



ORIGINAL ARTICLE

# Knowledge and attitude of primary health care staff screening and not screening for domestic violence against women

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Received 14 May 2012; accepted 18 July 2012

Available online 23 August 2012

## KEYWORDS

Violence;  
Women;  
Knowledge;  
Attitude;  
Screening;  
Primary health care staff

**Abstract** *Background:* Violence against women is an important public health problem that draws attention of a wide spectrum of clinicians. Attitude and knowledge of the primary health care (PHC) staff can affect their ability and willingness to screen for and manage domestic violence (DV) against women.

*Objectives:* Reveal the impact of knowledge and attitude of workers to screen for DV against women.

*Methods:* An observational cross-sectional study was carried out in PHC centers located in two randomly selected health regions in Kuwait. The study involved all available physicians (210) and nurses (464) in the selected centers. The overall response rate was 54.3%. A self-administrative questionnaire was used for data collection. It included four main aspects relevant to knowledge and one attitude domain regarding DV. A 5-point, Likert-scale was used to assess participant's answers for each item.

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Peer review under responsibility of Alexandria University Faculty of Medicine.



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**Results:** Male physicians were significantly more likely to screen for violence (36.2% compared with 18.8% for females,  $P < 0.001$ ) and (51.2% compared with 26.4% for nurses,  $P < 0.001$ ). Those screening for violence had a significantly higher mean percent overall knowledge score ( $73.8 \pm 9.5$  compared with  $70.9 \pm 11.2\%$ ,  $P = 0.006$ ). The only knowledge sub-domain showing significant difference was the psychological sub-domain ( $78.4 \pm 20.3$  compared with  $69.4 \pm 26.3\%$ ,  $P = 0.004$ ). Although, no significant differences were detected for each of the questions of this domain yet, those not screening for violence had a significantly higher mean percent score than those screening for violence ( $70.1 \pm 18.6$  compared with  $65.5 \pm 16.5\%$ ,  $P = 0.015$ ).

**Conclusion:** Physicians at the PHC centers screened for violence against women more than nurses. Although, the knowledge of those screening for violence was better than those for not screening, yet more positive attitude was demonstrated among those not screening. Task and skill based programs should be planned to enhance both knowledge and skills of the health care staff about the screening process. Other factors affecting the screening process such as infrastructure and physical environment need to be considered.

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## 1. Introduction

A WHO study on women's health and domestic violence (DV) in 10 different countries representing diverse cultural, geographical and urban/rural settings documents the large extent of violence against women.<sup>1</sup> It also shows clearly that violence against women demands a public health response, because the impact of such violence goes far beyond the immediate harm and also affects many aspects of the women's future health.<sup>2</sup> In addition to injuries, battered women often experience somatic and stress related illnesses, chronic pain syndromes, depression, posttraumatic stress disorder, and substance abuse disorders.<sup>3,4</sup> Furthermore, compared with women with no history of violence, battered women have higher levels of health care use.<sup>5</sup> In fact, 21–66% of female patients seeking general medical care,<sup>4,6–8</sup> report experiencing intimate partner violence (IPV).<sup>9,10</sup> Despite the high prevalence of IPV, less than 15% of female patients report being asked about abuse by health care professionals or disclosing abuse to them.<sup>6,11–13</sup>

Early identification of DV has been a priority in efforts to improve the health care response to IPV.<sup>14</sup> Because of the prevalence and associated health care costs of IPV, national public health organizations have endorsed the use of interventions such as protocols in clinical settings for the identification of patients experiencing violence.<sup>15–17</sup> However, multiple studies examining physician practices suggest that only a small fraction of physicians and other health care professionals commonly inquire about DV.<sup>11,18,19</sup> For medical personnel who encounter victims of violence, it is usually not easy to recognize the problem or to voice the suspicion that a woman might have suffered DV; accordingly, it is difficult to offer adequate help and support.

Multiple barriers face the medical staff in the primary health care (PHC) facilities to screen and manage battered women. Patient attitudes, lack of institutional support, and other environmental factors may hinder efforts to address IPV in clinical settings.<sup>20,21</sup> In addition, physicians' feelings of discomfort and powerlessness, level of training, knowledge about violence as well as the attitude of health care medical staff may also contribute to this low level of inquiry.<sup>22–24</sup>

Little research in the primary care setting has investigated DV against women in the State of Kuwait. Reviewing the available literature did not reveal any studies dealing with

screening for DV against women in Kuwait. The primary objectives of the present study were to identify knowledge and attitude of PHC medical staff about screening for DV against women and to evaluate whether these factors affect the actual practice of screening for violence among randomly selected samples of nurses and physicians most likely to care for women at the point of initial DV disclosure.

