

## Violence against women with hearing disabilities in Tabuk, Saudi Arabia

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A – Study Design, B – Data Collection, C – Statistical Analysis, D – Data Interpretation, E – Manuscript Preparation, F – Literature Search, G – Funds Collection

**Summary Background.** Domestic violence (DV) against women seriously threatens global women's health and human rights. DV is a serious problem for females in general and has a higher incidence among women with disabilities.

**Objectives.** This study aimed to explore the prevalence and associated factors of domestic violence (DV) against women with hearing disabilities in Tabuk, Saudi Arabia.

**Material and methods.** A descriptive cross-sectional research design was utilised to recruit a convenience sample of all deaf and hard of hearing female participants (87) from Tabuk University, Al Amal centre for deaf females, and secondary schools that integrate hard of hearing female students in Tabuk city, KSA. An interview schedule was used for data collection; it comprised demographic data, the World Health Organization violence against women scale, the verbal violence scale and DV properties. Data analysis was performed using the Statistical Package for Social Science software, version 23 (SPSS Inc. Chicago, IL, USA).

**Results.** The results indicated that more than one-third (36%) of participants with a hearing disability were exposed to moderate to severe forms of DV. Living in an urban area, unmarried women, having a university-educated mother and a monthly income of more than 10 000 SAR were negative predictors for exposure to violence ( $p < 0.001$ ). On the other hand, complete deafness, having deceased parents and larger family size were positive predictors for exposure to violence ( $p < 0.001$ ) based on binary logistic regression results.

**Conclusions.** The prevalence of DV was moderate to high in more than one-third of the participating females with hearing disabilities in Tabuk city. Women living in an urban area, unmarried, having a university-educated mother and having high socio-economic status were at lower risk of experiencing DV. Thus, improving the economic status of deaf people and raising awareness of married women living in rural areas can be effective strategies to reduce DV against women with hearing disabilities.

**Key words:** domestic violence, disabled persons, Saudi Arabia.

Elsayed HA, Ibrahim HA, Elgzar WT, Abushaira MI, El Houfey AA. Violence against women with hearing disabilities in Tabuk, Saudi Arabia. *Fam Med Prim Care Rev* 2023; 25(3): 276–282, doi: <https://doi.org/10.5114/fmpcr.2023.130087>.

## Background

Domestic violence (DV) against women seriously threatens global women's health and human rights. DV includes all form of aggression that violates a woman's physical self, self-respect and confidence, regardless of age, race or country [1]. The Eastern Mediterranean Region ranked third regarding the prevalence of DV against women. It is reported that at least 31% of ever-partnered females undergo physical, psychological or sexual violence sometime in their lives [2]. In Saudi Arabia (SA), studies reported that the prevalence of DV for married females ranged between 33% and 45% [3, 4]. Violence is a serious hidden problem in Arabic and Islamic countries, especially in SA, and most abused females do not say that they were abused due to traditions and social habits of family privacy. A cross-sectional study in Riyadh found that 20% of women were exposed to violence at some point in their life [5]. It was reported that two in three women with a disability (65%) report at least one in-

cident of violence, including physical, sexual, intimate partner violence, emotional abuse or stalking by any offender [6]. The prevalence rates of psychological, physical and sexual intimate partner violence against deaf women are nearly double compared with their counterparts that can hear [7].

Several predisposing factors for women's vulnerability to violence include economic factors involving poverty, man power dominance and inequalities of wealth, social customs regarding male authority over female actions and gender inequality [8]. Furthermore, child abuse and marriage, observing parents' violence, social customs of violence and men's hegemonic masculinity are other predisposing factors for DV [9].

DV is a serious problem for females in general and has a higher incidence among women with disabilities [10]. Women with disabilities are most marginalised and suffer from all types of violence compared to their non-disabled peers. These include people who may be physically, economically or socially dependent on their partners, family members, healthcare providers,



personal care assistants or teachers. Women with disabilities found difficulty in identifying, defining or describing abuse and are less likely to be aware of it than their peers without disabilities. They also may be deprived of many services because of obstacles in their physical and social environments, and further deprivation may be aggravated by gender inequalities and being women under the control of men. Furthermore, women with disabilities may suffer from DV in silence because of social restraints and cultural factors. Even when they decide to report violence, they may fight to find trusted people who respect their suffering and can really help them without blaming or humiliating them [11]. Deaf women are twice as much exposed to physical, psychological and sexual violence compared to their counterparts who can hear [7].

