ORIGINAL
ARTICLES

Lebanese Medical Students' Exposure to Domestic Violence:

Does It Affect Helping Survivors?

Jinan Usta, MD, MPH; Sani Hlais, MD, MPH; Hala Abou Farhat, MPH, CPH; Maya Romani, MD; Hiba Bzeih, MD; Lynn Abdo, MD

BACKGROUND AND OBJECTIVES: Our purpose was to assess medical students' willingness to help women survivors of intimate partner violence (IPV) and its relation to past exposure to violence.

METHODS: A cross-sectional study of medical students enrolled in three major universities in Beirut was carried out: 545 students filled out a self-administered questionnaire. The Inventory of Beliefs About Wife Beating, the Attitudes Toward Women's scale, the Marriage Role Expectations Inventory, the Conflict Tactics scale, and the Trauma Symptoms scale were used.

RESULTS: The majority (93.6%) of medical students believed that battered wives should be helped by either social or governmental agencies, but only 48% showed readiness to provide help themselves. Female medical students were significantly more likely to be willing to help survivors of violence, whereas students exposed to domestic violence in childhood were significantly less likely to do so. Female medical students previously exposed to violence had significantly higher scores on the Briere and Runtz's Trauma Symptom Checklist, indicating more negative trauma-related symptoms. Multivariate analysis revealed that the students' exposure to verbal aggression, their marital role expectations, attitudes toward women, and parents' marital status accounted for 26% of the variability in the Helping Battered Wives score.

CONCLUSIONS: The results of this study suggest that the medical students' past exposure to DV impacts their psychological well-being and their willingness to help abuse survivors. Given the multitude of stresses medical students are exposed to, careful attention and attendance to the effect of abuse on their well-being may be warranted.

(Fam Med 2014;46(2):112-9.)

Intimate partner violence (IPV) is a major public health problem that negatively affects the health of women worldwide.[1] Its lifetime prevalence ranges from 15% to 71%.[2]

Studies conducted in the Arab world are consistent with global findings of IPV being highly prevalent.[3] In Lebanon, its prevalence among women users of primary health centers was found to be 35%.[4] Of refugee women presenting to an antenatal clinic, 68.8% reported being victim to one type of IPV at one point in their married lives, 11.4% were victims of physical abuse during their pregnancy, and 26.2% have experienced coerced sexual intercourse.[5,6] In Egypt, one third of married women were beaten at least once by their husbands,[7] while in Aleppo, Syria, 23% of pregnant women randomly selected from primary care centers reported current physical abuse.[8] Moreover, 80% of women and men asserted that wife abuse is not considered a criminal act and does not require reporting to the legal authorities; some even consider wife abuse as legitimate and acceptable.[3] Accordingly, IPV is still viewed in the Arab world as a personal and family issue rather than a social and legal problem; the issue is uncommonly dealt with in a formal, organized way that involves legal, health, mental health, or welfare services.[9,10]

Although abused women have poorer health and use health care services more frequently[1,4,11] than

From the Department of Family Medicine (Drs Usta, Hlais, Romani), Department of Health Promotion and Community Health (Dr Farhat), American University of Beirut, Lebanon; International Medical Center, Jeddah, Kingdom of Saudi Arabia (Dr Bzeih); and Faculty of Medicine, Université Saint-Joseph, Lebanon (Drs Hlais and Abdo).

women who have not been abused, primary care physicians are missing opportunities to screen for IPV.[12] Reasons included lack of education and training in IPV diagnosis, communication and referral system,[13-15] time constraints, discomfort in addressing the topic, and fear of offending the patient.[15-17] Considering IPV a personal matter or "social work," while justifying IPV and blaming the victim has impeded physicians from taking any action.[18,19] Further, past exposure to IPV may decrease health care providers' self-efficacy to deal with the problem.[15,20]

Findings in Lebanon and Syria suggest that when asked, victims are open to sharing their experiences of abuse.[4,8] However, service providers admitted not asking or screening for IPV and recognized lacking the needed knowledge and training.[21] This may explain why women subjected to violence or conflict in Lebanon, a relatively conservative society, do not consider the health care system as a resource for dealing with their problems; they would not know how to cope with their situation and suffer in silence.[22]

