Violence against women (VAW), in its various forms, is endemic in communities around the world, cutting across race, age, and religious and national boundaries. The World Bank estimated domestic violence to be as serious a cause of incapacity and death among women aged 15 to 49 years as cancer, and a greater cause of ill health than traffic accidents and malaria combined.1 Many researches and reports have linked VAW to the long-term suffering of women who have chronic pain, pelvic inflammatory diseases, fatigue, sexually transmitted infections, and even cancer.2,3 Physical and sexual Abuse in childhood were found to be predictors of early onset cardiovascular events in women.4

Domestic violence is a hidden problem, because it occurs within the private confines of the family, making it difficult to be exposed, documented, and studied. Among the reasons for under-reporting of domestic violence is the fear that the victims may be abused again if they reported such incidences. Besides, many women do not know their legal rights or where to go to seek help, and even if they do, legal and judicial authorities

**BACKGROUND AND OBJECTIVES:** Violence against women (VAW) is a worldwide problem that adversely affects women physically, psychologically, sexually, and financially. The aim of this study was to investigate (1) the rate of self-reported physical violence from husbands among women who presented to outpatient clinics of a major teaching hospital (2) the variables associated with VAW and (3) the pattern and the consequences of abuse on the victims’ health

**DESIGN AND SETTINGS:** This cross-sectional study was conducted over a 6-month period, commencing in December 2009 at King Khalid University Hospital (KKUH), Riyadh, Saudi Arabia.

**METHODS:** Women attending outpatient clinics regularly at KKUH, Riyadh, Saudi Arabia, were eligible for the study. The WHO VAW Instrument was used with some modifications to accommodate for the local culture.

**RESULTS:** A total of 222 Saudi women whose age ranged from 15 to 70 years were enrolled in the study. The rate of physical violence in the current study was 12.2%. Statistically significant associations were found between the self-reporting of VAW and the physical abuse of their husbands during childhood (odds ratio [OR]=8, 95% confidence interval [CI]: 2.2, 28.5, \( P = .002 \)). Similarly living in rented houses resulted in higher likelihood of the wife being abused (OR=4.23, CI: 1.706, 10.49, \( P = .002 \)). The likelihood increased if there was a history of wives being abused as a child (OR=3.563, CI: 1.438, 8.824, \( P = .008 \)) and if their husbands were unemployed (OR=5.29, CI: 1.6, 17.57, \( P = .012 \)). Furthermore, women who described family life as bad or disastrous were found more likely to be physically abused (OR=5.8, CI: 2.3, 14.5, \( P = .001 \)).

**CONCLUSION:** VAW is a significant social and public health problem in the Saudi society. Health professionals may need to consider the diagnosis, when the risk factors identified in the current study are found.
sometimes do not take appropriate or timely actions
due to cultural norms and beliefs or lack of protective
services that support and empower abused women.5,6
Even though most societies prohibit violence against
women, violations of women’s human rights are often
sanctioned on the basis of cultural practices and norms,
or through misinterpretation of religious tenets.7,8
In Arab and Islamic countries, domestic violence
is not considered a major public health concern by
many, despite its increasing frequency and serious con-
sequences.7 VAW has recently been highlighted as a
problem in Saudi Arabia. In a study that involved 689
ever-married women attending primary health centers
in Al-Medina Al-Munawara, 25.7% of the participants
reported physical abuse and out of these only 36.7% of
them had informed and discussed the issue with their
physicians.9 The magnitude and factors associated
with VAW merits investigation based on its endemic-
ity worldwide and its serious consequences on women’s
health. In Saudi Arabia, the figures and studies that
show the extent of the problem are limited. These find-
ings drove us to study the pattern and factors associated
with VAW. The primary objectives of the study were
(1) to estimate the rate and pattern of violence from
husbands among women who presented to the outpa-
tient clinics of a large teaching hospital in Riyadh, (2) to
investigate the variables and risk factors associated
with VAW, and (3) the consequences of abuse on the victims’
health status.

