

Dental Hygienists' Readiness to Screen for Intimate Partner Violence in the State of Texas

Sarah A. Lemich RDH, MSDH; Jacqueline J. Freudenthal, RDH, MHE;
Karen Neill, Ph.D., R.N., SANE-A, DF-IAFN; Denise M. Bowen, RDH, MS

Abstract

Purpose: Limited data document dental hygienists' preparedness for intimate partner violence (IPV) screening and response. The aim of this study was to assess dental hygienists' readiness to screen for IPV and provide baseline information for the realization of action toward addressing IPV.

Methods: The Domestic Violence Healthcare Provider Survey (DVHPS) instrument was distributed online to all members of the Texas Dental Hygienists' Association (n=1100). Four hundred fifteen emails were opened and 114 (n=114) surveys were returned for 28% response rate. This validated survey measures six scales: perceived self-efficacy, fear of offending patients, victim personality/traits, professional role resistance, perceptions of victim disobedience causing IPV, and psychiatric support. Descriptive statistics were used to calculate mean scores for each scale. Specific criteria were applied to interpret the level of readiness based on the scale scores.

Results: A little more than one quarter of the respondents (28%) reported having had course content related to IPV as students in their dental hygiene program curriculum, while 27% reported completing continuing education on IPV. A significant proportion of participants, 40%, were uncertain if routine IPV screening was within their professional role. They did not perceive self-efficacy in their screening capabilities ($m=3.08$ with 5.0 as the strongest), however they reported possessing a strong knowledge regarding IPV victims' personality/traits and did not blame the victims ($m=1.92$ and 1.48 respectively with 1.0 as the strongest).

Conclusion: Results confirm earlier studies indicating the need for IPV training for oral health care professionals. Specifically, there is an evident need for training to increase dental hygienists' self-efficacy regarding IPV screening. Dental hygienists play a critical role in IPV screening and should be prepared to face the challenges presented by IPV and be available to meet the needs of IPV victims through referral to the appropriate support services.

Keywords: dental hygienist, intimate partner violence, IPV screening, spouse abuse, domestic violence

This manuscript supports the NDHRA priority area: **Professional development: Education** (evaluation).

Submitted for publication: 8/26/17; accepted: 2/11/18

Introduction

In the United States (U.S.), an estimated 20 individuals are abused physically in intimate partner violence situations every minute, every day.¹ Intimate partner violence (IPV), also known as domestic violence (DV), is experienced by both men and women; nearly 4,000,000 victims of abuse in the U.S. annually are women.² Over 42.4 million women have experienced IPV in the form of rape, abuse, or stalking sometime during their lifetime.³ IPV affects women regardless of race, class, religious affiliation, age or economic status.

The state of Texas has a high incidence of IPV cases annually; 38% of women in the state of Texas reporting having experienced violence as compared to 33.3% of US women.^{1,4} Additionally 75% of young adults in Texas have either experienced or know someone who has experienced dating violence.⁴ In 2015, there were 158 documented cases of women killed by an intimate partner in Texas, more than 10% of the national total, with over 185,000 family violence incidents reported annually in the previous four consecutive years.⁴ Accurate determination

of IPV prevalence across Texas remains difficult as the number of unreported cases remains unknown.

IPV is a health and social problem with growing recognition, producing damaging effects on individuals, families, and society. In addition to physical injuries, many IPV survivors suffer mentally and psychologically with fear, safety concerns, and post-traumatic stress disorder [PTSD].³ Furthermore, IPV negatively affects the economy as victims lose 8 million paid working days each year, while IPV costs \$8.3 billion for healthcare annually.¹

Dental hygienists and dentists conduct routine examinations of the head, neck, and oral cavity during dental appointments, placing them in a unique position to identify and document signs of abuse.⁵ Texas, along with California and North Dakota, is one of few states with mandatory IPV victim referral and reporting laws.⁶ Texas law requires the reporting of suspected abuse and injury caused by a weapon, and Tex. Fam. Code § 91.003 requires healthcare providers to refer identified victims of IPV to domestic violence (DV) programs or service agencies.⁷ Although some types of IPV including physical, sexual, verbal, economic, and psychological/ emotional are difficult for healthcare professionals to recognize, 75% of physical abuse occurs on the head, face, mouth, and neck.⁵ Victims isolated from friends, family, and social services may present for scheduled or emergency dental appointments as a result of IPV.⁷ Specific knowledge regarding IPV screening and response enhances the ability of dental hygienists' to fulfill these obligations and provide compassionate care, confidently communicate with victims, and manage victim needs.⁸