It is necessary for medical schools to provide training on violence victims' care and to increase the probability of medical students to integrate the care of violence within their daily clinical practice later on. However, this training is lacking from the medical schools' curricula in Lebanon and to our knowledge in the Arab world. Research showed that students exposed to intentional injury are at emotional risk when caring for violence victims,[23] and medical students with a history of abuse had significantly greater suicidal ideation.[24] Hence, this study was conducted to explore the effect of past exposure to violence on medical students' willingness to help victims of abuse, taking into consideration their psychological status, attitudes toward women, beliefs about IPV, marital expectations, and their knowledge of the health impact of IPV. It was hypothesized that students exposed to family violence, who are not suffering from trauma symptoms, will be more willing to help IPV survivors if they are adopting pro-feminist attitudes, an egalitarian approach to marriage, and are less willing to justify abuse.

Methods

Participants and Procedure

A cross-sectional survey of all medical students in the last 4 years of undergraduate training (n=912) from the three major universities in Beirut, the American University of Beirut (AUB, n=301), Saint-Joseph University (USJ, n=286) and the Lebanese University (LU, n=325), was carried out. These were chosen because of their long-standing history in teaching medicine, their students are from various areas in Lebanon, and because they represent diversity of socioeconomic status, since two of them are private (AUB and USJ), and one is public (LU). Following a lecture in class (for the preclinical years) or a conference (for the clinical years), a member of the research team explained the research to the medical students and requested those who agreed to participate to fill out an anonymous unmarked questionnaire. Information on nonrespondents was not collected since some left before the questionnaire was distributed. The data collection period lasted 10 weeks: from January 20, 2009, to April 3, 2009. The research was approved by the American University of Beirut research board.

Instruments

The questionnaire was developed in Arabic, based on previously validated questionnaires and pilot tested; the estimated participation time was 20 minutes. In addition to demographic information, the questionnaire included the following:

Exposure to Family Violence. The Straus' Conflict Tactics Scales (CTS)[30] was used to measure participants' exposure to interparental violence during childhood and adolescence. The items, not specifying survivor or aggressor, reflected two subscales: verbal aggression and physical violence. Responses to the items were based on an 8-point scale ranging from 0=never to 7=daily. The Cronbach's alpha values for verbal aggression and physical violence were 0.84 and 0.96, respectively.

Trauma Symptoms. This was measured using Briere and Runtz's Trauma Symptom Checklist (TSC-33).[31] The 33 items were grouped into six psychological symptoms: dissociation, anxiety, depression, sexual abuse trauma index, sleep disturbance, and sexual problems. Responses to these items were based on a 4-point scale ranging from 0=never to 3=all the time. An overall trauma symptom score was computed by adding up points on all the 33 items.

Beliefs About Domestic Violence. The revised version[25] of the Saunders et al[26] Inventory of Beliefs About Wife Beating (IBWB) was used and included the following scales: (1) justifying wife beating (JWB), (2) battered wives are responsible for their beating (BWRB), (3) violent husbands are responsible for their violence (VHRV), (4) battered wives benefit from beating (BWBB), (5) helping battered wives (HBW), and (f) punishing violent husbands (PVH). Responses to these items were computed to come up with a total score. The Arabic version was reported to have good internal reliability with alphas ranging from .61 (PVH) to .91 (JWB).[25] In this study, the Cronbach's alpha values for the different scales ranged from 0.64 (BWBB) to 0.86 (JWB).

Attitudes Toward Women. A short version of the Spence and Helmreich Attitudes Toward Women (ATW) scale[27] was used. A total score was computed by adding the responses. Score values falling on the high end indicated a pro-feminist, liberal, egalitarian attitude whereas values falling on the low end indicated a traditional, patriarchal, conservative attitude toward women. The

reported Cronbach's alpha was .86 for the Arabic version.[25,28] The Cronbach's alpha value in our study was 0.81.

Marital Role Expectations. A short 14-item version of Dunn and DeBonis's Marriage Role Expectations Inventory (MREI)[29] was used. Responses to this measure were added into a total score with high values indicating companionship-egalitarian as opposed to traditional-patriarchal expectations of marriage. The Cronbach's alpha value for this version was 0.89.

Knowledge About Health Impact of Domestic Violence. A checklist of the 19 common complaints encountered in general practice was provided. The students were asked to check all conditions they considered to be associated with domestic violence exposure. A knowledge score was computed for each participant by adding the correctly checked items.