Violence increases the risk of mortality and severe injury for all women [12]. Women with disabilities who are exposed to violence suffer from high levels of severe mental distress, depression and attempted suicide [13]. DV in pregnancy also increases the likelihood of miscarriage, stillbirth, preterm delivery and low birth weight in babies. In addition, post-traumatic stress and other anxiety and eating disorders, sleep difficulties and attempted suicide can be found. Other health effects include headaches, back pain, abdominal pain, fibromyalgia, gastrointestinal disorders, limited mobility and poor overall health [14].

Violence prevention has become an essential requirement for females in general and deaf females in particular. Countries and social organisations should spend more effort at all levels to activate DV protective measures at the family and community levels, increasing the recognition of victims and control of violence and providing violence counselling and supportive system, particularly in front-line health settings and social services organisations [15]. In addition, there is a need to raise stakeholder awareness about the importance of sustainably integrating violence against women into health systems by designing relevant policies and guidelines. Health authorities also need to continue maintaining the capacity of the healthcare provider and developing evidence and knowledge to enhance the actions taken and eradicate this phenomenon [16]. Accordingly, the Ministry of Social Affairs in the SA DV Protection Programme was established and set up a national notification number to report any case of violence [17]. The problem of violence against women may limit their ability to maintain good health and quality of life, especially for this marginalised group. Therefore, the first step in solving the problem is to assess the current situation. Thus, our study aimed to explore the prevalence and associated factors of DV against women with hearing disabilities in Tabuk, SA.

## Material and methods

### Study design

A cross-sectional research design was utilised in this study.

### Setting and sample

The present study data was collected from Tabuk University, Al Amal centre for deaf females, and secondary schools that integrate hard of hearing female students in Tabuk city, KSA.

### Sample size calculation

The deaf and hard of hearing population are relatively small for the randomisation procedure or sampling formula; therefore, a convenience sample of all deaf and hard of hearing females who matched the inclusion criteria was included in the current study. The snowball sampling technique was also used to reach participants from the students' relatives. The inclusion criteria include being a deaf or hard of hearing Saudi female, 15 years of age or more, using and understanding sign language, not previously diagnosed with mental or psychological disorders, being free from other genetic or health problems based on a history taking and agreeing to participate in the current study.

### Study measures and data collection

The researchers developed an interview schedule after reviewing relevant recent literature. It was composed of three main parts. Part I: Demographic and basic data, such as age, residence, educational level, marital status, mother's educational level, monthly income, father/mother viability and family size. Part II: The WHO scale of violence against women [18]. This consists of three sub-domains: psychological violence (4 items), physical violence (6 items) and sexual violence (3 items). However, sexual violence was excluded in the current study as we had unmarried Muslim females in the current study sample, and sex outside of the marriage framework is prohibited; in addition, in Saudi culture, openly discussing sexual aspects is not acceptable. Each item was rated on a 5-points Likert scale ranging from strongly disagree (1) to strongly agree (5). The total subscales score was obtained by summing the items of each subscale, ranging from 4 to 20 for psychological violence and 6 to 30 for physical violence. A higher scale score indicates higher exposure to violence. Part III: The verbal violence scale; adopted from Hadi and Abdel Nabi, 2013, consisting of 11 items. Each item was rated on a 5-points Likert scale ranging from strongly disagree (1) to strongly agree (5) [19]. The total scale score ranged from 11 to 55. The overall violence score ranged from 21–105. The participants were considered to have low (21–49), moderate (50–77) and high violence (78–105) based on their scores. Part IV: DV properties: composed of three main multiple choices questions about response to violence, source and disclosure for each type of violence. The interview schedule was translated into Arabic by the researchers and then reviewed by a professor of translation from the College of Language and Translation. The scale validity and reliability were examined in the present study (Table 1).