## 2. Methods

An observational cross-sectional study design was adopted for this study. The study was carried out in the PHC centers located in two randomly selected health areas (Capital and Jahra) out of five in Kuwait. The total number of physicians and nurses working in the selected centers was 239 and 510, respectively. All available physicians (210) and nurses (464) during the field work of the study in the selected centers were the target population of this study. Out of these, only 366 (128 physicians and 238 nurses) agreed to share in the study with an overall response rate of 54.3% (61.0% and 51.3%, respectively). The study covered the period August 2011 to February 2012. Data were collected over three months starting from September to December, 2011.

Data of this study were collected through a specially designed questionnaire. It included socio-demographic data (age, gender, nationality, marital status, education, specialty, job position, years of experience, income), and four questions dealt with practicing of screening for violence.

Apart from personal information and frequency of screening of DV, the questionnaire included seven statements related to attitude domain, in addition to 23 items that are relevant to a number of DV facets as an indicator for participants' knowledge. We divided the 23 items into four domains of DV namely deprivation domain (10 items), psychological domain (4 items), physical domain (6 items), and sexual relationship (3 items).

Physicians indicated their degrees of relative attitude or knowledge for each item using a 5-point, Likert-scale ranging from 1 = strongly disagree (not violence through) to 5 = strongly agree (severe violence). High scores for definition of DV indicated that these statements were considered as more severe violence. Low scores showed that the respondents were to perceive the statements less likely as violence. For each

participant, the scores were summed so as to show each participant's knowledge level ranging from 23 to 115 for knowledge and from 7 to 35 for attitude. Percent score was calculated for the total attitude score as well as for each domain of knowledge.

A pilot study was carried out on 30 physicians and nurses (not included in the final study). This study was formulated to test the clarity, applicability of the study tools, accommodate the aim of the work to actual feasibility, identify the difficulties that may be faced during the application, as well as study all the procedures and activities of the administrative aspects. Also, the time of interviewing the health staff was estimated during this pilot study. The necessary modifications according to the results obtained were done, so some statements were reworded. Also, the structure of the questionnaire sheet was reformatted to facilitate data collection. The average time needed for filling the questionnaire was 15 min.

A pre-coded sheet was used. All questions were coded before data collection. This facilitates both data entry and verification as well as reduces the probability of errors during data entry. Data were fed to the computer directly from the questionnaire without intermediate data transfer sheets. The Excel program was used for data entry. A file for data entry was prepared and structured according to the variables in the questionnaire. After data were fed to the Excel program; several methods were used to verify data entry. These methods included simple frequency, cross-tabulation, as well as manual revision of entered data.

All the necessary approvals for carrying out the research were obtained. The Ethics Committee of the Kuwaiti Ministry of Health approved the research. A written format explaining the purpose of the research was prepared and signed by the physician before filling the questionnaire. In addition, the purpose and importance of the research were discussed with the director of the health center.

### 2.1. Statistical analysis

Before analysis; data were imported to the statistical package for social sciences (SPSS) which was used for both data analysis and tabular presentation. Descriptive measures were utilized (count, percentage, arithmetic mean and standard deviation) as well as analytic measures (Chi square for qualitative variables and Student t test for normally distributed quantitative variables). Mann-Whitney test was used for non parametric variables. Multiple linear regression was used to identify significant factors after controlling for the confounding effect of other variables. The level of significance selected for this study was  $P \leq 0.05$ .

Multiple logistic regression analysis was utilized to identify the significant factors correlating with the screening for domestic violence against women. Age, duration at work, nationality, gender, and marital status were used as co-variates. A score of one was used for screening and a score of zero was used for being a nurse.