METHODS

Study population and setting
Women visiting the outpatient clinics of the King
Khalid University Hospital (KKUH), Riyadh (regard-
less of their complaints or reasons for the visit) were
invited to participate during the period from December
2009—May 2010. Riyadh is the capital of Saudi Arabia
with a population of 5,188,286, according to the
Population and Housing Census of 1431 H (2010).
KKUH is a 800-bed facility located in the northwest of
Riyadh City. It is a referral tertiary care facility, which
provides general and subspecialty medical services and
is the main training venue for medical students of King
Saud University, College of Medicine.

Questionnaire
The WHO VAW multi-country instrument was used
in this study.10,11 It was translated to Arabic by the
WHO and is available in Arabic language on their web
site. The questionnaire is composed of 12 sections. The
sections felt to be culturally acceptable to ask such as
demographics, domestic violence, and injuries for both
the respondent and her partner were included in the
questionnaire; other sections on life experiences and
general health, were not selected. A preliminary pilot
study on 25 women belonging to the study population
was conducted earlier to check for ambiguous items,
and appropriate changes were made.

Data collection
Female medical students who collected the data were
carefully trained on conducting interviews and prop-
erly filling out the questionnaire under the supervision
of two authors (JQ and MM) before the pilot study.
Students approached women in the waiting room
with a request to participate in the study and to fill
out the study questionnaire. Students assisted patients
who had difficulty in filling out the questionnaire.
Participants were assured confidentiality and anonym-
ity. A convenience sample was used.

Statistical analysis
Analysis was performed using SPSS, version 18.0.
Analysis was used to relate the independent variables,
namely the sociodemographic variables with the likeli-
hood of abuse. Results were tabulated and descriptive
(percentages) and analytical statistics like chi-square
test were calculated. A significance level of \( P < 0.05 \)
was considered significant. Logistic regression with
the significant variables was performed, but the model
did not improve when the independent variables were
added.

RESULTS
A total of 300 women were approached to participate
in the study. Of these, 222 (74%) women were enrolled
in the study and all were included in the final analysis.
Fifty women (16.6%) declined to participate and 28
(9.3%) did not fill out the questionnaire completely, ei-
ther because they were in a hurry or were missed by the
researcher due to high patient volumes.

The participants’ age ranged from 15 to 70 years.
The majority of the study subjects did not smoke and
192 (86.5%) of them reported that they were the only
wives of their husbands.

Out of the 222 studied women, 33 (14.9%) reported
being abused during their childhood and the abusers
were the father 10 (30%), brother 10 (30%), the mother
5 (15%) or a stranger 4 (12.1%).

Of the 222 participants, 27 women (12.2%) admit-
ted that their husbands had abused them physically
at least once in their lives. The majority of the abused
women in the current study were exposed to violence
few times a year (48%), followed by few times a month (22%) and finally everyday (11%); the group exposed to daily violence were more likely to seek medical care than the women who were abused less frequently (e.g. few times a year) but the difference was not statistically significant (P=.08). A total of 44% of the abused women were exposed to violence during pregnancy, 16 (66%) of the physically abused women fought back physically to defend themselves, 7 of the abused women (28%) worked regularly, and the job performance was adversely affected among 5 (55.5%) of them. A total of 71% of the abused women, admitted that they had left home at least once, even for 1 night, either because they could not endure more violence (69%), or they were being forced to leave the home (38%), or were badly injured (13%), or due to fear for the safety of the children (13%).

A statistically significant association was found between the self-reporting of VAW and the physical abuse of their husbands during childhood (odds ratio [OR]=8, 95% confidence interval [CI]: 2.2, 28.5, P=.002) (Table 1). Similarly, living in rented houses resulted in higher likelihood of abuse (OR=4.23, CI: 1.706, 10.49, P=.002). When there was a history of the wives being abused as a child (OR=3.563, CI: 1.438, 8.824, P=.008) and if their husbands were unemployed (OR=5.29, CI: 1.6, 17.57, P=.012) increased the likelihood of abuse. Furthermore, women who described their family life as bad or disastrous were found more likely to be physically abused (OR=5.8, CI: 2.3, 14.5, P=.001). The rate of reported smoking among husbands of the study sample was around 30%, drug abuse was (4%), and drinking alcohol was (5%).