**Table 1. Instrument validity and reliability**

Dimension item	Factor loading	Cronbach alpha	Composite reliability	Average variance extracted	Minimum item to total correlation
<b>Psychological abuse</b>		0.78	0.801	0.783	0.826
Insulted me in a way that made me feel bad about myself	0.796				
Belittled and humiliated me in front of other people	0.775				
Tried to scare and intimidate me on purpose (e.g. by the way he/she looked at me, by yelling or smashing things)	0.823				
Threatened to hurt me or someone I care about	0.875				
<b>Verbal abuse</b>		0.862	0.802	0.724	0.831
I am subjected to verbal abuse from my family	0.862				
I get scolded from my family	0.883				

Dimension item	Factor loading	Cronbach alpha	Composite reliability	Average variance extracted	Minimum item to total correlation
My father speaks to me in a loud, aggressive voice	0.868				
The exchanging of profanity and cursing by members of my family is usual	0.714				
My father accuses my friends and criticises them aggressively	0.742				
My parents fake bad news to others, especially my friends	0.846				
Others mock my ideas	0.778				
I cannot respond to the insults directed at me by my family	0.779				
I hear inhumane phrases uttered by my family towards me	0.753				
My father believes that hearing bad words modifies my behaviour	0.731				
I am exposed to hurtful words that make me feel inferior	0.778				
<b>Physical abuse</b>		0.825	0.820	0.738	0.783
Pushed or shoved me	0.872				
Threw something at me that could have hurt me	0.812				
Hit me with his/her fist or with some other object that could have hurt me	0.742				
Kicked and dragged me and beat me	0.760				
Choked me or burnt me on purpose	0.818				
Hurt me with a knife, a gun or some other weapon	0.862				

The data was collected from the beginning of February to the end of May 2022. Data collection was done through an interview using an interview schedule. A sign language specialist interviewed the participant to translate the questions into sign language and register the responses. The interview was done in small groups of 3 to 5 participants each time. At the beginning of the interview, the sign language specialist explained the study's aim and took informed consent from the participants after emphasising data confidentiality. Each question was then translated into sign language, and any elaboration needed was done.

### Ethical considerations

The project proposal was approved by the Deanship of Scientific Research and the ethical committee at the University of Tabuk before the beginning of data collection (IRB Log Number 2021-20). Further approval was obtained from the data collection settings. The researchers explained the study's aim to the participants, and informed consent was then taken. Participants were informed of their right to withdraw from the study at any time without any penalties. All the data was treated confidentially and used only for research purposes.

### Statistical methods

The data was analysed using IBM software (IBM Corp., Armonk, NY, USA), version 23. The participants' demographic characteristics, violence level, help-seeking behaviours and disclosure of violence were described using descriptive statistics as the number, mean percentage and standard deviation. Ordinal logistic regression was performed to detect the predictors of violence from the participants' demographic characteristics. Among the demographic variables, age and the number of family members were continuous variables. The other demographic variables were categorical: residence, educational level, mother's education, type of handicap, marital status, monthly income and father's/mother's living conditions. The first category was taken as a reference for all categorical variables. Statistically significant values were considered at  $p < 0.05$ .

## Results

Basic data	n (87)	%
<b>Type of handicap</b>		
Hard of hearing	23	26.4
Deafness	64	73.6
<b>Residence</b>		
Rural	10	11.5
Urban	77	88.5
<b>Education</b>		
Secondary school	8	9.2
University	79	90.8
<b>Marital status</b>		
Married	11	12.6
Single	75	86.2
Divorced	1	1.1
<b>Mother education</b>		
Illiterate	18	20.7
Read and write	30	34.5
Secondary education	12	13.8
University education	27	31.0
<b>Monthly income</b>		
Less than 5 000 SAR per month	39	44.8
From 5 000 to 10 000 SAR per month	33	37.9
More than 10 000 SAR per month	15	17.2
<b>Father's living condition</b>		
Alive	81	93.1
Deceased	6	6.9
<b>Mother's living condition</b>		
Alive	84	96.6
Deceased	3	3.4
<b>Age (Mean ± SD)</b>	22.95 ± 1.57	
<b>Numbers of family members (Mean ± SD)</b>	8.36 ± 3.24	