### 3. Results

Table 1 shows socio-demographic characteristics of studied PHC staff. Medical staff screening for DV against women was slightly older than those not screening ( $37.2 \pm 8.5$  years

compared with  $35.83 \pm 8.33$  years old,  $P = 0.14$ ) and spent nearly similar years at the current job ( $11.5 \pm 7.5$  years compared with  $10.50 \pm 7.81$  years,  $P = 0.25$ ). Also, the marital status and educational qualification of both groups did not differ significantly. Males were significantly more likely to screen for violence (36.2% compared with 18.8%,  $P < 0.001$ ). Physicians also, tended to screen for violence more than nurses as they constituted 51.2% of those screening as compared with 26.4% of those not screening for violence,  $P < 0.001$ .

Table 2 shows knowledge of PHC staff about violence. Those screening for violence had a significantly higher mean percent overall knowledge score than those who were not used to screen ( $73.8 \pm 9.5$  compared with  $70.9 \pm 11.2\%$ ,  $P = 0.006$ ). The medical staff practicing screening tended to have a slightly higher or similar mean percent score for the deprivation/neglect ( $53.9 \pm 17.1$  compared with  $51.3 \pm 18.7\%$ ,  $P = 0.097$ ), physical ( $94.3 \pm 9.5$  compared with  $94.5 \pm 8.9\%$ ,  $P = 0.948$ ), and sexual ( $92.4 \pm 9.4$  compared with  $90.9 \pm 10.5\%$ ,  $P = 0.194$ ) sub-domains. The only sub-domain showing significant difference was the psychological sub-domain ( $78.4 \pm 20.3$  compared with  $69.4 \pm 26.3\%$ ,  $P = 0.004$ ).

Table 3 demonstrates the attitude of PHC staff toward screening for domestic violence against women. Although no significant differences were detected for each of the questions of this domain yet, those not screening for violence had a significantly higher mean percent score than those screening for violence ( $70.1 \pm 18.6$  compared with  $65.5 \pm 16.5\%$ ,  $P = 0.015$ ). Also, a significant difference is noticed for perception of the improved aspects by screening, while those screening for violence selected health improvement (30.7% compared with 20.5%), improvement of the social aspects was stated by 33.1% of those not screening compared with 21.3% of those not screening for domestic violence against women.

Studying the simultaneous effect of predictors of screening with controlling for the confounding effect by the multiple logistic model revealed that only the job of the PHC staff (a physician or a nurse) was proved to be a significant predictor, while all the other factors including the knowledge and the attitude score were not statistically significant predictors of screening for DV against women.

### 4. Discussion

A number of studies have examined the knowledge, attitudes, and beliefs of physicians<sup>22,25-27</sup> and/or nurses<sup>28,29</sup> to identify IPV. While no recent systematic review exists, the common themes that emerge from these and other studies include gaps in provider knowledge and education regarding IPV; lack of patient compliance; in addition to lack of effective interventions and perceived system support. The later includes time; provider self-efficacy as feelings of powerlessness and loss of control; safety and confidentiality concerns; fear of offending; affective barriers; poor interviewing or communication skills; providers' personal experience with abuse; fears about legal involvement; and provider age and years in practice. Health care workers might share the same cultural norms and prejudices with victims or perpetrators of IPV, which would affect their professional attitudes. Moreover, some physicians might think that IPV is a private family matter and not a health issue. In addition, while the resources allocated to this field are inadequate, some HCW might feel desperate, leading them to professional reluctance.<sup>30-32</sup> However, health care

**Table 1** Socio-demographic characteristics of primary health care staff screening and not screening for domestic violence against women.

Character	Screen ( <i>n</i> = 127)		Do not screen ( <i>n</i> = 239)		<i>P</i> value
	No.	%	No.	%	
<i>Age (years)</i>					
< 30	18	14.2	64	26.8	0.14
30-	40	31.5	56	23.4	
35-	24	18.9	53	22.2	
40-	23	18.1	27	11.3	
> 45	22	17.3	39	16.3	
<i>Sex</i>					
Male	46	36.2	45	18.8	< 0.001*
Female	81	63.8	194	81.2	
<i>Nationality</i>					
Kuwaiti	24	18.9	34	14.2	0.244
Non Kuwaiti	103	81.1	205	85.8	
<i>Marital status</i>					
Single	20	15.7	30	12.6	0.397
Married	107	84.3	209	87.4	
<i>Job</i>					
Physician	65	51.2	63	26.4	< 0.001*
Nurse	62	48.8	176	73.6	
<i>Qualification</i>					
Bachelor degree	49	38.6	85	35.6	0.568
Higher qualification	78	61.4	154	64.4	
<i>Years at work</i>					
< 5	24	18.9	55	23.0	0.25
5-	37	29.1	74	31.0	
10-	28	22.0	54	22.6	
15-	17	13.4	21	8.8	
> 20	21	16.5	35	14.6	

\* Significant, *P* < 0.05.

workers have the opportunity and commitment to identify and manage battered women.

