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The questionnaire for the detection of invisible violence against women: Turkish validity and reliability study

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Abstract

This study aims to determine the Turkish validity and reliability of the questionnaire for the detection of invisible violence against women. This methodological study was conducted online with 221 single women with an intimate partner and 277 married women. The scale was confirmed that the 23-item scale had 5 sub-scales. Fit indices were found χ^2/sd=2.202, TLI=.900, RMSEA=.074, SRMR =.0571, AGFI=.800, GFI=.850, IFI=.903, CFI=.902 and df= 214 in single women who had an intimate partner. Fit indices were found χ^2/sd=2.212, TLI=.901, RMSEA=.066, SRMR=.0582, AGFI=.827, GFI=.864, IFI=.916, CFI=.915 and df=216 in married women. The scale Cronbach's alpha coefficient was found to be 0.93 for the whole scale. And also the reliability of scale showed that it has excellent Cronbach's alpha coefficient of 0.84, 0.83, 0.86, 0.74 and 0.72 for the subscales of crisis, utilitarian, coercive, ambivalent and benevolent sexist behaviors respectively. The Turkish version of the questionnaire for the detection of invisible violence against women is a valid and reliable measurement tool for married/single women who have an intimate partner *(Afr J Reprod Health 2025; 29 [1]: 144-152)*

Keywords: Invisible; reliability; validity; violence; women health

Résumé

Cette étude vise à déterminer la validité et la fiabilité turques du questionnaire de détection de la violence invisible à l'égard des femmes. Cette étude méthodologique a été menée en ligne auprès de 221 femmes célibataires avec un partenaire intime et 277 femmes mariées. Il a été confirmé que l'échelle de 23 éléments comportait 5 sous-échelles. Des indices d'ajustement ont été trouvés χ2/sd=2,202, TLI=0,900, RMSEA=0,074, SRMR=0,0571, AGFI=0,800, GFI=0,850, IFI=0,903, CFI=0,902 et df=214 en simple les femmes qui avaient un partenaire intime. Des indices d'ajustement ont été trouvés χ2/sd=2,212, TLI=0,901, RMSEA=0,066, SRMR=0,0582, AGFI=0,827, GFI=0,864, IFI=0,916, CFI=0,915 et df=216 chez les femmes mariées. Le coefficient alpha de l'échelle de Cronbach s'est avéré être de 0,93 pour l'ensemble de l'échelle. La fiabilité de l'échelle a également montré qu'elle possède un excellent coefficient alpha de Cronbach de 0,84, 0,83, 0,86, 0,74 et 0,72 respectivement pour les sous-échelles de comportements sexistes de crise, utilitaire, coercitif, ambivalent et bienveillant. La version turque du questionnaire de détection de la violence invisible à l'égard des femmes est un outil de mesure valable et fiable pour les femmes mariées/célibataires ayant un partenaire intime. *(Afr J Reprod Health 2025; 29 [1]: 144-152).*

Mots-clés: Invisible; fiabilité; validité; violence; santé des femmes

Introduction

Violence against women is a violation of human rights that is based on gender discrimination, is accepted as a social problem worldwide, and has an ever-increasing importance[1]. Violence against women can be seen in individuals from all parts of society, regardless of age, education level, income level, culture, social status, ethnicity, or race[2].

Violence against women involves all kinds of oppressive thoughts, attitudes, and behaviors that harm women's bodily, physical, emotional, mental, and social well-being and restrict their freedom[3,4]. Looking at the effects of violence merely on the body has caused to tackle violence from a narrow framework. Violence also involves aspects that cause women to be harmed in terms of psychological, emotional, and social aspects, and

violence should be approached in terms of these aspects[3,5,6]. Women are generally subjected to these kinds of violence types mostly due to spouse/partner violence by people they know in their life[7,8].

The World Health Organization (WHO) reports that one in every three women (35%) is exposed to physical or sexual violence at any period in their life. Women worldwide are generally subjected to violence from their spouse or partner/person they lived with. One-third of femicide (38%) is also committed by women's spouse or partner/person they live with. Therefore, violence against women by spouse/intimate partner is encountered as a serious health problem today[9].