Data Entry and Analysis

The data was entered using the 16th version of Statistical Package for the Social Sciences (SPSS). Descriptive statistics included mean and standard deviation for continuous variables, frequencies, and percents for categorical variables. We used Chi-squared tests to compare percents and *t* tests and ANOVA to compare means, simple linear regression, and Pearson's correlation coefficients as well as stepwise multiple linear regression to analyze the determinants of the different scores studied as continuous variables. We used the statistical software STATA 10. The level of significance was set at 0.05.

Results

There were 912 students enrolled in the three universities; however, the actual number of the population under study was 869 as 43 students were either on vacation, taking an elective abroad, or having rotations outside of Beirut during the data collection period.

Sample Characteristics

A total of 545 (62.7%) students returned completed questionnaire; 318 (58.4%) were from private universities, and 227 (41.7%) were from the public university. The response rate was comparable among universities and by gender. There was a slight predominance of males among respondents, and almost 60% of the sample was in the preclinical years. As for nationality, 532 (98.1%) students were Lebanese. (Table 1).

Exposure to Family Violence and Trauma Symptoms. According to CTS scores, 120 (22.02%) and 494 (90.8 %) students had exposure to physical and verbal violence respectively. The mean age at first exposure was 9.9 years (SD=4.12 years). There were no significant differences between male and female respondents in the scores of exposure to verbal aggression and to physical violence (*t* tests, *P* value=.2283 and .4996, respectively). Participants exposed to family violence were more likely to report higher levels of trauma symptoms (r=0.34, P<.0001) regardless if it were verbal aggression (r= 0.30, P<.0001) or physical violence (r=0.33, P<.0001). The younger the students were when first witnessing violence in their homes, the greater was their tendency to develop trauma symptoms (r=-0.13, P=.0231). Gender differences with regards to the different trauma symptoms were found to be significant; women had a significantly greater tendency to report dissociation (P=.0047), anxiety (P<.0001), depression (P=.0002), and sexual problems (P<.0001) compared to men.

Students' Willingness to Help Battered Wives

Our results revealed that, with respect to Helping Battered Wives Scale, most medical students believed that battered women should receive help: "Social agencies should do more to help battered women" 473 (92.0%), "Wife beating should be given a high priority as a social problem by government agencies" 470 (91.6%), "Women should be protected by law if their husbands beat them" 463 (90.1%), and that "The police and the courts should intervene to help battered women in case their husbands refused to be treated to stop violence" 456 (89.1%). However, a much lower percentage wanted to intervene in case a woman is attacked by her husband: 247 (48.1%) agreed to "I would call the police," while 233 (46.7%) agreed to the statement "It would be best that I do nothing." A significantly higher percent of female respondents, 149 (61.8%), disagreed with this last statement as compared to 117 (45.4 %) of male respondents (P<.001).

Scores on the "Helping Battered Wives" scale varied significantly by gender where females had higher scores than males (P<.0001), by place of family residence as students whose families resided in urban areas had higher scores than those residing in rural areas (P=.0194), by parents' marital status where students with divorced parents had higher scores than students whose parents were married (P=.0137), and by mother's level of education since students whose mothers went to university scored significantly higher than students' whose mothers had only intermediate schooling (P=.0001). In addition, students with greater knowledge about the effects of domestic violence were more willing to help battered women (r=0.1287, P=.0053).

Further, students who held higher scores on Exposure to Family Violence, whether Verbal Aggression or Physical Violence, were less likely to believe that battered women should be helped (r=-0.15, P=.0008, r=-0.13, P=.0028, and r=-0.17, P=.0001 respectively). A significant negative correlation was noted between scores on "Helping battered wives" and scores on "Justifying wife beating" (r=-0.48, P<.0001), as well as scores on "Battered wives are responsible for their beating" (r=-0.43, P<.0001). There were also significant positive correlations between scores on "Helping battered wives" and