The results of this study showed that males tended to screen for DV against women more frequently than females. Also, those screening for violence was more likely to be done by physicians than nurses. Although it is unexpected to find more males screening for violence against women than females, yet this can be explained by the higher proportion of females among nurses than physicians and the results of the multiple logistic regression which excluded gender as a predictor of screening. It seems that the effect of gender was associated with the job and its confounding effect was excluded in the multivariate analysis of the results.

Although details about the pattern of screening among PHC workers will be dealt with in another part of this series about screening for domestic violence against women in Kuwait, it can be stated that only 34.7% were actually screening for violence among women. This means that a large proportion of PHC workers are missing an important opportunity to detect and deal with DV against women.<sup>33</sup> The knowledge of violence definition was significantly better among those screening than those not screening. The main sub-domain of knowledge showing significant difference is that dealing with the psychological definition of violence. These results confirm the need for improving the knowledge of PHC staff not only

about violence definition but also about all aspects of violence including intervention, referral, and the legislative and social issues of violence. However, the duration and methods of training and increasing awareness about violence need meticulous selection and decisions. Previous cross-sectional surveys have found that professional training positively influenced reported intimate partner abuse screening practices<sup>34,35</sup>; however, studies that directly examined the effects of training have produced conflicting results depending on the type of training and length of follow-up.<sup>36-38</sup> Professional training has the potential to increase knowledge, comfort, and skills for effective inquiry and intervention. However, without structural changes, regular in-service education, and institutional policies, physician training is unlikely to be sufficient to change clinical practice.<sup>36,38-40</sup> Controlled studies are needed to determine the effectiveness of interventions for improving physician behavior regarding intimate partner violence.

Attitude of health care workers toward violence prevention and beliefs about the effectiveness of violence prevention are associated with screening practices.<sup>41</sup> Other researches examining the effects of attitudes and beliefs as factors associated with physicians' delivery of violence prevention services support this finding.<sup>42-45</sup> As suggested by the precede/proceed model, physicians' attitudes and beliefs are often influenced by their educational experience. Based on these findings, the develop-

**Table 2** Knowledge of primary health care staff practicing and not practicing screening of domestic violence against women.

Knowledge about violence definition	Screen (n = 127)		Do not screen (n = 239)		P
	No.	%	No.	%	
<i>Deprivation/neglect</i>					
Keeping women from seeing her friends	68	53.5	109	45.6	0.148
Restricting women from contacting with family relatives	80	63.0	149	62.3	0.903
Insisting to know where are women all the times	63	49.6	117	49.0	0.905
Ignoring or treating women indifferently	66	52.0	99	41.4	0.054
Getting angry when women talk with other men	57	44.9	85	35.6	0.082
Suspicion of unfaithfulness of women	67	52.8	101	42.3	0.055
Asking permission before seeking health care	64	50.4	101	42.3	0.137
Men' right to enforce women to wear suitable clothes	46	36.2	102	42.7	0.231
Women are obliged to share in the house expenses	35	27.6	70	29.3	0.728
Men are the decision makers in home management	35	27.6	74	31.0	0.498
Deprivation/neglect percent score (mean ± SD)	53.9 ±	17.1	51.3 ±	18.7	(0.097)
<i>Psychological</i>					
Insulting women and make them feel bad	95	74.8	154	64.4	0.043*
Humiliating women in front of other people	96	75.6	155	64.9	0.035*
Intimidating women on purpose	110	86.6	173	72.4	0.002*
Threatening or hurting women	111	87.4	179	74.9	0.005*
Psychological percent score (mean ± SD)	78.4 ±	20.3	69.4 ±	26.3	(0.004)*
<i>Physical</i>					
Slapping women or throwing at them with something	126	99.2	237	99.2	[1.00]
Pushing or shoving women	125	98.4	235	98.3	[1.00]
Hitting with a fist	126	99.2	236	98.7	[1.00]
Kicking, dragging or beating women	127	100	239	100	
Chocking or burning women	127	100	238	99.6	[1.00]
Threatening with a knife, stick, gun	127	100	238	99.6	[1.00]
Physical percent score (mean ± SD)	94.3 ±	9.5	94.5 ±	8.9	(0.948)
<i>Sexual</i>					
Forcing women to have sex by the husband	123	96.9	218	91.2	0.042 ±
Raping by foreigners	127	100	239	100	–
Sexual harassment	127	100	239	100	–
Sexual percent score (mean ± SD)	92.4 ±	9.4	90.9 ±	10.5	(0.194)
Total knowledge percent score (mean ± SD)	73.8 ±	9.5	70.9 ±	11.2	(0.006)*

