

reported that the overall prevalence of domestic violence in husbands was 40.0%. Experience of emotional violence in the past was associated with pain or discomfort feelings [13]. However, it is still under research in China. In this study, we aimed to explore the reasons of emotional abuse and the potential factors of adverse mental outcome.

Methodology

Study design

The study was a cross-sectional, online-based survey of married women in the Guangdong Province, China. The target population was married women from different age groups that were collected through a convenience sampling technique. There were women from different institutions, colleges and lay people who access to the internet. Our online survey was developed using Questionnaire survey software, and was conducted from 1st Sept to 30th Sept in 2015. The survey was anonymous and opened to all women residents aged 20 years and above who lived in Guangdong Province, China.

The survey was promoted on the web sites of a number of communities. The entry page to the survey provided detailed information about the survey, including the study aim, potential privacy and expected benefits. All participants must provide consent to the survey by acknowledging their understanding of the provided information before they were enrolled into the survey. At the end of the survey, participants were offered network currency, which can be spent on the internet. After the survey terminated, married women were included for meaningful analysis.

Demographic information including age, marital status, occupation, education background, monthly income and number of children were collected. Understanding and experience of emotional violence from intimate partners were investigated, followed by assessment of anxiety and depression status. A total of 810 females participated in the survey, 18 participants whose information was incomplete were excluded.

The final sample consisted of 747 Chinese married females. Emotional abuse in marriage was defined as being indifferent or perfunctory to their partner, barely communicates or has stopped intimacy with their partners. Participants were asked about their past experience of emotional neglect from intimate partners, whether they ever had emotional abuse against their partners and the duration of the last cold violence, major causes of emotional abuse and their suggested solution to domestic cold violence.

Anxiety and depression

Anxiety was assessed by Generalized Anxiety Disorder 7-item, which is based on the DSM-criteria for generalized anxiety disorder. Each item is reported on a four-point scale (0=not at all, 3=almost every day). The total score can range between 0–21. Scores less than 5 were categorized as 'normal'. Scores ranging from 5 to 9 were considered mild anxiety, scores of 10–14 were considered moderate anxiety, and scores of 15–21 were classified as severe [14,15].

Depression was assessed using the Patient Health Questionnaire (PHQ-9), a 9-items questionnaire that is used for screening in both clinical and research settings [16]. Each of the 9 items can be scored between 0 ("not at all") and 3 ("nearly every day"), and a summary score can range from 0 to 27 [17]. Scores less than 5 were categorized as 'normal', scores of 5–9 were considered mild, scores of 10–14 were

considered moderate, and scores of 15–27 were classified as severe; participants who had severe depression should be recommended for anti-depressant treatment [18].

We grouped 'moderately severe' into the category of moderate depression in our analyses. Therefore, PHQ-9 scores were classified into 'mild', 'moderate' and 'severe' depression. In both questionnaires, the answers referred to the participants' experience in the past two weeks. We also collected information such as change in weight or physical discomfort in the last month of the survey.

Ethics

The study was submitted to the Ethics Committee in the first affiliated hospital of Shantou University Medical College for approval. Participants were informed about the content and aim of the questionnaire before survey. All participants were allowed to not answer any question that they perceived to be uncomfortable.

Statistical analysis

All collected data were entered into EpiData 3.0 and analyzed using SPSS 15.0. The percentage of personal characters and answered questions were calculated. Categorical variables between groups (abuse and non-abuse, etc.) were compared using Chi-squared test. A multivariable logistic regression analysis was used to examine associations between socio-demographic factors, predicting the anxiety or depression syndrome; and to explore the associations between emotional violence and anxiety or depression symptoms. Robust variance estimation was used to calculate the 95% Confidence Intervals (CI). All two-tailed p-values less than 0.05 were considered statistically significant.

Results

The socio-demographic characteristics of the study participants with and without emotional abuse are shown in Table 1. All participants were aged between 20–55 years. There were 214 women reported having emotional abuse by their husbands and 533 women did not have such experiences. The two groups were significantly different in age, education background, professional status, monthly income and number of children.