A country-based study conducted in Turkey showed that 36% of women were subjected to physical violence by their spouse/partner they lived with at any period during their life. Exposure to violence rates within the past year was reported to be 8% for physical violence, 5% for sexual violence, 26% for psychological violence, and 15% for economic violence[10]. A meta-analysis conducted in Turkey reported exposure to violence rates of 13% to 78%, indicating high levels of exposure to violence among women in Turkey[1,11].

Invisible violence against women, which is part of spouse/intimate partner violence, is defined as culturally accepted attitudes, behaviors, and subtle beliefs used by men to force women to submit[12,13]. Invisible violence against women is actually a symbolic type of violence that is naturalized and incorporated into the social habitus and becomes difficult to be recognized even by women who are exposed to this type of violence[14,15]. Invisible violence against women is based on sexist violent behaviors reflecting daily pressure committed by men on women[16]. Women who are exposed to this violence do not disclose that they are exposed to abuse by their spouse/intimate partner and they do not demonstrate visible signs that would enhance the detection of spouse/intimate partner violence[17]. Rates of applying to an institution/organization providing service about this issue to receive help are also very low among women who are exposed to violence[8,18]. Because psychological violence often precedes physical intimate partner violence against women, and is considered one of the main risk factors[19].

While some studies find the prevalence of psychological intimate partner violence to be around 10-20%, other studies find this rate to be 80-90%[20,21].

The frequency and severity of psychological Intimate partner violence against women can also differ widely from one country to another, meaning that the way in which this type of violence is perceived and interpreted can vary across countries and cultures[21].

Health professionals experience difficulty in determining and preventing invisible violence cases, which is a type of spouse/intimate partner violence[22-24]. The WHO highlights the need for taking necessary measures against coercive violence and gender inequality[24]. Therefore, health professionals play an important role in the early diagnosis and prevention of invisible violence against women. The development of standardized measurement tools could contribute to the early diagnosis of invisible violence against women by health professionals and the development of necessary measures[25,26].

For this reason, this study aims to adapt the Questionnaire for the Detection of Invisible Violence against Women developed by Dobarrio-Sanz *et al*. to Turkish and test its validity and reliability for Turkish culture[27].

Methods

Study design

This study is methodological.

Target population and the sample

The sample of the study was composed of women who were members of social media groups, and agreed to participate in the study between March and May 2023.

The literature reports that the adaptation of a scale to a different culture in methodological studies requires administering the scale to a group that is 5-10 times larger than the number of items in the scale. As the number of items in this scale is 23,

the sample should be composed of at least 115-230 individuals. Based on this recommendation, the number of the sample was determined as 10 times larger than the number of items in the scale and 230 women were aimed to be reached. In this regard, no sampling was performed in the study and data were collected from 277 married women and 221 single women with an intimate partner who met the research criteria using the nonprobability random sampling method.

Data collection tools

Personal information form; the form prepared by the researchers included 9 questions about women's socio-demographic characteristics.

Questionnaire for the detection of invisible violence against women (Q-IVAW); the scale, which was developed by Dobarrio-Sanz et al. to detect invisible violence against women, is composed of 23 items responded on a 5-point Likert scale with options including 0 = never; 1 = rarely; 2 = sometimes; 3 = often; 4 = always)[27]. The scale includes 5 sub-scales including (1) Crisis Sexist Behaviors; (2) Utilitarian Sexist Behaviors; (3) Coercive Sexist Behaviors; (4) Ambivalent Sexist Behaviors; and (5) Benevolent Sexist Behaviors. Higher scores indicate a higher probability of women's experience of invisible violence. Cronbach's alpha coefficient of the scale was reported .937[27]. Cronbach's alpha coefficients were found .936 in single women who had an intimate partner and .930 in married women in this study.

