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Validation of a Short Version of a Self-rated Instrument Designed to Measure Attitudes towards Domestic Violence

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Abstract

Violence against women has been recognized as an important public health problem. It is present in every culture around the globe but its local manifestations are highly dependent on social and cultural norms of the society which permeates it. Therefore, to provide a more robust assessment of the effectiveness of a domestic violence prevention programmes promoted by Singapore Committee for UN Women, Singapore, semantic and psychometric validation of Attitudes towards domestic violence (ADV) scale was conducted. As the questionnaire was tested in Singapore with English as an official language, translation and back translation steps were omitted. In the subsequent steps 20 multidisciplinary team members provided their feedback on semantic structure of the items to produce the final version. Singaporean version of ADV had an acceptable validity (Cronbach's coefficient alphas .81 to .98) of scores on the five subscales and satisfactory internal consistency (Cronbach's coefficient alphas .70 to .85). The ADV Questionnaire proved to be a promising instrument for estimating the effectiveness of domestic abuse prevention programmes.

Keywords: Domestic violence; Psychometric adaptation

Introduction

Violence in close partner relationships is the most common form of violence experienced by women worldwide [1]. It is a complex phenomenon often bearing long term health consequences for women [2]. Understanding of the wider social context and culture specific factors that support violence is necessary to implement effective preventive intervention strategies [3]. Attitudes towards violence against women have a significant role in understanding perpetration of violence against women, women's response to this victimization, and institutional responses to violence against women [4]. In addition, the role of cultural believes related to domestic violence offer another facet to understanding domestic violence. Comprehending attitudes towards violence against women is a key to better understanding of its root causes and, developing more effective intervention measures. Recent meta-analysis has further supported behaviour attitudes association by showing that attitudes have more impact on behaviour when participants have more control over their behaviour [5].

As there is no existing psychological instruments exploring attitudes towards domestic violence that are applicable to the unique multi-ethnic, multi-religious environment of Singapore and in order to better support evaluation of intervention strategies implemented by Committee for UN Women Singapore we have assembled new scale focusing on attitudes towards domestic violence. Committee for UN Women in Singapore has had a long-standing tradition of supporting local, regional and global programs that provides women and young girls access to leadership, development and economic independence. Help Anna is one of the programmes which focuses specifically on raising awareness about different types of violence that women of all backgrounds are exposed to. As part of scale construction process, we have conducted extensive literature search on the topic of domestic violence and found that most psychological scales predominantly focus on measuring prevalence [6,7] knowledge of and willingness to intervene [8]. Of the previously validated scales of attitudes towards domestic violence there are no available scales validated on Asian population of a developed country that would be appropriate for Singaporean environment. Previously conducted prevalence studies showed 6% of adult women in Singapore experiencing intimate partner violence [9,10]. Judging from the relatively more silent and conservative nature of Asian culture it can be assumed that these reports are underestimated.

Foo et al. further reported that in Singapore, less than one quarter of victims reported their most recent incident of abuse to the police. Right now, one in ten women in Singapore report experiencing physical or sexual violence [9]. Prevalence of financial abuse in Singapore has largely been underreported. 35% of the participants experienced some form of economic abuse at least once. 73% of the respondents experienced restrictions on communication and 74% restrictions on movement by their employer or employer's family [9].

Therefore, our efforts combined cultural adaptation Price et al scale of Attitudes towards dating violence (ATDV) which were adapted to cultural environment of Singapore with additional new items. As the original questionnaire is in English, translation and back translation steps of cultural adaptation were omitted so we proceeded with semantic adaptation of the items so they are culturally relevant and comprehensible form [11-13]. New items were specifically constructed to target psychological, financial and physical abuse.

The first goal of this study was to provide normative data on attitudes towards domestic violence by men and women of different cultural backgrounds. Second, we provided new scale measuring attitudes towards domestic violence and its psychometric properties.

Methodology

Item pool development

Additional items were included in the process of the scale

development. Four items were adapted from ATDV scale and new items which comprised aspects of physical, psychological and financial abuse. All items were based on Breiding et al intimate partner violence definitions of psychological, physical and sexual dating violence. Approximately half of the items were worded positively the other half negatively to avoid agreement bias.

All four items of the original ATDV scale were adopted from English, Attitudes towards male psychological dating violence (12-items) and Attitudes towards male physical dating violence (12 items) and predominant changes included girlfriend to 'partner'. The questionnaire comprised of three sections. The first section included questions on psychological abuse (verbal abuse, possessiveness and control), second part of the questionnaire consisted of physical abuse items and third part included aspects of financial abuse and control. For each scale, higher scores indicated a greater acceptance of abusive behaviour. Newly constructed items were adapted to the same Likert scale measure.