Table 2 illustrates the demographic characteristics of the study participants. The participants' mean age was 22.95, and the mean of their family members was 8.36. In addition, 88.5% and 90.8% were Urban area residents and university educated, respectively. 86.2% were single, and only 1.1% were divorced. Around one-third (31%) of the participants had a university-educated mother, and less than half (44.8%) had an income of less than 5 000 SAR per month. Complete deafness was reported among 73.6% of the study participants. Furthermore, a small proportion of them had a deceased father (6.9%) or mother (3.4).

Table 3 shows the distribution of the study participants according to the self-reported violence level, violence disclosure, help-seeking behaviours and source of violence. Psychological

violence was moderate or high among 24.1% and 17.2% of the study participants. Verbal violence was more common as it was moderate among 34.5% and high among 19.5%. Physical violence was the least reported type, as it was reported as moderate among 23% and high among 11.5%. The overall violence score was high among 13.8%, moderate among 32.2% and low among 54%. Violence disclosure was considered a problem for the current study participants, as only 10.3% could disclose this information, and 41.3% were unable to disclose this information although they suffer from it. In addition, 87.4% of the study participants were unwilling to seek help if exposed to violence. Finally, the most commonly reported source of violence was father/mother (36.8%) followed by brother/sister (31%).

**Table 3. Distribution of the study participants according to the self-reported violence level, violence disclosure help-seeking behaviours and source of violence**

	Low		Moderate		High	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Psychological violence	51	58.6	21	24.1	15	17.2
Verbal violence	40	46.0	30	34.5	17	19.5
Physical violence	57	65.5	20	23.0	10	11.5
Overall violence	47	54.0	28	32.2	12	13.8
<b>Violence disclosure</b>	<b><i>n</i></b>	<b>%</b>				
No, did not suffer	42	48.4				
No, although suffering	36	41.3				
Yes	9	10.3				
<b>Help-seeking behaviours</b>	<b><i>n</i></b>	<b>%</b>				
Yes, partially	3	3.4				
Yes, all	8	9.2				
No	76	87.4				
<b>Source of violence*</b>	<b><i>n</i></b>	<b>%</b>				
Husband	8	9.2				
Stepfather/stepmother	3	3.4				
Father/mother	32	36.8				
Brother/sister	27	31.0				
Friends	15	17.2				
Others	6	6.9				

\* Total is not exclusive.

**Table 4. Associated factors of violence against women overall score (*n* = 87)**

Basic data	Psychological violence			
	OR	<i>p</i>	95% CI for EXP(B)	
			Upper	Lower
Age	1.038	0.781	0.796	1.355
<b>Residence</b>				
Rural	Ref			
Urban	0.197	0.035*	0.049	0.885
<b>Education</b>				
Secondary School	Ref			
University	1.034	0.851	0.667	1.635
<b>Marital status</b>				
Married	Ref			
Single	0.689	0.002*	0.374	0.972
<b>Mother's education</b>				
Illiterate	Ref			
Read and write	0.878	0.342	.663	1.149
Secondary education	0.267	0.048*	0.059	0.974
University education	0.197	0.034*	0.039	0.884

**Table 4. Associated factors of violence against women overall score (n = 87)**

Basic data	Psychological violence			
	OR	p	95% CI for EXP(B)	
			Upper	Lower
<b>Monthly income</b>				
< 5 000 SAR per month	Ref			
5 000 to 10 000 SAR per month	0.891	0.444	0.663	1.197
> 10 000 SAR per month	1.669	0.028*	1.090	2.557
<b>Type of handicap</b>				
Hard hearing	Ref			
Deafness	1.784	0.019*	1.101	2.856
<b>Father's living condition</b>				
Alive	Ref			
Deceased	1.650	0.008*	1.188	2.538
<b>Mother's living condition</b>				
Alive	Ref			
Deceased	2.309	0.001*	1.421	3.751
Numbers of family members	1.764	0.024*	1.122	2.829

\* Statistically significant.