Language validity

The original scale was translated from English to Turkish by the researchers and two independent language experts. Then the Turkish form obtained was reviewed by two researchers to construct its Turkish version. The form translated to Turkish was then back-translated to English by two specialists in the field who knew both languages well. The original scale and its version translated to Turkish were compared and no meaning changes were detected. In this way, the Turkish translation of the scale was completed. After ethics committee approval was obtained, the scale was piloted with a group composed of 20 individuals. These individuals were not included in the study. Comprehensibility of the statements in the scale was evaluated in the group that was administered piloting. Then it was presented to expert opinions for content validity.

Content validity

For content validity, 10 experts in the field were sent the English and Turkish forms of the scale through e-mail. The experts were asked to indicate their views about the clarity and comprehensibility of the items in the scale, share their suggestions for improving the items, and score each item using Content Validity Index (CVI). The experts were asked to assess each item on a scale from 1 to 4 using the expressions 4: "Very relevant", 3: "Quite relevant", 2: "Not very relevant", and 1: "Irrelevant". Expert views were received using the Davis method. The statements indicated as very relevant were accepted without any changes, and revisions were made for the items that they thought not relevant or irrelevant. Analyses were performed to provide numerical values for both the linguistic and cultural equivalence as well as the content validity of the items. An item with a CVI value greater than .80 is considered adequate in terms of content validity[27-29]. The scores obtained from 10 experts for content validity indicated a CVI of .90.

Statistical analysis

Data were analyzed using the SPSS 22.0 version (SPSS Inc; Chicago, IL, USA) and AMOS package programs. Data were analyzed using numbers, percentages, factor analysis, confirmatory factor analysis, χ^2/sd value, CMIN/DF, TLI, RMSEA, SRMR, AGFI, GFI, IFI, CFI, df fit indices, PATH diagram.

Research ethics

Ethics approval was obtained from the Noninvasive Clinical Research Ethics Committee of a university (dated 22.03.2023 and no: 2023/07). Official

permission was obtained from the author through email about the Turkish adaptation of the Q-IVAW. The study followed the principles in the Declaration of Helsinki.

Results

Table 1 demonstrates the distribution of participating married and single women according to demographic variables. Table 2 demonstrates the factor loading values of the Turkish adaptation of the Questionnaire for the Detection of Invisible Violence against Women.

Table 1: Distribution of married and single women according to demographic characteristics

	Single women (*n* = 221)	**Married women (*n* = 277)**
	n (%)	**n (%)**
Education level		
Primary school	0 (0.0)	6 (2.2)
High school	16 (7.2)	46 (16.6)
University	205 (92.8)	225 (81.2)
Working or not		
Working	62 (28.1)	217 (78.3)
Not working	159 (71.9)	60 (21.7)
Income level		
Income less than expenses	74 (33.5)	44 (15.9)
Income more than expenses	21 (9.5)	68 (24.5)
Income equal to expenses	84 (38.0)	144 (52.0)
No income	42 (19.0)	21 (7.6)
Partner's/Spouse's Education Level		
Primary school	2 (1.0)	8 (2.9)
High school	60 (27.1)	60 (21.7)
University	159 (71.9)	209 (75.4)
Partner's/ Spouse's working		
Working	158 (71.5)	264 (95.3)
Not working	63 (28.5)	13 (4.7)
Partner's/ Spouse's Income level		
Income less than expenses	46 (20.8)	53 (19.1)
Income more than expenses	65 (29.4)	79 (28.5)
Income equal to expenses	110 (49.8)	145 (52.3)

Following the KMO and Bartlett's tests, the Principal Components Analysis method was performed to analyze the factor structure of the scale. The main purposes of factor analysis are to decrease the number of variables and show new structures by benefitting from the relationship between the variables. Dobarrio-Sanz et al. reported the KMO index in the original scale as .93 and found Bartlett's test of sphericity significant[27]. In factor analysis, the factor load value should be .30 or over so that it can be said that an item measures a structure or a factor well[28]. Higher factor loading indicates higher explanatory power of the variable for its respective factor, which increases the reliability of the factor. Hence, this study considered the .30 criterion while determining the factor loading[29,30].

