for exposure to violence among study participants (table 6) showed that husband’s drug abuse was the significant main predictor (AOR= 8.2, CI= 3.3 - 19.9, $P < 0.0001$) followed by living in

extended family (AOR= 1.7, CI= 1.1 - 2.4, $P= 0.008$)

Table (7) shows predictors for poor mental health status by multiple logistic regression analysis where exposure to violence was the most significant predictor with women exposed to violence were about 3 times more at risk of being mentally affected (AOR= 2.8, CI= 1.95 – 4.21, $P < 0.0001$) followed by husband’s illiteracy and drug abuse (AOR=2.6, CI= 1.16 – 5.63, $P = 0.02$ & AOR = 2.5, CI= 1.17 - 5.37, $P= 0.02$ respectively) then, comes husband’s completed secondary education (AOR= 1.6, CI= 1.02 – 2.79, $P= 0.042$)

Discussion

Violence against women is considered as a public health epidemic, it continues to affect one-third of the ladies across the world.¹¹ The present study was conducted on ever married women attending Maternal and Child Health Care Center in Sedfa City, Assiut Governorate to assess the occurrence of violence against women and its effect on their mental health status.

Findings of this study revealed that percent of women exposed to physical

violence in the year before the study was 30.8% which is analogous to findings of a study on Married adolescent girls in Assiut and Sohag (25.9% in Assiut and 36.4% in Sohag).¹² However, our results are slightly above that reported by 15–49-year-old married women at EDHS 2014 (26.0%),⁵ and can be justified by the higher prevalence of violence in Upper Egypt Governorate compared to other regions which was diluted within

the nationally representative sample of EDHS or due to methodological difference (facility based vs household survey). Despite of the Egyptian societal, cultural and religious norms supporting husband's right to sex regardless of a wife's feelings, therefore many women do not consider having sex against their will as violence, about one quarter of this study participants (25.8%) reported exposure to sexual violence which is very similar to findings encountered by Mamdoh and colleagues in Alexandria (25.4%) with almost no difference between Upper Egypt rural site and the urban governorate of Alexandria.¹³

Regarding residence and its relation to violence exposure, results from the current study show that 46.0% of participants who lived in a village were exposed to violence which agrees with findings of EDHS 2014 and another Ethiopian study.^{5,14} This might flow from to lack of knowledge in rural society where aggressive treatment of wives is used as a tool for shaping wife's behavior,^{15,16} and women specially rural are convinced that their husbands have the right to beat them.¹⁷ However, the noticed difference in present study was not statistically significant ($p=0.30$).

In this study, more than half of women exposed to violence (56.0%) lived in extended families and this was statically significant ($p=0.001$).

Husbands were the committers to most violent behavior (80.7%) followed by in-laws (21.9%). This finding goes in parallel with findings from a cross sectional study in Turkey (91% and 22.7%)¹⁶ and a multinational study conducted by WHO and revealed that in Ethiopia, 71.0% of violence committed

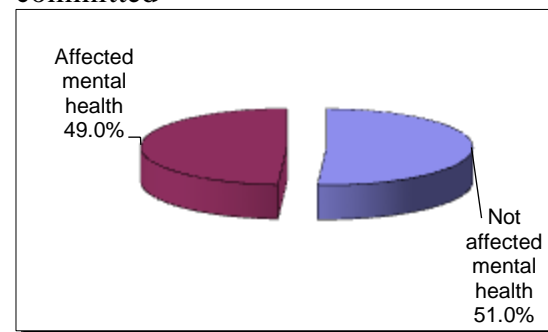


Fig. (2): Distribution of Mental health status of study participants.

by husbands, which is the highest worldwide.¹⁸ all these agreements in findings may be due the shared culture of accepting or justifying wife beating by husband and his family to shape woman's behavior within marriage. It was noticed in literature that violence is often committed by relations aside from spouses specially in those who live in extended family.^{19,20} This agrees with the present study where 21.9% of physical violence was perpetuated by husband's family. However, current results are higher than that of a study conducted in Japan, where only 15.0% of physical violence committed by husbands¹ which may be attributed to cultural and social and educational differences in backgrounds together with woman empowerment and social security.

