

## Readiness of Dental Students and Dentists to Screen for Domestic Violence Cases: A Cross-Sectional Study in Saudi Arabia

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### Abstract

**Introduction:** The dental professional can be the first responder for victims of domestic violence (DV). Because a high percentage of violent and abusive injuries involve trauma to the head and neck area, dentists have a unique opportunity to identify and document abuse cases.

**Aim:** The aim of this study was to explore the readiness of dental professionals and dental students to conduct DV screening in Saudi Arabia.

**Methods:** This was a cross-sectional study of 284 dental students and dentists in Saudi Arabia. Readiness for domestic violence screening was measured using a shortened version of the Domestic Violence Healthcare Providers Survey (DVHPS) questionnaire.

**Results:** Dental professionals had a moderate level (mean = 5.64) of readiness to conduct DV screening, based on a single-item question. Dental professionals scored moderate levels on all of the DVHPS domains (Mean range 2.33-2.84). A total of 38.73% of the participants had previous training in DV screening, and 68.31% of participants believed they could assess DV in a dental setting. Participants who were non-Saudi, had previous training, or believed they could identify DV had significantly better readiness to screen DV in multiple domains of the DVHPS. Married dental professionals had significantly higher scores in the patient's victim personality/traits and psychiatric support domains on the DVHPS.

**Conclusion:** Dental professionals in Saudi Arabia had a moderate level of readiness to conduct DV screening. It is important to have a health promotional campaign to educate dental students and dentists about DV screening.

**Keywords:** Readiness; Dental Professionals; Domestic Violence; Screening; Dental Setting

### Introduction

The dental professional can be the first respondent for victims of domestic violence (DV) [1] because a high percentage of violent and abusive injuries involve trauma to the head and neck area. Consequently, dentists have a unique opportunity to identify and document

abuse cases [2,3]. The World Health Organization (WHO) defines DV as physical, sexual, emotional, and financial abuse and control by a current or former intimate partner, most commonly by a male against his female partner. DV is also known as intimate partner violence (IPV) [4].

Globally, DV is recognized as a serious violation of human rights [1]. Many studies over a number of years have presented the impact of violence on the physical and mental health and social well-being of affected individuals, families, and society [5,6]. The health effects of DV are both short- and long-term. Short-term, DV can result in fractures, traumatic brain injuries, skin lacerations, burns, and in severe cases, death [7,8]. Long-term, all effects are associated with the development of depression, anxiety, post-traumatic stress disorder, substance misuse, and suicidal behavior [6,8-10].

Healthcare professionals may be the first or only person to whom survivors disclose abuse because these professionals are trusted [11]. Although policy frameworks and National Institute for Health and Care Excellence quality standards on DV guide for healthcare professionals to be involved in identification, support, and referral to specialist advocacy services [12], existing evidence reveals that the level of adherence to implementation of these policies and quality standards in dental practices is low [1]. Therefore, to gain in-depth understanding of why dental practitioners play a limited role in addressing and referring DV cases, we need to look more closely at the potential barriers and facilitators to performing DV screening for all dental patients. In dental practices, there are many barriers, such as limited education and training regarding screening and referral of DV victims, insufficient time or skill, lack of confidence, funding restrictions, and IT limitations [7,13-17].

Regarding the level of knowledge of dentists about DV and support of victims, there is, unfortunately, evidence that health professionals lack the essential skills and experience to respond appropriately when patients disclose abuse [7]. Previous studies have shown that dentists and dental students have insufficient knowledge of social signs and physical symptoms of DV in Pakistan, Saudi Arabia, UAE, and Jordan [18-21]. In Pakistan, only 31% of dentists knew suspect symptoms of DV victims [18], while in Saudi Arabia, almost 73% of the general dentists believed they could identify DV in a dental setting [19].