Around 87.4% of the study participants described

| Odds ratio (confidence interval) | P value | Chi square |
|----------------------------------|---------|------------|
| 4.2 (1.7-10.5)                   | .002    | 10.9       |
| 5.3 (1.6-17.6)                   | .012    | 8.9        |
| 8.0 (2.2-28.5)                   | .002    | 13.1       |
| 3.6 (1.4-8.8)                    | .008    | 8.29       |
| 5.8 (2.3-14.5)                   | .001    | 16.6       |

*The total may differ due to incomplete data.
the quality of family life as excellent and good and 12.6% thought of the family life as fair, bad, or disastrous. A statistically significant association was found between women's self-evaluation of family life and the possibility of being physically abused \((P=0.001)\) (Table 2). Women who described the quality of family life as fair, bad, or disastrous had reported abuse more frequently than women who described their life as good or excellent.

No significant association was found between the reported physical abuse rate and the age of the study population, their educational level, or their estimated household income. No significant association was also found between the husband's educational level, occupation, smoking status, use of drugs and alcohol, and the physical abuse of their wives.

The most frequent methods of violence, among the 27 abused women were hand slap in 19, twisting of hands in 13, dragging in 12, use of stick in 7, use of sharp tools in 3 and use of a rope in 2 (Figure 1).

When asked about the injuries encountered and the short- and long-term impact of violence on their bodies, women mentioned pain, 18; bruising, 18; dizziness, 16; chronic fatigue, 16; frequent headache, 10; problems with memory, 7; superficial cuts or wounds, 6; and deep wounds, 2 (Figure 2). About 88% of the abused women stated that violence adversely affected their mental or physical health. Furthermore, 85% of the study population perceived domestic violence as a major health issue for Saudi women.

The perceived acceptable general reasons given by the participants for men hitting their wives were as follows: the wife disobeyed him (61%), left home without his permission (57%), refused to have sex (32%), and did not complete the household work (26%).

When women were asked to explain their own reasons for domestic violence, 11 women mentioned that there was no particular reason for the violence; whereas, 9 women attributed these to financial problems, drunk husband, 7; husband's difficulties at work, 7; unemployment, 7; problems with other family members, 6; disobedience 6; refusing sex, 5; and because of pregnancy, 3 (Figure 3).

**DISCUSSION**

The rate of physical violence (12%) in this study represents lifetime prevalence and is relatively low as compared to the international and regional figures.\(^\text{12}\) The reported lifetime prevalence of physical or sexual violence, or both, varied from 15% to 71% in the WHO multi-country study.\(^\text{6,8}\) Although very scarce, research on domestic violence in some Arab countries, has provided considerable evidence to debunk the myth that wife-battering affects only a small percentage of women in this region.\(^\text{12}\) Studies in Egypt, West Bank, Gaza strip, and Tunisia found that 1 in 3 women had suffered physical abuse.\(^\text{7}\) In Jordan, using the WHO questionnaire, 31.2% of women were found to be the victim of physical abuse among 517 participants.\(^\text{13}\) Another study using a sample of 832 Arab adolescents from the occupied Palestine, revealed that about 76% of the adolescents reported having witnessed their fathers abusing their mothers.\(^\text{7}\)

Accurate estimation of the prevalence of domestic violence remains problematic in Saudi Arabia due to the sensitivity of exploring this issue with the studied women, as some of them may not have admitted abuse because of embarrassment or fear of family disapproval.\(^\text{14}\)