Increasing healthcare provider training, education and awareness of IPV is critical for primary prevention and effective response as it relies on the identification of risk and protective factors to prevent or care for victims of IPV. Secondary and tertiary interventions require efforts to intervene in the context of violence, and to provide referral resources for therapeutic support of survivors. Actions by healthcare providers to care for victims of IPV include documentation of signs and symptoms of abuse, respectful and compassionate communication, provision of information on community resources, and facilitation of access to services.³ Healthcare providers, including dental hygienists, have an important role in recognizing and responding comprehensively to victims of IPV to support the safety of victims, facilitate the use of community resources, and reduce morbidity and mortality. Common deterrents to IPV response cited by healthcare professionals include lack of knowledge in identifying signs of abuse, practitioners' preconceptions

and beliefs, and embarrassment or concern about offending the patient.⁸ Assessment of dental hygienists' preparedness for IPV screening and intervention is requisite to the design and implementation of effective screening and intervention programs for victims of violence.

Preparation of Oral Health Professionals for IPV Screening

Standards for clinical dental hygiene practice cite the professional responsibility to evaluate patients for DV risk based on health history and clinical assessment.⁹ The U.S. Preventive Services Task Force created a recommendation in the Healthy People 2020 objectives regarding Injury and Violence Prevention. It recommends increased IPV screening by healthcare providers for all women of childbearing age and increased referrals to intervention services following a positive screening.¹⁰

Dental hygienists, who routinely and universally screen patients, can play a significant role in identification, response, victim safety, and referral. The most recent data describing IPV curricular content in entry-level U.S. dental hygiene programs was published in 2002.¹¹ Despite widespread reporting and referral laws at that time, there was a lack of education and training in the curriculum for the preparation of dental hygienists to respond to this societal problem.

More recent studies have examined dental hygienists' IPV training obtained through continuing education, skill-based training, or other methods. A 2009 survey by Mascarenhas et al. indicated dentists and dental hygienists perceived a need for additional education on IPV and reported having received training exclusively through continuing education pathways.¹² Harris et al. suggested an increase in the educational preparation of dental hygienists with 92% reporting previous IPV training; however, dental hygienists reported feeling insufficiently trained to assist IPV victims.¹³ Deficits identified included universal screening of patients for IPV, referral protocols, and knowledge regarding community resources. These perceived deficiencies in training reinforce the need for more effective education of dental hygienists in order to support increased awareness and ability to confidently and compassionately recognize and refer victims of IPV. Small-scale studies of training programs for dental students have resulted in improved readiness to screen for IPV as well as enhanced identification and informed response; however, similar data are unavailable for dental hygienists.^{14,15}

Following a lack of training, deterrents impeding healthcare providers' ability to recognize, screen for, and refer victims of IPV include concern about offending the patient, the patient being accompanied by another person, and embarrassment in approaching the topic.¹² Confident healthcare professionals

are more comfortable questioning and engaging with patients in a caring manner about IPV, and can build a trusting relationship and positive rapport.¹⁶ Opportunity combined with knowledge can dispel the providers' feeling of embarrassment or concern regarding offending the patient. Victims have expressed a desire for healthcare professionals to question and listen to them regarding IPV.¹⁷

Primary Healthcare Providers' Readiness to Screen for IPV

Studies of nurses, nursing students, medical residents, and licensed healthcare providers indicate a need for increased knowledge and preparedness for IPV screening, legal reporting, communication with victims who have disclosed abuse, and documentation.^{8,18,19} Nursing students have questioned their professional responsibility related to IPV abuse screening.⁸ Sundbörg et al. assessed the barriers faced by nurses in the IPV screening process and identified the presence of preconceived ideas pertaining to IPV victims, and a lack of confidence related to appropriate timing for asking questions related to IPV.²⁰ Results indicated nurses were more likely to screen for IPV when they knew how to recognize physical signs of abuse, could develop a relationship with the patient in a supportive environment, and were confident in their abilities to question and discuss IPV.²⁰ LaPlante et al. studied 147 residents across medical specialties and found 50% of residents' reported barriers to routine IPV screening that included inadequate training and feelings of being unprepared for counseling victims of IPV; however all respondents recognized IPV screening as a professional responsibility.¹⁸ The researchers developed and implemented a two-hour course based on reported barriers for the residents and found an increase in knowledge and preparedness for IPV screening following the intervention. Healthcare professionals with training on IPV demonstrate improved perceived knowledge and preparedness for comprehensive response; however, the effects of training can diminish over time.²¹