Table 4 illustrates the associated factors of the overall score of violence against women. It is clear that being an urban area resident [OR = 0.197 (0.049–0.885),  $p = 0.035$ ], single [OR = 0.689 (0.374–0.972),  $p = 0.002$ ], having a university-educated mother [OR = 0.197 (0.039–0.884),  $p = 0.034$ ] and a monthly income of more than 10 000 SAR [OR = 1.669 (1.090–2.557),  $p = 0.028$ ] were negative predictors for exposure to violence; in other words, they have a lower chance to be a victim of violence. On the other hand, complete deafness [OR = 1.784 (1.101–2.856),  $p = 0.019$ ], having a deceased father [OR = 1.650 (1.188–2.538),  $p = 0.008$ ] or mother [OR = 2.309 (1.421–3.751),  $p = 0.001$ ] and a higher number of family members [OR = 1.764 (1.122–2.829)  $p = 0.024$ ] were positive predictors for more exposure to violence.

## Discussion

Women with hearing disabilities experience higher rates of violence compared to normal women [20], yet limited research has focused on violence against women among this marginalised population. To our knowledge, this is the first study in SA that evaluated violence against women with hearing disabilities and its associated factors. Therefore, the data provided by this study may help policymakers and health service managers in developing and implementing intervention strategies to reduce violence against this group.

The current study showed that with women with hearing disabilities were commonly exposed to different forms of violence. Verbal violence is the most common form of violence against women, as reported by more than half (54.0%) of females with hearing disabilities, followed by psychological violence (41.3%). In addition to verbal and psychological violence, hard of hearing females appear to be at risk of physical violence, as reported by 34.5% of study participants. Similarly, a recent study conducted in 2020 involved 1 845 women from the western region of SA, including Mecca, Jeddah and Taif. The study reported a prevalence of psychological violence (48.47%) and physical violence (34.77%) [3]. The prevalence of physical violence among the women with hearing disabilities in the current study was similar to the prevalence of physical abuse (32.0%) in the western region, as reported by a study conducted on 758 Saudi women to assess the prevalence and risk factors of physical violence against woman [21], which means that the prevalence of violence can be consistent across different popu-

lations in different sectors of SA regardless of the variable associated factors. However, it was expected that the prevalence of violence among the population with hearing disabilities was much higher than the normal population; the results indicated a similar prevalence as reported in the normal population. Such results indicate the huge effort of the Ministry of Social Affairs in SA to protect the disabled population against violence and discrimination.

In the current study, more than one-third of the participants with hearing disabilities were exposed to moderate to severe forms of DV. Based on current and prior studies, one in three Saudi women is a victim of violence. These findings are in line with Scherer et al. (2016), who conducted a systematic review to determine the prevalence of violence among female university students with and without disabilities. Their results showed that psychological violence was the most prevalent among female university students, with 34% to 52% in most of the research included in the review [22]. Our results were consistent with prior studies, revealing that psychological and physical violence is alarmingly high among deaf and hard of hearing female college students. The previous studies indicated that women with hearing disabilities are likely to be at a higher risk of experiencing DV [23–25]. Consequently, the current study results emphasised the importance of further evaluating the experience of DV among women with and without hearing disabilities.

Violence disclosure is a crucial step that enables various organisations and institutions to initiate actions to protect victims of violence. However, violence is considered a hidden problem for the current study participants, as only one-tenth of them could disclose this information, and 41.3% were unable to disclose this information although they suffer from it. In addition, more than three-quarters of the study participants were unwilling to seek help if exposed to violence. SA has a big problem with violence disclosure, like the rest of the Arab countries. Women are reluctant to report violence because of some cultural heritages, fear of the perpetrator of change and social stigma. In addition, the deaf population has few alternatives for socialisation and support. A study conducted on 421 Saudi women to explore the health-related influences of DV against women reported a low rate of violence disclosure among Saudi women [26]. Similarly, several studies on violence disclosure indicated that underreporting is more common than overreporting of violence; however, the disclosure rate is slightly higher than in our current study [27–29].