As VAW becomes increasingly recognized and researched, important questions are being raised concerning its causes, consequences, and risk factors. In the current study, although a higher risk of abuse was found among women living in rented houses, there was no significant association with the estimated household income. People differ in their sensitivity and definition of the meaning of income. We believe that the housing status is a more accurate reflection of the economic status that could play a role in the rate of VAW. A report from the USA found the financial situation for both the husband and wife is inversely proportional to violence.\(^\text{15}\) The UNICEF found that specific groups of women are more vulnerable, including minority groups and women with disabilities.\(^\text{12}\)

A review on published reports on this topic\(^\text{2}\) found that lifetime prevalence was almost similar among the poor and rich women. However, the current abuse
(point prevalence) is significantly lower among rich and professional women because it is easier for them to escape or end the violence, rendering them less likely to be currently abused. Therefore, improving women’s socioeconomic status is likely to be a key intervention to decrease women’s vulnerability in the long term.

The current study has shown that husband’s unemployment was a risk factor for domestic violence, which is consistent with other studies because men who were employed felt satisfied with their lives. Unemployment of both partners was shown in another study to adversely affect their mental and physical health.

The study has also revealed that husbands who were themselves abused as children by their parents were much more likely to abuse their wives. Similarly, women who were exposed to violence as children were prone to be abused by their husbands. It is well known that women who were abused as children tend to accept the violence as adults and wives. This indicates that violence runs in families in vicious cycles. Therefore, a preventive strategy would be worthwhile to stop such behavior from being transmitted through generations, in addition to efforts being made to prevent child maltreatment. The current study findings are in agreement with other reports that found that wife battering has significant short-term and long-term health effects on the abused women.

There was also a statistically significant association in this study between women’s perception of the quality of their family life and the likelihood of being physically abused. This could be an effect and not a risk factor and indicates that the emotional cost is staggering. The WHO multi-country study on women’s health and domestic violence has recently confirmed significant associations between reported lifetime experiences of partner violence and self-reported poor health.

The study population described some reasons for women being penalized by their husbands as acceptable. Interestingly, some women themselves believe that it is justifiable to beat a wife if she disobeys her husband or leaves the house without his permission. The lack of awareness of women regarding their rights and raising girls to accept violence as the man’s right exaggerates the situation. The appropriate religious interpretation of Islamic law stands strongly against those who cause any harm to their wives.

The current study has several limitations. First, it was conducted at the ambulatory care setting of a single hospital. Thus, the findings may be different in other patients population, health care settings, and locations. A representative survey of community household is likely to provide a better estimate of the prevalence. The difference between respondents and non-respondents was not checked. The questionnaire was based on self-report, and some women may have chosen not to disclose information due to many reasons alluded at previously. A convenience sample was used, which may limit the generalizability of the study. The studied sample had a higher educational and socioeconomic level than the reported figures of the Saudi population.
In our study sample, 35.1% got a bachelor's degree and above, while the Saudi Population and Housing Census of 2004 indicated that only 19% of Saudi women above the age of 30 hold an educational degree above the secondary school and this may affect the generalizability of the study results. The objective of the study was to investigate physical violence. Hence, women who might have suffered abuse in other forms, such as verbal or emotional, were not included in this report.

However, in spite of these limitations, this study provides an important baseline information on this important social and public health problem in Saudi Arabia.

The finding of physical abuse rate of 12.2% in a Saudi ambulatory care setting is significant enough to serve as a wake-up call for both governmental and non-governmental agencies, to work together to focus on this important public health problem. Proper raising and prevention of children maltreatment are needed to reduce the incidence of VAW. Health professionals should have a low threshold of suspicion regarding any sign of injury among women, particularly those who have any of the risk factors identified in the current study or when a woman describes her family life as bad.

Future research is needed to study the validity of the WHO self-reporting questionnaire and its ability to detect VAW victims and to study the impact of different interventions, such as screening for VAW in different settings and counseling and support on reducing the risk of future injuries. A national prevalence survey of domestic violence is very much needed.

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