The Domestic Violence Healthcare Providers Survey (DVHPS) is a published research instrument with strong psychometric properties used to assess health care providers' attitudes, beliefs, and self-reported behaviors related to the identification and management of IPV. Previous studies in Nigeria, Uganda, and Sweden employing the shortened version of the Domestic Violence Healthcare Providers Survey (DVHPS) found healthcare professionals' perceived self-efficacy and attitudes regarding IPV varied by discipline, gender, and age of the provider.²²⁻²⁴ Males, those with increased years of practice experience, and older providers were less likely to screen for IPV and tended to blame the victim more than their counterparts. Healthcare professionals with higher perceived self-efficacy were

more likely to screen for IPV. In Nigeria, social workers were most likely to screen, followed by doctors, nurses/midwives, and others.²² In Uganda, nurses and midwives, predominately female professions, were more likely to screen than doctors, a predominately male profession.²³ Because gender and profession were significantly linked with professional roles and placing blame on the victim, the conclusions support a need for systematic training in IPV screening.^{22,23}

A survey of nurses and physicians in a rural U.S. health network by Roush et al. using the shortened version of the DVHPS, found over half of the survey respondents had diagnosed at least one new IPV case in the previous year.²⁵ These respondents were considered to be more knowledgeable and reflected more positive attitudes, beliefs, and behaviors toward victims when compared to health care providers studied previously. One reason proposed for indicated readiness to screen for IPV was increased attention to the problem through media, campaigns, and healthcare organizations.²⁵

The purpose of this study was to assess and describe the readiness of dental hygienists in the state of Texas to screen for IPV. The findings of this study, coupled with current evidence regarding comprehensive and effective response to IPV, were used to design a model for educational programming to improve the preparedness of dental hygienists' in screening, identification, interaction and response to victims of this recognized social problem.

Methods

Following approval of the study by the Human Subjects Committee of Idaho State University, a census survey of all Texas Dental Hygienists' Association's [TDHA] members (n=1100) was conducted. Members agreeing to answer the survey comprised the sample. The following inclusion criteria determined eligibility: dental hygienists holding an active license to practice in the state of Texas who provide oral healthcare services to patients a minimum of one day per month in a public or private setting. Exclusion criteria included dental hygienists practicing less than one day a month; participants with a faculty license, as it is not a full privilege license in Texas; participants with a suspended or retired dental hygiene license.

The DVPHS shortened version online survey, was used for data collection. Permission to utilize the DVHPS was obtained from the authors of the instrument. The original DVHPS instrument was developed and validated in the U.S. by Maiuro et al. to assess healthcare providers' attitudes, beliefs, and self-reported behaviors related to the identification and management of IPV.²⁶ The purpose of the shortened survey was to determine

providers' readiness to screen in terms of knowledge and self-efficacy.²⁷ The instrument consists of 22 items measuring the following six scales: perceived self-efficacy (six items), fear of offending patients (four items), victim personality/trait (five items), professional role resistance (three items), victim disobedience (two items), and psychiatric support (two items). Factorial stability, internal consistency, and concurrent validity of the shortened DVHPS were determined in separate studies by John et al. and Lawoko et al.^{22,27}

The response to each survey item used a 5-point Likert-type scale allowing participants to express their degree of agreement or disagreement with each statement. The response choices for each question in the DVHPS were strongly disagree (1), disagree (2), uncertain (3), agree (4), and strongly agree (5). The first scale, perceived self-efficacy, and scale six, psychiatric support were positively keyed and increased scores indicate better preparedness to screen for IPV. The remaining scales (fear of offending patients; victim personality/traits; professional role resistance; victim disobedience causing IPV) were negatively keyed and lower scores indicate better preparedness.

Predetermined criteria were created by the study Principal Investigator (PI) in consultation with original authors of the instrument to interpret the participant's level of readiness based on mean response scores for each scale. Criteria were reviewed and deemed acceptable by the Maiuro research team responsible for developing the original DVHPS instrument.²⁶ Higher scores (mean ≥ 4) in perceived self-efficacy (scale 1) and psychiatric support (scale 6), signified a high level of self-efficacy and adequate access to psychiatric support services for patients. Mean scores of 2.1 to 3.9 indicated uncertainty, and mean scores ≤ 2 denoted a low level of self-efficacy and inadequate access to psychiatric services.

In the remaining scales, fear of offending patients (scale 2), victim personality/trait (scale 3), professional role resistance (scale 4), and victim disobedience (scale 5), mean scores of ≤ 2 signified participants had no fear of offending the patient, place blame on the victim for abuse, or question whether IPV screening is within the scope of dental hygiene practice. Mean scores of 2.1 to 3.9 indicated uncertainty, and a mean of ≥ 4 denoted fear of offending patients, blame of abuse on the patient, and unawareness of IPV as a part of the dental hygiene scope of practice.