Table 1: Descriptive Characteristics of the Participants

	n (%)		n (%)
Gender		**Type of family residence**	
Males	276 (52.4)	Urban	359 (68.8)
Females	251 (47.6)	Rural	163 (31.2)
University		**Parents' marital status**	
Private	318 (58.4)	Married	496 (91.9)
Public	227 (41.6)	Divorced/separated	13 (2.4)
Year of medical school		One/both dead	31 (5.7)
1st year	165 (31.4)	**Father's educational level**	
2nd year	159 (30.2)	Complimentary or less	70 (13.1)
3rd year	125 (23.8)	Secondary	119 (22.3)
4th year	77 (14.6)	University	345 (64.6)
Place of birth		**Mother's educational level**	
Beirut	77 (14.6)	Complimentary or less	61 (11.3)
North	100 (18.9)	Secondary	165 (30.6)
Mount-Lebanon	178 (33.7)	University	314 (58.1)
South	42 (7.9)	**Mother works**	
Nabatieh	30 (5.7)	No	293 (54.0)
Bekaa	60 (11.3)	Yes	250 (46.0)
Outside Lebanon	42 (7.9)		
Place of family residence			
Beirut	85 (17.1)		
North	82 (16.5)		
Mount-Lebanon	243 (48.8)	**Lebanese nationality**	532 (98.1%)
South	36 (7.2)		**Mean (SD)**
Nabatieh	12 (2.4)	**Age**	22.46 (1.26)
Bekaa	31 (6.2)	**Crowding Index***	1.01 (0.48)
Outside Lebanon	9 (1.8)		

n=545

* Crowding index: defined by the number of persons divided by the number of rooms (except toilets and kitchens) in a household. It is used as a proxy for socioeconomic status.

scores on "Violent husbands are responsible for their violence" (r= 0.28, P<.0001), scores on "Punishing violent husbands" (r= 0.32, P<.0001) and scores on Marital Role Expectations (r=.45, P<.0001). Students who perceived marriage as based on a companionship construct rather than a patriarchal-conservative one, held the view that battered women should be helped. (Tables 2 and 3).

Multivariate Analysis. Multivate analysis showed that the participants' marital role expectations, attitudes toward women, exposure to verbal aggression, and parents' marital status were significant determinants accounting for 26% of the variability in "Helping Battered Wives" score (r-squared=0.263, P< .0001) (Table 4).

Discussion

The results of the study clearly point to variability in the willingness of medical students attending Lebanese universities to help victims of domestic violence. Many variables were found on bivariate analysis to correlate significantly with willingness to help survivors (Table 2); the ones that remained significant on multivariate analysis were having divorced parents, liberal attitudes toward women, egalitarian marital

Table 2: Bivariate Analysis: Association of the Dependent Variable "Helping Battered Wives" (HBW) Score With Categorical independent Variables (*t* Test or ANOVA Test)

	HBW Score	P Value
	Mean (SD)	
Gender		<.0001
Male	24.70 (3.50)	
Female	26.34 (2.82)	
University		.0068
Private	25.81 (3.25)	
Public	25.00 (3.31)	
Type of family residence		.0194
Urban	25.71 (3.20)	
Rural	24.96 (3.44)	
Year of medicine study		NS
First	25.15 (3.61)	
Second	25.7 (3.42)	
Third	25.48 (3.15)	
Fourth	25.43 (2.68)	
Parents' marital status		.0137
Married	25.40 (3.31)	
Divorced	27.84 (2.19)	
One or both dead	26.24 (2.70)	
Crowding index categories		NS
First quartile	25.71 (3.36)	
Second quartile	25.73 (3.13)	
Third quartile	25.63 (3.32)	
Fourth quartile	25.04 (3.34)	
Father's level of education		NS
Complimentary or less	24.95 (3.46)	
Secondary	25.11 (3.34)	
University	25.74 (3.23)	
Mother's level of education		.0001
Complimentary or less	24.23 (3.58)	
Secondary	24.94 (3.14)	
University	25.97 (3.22)	
Working mother		NS
No Yes	25.38 (3.18) 25.58 (3.43)	

NS—not significant

role expectations, and negative past exposure to domestic verbal aggression. Of particular interest are the relations between the willingness to help survivors and the student's gender, or the student's past history of exposure to abuse. These relations were not sufficiently addressed in the medical literature, and further exploring them may improve the care provided to survivors.