Self-reported emotional abuse

Table 2 shows the self-reported prevalence of experiencing the emotional abuse from husband. In total, 214 (27.0%) women experienced emotional abuse or neglect in different frequency, 180 (22.72%) women experienced cold violence that last within six months and 34 (4.29%) women had such experience longer than a year.

The top three major causes of emotional violence were personality clashes (61.99%), great pressure (71.72%) and traditional perception of women being inferior to men (31.99%). The majority (90.15%) of them would choose communication as the first possible solution to stop emotional abuse, whereas 16.16% of them would call upon divorce.

Prevalence of anxiety and depression

The characteristics of women with and without anxiety (GAD-7 ≥ 5 and GAD-7 < 5) or depression (PHQ-9 ≥ 5 and PHQ-9 < 5) in abuse group and non-abuse group are respectively presented in Table 3. Among 214 emotional abuse victims, 65.9% and 75.8% had any degree of anxiety and/or depression.

Among 533 participants who did not experience emotional abuse,

41.5% and 55.5% had any degree of anxiety and/or depression. Most participants who developed anxiety or depression in violence group were aged within 26-35 (anxiety 55.3%, depression 50.6%), had college or bachelor degree (anxiety 76.6%, depression 78.4%), working in business, enterprise or government personnel (anxiety 38.4%, depression 38.9%) and with monthly income between 3001-6000 yuan (anxiety 40.0%, depression 44.7%).

Correlation of emotional violence and anxiety and depression

Table 4 shows the risk factors for anxiety or depression. In comparison to women who have no experience of emotional abuse, those emotional victims had higher proportion of anxiety (71.4%) or depression (61.3%). The results showed that emotional abuse victims had higher odds of having anxiety (OR=2.73 CI:1.93-3.87, $p<0.01$) or depression (OR=2.87 CI:1.96-4.22, $p<0.01$) compared to those without experiencing emotional abuse. Age was also a social factor of depression (OR=0.30 CI:0.17-0.63, $p=0.01$). Older women were less likely to have depression.

Citation:

stigmatized because that would result in emotional as well as material consequences [27]. The findings of the study showed that there was a statistically significant relationship between educational background and violence. It revealed a tendency that higher education degree was associated with greater likelihood of experiencing cold violence. That is because better educated individuals fully realize that the existing laws forbid physical violence but not emotional abuse. Victims would rather remain silent and tolerate, instead of having physical conflicts. A recent research on 3,893 married Malawian women has found that women's level of education is a significant predictor of their likelihood of experiencing intimate partner violence by her current husband [28], which was similar to other studies that have confirmed that women with higher educational attainment are less likely to be tormented by their husbands than women with lower educational attainment [29].

Impact of domestic cold violence on mental health in victims

When being treated with harmful emotional behavior, a spouse may feel unhappy, stressed and, even worse, a sense of depression. Previous studies have demonstrated that health problems are associated with experiencing harmful behavior from a partner. The most frequently reported consequence is feeling anxious or depressed. It has been reported that harmful behaviors are associated with a twofold to threefold increased odd of anxiety and depression symptoms in men experiencing or perpetrating harmful behaviors from their partners [30,31]. Women, who are exposed to physical or psychological spousal violence, are more likely to experience symptoms of depression, anxiety, psychogenic non-epileptic seizures and psychotic disorders [32]. In consistent with those results, our study revealed that among 214 emotional abuse victims, 65.9% have any degree of anxiety, 17.8% have depression and 10 of them have been harmed [30,31].

Wang et al. (2017) conducted a cross-sectional study on the impact of domestic violence on mental health in women. The study found that women who experienced domestic violence had significantly higher levels of anxiety, depression, and post-traumatic stress disorder (PTSD) compared to those who did not experience domestic violence. The study also found that the severity of domestic violence was positively correlated with the severity of mental health symptoms. The study concluded that domestic violence has a significant impact on the mental health of women and that interventions should be developed to address this issue.

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