Devries and colleagues analyzed data from 19 countries on prevalence of intimate partner violence during pregnancy and stated that the Prevalence of violence against pregnant women in developing countries is estimated to range from 4.0% to 29.0%²¹ which agrees with the present study findings where 10.8% of participants were

exposed to any form of violence during pregnancy, and corresponds to findings of a study in New Zealand that revealed a prevalence of violence during pregnancy of 9.0%.²² However, our results are about 1.5 times that of EDHS 2014 (7.0%) which might be explained by variation of violence practice by region and dilution of total percentage by that from regions with lower prevalence.⁵ The present study also revealed that husband's smoking and or using drugs were significantly related to practicing violence against their wives ($p=0.03$ & $p=0.001$ respectively). Similarly, a study was administered in Alexandria showed that husband's smoking or using drugs was an important predictor for spousal violence.¹³ This concordance indicates that even in urban governorate with lower rates of violence yet smoking/drug abuse would increase incidence of violent events.

About three quarters of participants in the present study (77.0%) who were exposed to any sort of violence did not seek help mainly due to fear from the husband. This almost like a multinational study administered by WHO revealed that two thirds of Bengali women, 80.0% of both Brazilian and Namibian women who were physically abused did not tell anybody while southern Africa did so.¹⁸ Again, this is in accordance with findings of a 10-country study which reported that most physically abused women (55.0% - 95.0%) had never gone to agency or authority to hunt help unless they were severely injured¹. This can be interpreted as women in less developed countries in different parts of the world tend not to complain upon exposure to violence either due to lack of empowerment or accepting violence within marriage norms.

It was noticed that main predictors for exposure to violence were drug abuse (OR=8.2, $P < 0.001$) followed by living in extended family (OR= 1.7, $P = 0.008$). Findings of Alexandria study were consistent with ours where drug abuse was the main predictor (OR = 10.3, $P < 0.01$) followed by other variables including extended family with large family size (OR = 1.8, $P < 0.01$).¹³ In this study there was statistically significant positive association between good mental health status and wife education, husband education, while negative association was reported with husband's smoking and drug abuse and violence exposure. However, only wife/husband education and violence showed significant association in logistic regression. These findings conform with evidence suggested that completing the secondary education, women's employment together with having economic resources protect against violence.²³ Studies from different parts of the world identified several sociodemographic factors that might increase the likelihood of women exposure to intimate partner/spousal abuse.^{13, 14, 16, 17, 23}

Exposure to violence can cause disturbance in psychological state and life quality, physical health of the females, increases use of medical services, low birth weight, pregnancy complications, and even impairs future mental development of their children.²⁴ Understanding the mental health status in women is vital due to their essential roles in growth and development of kids, welfare of the entire family.²⁵ The results reported in this study largely corroborate findings from previous studies from developed and developing countries concerning risk factors for self-reported mental health. Of central interest was this study's demonstration of associations between exposure to

any form of violence and mental health. Our results demonstrated that after controlling for a number of other demographics and socioeconomic factors, significant associations between violence exposure and poor mental health remained (OR= 2.86, $P < 0.0001$), confirming results of previous studies.²⁶

The present study revealed that women exposed to violence achieved significantly higher SRQ-20 mean score which indicates poorer mental health status than women with no exposure to violence (47.6 ± 23.1 vs 29.6 ± 20.6 ; $P = 0.001$) and exposure to violence was the single most important predictor for maternal mental health status (OR= 2.86, $p < 0.0001$). Similar findings were observed in United States where women exposed to IPV got lower mental and social functioning scores (using SF-36) coupled with increased risk of depressive symptoms (PR=2.6) and severe depressive symptoms (PR=4.0), and more than one additional symptom.²⁶ Another study was administered in Delhi, found that ladies who were exposed to violence within the past year were significantly having unhealthy mental status (OR= 2.52) and suicidal thoughts ever in life (OR 10.31).²⁷ Thus, empathizing that exposure to violence adversely affects women mental health status regardless of country or its level of development. A review was carried out by Chhabra and colleagues, provided some evidence that exposure to violence is related to psychiatric problems, depression, anxiety, phobias, posttraumatic stress disorder, and suicidality.²⁸ But the connection between violence and mental health status is not straightforward as some studies across different countries have proved it as a risk²⁹ whereas, other authors view violence as consequence

of mental disturbance.³⁰ Thus, violence is often viewed as both risk and consequence to poor mental health status but within the present study we adopt the theory of being a risk.³⁰

Conclusion

This study confirms the high prevalence of all forms of spousal abuse among a sample of women attending governmental MCH center in rural Assiut, Egypt. A considerable proportion of women within the study area exposed to any sort of violence (verbal, physical, sexual) mostly by the husband or his family. Majority of victims did not speak or request help from anyone. Socio-demographic significant predictors for exposure to violence are living in extended family and husband's drug abuse. Exposure to violence negatively affected woman's mental health status.