Gender and Helping

Studies of the relation between physician's gender and care delivery revealed that female physicians were more likely than their male counterparts to get engaged in the prevention of health problems that are specific to women,[32] treating pregnant women with greater care[33] and screeninng more frequently for breast and cervical cancer.[34] Yet, other research revealed that women physicians are more likely to empathize and provide better services to patients regardless of their gender. Female medical students in the United States scored significantly higher than men on the "Jefferson Scale of Physician Empathy"[35] and were more likely to provide health care services aimed at preventing ill-health[36] among both males and females.[37]

Consistent with these studies, our research revealed that, among medical students, being female was a positive predictor of willingness to help violence victims. However, it also revealed that female medical students were more likely to report depressive symptoms, anxiety, depression, dissociation, and sexual problems. Considering the multitude of stresses encountered in medical school to which women medical students are more susceptible[20] and that IPV encounters may result, among care providers, in distressing emotional and cognitive reactions such as flashbacks and nightmares,[38] our findings raise concerns about the vulnerability of medical students, and women in particular, to untoward psychological distress if they get engaged in assisting survivors without proper preparation. Anticipatory guidance and careful preparation of medical students through provision of psychological assistance and safe processing of their feelings may be warranted.[20] To our knowledge, none of the medical schools in Lebanon and possibly in the Arab world provides a

Table 3: Correlation Coefficient of Helping Battered Wives (HBW) Score With Different Independent Continuous Variables

	Pearson Correlation Coefficient *r* With HBW Score	*P* Value
Age	0.07	NS
Knowledge score about impact of domestic violence	0.13	.0053
Attitudes Toward Women score	0.46	<.0001
Marriage Role Expectations Inventory score	0.45	<.0001
Conflict Tactics score	-0.15	.0008
Verbal Aggression score	-0.13	.0028
Physical Violence score	-0.17	.0001
Trauma Symptoms score	-0.05	NS

NS—not significant

Table 4: Multivariate Analysis: Final Model of the Stepwise Multiple Linear Regression of the Dependent Variable "Helping Battered Wives" Score*

	Helping Battered Wives Score	
	β	*P* Value
Gender: female	0.424	.126
Parents' status		
Married	0	—
Divorced or separated	2.492	.004
One or both dead	0.192	.727
Exposure to verbal aggression	-0.0776	<.001**
Attitudes Toward Women score	0.145	<.001
Marriage Role Expectations Inventory score	0.069	.003
Model constant	—	NS

* *r* squared=0.26, P<.0001)

The following tested independent variables were not significant and not retained: university, year of study, mother's levels of education, place of birth, type of residence, age, exposure to physical violence, the Knowledge score about impact of domestic violence, and the trauma symptoms score.

NS—not significant

comprehensive training on adequate response to IPV survivors coupled with psychological assistance.

Childhood Exposure and Consequences

Studies on violence and trauma are consistent with our findings that the effects of childhood exposure to domestic violence last well into adulthood; adults exposed as children to domestic violence were found to suffer from long-term mental health consequences.[39,40] In our study, medical students exposed to domestic violence as children had higher scores on trauma symptoms compared to unexposed medical students.

However, what seems to be peculiar to our research is the finding that students exposed to family violence were less likely to believe that battered women should be helped. More research is needed to further elucidate whether this finding is specific to medical students in Lebanon, to the Arab world, or can be generalized; it is possible to interpret this finding by drawing on Bandura's social-learning theory. This theory posits that the exposure of children to violence allows them to normalize violence and, consequently, agree to it happening as a way to achieve a particular objective.[41] Our research revealed that students who were less likely to believe in helping battered women were more likely to adopt justifications for women's battering and were holding the belief that beating would benefit women in some way, which substantiates this theory. Another possible interpretation of this finding would be the use of avoidant coping by students exposed to violence. Avoidant coping was reported to be used by some individuals exposed to domestic violence.[42,43] Recognizing and addressing these personal issues within the medical student may be necessary to enhance their capacity to deliver appropriate care to survivors.

Limitations

Our study has a number of limitations. First, the design is cross-sectional, and students' responses on past experiences are open to recall bias. Second, we used the "Trauma Symptom Checklist," which is a screening tool and not a diagnostic test. Also, we have not addressed other factors that could be linked to distress and possibly to willingness to help among medical students, such as the high expectations placed on students entering medical school and the long working hours.[44] It is possible that a distressed student facing several challenges, in addition to history of abuse, may be less willing to get engaged in patient care

not necessarily violence survivors or current exposure to IPV. Similarly, current IPV exposure was not explored; asking related questions was considered premature at this stage since students are not familiar with this topic, and the reactions elicited by such questions could not be anticipated. Finally, our research reflects students' opinions and not practices that understandably may not be similar. These were not studied since students in the medical schools of Lebanon are not decision makers and hence what they practice does not reflect their opinions.