Results

A total of 415 members of the TDHA opened the survey link and there were 114 respondents yielding a response rate of 28%. Of those responding, 19 did not meet inclusion criteria; two additional respondents did not start the survey,

and three respondents only answered demographic and qualifying questions, for a total of 90 completed surveys to be included in the analysis.

The majority of participants were over 40 years of age, had practiced dental hygiene for more than 15 years, and possessed a bachelor's degree or higher. Only 28% of the respondents reported their entry-level dental hygiene curriculum had contained IPV content. A majority of the respondents (67%) indicated a lack of continuing education on IPV post-graduation, as it is not state mandated.

Descriptive statistics for each of the six scales assessed by the DVHPS are presented in Table I. Mean scores were: self-efficacy, 3.08; fear of offending patients, 2.57; victim personality/trait, 1.92; professional role resistance, 3.62; victim disobedience, 1.48; and, psychiatric support, 2.55.

Table I. DVHPS Scales: Mean, Median, Mode

Scales	M	Mode	SD
1: Perceived self-efficacy	3.08	3.00	0.61
2: Fear of offending patients	2.57	2.25	0.71
3: Victim personality/trait	1.92	1.0	0.68
4: Professional role resistance	3.62	3.33	0.67
5: Victim disobedience	1.48	1.0	0.56
6: Psychiatric support	2.55	3.0	1.01

Note: Scale 1 and 6 are positively keyed with the desirable mean being a 5. Scales 2-5 are negatively keyed with the desirable mean being a 1.

Table II includes frequency of responses for each survey item within the six scales assessed by the shortened version of the DVHPS. Within scale 1, self-efficacy, the majority of respondents disagreed/strongly disagreed (62.2%) that they have "no time to ask" patients about IPV during dental hygiene appointments. When asked, most respondents (68.9%) did not perceive they had available information about IPV management or advocates for their patients who were identified as IPV victims, while 56.7% disagreed/strongly disagreed they had access to social workers and community advocates to assist their patients. Most respondents reported being uncertain about making referrals (30%) or disagreed/strongly disagreed (35.6%) that they possessed the ability to make appropriate referrals for IPV.

Within the second scale, fear of offending patients, 64% of respondents did not agree that asking about IPV was an invasion of privacy, and 70% did not agree questioning is

Table II. Frequency of Responses to Items within DVHPS Scales* (n=90)

Scale	Item	Strongly Agree	Agree	Unsure	Disagree	Strongly Disagree	Missing	Total
1 (Q1-6)	1. No time to ask	2 (2.2%)	7 (7.8%)	25 (27.8%)	48 (53.3%)	8 (8.9%)	0	90
	2. Strategies to help	4 (4.4%)	31 (34.4%)	45 (50.0%)	5 (5.6%)	5 (5.6%)	0	90
	3. Make appropriate referrals	7 (7.8%)	24 (26.7%)	27 (30.0 %)	24 (26.7%)	8 (8.9%)	0	90
	4. Access to information	4 (4.4%)	12 (13.3%)	12 (13.3%)	48 (53.3%)	14 (15.6%)	0	90
	5. Access to advocates	8 (8.9%)	13 (14.4%)	18 (20.0%)	33 (36.7%)	18 (20.0 %)	0	90
	6. DH manage IPV	10(11.1%)	46 (51.1%)	32 (35.6%)	1 (1.1%)	1 (1.1%)	0	90
2 (Q7-10)	7. Afraid of offending	2 (2.3%)	29 (33.3%)	14 (16.1%)	35 (40.2%)	7 (8.0%)	3	87
	8. Invasion of Privacy	1 (1.1%)	8 (9.2%)	22 (25.3%)	47 (54.0%)	9 (10.3%)	3	87
	9. Abuse questioning is demeaning	1 (1.1%)	4 (4.6%)	21 (24.1%)	50 (57.5%)	11 (12.6%)	3	87
	10. Abuse questioning is upsetting	1 (1.1%)	16 (18.4%)	43 (49.4 %)	24 (27.6%)	3 (3.4%)	3	87
3 (Q11-15)	11. Victim benefits from abuse	0 (0.0%)	5 (5.8%)	9 (10.5%)	31 (36.0%)	41 (47.7%)	4	86
	12. Victims choose to be	1 (1.2%)	4 (4.7%)	6 (7.0%)	31 (36.0%)	44 (51.2%)	4	86
	13. Violence takes two	0 (0.0%)	5 (5.8%)	10 (11.6%)	33 (38.4%)	38 (44.2%)	4	86
	14. Personalities cause abuse	2 (2.3%)	6 (7.0%)	16 (18.6%)	26 (30.2%)	36 (41.9%)	4	86
	15. Passive-dependent personalities	0 (0.0%)	14 (16.3%)	25 (29.1%)	27 (31.4%)	20 (23.3%)	4	86
4 (Q16-18)	16. Not my place	2 (2.4%)	9 (10.6%)	24 (28.2%)	39 (45.9%)	11 (12.9%)	5	85
	17. Investigating the cause	2 (2.4%)	8 (9.4%)	25 (29.4%)	32 (37.6%)	18 (21.2%)	5	85
	18. None of my business	1 (1.2%)	9 (10.6%)	22 (25.9%)	41 (49.2%)	12 (14.1%)	5	85
5 (Q19-20)	19. Stepping out of roles	0 (0.0%)	1 (1.2%)	7 (8.2%)	27 (31.8%)	50 (58.8%)	5	85
	20. Victim was disobedient	0 (0.0%)	0 (0.0%)	3 (3.5%)	32 (37.6%)	50 (58.8%)	5	85
6 (Q21-22)	21. Access to referral services	8 (9.4%)	14 (16.5%)	24 (28.2%)	27 (31.8%)	12 (14.1%)	5	85
	22. Mental health services	7 (8.2%)	4 (4.7%)	23 (27.1%)	29 (34.1%)	22 (25.9%)	5	85