An analysis of Table 2 shows that the factor loadings ranged from .50 to .84 in the single women group, and from .44 to .87 in the married women group. When the items loaded were analyzed in terms of content, they were found to include Crisis Sexist Behaviors against Women (7 items) in the first factor; Utilitarian Sexist Behaviors (5 items) in the second factor; Coercive Sexist Behaviors (4 items) in the third factor, Ambivalent Sexist Behaviors (5 items) in the fourth factor; and Benevolent Sexist Behaviors (2 items) in the fifth factor.

Hence, it was found that no items should be eliminated from the scale. The scale was found to be composed of 5 sub-scales and 23 items.

After the exploratory factor analysis, confirmatory factor analysis was performed to test the validity of the model concerning factor analysis. χ^2/sd, TLI, RMSEA, SRMR, AGFI, GFI, IFI, CFI, and df were analyzed to test if the model structure fit the data (Table 3).

The PATH diagram obtained in the confirmatory factor analysis is demonstrated in Figure 1.

The PATH diagram obtained in the confirmatory factor analysis is demonstrated in Figure 2.

Q-IVAW scoring system

Four categories were created according to how often women were subjected to invisible violence against women by their partners: hardly ever = 0–17 points (≥1 SD below the mean); occasionally = 18–49 points (≤2 SD above the mean); often = 50–

Table 2: Factor load values of the scale

Items	Factor loading values	
	Single Woman	Married Woman
Crisis sexist behaviors		
IT-2.My partner uses emotional lackmailing to get me to do something he wants.	.747	.756
IT-6.My partner only gives in during disputes in order to get more benefits later.	.729	.679
IT-5.My partner gives me gifts or promises in order to obtain some benefit.	.685	.587
IT-4.My partner lets me make mistakes even though he knows I am not doing something correctly so he can reproach me for it afterwards.	.652	.543
IT-1.My partner insists until he gets what he wants even though I repeatedly make clear that I do not agree.	.637	.510
IT-3.My partner plays hard to get in order to get things from me.	.612	.504
IT-7. My partner tries to make me feel sorry for him when feeling ill so that I look after him.	.586	.452
Utilitarian sexist behaviors		
IT-11.My partner tells me that I am more capable of caring for others just because I am a woman.	.732	.795
IT-10.My partner tells me that my housework has no economic value.	.702	.733
IT-9.My partner uses his manly logic as if it were the only right way to do things (e.g., he believes that childcare leave should be taken by the woman).	.689	.752
IT-12. My partner tells me it is logical that I should be the one to look after the children or other loved ones (now or in the future).	.672	.721
IT-8.There are things that my partner prefers me to do because I am a woman (e.g., decorating the house, taking care of loved ones, cooking, or dealing with male salespeople to get a discount).	.649	.610
Coercive sexist behaviors		
IT-16. My partner tends to overrule me when he disagrees with me.	.841	.874
IT-14. My partner uses his physique (i.e., gestures, postures, etc.) or voice to impose his opinions when we argue.	.793	.830
IT-15. My partner tends to want to take charge because he is a man.	.746	.808
IT-13. My partner tries to impose his opinion to make decisions on issues that men know best (e.g., to buy a car).	.734	.713
Ambivalent sexist behaviors		
IT-21. My partner pretends to be clueless (e.g., saying “I didn’t notice”) to justify certain harmful behaviors towards me.	.725	.710
IT-20. My partner withholds information from me to avoid what he believes to be unnecessary conflicts.	.668	.627
IT-18. My partner makes jokes about gender stereotypes (e.g., about women’s abilities to do certain jobs, about women’s ability to drive, or their nature to perform household duties).	.598	.573
IT-19. My partner makes comments about the bodies of women who appear in adverts.	.530	.442
IT-17. My partner makes sexual jokes (e.g., about the number of people he has had sex with, about rape, or about sexual preferences).	.503	.308
Benevolent sexist behaviors		
IT-23. My partner crosses a line to protect me without consulting me first.	.794	.859
IT-22. My partner tells me that he makes decisions without consulting me as a way of protecting me or my family.	.732	.748