Many studies have explored the barriers and fears of dentists regarding asking about the reasons for injuries. For example, dental professionals in Netherlands, Faroe Islands, and India have reported that the most common causes of underreporting physical abuse cases are lack of knowledge and the embarrassment of talking about DV, along with the fear of victims' families [22-24]. For Saudi dentists in one study, a lack of adequate training in detecting DV and dentists' own embarrassment about raising the topic of abuse were the most common barriers [25]. However, another Saudi study concluded that fear of offending patients, an increased number of patients treated per day, and professional role resistance were the most common barriers [19].

Previous surveys among dentists in Brazil, Greece, France, Jordan, Turkey, and Saudi Arabia have assessed the frequency of screening and reporting suspected cases to legal authorities was low, ranging from 10% to even less than 3% [21,26-29]. In contrast, in Faroe Islands, the dentists showed relatively higher percentages, where 39% of dentists had reported DV cases to legal authorities [23]. However, Dutch dentists showed a result of 81% of the medical practitioners having suspected a case of physical abuse and simply taking notes of those signs/symptoms [22]. Conversely, in Saudi Arabia, 49.7% of dentists said they screen new patients for DV, while 46.4% said they do so at checkups [25].

The concept of readiness has been described as a positive force that may motivate people to make positive changes [30,31]. Unfortunately, nearly half of the Saudi healthcare practitioners are not ready to identify and screen DV cases and urgently need a DV training program, supportive work environment, and clear referral system [32]. There is evidence supporting dental professionals welcoming more opportunities for DV training to enhance their knowledge and competency at screening and referring patients experiencing DV [33].

Thus, it is important to assess whether dentists are physically and emotionally ready for the work as the first line of defense against DV. Bearing in mind that most of the previous studies investigating DV among dentists in Saudi Arabia were conducted only in the Western region of Saudi Arabia [19,25] and did not assess dental students as the future of the dental workforce, the aim of this study was to explore the readiness of dental professionals and dental students to screen for DV in Saudi Arabia.

### Methodology

#### Study design and sampling

From September 2023 to October 2023, a cross-sectional survey was undertaken in Saudi Arabia targeting dental practitioners. An online survey was distributed on several social media sites, including WhatsApp, Twitter, LinkedIn, TikTok, Snapchat, and Instagram, in order to recruit study participants, using a convenience sampling method for participant selection.

#### Inclusion and exclusion criteria

The inclusion criteria included participants who were dental students or dentists in Saudi Arabia. The participants also had to approve the study consent form electronically before completing the study questionnaire. The exclusion criteria included dentists who were retired at the time of the study. To ensure respondent anonymity and maintain participant information confidentiality, each questionnaire was assigned a unique identification number.

#### Instrument

The questionnaire comprised 35 questions divided into two main sections. The first section consisted of 13 questions assessing participants' demographics and general readiness to perform DV screening. The item to assess general dentists' readiness to perform DV screening was scored using a 10-point scale ranging from 1, which represented the lowest level of readiness, to 10, which represented the highest level of readiness. The second section was a detailed assessment of DV screening using the shortened version of the Domestic Violence Healthcare Providers Survey (DVHPS), which was adopted and modified from a previous study [35]. The DVHPS comprised six domains. The first domain had seven items exploring general dentists' self-efficacy in performing DV screening. The second domain was about general dentists' fears of offending patients in performing DV screening and comprised four items. The third domain consisted of five items assessing general dentists' judgments of victim personalities and their effects on DV screening. The fourth domain evaluated professional role resistance to performing DV screening in dental settings with three items. The fifth and sixth domains consisted of two items each to explore general dentists' assessments of victim disobedience and psychiatric support, respectively. In all six domains, item responses were recorded on a 5-point Likert scale where 1 = strongly disagree, 2 = disagree, 3 = uncertain, 4 = agree, and 5 = strongly agree. The term "intimate partner violence (IPV)" was replaced by "domestic violence (DV)" for consistency and to make it much easier for participants to understand the question, bearing in mind that IPV and DV are synonymous in the literature. The study was approved by the institutional review board from Taibah University with the number TUCDREC/250823/1Abdoh.