Recommendations

Findings of this study highlights the need to incorporate violence screening and services in mental health clinics, especially in poor settings such as rural Assiut where both spousal violence and mental health are often overlooked. Also, to integrate mental health into primary care services. In addition, community awareness of the harmful consequences of spousal violence needs specially on mental health to be addressed to combat its community's tolerance. Further research is recommended to investigate the effect on spousal violence on mental health status of children

Limitations of the study

The present study was carried out on relatively a small sample (500 participants) which hinders generalizability of findings beyond the local Egyptian context. Besides, the use of 1-year recall for violent events makes it liable for recall bias or women would report only severe forms of violence

which remains in their memories leading to underestimation. However, most of studies on violence use the same duration for recall. Another limitation is that both data on violence and mental health status are self-reported and collected via personal interview which may potentially underestimate the levels of both variables however, researchers made every effort for assurance of privacy and confidentiality to overcome this limitation.

Implications

Policies and programs aimed at addressing spousal violence, must address the cultural roots of the problem that discriminate against women and correct the imbalance in rights and power-sharing between males and females in Egyptian families and society.

Acknowledgements: The authors express their gratitude to women who participated in the study.

Conflict of interest: The authors have no potential conflict of interest to declare

Funding: This study did not receive any source of financial support

References

1. Garcia-Moreno C, Jansen H, Ellsberg M, Heise L, Watts CH. Prevalence of intimate partner violence: findings from the WHO multi-country study on women's health and domestic violence.. Lancet. 2006; 368(9543): p. 1260-1269. Available at: <https://apps.who.int/iris/handle/10665/43309>. Accessed on 15/7/2017
2. World Health Organization, London School of Hygiene and Tropical Medicine, South African Medical Research Council. Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner sexual violence. final report. Geneva.; Department of Reproductive Health and Research; 2013. Available from: <https://www.who.int/reproductivehealth/publications/violence/9789241564625/en/>
3. Kishor S and Johnson K. Profiling domestic violence: a multi-country study. Calverton, Maryland: ORC Macro; 2004 June. [cited 8 Mar 2017]. p. 118. [Available from: <https://dhsprogram.com/publications/publication-od31-other-documents.cfm>
4. The Egyptian Center for Women's Rights. Violence Against Women in Egypt. Cairo: Egyptian Center for Women's Rights; 2004.
5. Ministry of Health and Population [Egypt], El-Zanaty and Associates [Egypt], and ICF International. Egypt Demographic and Health Survey 2014. final report. Cairo, Egypt and Rockville, Maryland, USA.; 2015. Available from: <https://dhsprogram.com/pubs/pdf/od31/od31.pdf> accessed 22/8/2020
6. Krug E, Dahlberg L, Mercy J, Zwi A, Lozano R. eds. World Report on Violence and Health. Geneva: World Health Organization.; 2002. Available from: https://apps.who.int/iris/bitstream/handle/10665/42495/9241545615_eng.pdf?sequence=1
7. Beusenber MaO. A User's Guide to the Self Reporting Questionnaire. Geneva: World Health Organization, Division of Mental Health; 1994.
8. Vizcarra B, Hassan F, Hunter W, Muñoz S, Ramiro L, and De Paula C. Partner violence as a risk factor for mental health among women from communities in the Philippines, Egypt, Chile, and India. "Partner violence as a risk factor for Injury Control and Safety Promotion. 2004; 11 (2).
9. Harbour C and Barsoum G. Health. In: Survey Of Young People In Egypt (SYPE). Final Report. ; 2011. available from: https://www.researchgate.net/publication/271842042_Survey_of_Young_People_in_Egypt_Final_Report
10. Topnotch personel. [Online].; 2017 [cited 2020 August 27. Available from: <https://www.tntpersonnel.com/2017/09/07/everything-need-know-skilled-unskilled-labor/>.
11. World Health Organisation. Ethical and safety recommendations for intervention research on violence against women. Building on lessons from the WHO publication Putting women first: ethical and safety recommendations for research on domestic violence against women. Geneva: WHO. World Health Organization, Sexual and reproductive Health; 2016.
12. Abdel-Tawab N, Oraby D, El-Gibaly O, Darwish M, Aziz M, Elgazzar A, et al.