Conclusions

The study sheds light on an area not adequately researched in medical training, which is the relation between exposure to domestic violence in childhood and medical students' response to survivors. The presence of a negative association between childhood exposure to domestic violence and the willingness to help IPV survivors highlights the need to recognize exposure to domestic violence among medical students and consequently address it when affecting their psychological well-being. Whether past exposure to IPV affects future practice of medicine remains a question that needs to be answered by further research.

ACKNOWLEDGMENTS: Funding was granted by the University Research Board at the American University of Beirut.

Ethical approval to conduct this research was granted by the American University of Beirut's Institutional Review Board prior to any data collection.

The authors thank all the students who participated voluntarily to this study; special thanks to Dr Gene Feder for reviewing the article and providing valuable comments.

CORRESPONDING AUTHOR: Address correspondence to Dr Usta, American University of Beirut, Department of Family Medicine, Beirut, Lebanon. ju00@aub.edu.lb, jinan.usta@gmail.com

References

1. Ellsberg M, Jansen HA, Heise L, Watts CH, Garcia-Moreno C. Intimate partner violence and women's physical and mental health in the WHO multi-country study on women's health and domestic violence: an observational study. The Lancet 2008;371:1165-72.
2. Garcia-Moreno C, Jansen HA, Ellsberg M, Heise L, Watts CH. Prevalence of intimate partner violence: findings from the WHO multi-country study on women's health and domestic violence. The Lancet 2006; 368:1260-9.
3. Douki S, Nacef F, Belhadj A, Bouasker A, Ghachem R. Violence against women in Arab and Islamic countries. Arch Women Ment Health 2003;6:165-71.
4. Usta J, Farver JAM, Pashayan N. Domestic violence: the Lebanese experience. Pub Health 2007;121:208-19.
5. Hammoury N, Khawaja M. Screening for domestic violence during pregnancy in an antenatal clinic in Lebanon. Eur J Pub Health 2007;17:605-6.
6. Khawaja M, Hammoury N. Coerced sexual intercourse within marriage: a clinic-based study of pregnant Palestinian refugees in Lebanon. J Midwifery Womens Health 2008;53:150-4.
7. El Zanaty F, Hussein EM, Sahwaky GM, Way AA, Kishor S. Egypt demographic and health survey: 1995. Cairo Egypt National Population Council, 1996.
8. Maziak W, Asfar T. Physical abuse in low-income women in Aleppo, Syria. Health Care Women Int 2003;24(4):313-26.
9. Haj-Yahia MM. Attitudes of Arab women toward different patterns of coping with wife abuse. J Interpers Violence 2002;17:721-45.
10. Haj-Yahia MM. Wife abuse and battering in the sociocultural context of Arab society. Fam Process 2000;39(2):237-55.
11. Diop-Sidibé N, Campbell JC, Becker S. Domestic violence against women in Egypt—wife beating and health outcomes. Soc Sci Med 2006;62:1260-77.
12. Rodriguez MA, Bauer HM, McLoughlin E, Grumbach K. Screening and intervention for intimate partner abuse: practices and attitudes of primary care physicians. J Am Med Assoc 1999;282:468-74.
13. Lapidus G, Cooke MB, Gelven E, Sherman K, Duncan M, Banco L. A statewide survey of domestic violence screening behaviors among pediatricians and family physicians. Arch Pediatr Adolesc Med 2002;156:332-6.
14. Baig A, Shadigian E, Heisler M. Hidden from plain sight: residents' domestic violence screening attitudes and reported practices. J Gen Intern Med 2006;21:949-54.
15. Yonaka L, Yoder MK, Darrow JB, Sherck JP. Barriers to screening for domestic violence in the emergency department. J Contin Educ Nurs 2007;38:37-44.
16. Roelens K, Verstraelen H, Van Egmond K, Temmerman M. A knowledge, attitudes, and practice survey among obstetrician-gynaecologists on intimate partner violence in Flanders, Belgium. BMC Public Health 2006;6:238-47.
17. Bonds DE, Ellis SD, Weeks E, Lichstein P, Burke K, Posey C. Patient attitudes toward screening. N C Med J 2007;68:23-9.
18. Aneja S, Gottlieb AS, Feller E. Physician intervention for intimate partner violence. Med Health R I 2009;92:307-9.
19. Othman S, Mat Adenan NA. Domestic violence management in Malaysia: a survey on the primary health care providers. Asia Pac Fam Med 2009;7:2-9.
20. Ambuel B, Butler D, Hamberger LK, Lawrence S, Guse CE. Female and male medical students' exposure to violence: impact on well-being and perceived capacity to help battered women. J Comp Fam Stud 2003;34:113-41.
21. United Nations Population Fund (UNFPA). Rapid appraisal of reproductive health services in Lebanon, 2006.
22. Usta J, Farver JAM, Zein L. Women, war, and violence: surviving the experience. J Womens Health 2008;17:793-804.
23. Hendricks-Matthews MK. Ensuring students' well-being as they learn to support victims of violence. Acad Med 1997;72:46-7.
24. Cullinane PM, Alpert EJ, Freund KM. First-year medical students' knowledge of, attitudes towards, and personal histories of family violence (see comments). Acad Med 1997;2:48-50.
25. Haj-Yahia M. Beliefs about wife beating among Palestinian women: the influence of their patriarchal beliefs. Violence Against Women 1998; 4:533-58.
26. Saunders DG, Lynch AB, Grayson M, Linz D. The Inventory of Beliefs About Wife Beating: the construction and initial validation of a measure of beliefs and attitudes. Violence Vict 1987;2:39-57.
27. Spence JT, Helmreich R. Masculinity and femininity: their psychological correlates and antecedents. Austin, TX: University of Texas Press, 1978.
28. Haj-Yahia M. Beliefs of Jordanian women about wife-beating. Psychology of Women Quarterly 2002;26:282-91.
29. Dunn M, DeBonis NJ. Teachers' and counselors' guide to accompany a Marriage Role Expectations Inventory. Saluda, Lebanon: Family Life Publications Inc, 1979.
30. Straus MA. Measuring intra-family conflict and violence: the Conflict Tactics (CT) scales. J Marriage Fam 1979;41:75-88.
31. Briere J, Runtz M. The Trauma Symptom Checklist (TSC-33): early data on a new scale. J Interpers Violence 1989;4:151-63.
32. Woodward CA, Hutchison BG, Abelson G, Norman G. Do female primary care physicians practice preventive care differently from their male colleagues? Can Fam Physician 1996;42: 2370-9.
33. Woodward CA, Carroll JC, Ryan G, et al. Maternity care and maternal serum screening; do male and female family physicians care for women differently? Can Fam Physician 1997; 43:1078-84.
34. Lurie N, Margolis KL, McGovern PG, Mink PJ, Slater JS. Why do patients of female physicians have higher rates of breast and cervical cancer screening? J Gen Intern Med 1997;12: 34-43.
35. Hojat M, Gonnella JS, Mangione S, et al. Empathy in medical students as related to academic performance, clinical competence, and gender. Med Educ 2002;36:522-7.
36. Bertakis KD. The influence of gender on the doctor-patient interaction. Patient Educ Couns 2009;76:356-60.
37. Henderson JT, Weisman CS. Physician gender effects on preventive screening and counseling: an analysis of male and female patients' health care experiences. Med Care 2001;39:1281-92.