#### Statistical analysis

Statistical analyses were conducted using the Statistical Package for the Social Sciences (SPSS) software program, version 22.0 (IBM Corp., Armonk, NY, USA). Descriptive univariate analyses, including count, percentage, mean, and standard deviation, were used to report the demographic characteristics of the participants. The means of general dentists' readiness to perform DV screening and those of the DVHPS domains were calculated. Bivariate analysis using the t-test and Kruskal-Wallis test were conducted to determine the potential association between different predictors in the survey. The significance level was  $p < 0.05$ .

**Results**

The data for this study were collected from 284 dentists and dental students. There were 179 (63.03%) female and 105 (36.97%) male participants in the study. The mean age of the study population was 30.46 years, with a standard deviation (SD) of 8.62. Most participants were Saudi (84.51%) and non-married (61.62%). Regarding the education or work sector, 49.30% were in the governmental sector, 40.14% in the private sector, and 10.56% in both sectors. A total of 61.27% of the study participants had not received any undergraduate training in identifying DV, while 68.31% said that they can identify DV in the dental setting. The average clinical experience was 8.01 years (SD = 6.45), with an average of 33.76 (SD = 20.60) working hours per week, and an average of 7.84 (SD = 6.59) patients treated per day.

Variable		n	%	Mean	SD
Gender	Male	105	36.97		
	Female	179	63.03		
Age				30.46	8.62
Marital status	Married	109	38.38		
	Non-married	175	61.62		
Qualification	Student	26	9.15		
	Intern	23	8.1		
	Graduate	177	62.32		
	Specialist	40	14.08		
	Consultant	18	6.34		
Region of residence in Saudi Arabia	Western	81	28.52		
	Central	46	16.2		
	Southern	21	7.39		
	Eastern	109	38.38		
	Northern	27	9.51		
Nationality	Saudi	240	84.51		
	Non-Saudi	44	15.49		
Current education or work sector	Governmental	140	49.3		
	Private	114	40.14		
	Both	30	10.56		
Received training in identifying DV in undergraduate education	Yes	110	38.73		
	No	174	61.27		
I believe I can identify DV in a dental setting	Yes	194	68.31		
	No	90	31.69		
Clinical experience in years				8.01	6.45
Working hours/week				33.76	20.6
Patients treated/day				7.84	6.59

**Table 1:** Participants' demographic data.

When participants were asked about their readiness to perform DV screening of their patients, the mean readiness score of the answers was 5.64 (SD = 2.83), with answers given on a Likert scale ranging from 1 (representing the lowest level of readiness) to 10 (representing the highest level of readiness). The participants' responses to the DVHPS questionnaire are presented in table 2. Each DVHPS questionnaire domain was calculated based on the summative mean variable of each domain (Table 3).