*Scale 1 = Perceived self-efficacy, 2 = fear of offending patient, 3 = victim/personality traits, 4= professional role resistance, 5 = victim disobedience, 6 = psychiatric support.

demeaning to patients. However, most respondents strongly agreed/agreed (35.6%), or were uncertain (16.1%) about being afraid to offend patients when inquiring about IPV. Nearly half of the respondents (49.4%) were uncertain if questioning the patient on IPV would upset the patient.

With regards to the third scale, victim personality/traits and the fifth scale, victim disobedience, 5 responders (6%) indicated agreement that IPV victims benefit from the abusive relationship or they would leave; victims choose to be victims, or victims benefit from the abusive relationship. Furthermore,

one responder agreed that stepping out of traditional roles warrants abuse, however none of the respondents agreed that a victim's behavior causes violence in the relationship.

When considering the fourth scale, professional role resistance, 29% of the respondents were uncertain whether investigating the cause of IPV was within the scope of practice for health care providers, while 12% perceived it was not a part of health care practice. Many participants expressed uncertainty regarding asking about IPV with 28% responding that it was not their place and 26% that it was none of their business.

Regarding psychiatric support (scale 6), 28% of respondents were uncertain if their office/practice had adequate resources for referral services, while 46% disagreed that they had adequate access to referral services for their patients when IPV is identified. Only 13% strongly agreed/agreed they had adequate access to community or mental health services that might benefit these patients.

Discussion

IPV abuse often occurs repeatedly for the victim, thus training health care professionals to routinely screen, identify and respond to victims of IPV is critical to preventive and response efforts aimed at reducing the occurrence, morbidity and mortality of IPV.³ The dental hygiene appointment provides an ideal opportunity for early detection and prevention of trauma if professionals are trained to recognize and report abuse, refer victims, and provide compassionate communication.¹²

The low percentage of participants reporting having IPV curricular content in entry-level programs' closely reflected findings reported in the 2005 survey of U.S. dental hygienists.^{11,28} This finding, however, is significantly lower than practicing dental hygienists' retrospective perceptions of curriculum content reported in subsequent studies.^{12,13} The number of participants reporting having attended continuing education (CE) with IPV content was also substantially lower. Most participants in this study reported practicing dental hygiene for over 15 years; therefore, their recollection of curricular content might have been a factor. Little progress has occurred during this time to assess entry-level preparation of dental hygienists to effectively identify and respond to victims of IPV based on a deficiency in existing literature on IPV content in dental hygiene educational programs. A survey of U.S. dental hygiene programs is needed to document current IPV curricular content for entry-level dental hygienists.