No.: strongly agree and agree.

\* Significant, P < 0.05, [ ] Fisher exact test, ( ) Mann–Whitney P value.

**Table 3** Attitude of primary health care staff practicing and not practicing screening of domestic violence against women.

Attitude toward screening	Screen (n = 127)		Do not screen (n = 239)		P (Chi square)
	No.	%	No.	%	
Has a great importance	101	79.5	186	77.8	0.706
Lower rates of violence against women	74	58.3	152	63.6	0.318
Lower effects of violence against women	77	60.6	153	64.0	0.523
Improve quality of life of women in general	81	63.8	169	70.7	0.175
Detect most cases of violence	78	61.4	157	65.7	0.417
Has negative impact on women	31	24.4	42	17.6	0.119
Has negative impact on health care centers	36	28.3	49	20.5	0.091
Attitude percent score (mean ± SD)	65.5 ± 16.5		70.1 ± 18.6		[0.015]*
<i>The most improved aspects of screening</i>					
-Health	39	30.7	49	20.5	0.047*
-Social	27	21.3	79	33.1	
-Cultural	11	8.7	15	6.3	
-Spiritual	24	18.9	56	23.4	
-Legal	26	20.5	40	16.7	

\* Significant, P < 0.05, [ ] Mann–Whitney P value.

ment of violence prevention educational programs may need to be directed toward changing and/or enhancing physicians' attitudes and beliefs toward violence prevention to ultimately increase their delivery of violence prevention services.<sup>41</sup> The results of this study do not support these findings as it was revealed that attitude of PHC workers not screening was higher than that of those screening for domestic violence. However, multivariate analysis, after adjusting for the confounding effects of other variables, excluded the attitude score as a predictor of screening for violence. Also, the construction of the attitude score of this study is different from these studies, as this research dealt with attitude toward screening while the other studies dealt with attitude toward importance of prevention of violence. However, it seems that violence screening is still controversial and there are other multiple factors that might affect adhering to screening of all women for violence or only screening those with apparent physical injuries that might happen because of exposure to violence by the husband or one of the family members. Violence prevention training was revealed to be important in increasing the rates for the provision of violence prevention services by some studies.<sup>43,46</sup> Another study did not find increased reports of training to be associated with screening practices, it may be that more important factors include physicians' perceptions of the quality of the skills they received from their training rather than just the amount of training.<sup>41</sup> This study revealed that, although more than 74% of participants had received violence prevention training since residency, 75% reported having no confidence in their ability to counsel on violence prevention. Perhaps their training was knowledge based rather than skills based. If this is the case, violence prevention training programs may be more effective if they include a skills-based component. Use of skills-based training may thereby increase physicians' self confidence in their skills when providing violence prevention services including screening.<sup>41</sup>

Many health care givers do not believe intimate partner violence is a common problem, or they may feel that it occurs only in lower socioeconomic groups. They may also be afraid of offending a patient by asking about abuse.<sup>47</sup> Most clinicians are uncomfortable talking about violence since they feel ill-equipped to offer help. Asking about intimate partner violence and obtaining a positive response identify an opportunity for prevention of health-related sequelae. In addition, screening allows the physician to become acquainted with new contexts of a patient's life. Asking about violence exposure may give the physician insight into the etiology of health problems, permitting definitive treatment rather than simply palliating their symptoms.<sup>48</sup>