Domain	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
	n (%)	n (%)	n (%)	n (%)	N (%)
<b>1. Self-efficacy</b>					
I have time to ask about domestic violence (DV) in my practice.	(58) 20.42%	(76) 27.76%	(89) 31.34%	(41) 14.44%	(20) 7.04%
There are strategies I can use to help victims of DV change their situation.	(48) 16.90%	(77) 27.11%	(84) 29.58%	(48) 16.90%	(27) 9.51%
I feel confident that I can make the appropriate referrals for abused patients.	(51) 17.96%	(61) 21.48%	(91) 32.04%	(52) 18.31%	(29) 10.21%
I have ready access to information detailing management of DV.	(82) 28.87%	(80) 28.17%	(61) 21.48%	(41) 14.44%	(29) 7.04%
I have ready access to medical social workers or community advocates to assist in the management of DV.	(89) 31.34%	(73) 25.70%	(66) 23.24%	(32) 11.27%	(24) 8.45%
I feel that general dentists can help manage DV patients.	(26) 9.15%	(65) 22.89%	(86) 30.28%	(60) 21.13%	(47) 16.55%
<b>2. Fear of offending patients</b>					
I am afraid of offending the patient if I ask about DV.	(49) 17.25%	(60) 21.13%	(74) 26.06%	(68) 23.94%	(33) 11.62%
Asking patients about DV is an invasion of their privacy.	(62) 21.83%	(76) 26.76%	(78) 27.46%	(42) 14.79%	(26) 9.15%
It is demeaning to patients to question them about abuse.	(47) 16.55%	(76) 26.76%	(94) 33.10%	(45) 15.85%	(22) 7.75%
If I ask non-abused patients about DV, they will get very angry.	(28) 9.86%	(60) 21.13%	(88) 30.99%	(71) 25.00%	(37) 13.03%
<b>3. Victim personality traits</b>					
A victim must be getting something out of the abusive relationship, or else he/she would leave.	(63) 22.18%	(64) 22.54%	(105) 36.97%	(33) 11.62%	(19) 6.69%
People are only victims if they choose to be.	(91) 32.04%	(66) 23.24%	(71) 25.00%	(38) 13.38%	(18) 6.34%
When it comes to domestic violence victimization, it usually takes two.	(58) 20.42%	(68) 23.94%	(114) 40.14%	(31) 10.92%	(13) 4.58%
I have patients whose personalities cause them to be abused.	(87) 30.63%	(60) 21.13%	(83) 29.23%	(38) 13.38%	(16) 5.63%
The victim's passive/dependent personality often leads to abuse.	(64) 22.54%	(64) 22.54%	(91) 32.04%	(48) 16.90%	(17) 5.99%

<b>4. Professional role resistance</b>					
It is not my place to interfere with how a couple chooses to resolve conflicts.	(54) 19.01%	(77) 27.11%	(96) 33.80%	(34) 11.97%	(23) 8.10%
Investigating the cause of DV is not part of dental practice.	(73) 25.70%	(68) 23.94%	(69) 24.30%	(54) 19.01%	(20) 7.04%
If patients do not reveal abuse to me, then they feel it is none of my business.	(52) 18.31%	(62) 21.83%	(86) 30.28%	(53) 18.66%	(31) 10.92%
<b>5. Victim disobedience</b>					
Women who choose to step out of traditional roles are a major cause of DV.	(87) 30.63%	(59) 20.77%	(84) 29.58%	(41) 14.44%	(13) 4.58%
The victim has often done something to bring about violence in the relationship.	(104) 36.62%	(58) 20.42%	(78) 27.46%	(34) 11.97%	(10) 3.52%
<b>6. Psychiatric support</b>					
I have ready access to mental health services should our patients need referrals.	(83) 29.23%	(73) 25.70%	(69) 24.30%	(44) 15.49%	(15) 5.28%
I feel that the mental health services at my clinic or agency can meet the needs of DV victims in cases where they are needed.	(86) 30.28%	(54) 19.01%	(79) 27.82%	(38) 13.38%	(27) 9.51%

**Table 2:** Participants' responses to the items in domestic violence healthcare providers survey (DVHPS) domains.

Domain	Mean (standard deviation)
Self-efficacy	2.69 (0.91)
Fear of offending patients	2.84 (0.93)
Victim personality traits	2.51 (0.91)
Professional role resistance	2.68 (1.02)
Victim disobedience	2.33 (1.06)
Psychiatric support	2.47 (1.10)

**Table 3:** Collective mean and standard deviation for each domain in shortened version of the domestic violence healthcare providers survey (DVHPS).

The perception of readiness to screen for DV and the six DVHPS domain scores were assessed against the demographic data using t-test and the Kruskal-Wallis test. The results are shown in detail in table 4.