Participant responses to the questions on the DVHPS in this study, indicated four areas in which dental hygienists' lacked confidence regarding IPV screening: self-efficacy; fear of offending patients; professional role resistance; and scale psychiatric support. These areas of uncertainty can lead to dental hygienists' failure to screen or address signs of IPV, despite the dental hygienists' optimum position for abuse recognition.^{11-13, 28}

This lack of confidence may be related to their lack of education and training. Dental hygienists who have completed IPV trainings, possess higher self-efficacy and are more likely to screen, intervene, and refer victims of IPV.¹⁴ Additionally, study findings in dentistry and other health care disciplines support the effectiveness of a brief training course

in improving preparedness for IPV screening.^{18,28} Healthcare professionals confident in screening, early detection, and effective interventions can reduce the risk of violence and abuse without providing further harm to the patient. It is critical that clinicians be aware of effective screening tools and know how to access resources in the healthcare setting and community in order to keep victims safe.²⁹ Dental hygienists responding to this survey expressed inadequate access to agencies, advocates, community and mental health services for referral of patients identified as IPV victims. A healthcare professional's ability to quickly refer a victim to a specialist or shelter for medical treatment, coupled with identification and intervention has been shown to be lifesaving.²

When asked if abuse-related questioning was offensive to IPV victims, the majority of this survey's participants indicated that they were either uncertain or agreed they feared offending patients. Findings regarding apprehension about offending or upsetting patients by questioning them on IPV are potential barriers to implementation of universal screening and align with previous published studies of dental hygienists and other health care providers.^{12,25} Practitioners need to be aware that IPV victims have expressed a desire to have health professionals question and listen to them regarding IPV.¹⁷

Regardless of health care providers' mandated reporting requirements for IPV in Texas, many of the respondents in this study were unsure if addressing IPV was within their scope of practice. Screening for IPV should be an interprofessional effort for healthcare professionals. However, a significant proportion of these respondents were either unsure or did not think IPV was within the professional role of the dental hygienist, or believed IPV was none of the clinician's business if the abuse was not revealed to them by the patient.¹³ Previous research indicated nurses did not perceive IPV screening and victim intervention was within their scope of practice, leading to failure to screen and refer victims.^{8,20} These findings indicate that interprofessional educational efforts should be pursued.

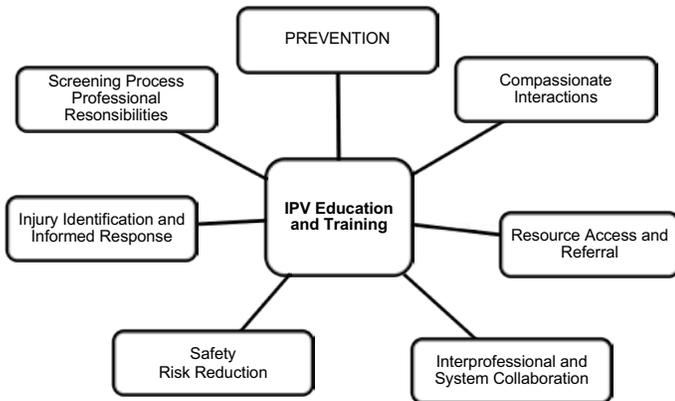
Participants' responses to the DVHPS indicated a strong level of knowledge and awareness regarding victim actions not triggering violence and not placing blame on the victim for experiencing IPV. The vast majority of respondents in this study were females, so this factor may have affected their perceptions and ability to empathize with their patients. Earlier studies suggest that male healthcare providers are more likely to perceive personality and disobedience as triggers for abuse.^{22,24}

Results from this study support previous research indicating that despite receiving some training on IPV, the majority of dental hygienists perceive themselves as inadequately prepared to address and assist victims of IPV and are uncertain/disagree

whether IPV is within their scope of practice.^{12,13} Common across previous studies is the lack of confidence expressed by dental hygienists. Barriers to screening identified include fear of offending the patient when questioning about abuse and inadequate knowledge and preparation on IPV screening and response. Findings from this study are also similar to those of Harris et al. indicating respondents' perception of inadequate referral services.¹³

Dental hygienists possess a strong level of knowledge and awareness regarding IPV and do not blame the victim for IPV abuse. However, the need for additional training to increase dental hygienists' self-efficacy; specifically including IPV content on recognition, assessment, and referral of IPV victims, as well as compassionate communication with confidence is supported by the results from this study. Findings of this study combined with other research regarding dental hygienists and IPV provides the foundation for a model integrating educational interventions to enhance dental hygienists' preparedness to routinely screen and effectively respond to IPV. Figure 1 provides a visual representation of suggested content for IPV Educational Intervention Training.