Note. single woman: $n = 221$; married woman: $n = 277$

Table 3: Fit indices obtained from the confirmatory factor analysis

Indices	Single Woman Measurement	Married Woman Measurement
CMIN/DF	2.202	2.212
TLI	.900	.901
RMSEA	.074	.066
SRMR	.0571	.0582
AGFI	.800	.827
GFI	.850	.864
IFI	.903	.916
CFI	.902	.915
df	214	216

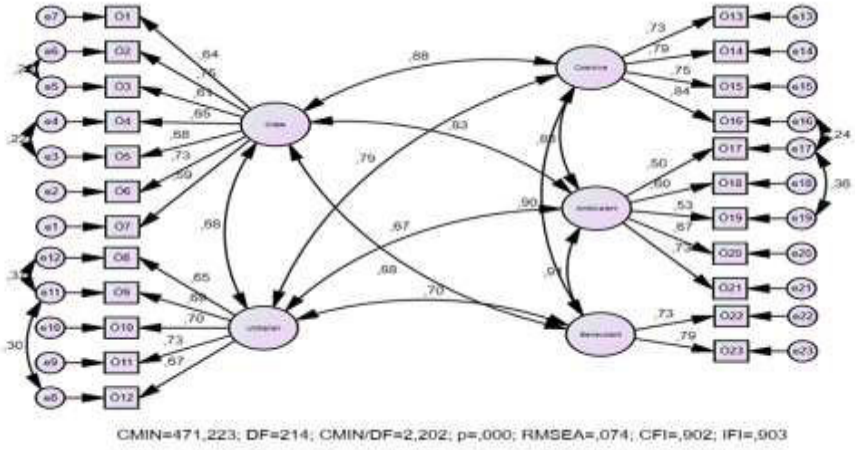

Figure 1: Path diagram concerning the confirmatory factor analysis of married women

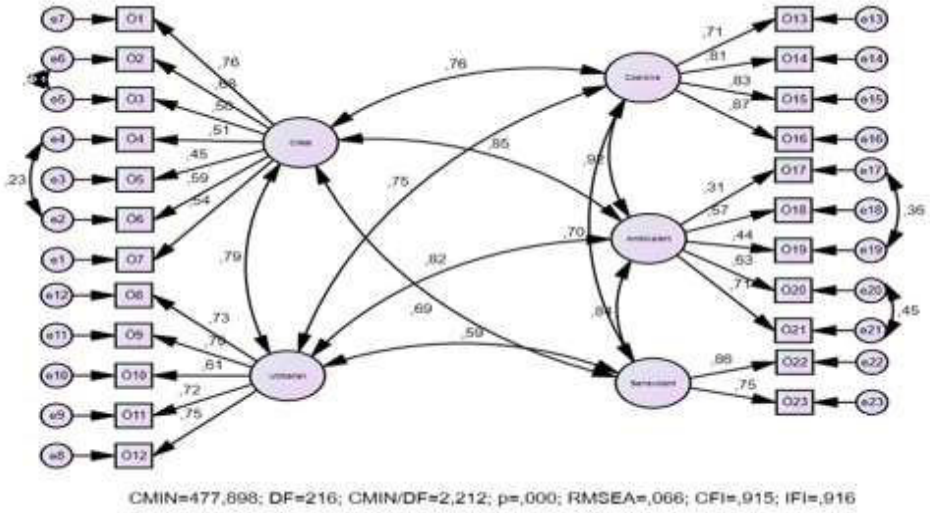

Figure 2: Path diagram concerning the confirmatoryfactor analysis of single women

80 points (≤4 SD above the mean); and very often = 81–92 points (>4 SD above the mean))

Discussion

This study performed Turkish translation of the questionnaire for the detection of invisible violence against women and analyzed its psychometric properties with married women and single women with intimate partners in the Turkish woman population. There is no Turkish scale to determine and evaluate invisible violence experienced by women. Therefore, this study investigated the psychometric properties to develop a reliable Turkish version of the original scale.