Variable		Readiness to conduct DV screening for all patients n (%)	Self-efficacy n (%)	Fear of offending patients n (%)	Victim personality / traits n (%)	Professional role resistance n (%)	Victim disobedience n (%)	Psychiatric support n (%)
Gender	Male	5.45 (2.90)	2.58 (0.87)	2.83 (0.87)	2.46 (0.89)	2.55 (1.01)	2.30 (0.99)	2.39 (1.00)
	Female	5.75 (2.79)	2.75 (0.93)	2.85 (0.96)	2.54 (0.93)	2.75 (1.02)	2.35 (1.10)	2.53 (1.15)
Marital status	Married	5.57 (2.88)	2.77 (0.87)	2.9 (0.86)	2.69 (0.79)*	2.77 (0.94)	2.48 (1.04)	2.65 (0.94)*
	Non-married	5.69 (2.8)	2.63 (0.94)	2.8 (0.97)	2.4 (0.96)	2.62 (1.06)	2.25 (1.07)	2.36 (1.17)

Qualification	Student/ intern	5.39 (2.86)	2.63 (0.99)	2.8 (1.04)	2.44 (1.01)	2.56 (1.15)	2.19 (1.14)	2.41 (1.29)
	Dentist	5.69 (2.82)	2.7 (0.9)	2.85 (0.91)	2.53 (0.89)	2.7 (0.99)	2.36 (1.04)	2.49 (1.05)
Region	Western	5.49 (2.92)	2.72 (1.00)	2.80 (0.91)	2.56 (1.02)	2.62 (1.01)	2.40 (1.11)	2.51 (1.20)
	Central	5.43 (2.58)	2.69 (0.92)	3.05 (0.97)	2.55 (0.86)	2.84 (1.01)	2.37 (1.11)	2.60 (1.19)
	South- ern	5.29 (2.76)	2.48 (0.80)	3.10 (1.07)	2.50 (0.87)	2.86 (1.09)	2.40 (1.06)	2.48 (0.95)
	Eastern	5.83 (2.78)	2.72 (0.84)	2.74 (0.88)	2.44 (0.87)	2.58 (1.00)	2.20 (1.00)	2.42 (1.03)
	North- ern	5.96 (3.28)	2.60 (1.02)	2.80 (0.98)	2.58 (0.87)	2.80 (1.05)	2.56 (1.09)	2.35 (1.01)
National- ity	Saudi	5.54 (2.83)	2.64 (0.91)*	2.86 (0.89)	2.46 (0.91)*	2.64 (1.02)	2.27 (1.04)*	2.39 (1.07)*
	Non- Saudi	6.18 (2.75)	2.95 (0.88)	2.73 (1.10)	2.80 (0.88)	2.89 (1.00)	2.68 (1.11)	2.91 (1.13)
Training in identi- fying DV	Yes	6.19 (2.61)*	2.98 (0.95)*	2.95 (0.99)	2.67 (0.88)*	2.72 (1.01)	2.62 (1.06)*	2.77 (1.08)*
	No	5.29 (2.91)	2.50 (0.84)	2.77 (0.88)	2.41 (0.92)	2.65 (1.02)	2.16 (1.02)	2.29 (1.06)
I believe I can identi- fy DV	Yes	6.21 (2.64)*	2.85 (0.90)*	2.81 (0.96)	2.57 (0.88)	2.76 (1.03)*	2.42 (1.05)*	2.60 (1.10)*
	No	4.42 (2.85)	2.34 (0.85)	2.90 (0.86)	2.38 (0.96)	2.50 (0.97)	2.14 (1.05)	2.20 (1.04)
*p < 0.05								

**Table 4:** The relationship between readiness to screen for DV in addition to the six DVHPS domain scores and the demographic data.

## Discussion

The present study assessed the readiness of dental professionals and dental students in Saudi Arabia to conduct DV screening. Participants demonstrated a moderate level of readiness. Females, dentists, and trained participants had higher readiness scores than males, students/interns, and non-trained participants.

The mean readiness score of general dentists and dental students for performing DV screening for all patients was 5.6, while the study conducted in Jeddah city, Saudi Arabia, found that the readiness score of dentists for screening DV cases was 7.7 [19], similar to the results from another study conducted in Netherlands [22]. However, the current study suggested a differential readiness for DV screening based on training, in which trained participants showed significantly more positive attitudes than non-trained participants about identifying DV, in line with other studies where the knowledge score and confidence level about dealing with DV cases increased significantly among trained practitioners [33,34].