Scale testing

In the pretest stage, 20 Singaporean women professionals from different fields of business and academia reviewed the items for clarity, inclusiveness, ambiguity and cultural appropriateness of the language and content of the measure. This was particularly important given the sensitivity of the violence against women issues. Mean age of participants was 39 years (SD=7.5) 85% were college graduates and 15% of postgraduate degree 45% of participants. 65% of subjects were married, 15% were single and 20% were in partnerships.

Reviewers were also asked to identify any common abusive behaviours that were not initially captured by the items. 11 new items were identified (related to the financial abuse scale). The items on each scale were then randomly ordered to form the initial version of the Attitudes towards Domestic Violence Scale.

Measures

All participants completed background questionnaire developed for this study to determine age, gender, marital status and educational level.

Attitudes towards Dating Violence. Reviewers completed two scales that assessed, respectively, attitudes towards psychological, physiological violence conducted by men. These scales are Attitudes Towards Male Psychological Dating Violence (AMDV-Psy; 15-items), the Attitudes towards male physical dating violence (AMDV-Phys; 12-items), respectively.

Respondents also completed three additional scales on Gender Role Beliefs [14].

Upon completion of the questionnaire participants were given a presentation on domestic violence as well as an opportunity to ask questions regarding the study and domestic violence.

Additionally, the informed consent of all those who participated in the study was obtained. This work has obtained a positive feedback by the Ethics Committee of the Committee for UN Women and was approved without further ethical objections.

Data Analysis

For the assessment of the semantic, idiomatic and cultural equivalence of items which were adapted from the English version of the ATDV questionnaire. Factor structure of the complete new compiled

version of Attitudes towards Domestic Violence Scale was assessed. Reliability and validity of each subscale was separately assessed. A principal-components analysis (PCA) with a Varimax rotation was conducted to evaluate the conceptual validity of the ATDV-new. Thirty items loading on four factors were then selected (see below). These 29 items constitute the subject of this report.

Initial version of the questionnaire contained 95 items which were administered to 20 reviewers to reduce the number of items of the scale. The scales were factor analysed and the internal consistency of both physical, psychological and financial abuse subscales was determined. Items were selected for the reduced versions of the scales if they loaded above .20 on their respective factors of the scales and their inclusion didn't significantly lower the reliability of the scale. Internal consistency for each subscale was assessed with the use of coefficient α. Concurrent validity was assessed by correlating the subscales' scores with those of the ADTV-psychology and physiological completed by the research subjects on the same occasion using the Pearson's r.

The statistic package SPSS (v. 20.0 of SPSS Inc., Chicago, IL, EE.UU.) was used analyse data.

Results

Subscale construction

Initial principal components analysis was conducted in two separate steps. At first, we factor-analysed the 95 items covering all the aspects of physical and psychological violence. PCA followed by Varimax rotation identified four factors. 10-items of the 54 original items loaded on one of the factors with a value equal to or greater than 0.20, with no items loading on more than one factor. Four factors were identified.

The first factor, accounting for 21.55% of the variance and with an eigenvalue of 5.29, was defined by 8 items (3, 4, 5, 6, 7, 14, 23,16) and interpreted as the possessiveness and control factor. The second factor, accounting for 17.17% of the variance and with an eigenvalue of 5.04, was defined by 5 items (26, 27, 28, 29, 09) and interpreted as the verbal abuse factor. The third factor, accounting for 13.26% of the variance and with an eigenvalue of 3.65, was defined by 10 items (1, 2, 24, 25, 12,15,19, 8, 13, 12) and interpreted as the financial abuse factor. The fourth factor, accounting for 11.34% of the variance and with an eigenvalue of 2.79, was defined by 6 items (20, 10, 21, 22, 11, 18) and interpreted as the physical abuse factor.

Principal components analysis with varimax rotation of the ATDV items-factor loadings (Table 1).

Reliability

The reliability of the ADTV_new was assessed with two measures of internal consistency: coefficient α and item–total correlations. Coefficients α for internal consistency were 0.94 (possessiveness and control), 0.97 (verbal abuse), 0.74 (financial abuse), and 0.74 (physical abuse scale). Data on item–total correlations are available at request.

Concurrent validity

All participants completed ATDV_new. The correlation coefficients between the dimensions of the ATDV_new and gender norms.