Scale adaptation is a complex process that needs to consider maintaining content, psychometric properties, and general validity for the target population[31], and it is composed of different phases. Translation is the first phase of the adaptation process[30,31]. Therefore, expert opinions were received after the original scale translation was performed by language experts. CVI is the most common method utilized in terms of content, language, and culture equivalence[30]. CVI value of over .80 is reported to be adequate in terms of content validity[30]. The CVI value was found .90 in this study, indicating the adequacy of the language equivalence of the scale.

Whether data were suitable for factor analysis was tested using KMO and Bartlett's tests. Higher KMO values indicate that each variable in the scale can be perfectly predicted by other variables.

While a KMO value of >.90 is excellent for factor analysis, .80 is very good and.70 is good.
A minimum of .70 is expected for good analysis. Bartlett's Test of Sphericity needs to be significant ($p<.05$)[32,33]. In the original scale, Dobarrio-Sanz et al. found the KMO index as .93 and Bartlett's Test of Sphericity as significant, indicating the suitability of factor analysis between variables[27].

Confirmatory factor analysis tested the construct validity determined in the exploratory factor analysis. The fit of the model obtained was tested using χ^2/sd, TLI, RMSEA, SRMR, AGFI, GFI, IFI, CFI, and df fit criteria. χ^2/df <2.5, an RMSEA value of .80 or smaller, and a p-value of higher than .05 indicate a good fit, and GFI and CFI indices of over .90 indicate a good fit[30,33]. The results showed that all the goodness of fit indices was in the acceptable range. A holistic evaluation showed that the 23-item model with 5 sub-scales was acceptable without any changes in its original form, and some values were found to demonstrate an excellent fit. All the findings indicate that the scale has high validity in Turkish culture.

Scale reliability is the consistency between the responses to the test items by the respondents. It is related to the degree to which the scale measures the feature it wants to measure. Cronbach's alpha is the most commonly used internal consistency reliability measure[34]. Cronbach's alpha value of lower than .40 indicates unreliability, values between .60 and .80 indicate low reliability and values over .80 indicate high reliability[35]. The total Cronbach's alpha value of the scale is greater than .80 in this study. Dobarrio-Sanz, Fernández-Vargas, Fernández-Férez *et al*. reported the total Cronbach's alpha coefficient of the scale was .937[27]. Item-total correlation coefficients are calculated to determine the relationship of the scale items with other items and the total score, and this value is expected to be over .30[35]. This study found the sub-scale correlations as over 0.30, which indicates that the reliability of the scale is adequate. According to the scores stated in the scale calculation, it can be determined how often women are exposed to invisible violence by their partners.

Conclusion

The results of this study showed that the Turkish version of the scale was composed of 23 items and five sub-scales like in the original scale. Construct validity results confirmed that the scale was composed of 5 sub-scales. Cronbach's alpha value was similarly found to be high in the Turkish version. The results of the study showed that the Turkish version of the scale was the same as the original scale and thus cultural equivalence was enhanced. The results of this study showed that the Turkish version of the Questionnaire for the Detection of Invisible Violence against Women (Q-IVAW) is a valid and reliable measurement tool that can be used in the Turkish population. It can be administered to all women who have a spouse and intimate partner. It was found to be suitable for

revealing invisible violence that cannot be disclosed by women but is experienced in their daily lives, which is believed to help health personnel detect invisible violence easily and contribute to providing women with all necessary support and care.

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Author's contribution

Design of the study: TS, SEA. Acquisition of data: TS. Analysis and interpretation of data: SEA, AT. Study supervision: TS Manuscript writing: TS, SEA, AT Critical revisions for important intellectual content: TS, SEA, AT. All authors contributed to the article and approved the submission.

Conflicting interests

The authors report there are no competing interests to declare..

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