Results on the attitudes and self-reported behaviors related to the identification and management of DV among the study participants were uncertain. Based on the scores of the self-efficacy and psychiatric support predictors, dentists and dental students are not adequately ready to screen abuse cases in the dental setting. In addition, fear of offending patients, victim personality/traits, professional role resistance, and victim disobedience could be considered potential barriers, given that the results were not low enough. These limiting factors might lead to uncertainty or failure to perform DV screening.

This survey's results showed that most respondents reported being uncertain about making appropriate referrals for suspected cases (32%), which parallels the findings of previous studies conducted in many countries, as the frequency among dentists of reporting abused patients to legal authorities was low, ranging from 3% to 10% [28,35]. This finding could be for many reasons, including a lack of time to screen abuse cases; given that 31% of participants were uncertain about having time to ask about DV in their dental practice. In contrast, 62.2% of dental hygienists disagreed/strongly disagreed that they do not have time to ask patients about DV during dental hygiene appointments [36]. Another cause could be a lack of awareness about which legal authorities suspected cases should be reported to, as most respondents (31.34%) strongly disagreed that they possessed the ability to make appropriate referrals, similar to studies in the United Arab Emirates, United States, and Saudi Arabia also showing a lack of awareness about legislation regarding DV among practicing dentists and medical students [14,20,35]. In contrast, one previous study reported that 85% of dental practitioners and 86% of undergraduate dental students correctly identified the legal authorities where suspected cases should be reported [37].

In this study, most respondents (26.06%) were uncertain about being fearful of offending patients when inquiring about DV. This result is consistent with findings in several studies regarding barriers to screening for physical abuse cases worldwide, with surveys in Faroe Islands, Turkey, India, Saudi Arabia, and the United States reporting lack of knowledge and fear of discussing DV with patients [23,28,38,39]. This is likely due to an inability to screen the abused patients without the presence of relatives or a lack of self-confidence.

Moreover, the assessment of participants' professional role resistance toward screening DV victims showed that most (25.70%) considered DV beyond the scope of their practice. Similarly, a significant proportion of American (56.5%) and Indian dentists (64%) did not believe that DV screening should be part of their professional roles [3,14]. This can be explained by very few dental schools offering courses on DV in their curricula [40].

Although the Saudi Ministry of Health runs the Department of Psychological and Social Health, which provides a variety of mental health and social services for DV victims, 29.23% of the participants disagreed that they had ready access to referral services to mental health centers for their patients when DV is suspected. A similar negative attitude was reported among dental practitioners in Pakistan, where only 22% of respondents had good knowledge about the recommended first step to be taken when a case of physical abuse is identified [18]. In comparison, more positive attitudes were seen in a previous study among Saudi dentists in Jeddah city, where 40% of participants were aware of the correct protocol for accessing mental health services [35]. One of the reasons for this finding is the lack of availability of a basic protocol for screening suspected cases of DV in all health settings.

Therefore, these findings point to the obvious need for additional educational courses and training programs to enhance the attitudes of dentists and dental students toward DV cases, which will improve their preparedness to routinely screen and correctly report patients suspected of suffering DV. This is in agreement with a study conducted in eight Arab counties in which most dentists (68.8%) indicated they intended to report DV [41].

### Conclusion

Dental professionals in Saudi Arabia who participated in this study had a moderate level of readiness to conduct DV screening, based on the single-item question and DVHPS questionnaire. Around one-third of the participants had previous training on DV screening, and around two-thirds of the participants believed they could assess DV in a dental setting. Participants who were non-Saudi, married, had previous training, or believed they could identify DV had significantly higher scores for readiness to screen DV in multiple domains of the DVHPS. It is important to create a health promotional campaign to educate dental students and dentists about DV screening and boost stakeholders to enable dental professionals in Saudi Arabia to conduct such screenings.



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## Conflicts of Interest

The authors declare no conflicts of interest.

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