38. Ambuel B, Hamberger LK, Lahti J. The Family Peace Project: a model for training health care professionals to identify, treat and prevent partner violence. Journal of Aggression, Maltreatment and Trauma 1997;1:55-81.

39. Haj Yahia M, de Zoysa P. Rates and psychological effects of exposure to family violence among Sri Lankan university students. Child Abuse Neglect 2008;32:994-1002.

40. Roustit C, Renahy E, Guernec G, Lesieur S, Parizot I, Chauvin P. Exposure to interparental violence and psychosocial maladjustment in the adult life course: advocacy for early prevention. J Epidemiol Community Health 2009;63:563-8.

41. Bandura A. Social learning theory. Oxford: Prentice-Hall, 1977.

42. Leitenberg H, Gibson LE, Novy PL. Individual differences among undergraduate women in methods of coping with stressful events: the impact of cumulative childhood stressors and abuse. Child Abuse Neglect 2003;28:181-92.

43. Street AE, Gibson LE, Holohan DR. Impact of childhood traumatic events, trauma-related guilt, and avoidant coping strategies on PTSD symptoms in female survivors of domestic violence. J Traum Stress 2005;18:245-52.

44. Dyrbye LN, Thomas MR, Shanafelt TD. Medical student distress: causes, consequences, and proposed solutions. Mayo Clin Proc 2005;80:1613-22.