Married Adolescent Girls in Rural Assiut and Souhag: Limited Choices and Unfulfilled Reproductive Health Needs. Final Report. Cairo; 2017. Available from: https://www.popcouncil.org/uploads/pdfs/2017PGY_MarriedAdolGirlsAssiutSouhag.pdf. Accessed on 21/8/2018

13. Mamdouh H, Ismail H, Kharboush I, Tawfik M, El Sharkawy O, Abdel-Baky M, et al. Prevalence and risk factors for spousal violence among women attending health care centres in Alexandria, Egypt. Mamdouh H.M, Ismail H M, Kharboush I F, Tawfik, M.M., El Sharkawy OG, et al. 2012. Prevalence and risk factors for spousal violence among women aEastern Mediterranean Health Journal. 2012; 18(11): p. 1118 - 1126. Available from: [file:///C:/Users/welcome/Downloads/EMHJ_2012_18_11_1118_1126%20\(1\).pdf](file:///C:/Users/welcome/Downloads/EMHJ_2012_18_11_1118_1126%20(1).pdf)

14. Chernet A G and , Cherie K T. Prevalence of intimate partner violence against women and associated factors in Ethiopia. BMC Women's Health 20, 22 (2020).. 2020; 20(22). Available from: <https://bmcwomenshealth.biomedcentral.com/articles/10.1186/s12905-020-0892-1#citeas>

15. İçli T G, Pekaya M, and Sever H. The Evaluation of Domestic Violence: The Case of Zonguldak. Advances in Applied Sociology. 2014; 4(01): p. 5.

16. Ali N, Ali F, Khuwaja A, and Nanji K. Factors associated with intimate partner violence against women in a mega city of South-Asia: multi-centre cross-sectional study. Hong Kong Med J. 2014; 20: p. 297-303.

17. Sen S, and Bolsoy, N. Violence against women: Prevalence and risk factors in Turkish sample. BMC Women's Health. 2017; 17: p. 1-9.

18. Ellsberg M., Jansen H A, Heise L, Watts. Intimate partner violence and women's physical and mental health in the WHO multi-country study on women's health and domestic violence: an observational study. Lancet. 2008; vol. 371(9619): p. 1165-1172.

19. Güler N, Tel H, and Tuncay FO. The view of women to the violence experienced within the family. Cumhuriyet Med J. 2005; 27(2): p. 51-56.

20. Selic P, Pesjak K, and Kersnik J. The prevalence of exposure to domestic

violence and the factors associated with co-occurrence of psychological and physical violence exposure: a sample from primary care patients. BMC Public Health. 2011; 11(1): p. 621.

21. Devries KM, Kishor S, Johnson H, Stockl H, Bacchus LJ, Garcia-Moreno C, et al. Intimate partner violence during pregnancy: analysis of prevalence data from 19 countries. Reprod Health Matters. 2010 Nov; 18(36): p. 158-70.

22. Fanslow J, Silva M, Robinson E, and Whitehead A. Violence during pregnancy: Associations with pregnancy intendedness, pregnancy-related care, and alcohol and tobacco use among a representative sample of New Zealand women. The Australian & New Zealand Journal of Obstetrics & Gynaecology. 2008; 48: p. 398-404.

23. Heise L KA. Cross-national and multilevel correlates of partner violence: an analysis of data from population-based surveys. Lancet Global Health. 2015; 6: p. E332-E340.

24. Bonomi A E, Thompson R S, Anderson M, Reid R J, Carrell D, Dimer J A, et al. Intimate Partner Violence and Women's Physical, Mental, and Social Functioning. American Journal of Preventive Medicine. 2006 June ; 30(6): p. 458-466.

25. Sagar R HG. Domestic violence and mental health. J Mental Health Hum Behav. 2018; 23: p. 2-3.

26. Stephenson R, Winter A, and Hindin M. Frequency of Intimate Partner Violence and Rural Women's Mental Health in Four Indian States. Violence against women. 2013 October 18; 19(9): p. 1133-50.

27. Sharma KK, Vatsa M, Kalaivani M, and Bhardwaj D. Mental health effects of domestic violence against women in Delhi: A community-based study. J Family Med Prim Care. 2019; 8: p. 2522-7.

28. Chhabra S. Effects of societal/domestic violence on health of women. J Womens Health Reprod Med. 2018; 2: p. 1-6. Available from: <https://www.imedpub.com/articles/effects-of-societaldomestic-violence-on-health-of-women.pdf>

29. Fulu E, Jewkes R, Roselli T, and Garcia-Moreno C. Prevalence of and factors associated with male perpetration of intimate partner violence: Findings from the

UN multi-country cross-sectional study on men and violence in Asia and the Pacific. *The Lancet Global Health*. 2013; 1(4): p. e187– e207.

30. Hsu M C and Tu C H. Adult patients with schizophrenia using violence towards

their parents: A phenomenological study of views and experiences of violence in parent–child dyads. *Journal of Advanced Nursing*. 2014; 70(2): p. 336–349.