The findings from logistic regression analysis revealed that urban area residents with a monthly income of more than 10 000 SAR were significantly less likely to experience DV than others. These findings indicated that living in poverty and rural areas plays an important role in vulnerability to DV. The current study's findings are supported by several other studies that showed a significant association between socio-economic status and DV in different countries, such as Ethiopia [30, 31], Rwanda [32]. The high prevalence of violence among rural women may be attributed to cultural perception and lack of information and services in rural areas, where beating, cursing and other forms of violence are considered to shape women's behaviour. Consistent findings were also observed in an Ethiopian survey which indicated that female residents of urban areas have less chance of experiencing violence than female residents of rural areas [33].

Marital status was also strongly linked with DV experience; the results of this study indicated that unmarried women were significantly less likely to experience DV than married women. The relationship between marriage and experiencing DV can be explained by male dominance as a common phenomenon in SA, like the rest of the Arab countries. If the husbands exhibit repetitive violent behaviour to control women, pleasant emotions and effectual contact will disappear among the family members, which may lead to confrontation and the occurrence of DV. The current findings were in line with a study conducted by Seid et al. (2021), who stated that women whose husbands exhibit at least one type of wife-dominant behaviour were four times more likely to experience DV when compared to those who were single or those whose husbands had no wife-dominant behaviour. [30] This result is also consistent with a study from Nigeria that found a significant association between men's controlling behaviour in marriage and the experience of DV [34].

The current study also found that complete deafness and having a deceased father and mother are positive predictors of exposure to DV. A previous study conducted by McQuiller Williams et al. (2014) compared the experience of physical and psychological violence among deaf and hard of hearing college students. Their findings revealed that hard of hearing participants were significantly more at risk of experiencing physical violence than deaf participants but were not more likely to experience psychological violence [23]. The difference between the current study and the study by McQuiller Williams et al. may be attributed to the difference in the dependent variable used in logistic regression analysis. In the current study, logistic regression was analysed based on the overall violence score, while with McQuiller Williams et al., logistic regression was analysed for physical and psychological violence separately. These findings point to the need for more targeted research on DV against women and its associated factors among these marginalised populations, including qualitative research. These findings also shed

light on the need for more professional and educational services to be available to the deaf and hard of hearing population, especially those whose parents have died, to promote independence and prevent violence against women. Likewise, social and economic security is essential for achieving this independence.

The current study suggests that larger family sizes positively predict the experience of violence. The results from a previous study indicated that abused women were more likely to have more family members than non-abused women [35]. These findings shed light on the important role of healthcare providers in educating and counselling deaf adolescents and adults about DV against women. Besides this, health and social service providers must ensure that all related examinations and counselling are accessible to the deaf community.

### Strengths and limitations of the study

This is the first study in SA that evaluated the prevalence of DV and its associated factors among women with hearing disabilities. The limitation of the current study is the collection of data using a convenience sample, which may limit the generalisation of the study findings. Thus, further research is suggested on a larger sample size from various geographical areas in SA.

### Conclusions and implications for clinical practice

Although SA has tried to lower DV against women, its prevalence among hearing-disabled females is moderate to high (36%) in Tabuk city. Based on logistic regression, living in an urban area, being single, having a university-educated mother and having a monthly income of more than 10 000 SAR are negative predictors of exposure to violence. On the other hand, complete deafness, having deceased parents and a larger family size are positive predictors of exposure to violence. Thus, improving the economic status of deaf people and raising the awareness of married women living in rural areas can be effective strategies to reduce DV against women.

The data provided by this study may help policymakers and health service managers in designing and implementing appropriate strategies to tackle DV against this marginalised group. Addressing such predictors is likely to increase the efficiency of DV interventions and enhances the ability of deaf individuals to confront and disclose information about DV against women.

**Acknowledgments.** The authors extend their appreciation to the Deanship of Scientific Research at University of Tabuk for their funding of this work through research number (S-1443-0133).

Source of funding: This work was funded from the authors' own resources.

Conflicts of interest: The authors declare no conflicts of interest.

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Received: 20.12.2022

Reviewed: 23.02.2023

Accepted: 18.05.2023

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