Figure 1. Proposed Brief Educational Intervention Model for IPV Training for Dental Hygienists



Limitations

This study was conducted using a sample of dental hygienists who were members of the TDHA and responses from professional association members might not be reflective of the preparedness of all dental hygienists in Texas. Also, there are 1,000 members of the TDHA and 12,900 dental hygiene licentiates in the state of Texas. Results from the 28% (n=114) response rate cannot be generalized beyond this sample. A follow-up question was posted on the TDHA Facebook page to determine potential reasons for the low response rate in this study. Patterns of non-respondents could not be determined with this unstructured, anonymous query

of TDHA members. The most frequent responses cited for not completing the survey included: I do not see many patients who are victims in my practice, and I did not see or receive the email sent by TDHA.

Participants also could have answered survey questions based on their perceptions of expected responses instead of individual beliefs. Maiuro et al. validated the full survey in the U.S, however, the shortened version was validated in Sweden and Nigeria and may contain cultural phrases appropriate for those countries.^{26,27}

Conclusion

Findings of this study support previous research establishing a need for healthcare professionals to acquire additional IPV-related education to foster sensitive interactions, safety, injury prevention, adequate healthcare, and provision of guidance for IPV victims. Research indicates healthcare providers' knowledge gaps in this area can be overcome with specific education and training on IPV. Specifically, there is an evident need for training to increase dental hygienists' self-efficacy regarding IPV screening.

Dental hygienists play a critical role in IPV screening and should be prepared to face the challenges presented by IPV and be available to meet the needs of IPV victims through referral to the appropriate support services. An educational model can be used to enhance screening, identification, response, and interaction of dental hygienists with victims of IPV. Future studies focused on testing this educational model with healthcare providers can enhance and advance interprofessional efforts.

Sarah A. Lemich RDH, MSDH is an adjunct faculty member in the Department of Dental Hygiene, Texas Woman's University, Denton, TX.

Jacqueline Freudenthal RDH, MHE is an associate professor and chair, Department of Dental Hygiene, *Karen Neill, Ph.D., R.N., SANE-A, DF-IAFN* is the Associate Dean for Academic Affairs and Director of Graduate Studies School of Nursing; *Denise M. Bowen, RDH, MS*, is a professor emeritus and member of the graduate faculty; all at Idaho State University, Pocatello, ID.

Corresponding author: Denise M. Bowen, RDH, MS; bowendeni@isu.edu

References:

1. National Coalition Against Domestic Violence. Domestic Violence National Statistics [Internet]. 2015 [Cited 2017 Jun 20]. Available from: https://ncadv.org/assets/2497/domestic_violence.pdf
2. Mythri H, Kashinath KR, Raju AS, et al. Enhancing the dental professional's responsiveness towards domestic violence: a cross-sectional study. *J Clin Diag Resh*. 2015 Jun;9(6):ZC51-3.
3. CDC. Intimate Partner Violence Surveillance [Internet]. Atlanta (GA): Centers for Disease Control and Prevention; 2015 [Cited 2017 Jun 20]. Available from <https://www.cdc.gov/violenceprevention/pdf/intimatepartnerviolence.pdf>
4. TCFV. Facts and Statistics [Internet]. Austin: Texas Council on Family Violence; 2017 [Cited 2017 Jun 20]. Available from: <http://tcfv.org/resources/facts-and-statistics/>
5. California Dental Association Foundation. Dental Professionals Against Violence [Internet]. Sacramento: California Dental Association; 2004 [Cited 2017 Apr 15]. Available from: http://www.cdafoundation.org/portals/0/pdfs/dpav_ref_manual.pdf
6. Durborow N, Lizdas KC, O'Flaherty A, et al. Compendium of State Statutes and Policies on Domestic Violence and Health Care [Internet]. Sacramento: Family Violence Prevention Fund; 2010 [Cited 2017 Apr 15]. Available from: https://www.acf.hhs.gov/sites/default/files/fysb/state_compendium.pdf
7. Family Code: Title 4 Protective Orders and Family Violence. Austin (TX): Texas Constitution and Statutes; 1997 [Cited 2017 Jun 20]. Available from: <http://www.statutes.legis.state.tx.us/Docs/FA/htm/FA.91.htm>
8. Rigol-Cuadra A, Galbany-Estragué P, Fuentes-Pumarola C, et al. Perception of nursing students about couples' violence: knowledge, beliefs and professional role. *Rev Latino-Am Enfermagem*. 2015 May-Jun;23(3):527-34.
9. ADHA. Standards for Clinical Dental Hygiene Practice [Internet]. Chicago (IL); American Dental Hygienists' Association; 2016 [Modified 2016; Cited 2017 Jun 20]. Available from: <https://www.adha.org/resources-docs/2016-Revised-Standards-for-Clinical-Dental-Hygiene-Practice.pdf>
10. ODPHP. Healthy People 2020 [Internet]. Washington (DC): U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion [cited 2017 Jun 20] Available from: <https://www.healthypeople.gov/2020/tools-resources/evidence-based-resource/intimate-partner-violence-screening-women-childbearing>
11. Gutmann ME, Solomon ES. Family violence content in dental hygiene curricula: a national survey. *J Dent Educ*. 2002 Sep;66(9):999-1005.
12. Mascarenhas AK, Deshmukh A, Scott T. New England, USA dental professionals' attitudes and behaviours regarding domestic violence. *Br Dent J*. 2009 Nov;206(3):E5.
13. Harris CM, Boyd L, Rainchuso L, et al. Oral healthcare providers' knowledge and attitudes about intimate partner violence. *J Dent Hyg*. 2016 Oct;90(5):283-96.
14. Connor P, Nouer S, Mackey S, et al. Dental students and intimate partner violence: measuring knowledge and experience to institute curricular change. *J Dent Educ*. 2011 Aug;75(8):1110-9.
15. Raja S, Rajagopala C, Kruthoff M, et al. Teaching dental students to Interact with survivors of traumatic events: development of a two-day module. *J Dent Educ*. 2015 Jan;79(1):47-55.
16. McGarry J, Ali P. Researching domestic violence and abuse in healthcare settings: challenges and issues. *J Research in Nursing*. 2016 Sep;21(5-6):465-76.
17. Nelms AP, Gutmann ME, Solomon ES, et al. What victims of domestic violence need from the dental profession. *J Dent Educ*. 2009 Apr;73(4):490-8.
18. LaPlante LM, Gopalan P, Glance J. Addressing intimate partner violence: Reducing barriers and improving residents' attitudes, knowledge, and practices. *Acad Psychiatry*. 2016 Oct;40(5):825-8.
19. Sutherland MA, Fontenot HB, Fantasia HC. Beyond assessment: examining providers' responses to disclosures of violence. *J AM Assoc Nurs Pract*. 2014 Oct;26(10):567-73.
20. Sundbörg E, Tornkvist L, Saleh-Stattin N, et al. To ask, or not to ask: the hesitation process described by district nurses encountering women exposed to intimate partner violence. *J Clin Nurs*. 2017 Aug;26(15-16):2256-65.
21. Papadakaki M, Petridou E, Kogevinas M, et al. Measuring the effectiveness of an intensive IPV training program offered to Greek general practitioners and residents of general practice. *BMC Med Educ*. 2013 Mar;13(46).

22. John I, Lawoko S, Svanstrom L, et al. Healthcare providers' readiness to screen for intimate partner violence in northern Nigeria. *Violence Vict.* 2010 Mar;25(5):689-704.
23. Lawoko S, Ochola E, Oloya G, et al. Readiness to screen for domestic violence against women in healthcare Uganda: Associations with demographic, professional and work environmental factors. *Open Journal of Preventive Medicine.* 2014 Apr;4:145-55.
24. Lawoko S, Sanz S, Helström L, et al. Screening for intimate partner violence against women in healthcare Sweden: prevalence and determinants [Internet]. *ISRN Nurs.* 2011, Article 510692, 7 pages [cited 2017 Apr 20]. Available from: <https://www.hindawi.com/journals/isrn/2011/510692/>
25. Roush K, Kurth A. CE: original research: intimate partner violence: the knowledge, attitudes, beliefs, and behaviors of rural healthcare providers. *Am J Nurs.* 2016 Jun; 116(6):24-34.
26. Maiuro RD, Vitaliano PP, Sugg NK, et al. Development of a healthcare provider survey for domestic violence: psychometric properties. *Am J Prev Med.* 2000 Nov;19(4):245-52.
27. Lawoko S, Sanz S, Helström L, et al. Assessing the structural and concurrent validity of a shortened version of the Domestic Violence Healthcare Providers' Survey questionnaire for use in Sweden. *Psychology.* 2012 Feb;3(2):183-91.
28. Harmer-Beem M. The perceived likelihood of dental hygienists to report abuse before and after a training program. *J Dent Hyg.* 2005 Jan;79(1)7 Epub 2005 Jan. 1.
29. U.S. Preventive Services. Final update summary: intimate partner violence and abuse of elderly and vulnerable adults: screening [Internet]. U.S. Preventive Services Task Force [modified 2016 Sept 1; cited 2017 Apr 20]. Available from: <https://www.uspreventiveservicestaskforce.org/Page/Document/UpdateSummaryFinal/intimate-partner-violence-and-abuse-of-elderly-and-vulnerable-adults-screening>