## References

1. WHO multi-country study on women's health and domestic violence against women: summery report of initial results on prevalence, health outcomes and women's responses. Geneva: World Health Organization; 2005.
2. Krug E, Dahlberg LL. World report on violence and health. *Lancet* 2002;**360**:1083–8.
3. Cascardi M, Langhinrichsen J, Vivian D. Marital aggression: impact, injury, and health correlates for husbands and wives. *Arch Intern Med* 1992;**152**:1178–85.
4. McCauley J, Kern DE, Kolodner K, et al. The "battering syndrome": prevalence and clinical characteristics of domestic violence in primary care internal medicine practices. *Ann Intern Med* 1995;**123**:737–46.
5. Sansone RA, Wiederman MW, Sansone LA. Healthcare utilization and history of trauma among women in a primary care setting. *Violence Vict* 1997;**12**:165–72.
6. Hamberger LK, Saunders DG, Hovey M. Prevalence of domestic violence in community practice and rate of physician inquiry. *Fam Med* 1992;**24**:283–7.
7. Wagner PJ, Mongan P, Hamrick D, Hendrick LK. Experience of abuse in primary care patients: racial and rural differences. *Arch Fam Med* 1995;**4**:956–62.
8. Johnson M, Elliott BA. Domestic violence among family practice patients in mid-sized and rural communities. *J Fam Pract* 1997;**44**:391–400.
9. McFarlane J, Parker B, Soeken K, Bullock L. Assessing for abuse during pregnancy: severity and frequency of injuries and associated entry into prenatal care. *JAMA* 1992;**267**:3176–8.
10. Gazmararian JA, Lazorick S, Spitz AM, Ballard TJ, Saltzman LE, Marks JS. Prevalence of violence against pregnant women: review article. *JAMA* 1996;**275**:1915–20.
11. Friedman LS, Samet JH, Roberts MS, Hudlin M, Hans P. Inquiry about victimization experiences: a survey of patient preferences and physician practices. *Arch Intern Med* 1992;**152**:1186–90.
12. Plichta SB, Duncan MM, Plichta L. Spouse abuse, patient-physician communication, and patient satisfaction. *Am J Prev Med* 1996;**12**:297–303.
13. Caralis PV, Musialowski R. Women's experience with domestic violence and their attitudes and expectations regarding medical care of abuse victims. *South Med J* 1997;**9**:1075–80.
14. Council on scientific affairs, American medical association. Violence against women: relevance for medical practitioners. *JAMA* 1992;**267**:3184–9.
15. Novello AC, Rosenberg M, Saltzman L, Shosky J. From the surgeon general, US public health service. *JAMA* 1992;**267**:3132.
16. American public health association. Policy statement 9211 (PP): domestic violence. *Am J Public Health* 1993;**83**:458–63.
17. Saltzman LE, Johnson D. CDC's family and intimate violence prevention team: basing programs on science. *J Am Med Womens Assoc* 1996;**51**:83–6.
18. Parsons LH, Zaccaro D, Wells B, Stovall TG. Methods of and attitudes toward screening obstetrics and gynecology patients for domestic violence. *Am J Obstet Gynecol* 1995;**173**:381–7.
19. Derk S, Reese D. Rural health-care providers' attitudes, practices, and training experience regarding intimate partner violence. West Virginia, March 1997. *MMWR Morb Mortal Wkly Rep* 1998;**47**:670–3.
20. Warshaw C. Domestic violence: changing theory, changing practice. *J Am Med Womens Assoc* 1996;**51**:87–91.
21. Gremillion DH, Kanof EP. Overcoming barriers to physician involvement in identifying and referring victims of domestic violence. *Ann Emerg Med* 1996;**27**:769–73.
22. Sugg NK, Inui TI. Primary care physicians' response to domestic violence: opening Pandora's box. *JAMA* 1992;**267**:3157–60.
23. Brown JB, Lent B, Sas G. Identifying and treating wife abuse. *J Fam Pract* 1993;**36**:185–91.
24. Ferris LE. Canadian family physicians' and general practitioners' perceptions of their effectiveness in identifying and treating wife abuse. *Med Care* 1994;**32**:1163–72.
25. Rodriguez MA, Sheldon WR, Bauer HM, Perez-Stable EJ. The factors associated with disclosure of intimate partner abuse to clinicians. *J Fam Pract* 2001;**50**(4):338–44.
26. Gerbert B, Caspers N, Bronstone A, Moe J, Abercrombie P. A qualitative: analysis of how physicians with expertise in domestic violence approach the identification of victims. *Ann Intern Med* 1999;**131**(8):578–84.
27. Sugg NK, Thompson RS, Thompson DC, Maiuro R, Rivara FP. Domestic violence and primary care: attitudes, practices, and beliefs. *Arch Fam Med* 1999;**8**(4):301–6.