Discussion

Short version of ATDV of 29 (out of originally 95) items has shown excellent internal consistency for psychological abuse factors

Item	Factor 1	Factor 2	Factor 3	Factor 4
Factor # 1-possesiveness and control				
3- Man wanting to spend all his free time with his partner it just shows his love for her	0.952			
4- If a man objects his partner socializing with her friends it just shows his love for her	0.952			
5- If a man controls when his partner can speak to her family it just shows his love for her	0.952			
6- If a man wants to have full access to his partners phone it just shows his love for her	0.952			
7- It is ok for a man to occasionally check his partners' social media communications	0.871			
14- It is ok for a man to object his partner seeing people he doesn't like.	0.614			
23- It is ok for a man to be aware of where his partner is at all times.	0.614			
16- In a conflict situation it can be justified for a man to put down or call his partner names	0.432			
Factor # 2-verbal abuse				
29- If the woman causes conflict it is ok for her partner to treat her like a personal servant to make up for her behavior		0.991		
09- If the women keeps inducing stress to her partner it is ok for him to deny her access to money or other basic resources		0.991		
27- If the woman keeps inducing stress to her partner it is ok for him to call her crazy		0.991		
26- If the woman causes conflict it is ok for her partner to treat her like a personal servant to make up for her behavior		0.991		
28- If the woman causes conflict it is ok for her partner to threaten her with a fist in order for her to stop that behaviour		0.991		
Factor # 3 – financial abuse				
24- A man should decide if his partner would work or not			0.948	
02- A woman shouldn't accept professional advancement without her partner's approval			0.948	
25- Access to both of partners finances' should be in mans' hands			0.948	
01- If the man is in charge of house finances he should also be in charge of the amount of allowance			0.784	
12- Making decisions on loans and debt should be in man's hands			0.434	
15- Man is allowed to be in charge of both incomes (his and his partners')			0.434	
19- Man shouldn't be accountable to his partner if he amounts debt without telling his partner			0.432	
08- Man shouldn't be compelled to contribute to family income if he feels he shouldn't			0.387	
13- Man should be in charge of the assets a woman brings into their marriage			0.352	
12- If a woman is working in a family business it's not expected of her to be paid			0.352	
Factor #4 -physical abuse				
20- If the woman causes conflict it is never ok for her partner to treat her like a personal servant to make up for her behaviour				0.867
10- If the woman causes conflict it is ok for her partner to threaten her with a fist in order for her to stop that behaviour				0.794
21- If the woman causes conflict it is ok for her partner to throw something at her to stop that behaviour				0.737
22- If nothing else works, in a conflict situation, it's ok for a man to slap his partner				0.737
11-If nothing else works, in a conflict situation, it's ok for a man to hit his partner				0.456
18-If nothing else works, in a conflict situation it can be justified for a man to threaten his partner with a knife or a similar weapon				0.456

Table 1: Principal components analysis with varimax rotation of the ATDV items-factor loadings.

and satisfactory for financial abuse and physical abuse. It should be emphasized that scale analysis presented in this report is the first phase of scale construction process and lower internal consistency scores of physical abuse and financial abuse scale could be partly due to a limited number of participants in this initial stage. However, it is promising that a four factor structure of ATDV, consisting of Possessiveness and Control, Verbal Abuse, Financial Abuse and Physical violence is upheld. Concurrent validity against the Gender norms scale has revealed positive association with verbal abuse subscale which is consistent with existing literature on association between gender beliefs and intimate partner violence [15]. To report that these beliefs were associated with friends reports who also had negative beliefs about gender roles and were abusive in their peer relationships [15]. Understanding individuals' beliefs about these roles might help us better understand the dynamics involved in hostile and benevolent sexism' which are driving intimate partner violence [14].

Although ATDV was successful as far as content validity acceptability and reliability further validation is necessary with more diverse and larger sample. Furthermore, it would be important to

further examine factor structure with confirmatory factor analysis and attempt replication of results in different samples. As gender role beliefs have not been previously examined in Singapore it is possible that diverse social groups would show differences in dimensionality of the scale and in that context mediating role of gender believes should be further examined. In this initial phase, we have recruited female reviewers but it would be important to validate the scale against both genders and explore multiple dimensions of gender beliefs. Thus this instrument turns into a practical tool to assess in a subjective fashion, the physical activity performed by women in Singapore 27-45. Further studies should be conducted to assess its extrapolation to other populations hence we encourage the use of scale in further research.

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