28. Minsky-Kelly D, Hamberger LK, Pape DA, Wolff M. We've had training, now what? Qualitative analysis of barriers to domestic violence screening and referral in a health care setting. *J Interpers Violence* 2005;**20**(10):1288–309.
29. Stinson CK, Robinson R. Intimate partner violence: continuing education for registered nurses. *J Contin Educ Nurs* 2006;**37**(2):58–62.
30. Shane B, Ellsberg M. Violence against women: effects on reproductive health. *Outlook* 2002;**20**(1):1–8.
31. Krasnoff M, Moscati R. Domestic violence screening and referral can be effective. *Ann Emerg Med* 2002;**40**(5):485–92.
32. Garimella R, Plichta SB, Houseman C, Garzon L. Physician beliefs about victims of spouse and about the physician role. *J Womens Health Gend Based Med* 2000;**9**(4):405–11.
33. Yanikkerem E, Karadas G, Adiguzel B, Sevil U. Domestic violence during pregnancy in Turkey and responsibility of prenatal healthcare providers. *Amer J Perinatol* 2006;**23**:093–104.
34. Henderson TJ, HodsonScholle S, Weisman CS, Anderson TR. The role of physician gender in the evaluation of the national centers of excellence in women's health: test of an alternate hypothesis. *Women's Health Issues* 2004;130–9.
35. Rodriguez MA, Bauer HM, McLoughlin E, Grumbach K. Screening and intervention for intimate partner abuse practices and attitudes of primary care physicians. *JAMA* 1999;**282**:468–74.
36. Sitterding HA, Adera T, Shields-Fobbs E. Spouse/partner violence education as a predictor of screening practices among physicians. *J Contin Educ Health Prof* 2003;**23**:54–63.
37. Moore ML, Zaccaro D, Parsons LH. Attitudes and practices of registered nurses toward women who have experienced abuse/domestic violence. *J Obstet Gynecol Neonatal Nurs* 1998;**27**(2):175–82.
38. Tilden VP, Schmidt TA, Limandri BJ, Chiodo GT, Garland MJ, Loveless PA. Factors that influence clinicians' assessment and management of family violence. *Am J Public Health* 1994;**84**(4):628–33.
39. Ahmed AM, Abdella ME, Yousif E, Elmardi AE. Response of Sudanese doctors to domestic violence. *Saudi Med J* 2003;**24**(10):1077–80.
40. Jaffee KD, Epling JW, Grant W, Ghandour RM, Callendar E. Physician-identified barriers to intimate partner violence screening. *J Womens Health* 2005;**14**(8):713–20.
41. Chaffee TA, Bridges M, Boyer CB. Adolescent violence prevention practices among California pediatricians. *Arch Pediatr Adolesc Med* 2000;**154**:1034–41.
42. Olson LM, Christoffel KK, O'Connor KG. Pediatricians experience with and attitudes toward firearms. *Arch Pediatr Adolesc Med* 1997;**151**:352–9.
43. Parsons LH, Zaccaro D, Wells B, Stovall TG. Methods of and attitudes toward screening obstetric and gynecology patients for domestic violence. *Am J Obstet Gynecol* 1995;**173**:381–6.
44. Cassel CK, Nelson EA, Smith TW, Schwab CW, Barlow B, Gary NE. Internists' and surgeons' attitudes toward guns and firearms injury prevention. *Ann Intern Med* 1998;**128**:224–30.
45. Cheng TL, DeWitt TG, Savageau JA, O'Connor KG. Determinants of counselling in primary care pediatric practice. physician attitudes about time, money, and health issues. *Arch Pediatr Adolesc Med* 1999;**153**:629–35.
46. Tilden VP, Schmidt TA, Limandri BJ, Chiodo GT, Garland MJ, Loveless PA. Factors that influence clinicians' assessment and management of family violence. *Am J Public Health* 1994;**84**:628–33.
47. Kaur G, Herbert L. Recognizing and intervening in intimate partner violence. *Clevel and Cleve Clin J Med* 2005;**72**:406–22.
48. Janssen P, Dascal-Weichhendler H, McGregor M. Assessment for intimate partner violence: where do we stand? *JABFM* 2006;**19**:413–5.