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Standardization and Validation of Hindi Version of Kansas Marital Satisfaction Scale

Rashmi Rani[*], Arun Kumar Jaiswal and Lok Nath Singh

Department of Psychology, Faculty of Social Sciences, Mahatma Gandhi Kashi Vidyapith, Varanasi – 221002

ABSTRACT

The present study aimed to elucidate the psychometric properties, factorial structure, and predictive validity of Hindi version of Kansas Marital Satisfaction Scale in Indian cultural milieu. A total of 300 couples, 21 to 75 years old (300 husbands and 300 wives) were, conveniently sampled from Chowk and adjoining areas of Varanasi city of Uttar Pradesh, completed the Hindi version of Kansas Marital Satisfaction Scale. Factor analysis (principal components) with loadings equal to or more than 0.400, Eigen value equal to 1.00 and the Scree plot revealed single factors explaining a total of 81.116 % variance for husbands, 77.129 % variance for wives and 78.992 % variance for couples (husbands and wives). Confirmatory factor revealed that the fit indices were very good ($\chi2 = 0.00$, $p < 0.001$; CFI = 1.00; GFI = 1.00; SRMR = 0.00; RMR = 0.00) over the level of analysis (for husbands, wives and whole sample). The reliability coefficients of the single factor emerged fairly high and indicated good reliability of the Hindi version of KMSS. KMSS correlated significantly and positively with all measures of DAS-H indicating good convergent validity of KMSS-H. The results also indicated no significant gender and age differences on marital satisfaction as measured by KMSS-H. The findings indicated that Kansas Marital satisfaction Scale-Hindi (KMSS-H) may function as a useful brief measure of marital satisfaction in Indian culture.

KEYWORDS: Marital satisfaction, Marital adjustment, KMSS-Hindi version

*Correspondence author

Dr. Rashmi Rani

Department of Psychology,

Faculty of Social Sciences,

Mahatma Gandhi Kashi Vidyapith,

Varanasi 221002, Uttar Pradesh, India

INTRODUCTION

Marriage is an emotional and legal commitment of two people to share social bond and responsibility, emotional and physical intimacy, various tasks, and economic resources. Happy marriage refers to happiness, satisfaction, affection between spouses in relationship. Marital satisfaction is a process of adaptation of the both partners in such a way as to avoid or resolve conflicts sufficiently so that the mates feel satisfied with the marriage and each other. There are numerous areas of research that focus on the complexities of marriage like the destructive communication styles, maladjustment, transition to parenthood, work stress, economic stress etc.

Numerous studies on close relationship[10,23] and interpersonal relationship[10,5] provide ample evidences to understand venerability and influential traditions in history like psychodynamic model[24, 34], social-learning models of marital adjustment[43], cognitive and effective components[1,33], the dependency of dyadic observation and the dichotomous nature of outcome variables[6,30]. Research have revealed that subjective relationship satisfaction is associated with many optimistic outcomes, including mental health[16], physical health[48], and child functioning[22], while marital dissatisfaction is associated with numerous issues[20] like depressive symptoms[2, 3, 14]. One of the etiological models of depression is known as 'Marital Discord Model of Depression' which is connected with marital dissatisfaction[4].

In a number of researches several psychological tools were developed in western countries to assess marital satisfaction. Most universally used scales are Locke-Wallas Marital Adjustment Test (MAT)[28],Spanier's Dyadic Adjustment Scale (DAS)[45],Snyder's Marital Satisfaction Inventory (MSI)[44],Roach, Frazier and Bowden's Marital Satisfaction Scale (MSS)[37]. One of them is Schumms's Kansas Marital Satisfaction Scale (KMSS) used to measure marital satisfaction and adopted in various cultures and populations like Persian[34], Chinese[43], Korean[9] and US Army personnel populations [39].

From past few decades due to transitional phase of Indian culture and values, increase in rate of divorce, broken family, marital conflict and their consequences have been observed that compelled the researchers to assess the marital domains like marital satisfaction and replicate basic research to examine the cause and consequences of marital satisfaction/dissatisfaction. As such, the present study aimed to elucidate the (i) psychometric properties, (ii) construct and convergent validity, (iii) gender and age differences for predictive validity of Hindi version of Kansas Marital Satisfaction Scale in Indian cultural milieu in view of the fact that psychological test(s) of proven psychometric adequacy for a given population, if transported and employed for measurement purposes of the theoretical construct(s) in another cultural milieu, may not be regarded as

trustworthy and valid measure of the theoretical construct(s) unless preliminary psychometric checks are made[13, 49].

Experimental Section

Participants and procedure

A total of 600 married participants, 21 to 75 years old, (300 husbands + 300 wives) (husbands, mean age = 39.507, SD = 9.190 years; wives, mean age = 35.587, SD = 8.580 years) with at least graduation qualification were conveniently sampled from Chowk and adjoining areas of Varanasi city of Uttar Pradesh. The analyses of the demographic characteristics revealed that length of the marriage ranged from 2 to 47 years (mean marital length = 11.920; SD = 9.295), and 91.3% and 8.7% Participants were respectively from urban and rural background, and 76.7% and 23.3% of participants were respectively from joint and nuclear families. The husbands were having a little higher educational qualification with 25.3% and 24.6% husbands were respectively graduate and postgraduate as compared to 21.3% and 28.7% graduate and postgraduate wives.

Instruments

Kansas Marital Satisfaction Scale- Hindi Version

Schumm et al., (1986) devised a three-item inventory impressively entitled as Kansas Marital Satisfaction Scale (KMSS)[41]. Participants are asked to rate their satisfaction, with their marriage, with their spouses and with their relationship. The inventory has been shown to possess a reliability of 0.93, only 0.01 below that of Spanier's questionnaire, and to correlate 0.83 with KMSS[41], depicting that short questionnaire is of high face validity (surprisingly well in the field so far available). With prior permission of Prof. Walter Schumm the Hindi translation of KMSS was created using a back-translation procedure involving one well-versed and native speaker of both the languages and the authors) in an attempt to ensure the content equivalence. In addition, the items were evaluated for their relevance of the measurement of the theoretical construct(s) in Indian cultural milieu. In the final attempt, the items were tried out on a small sample of married couples and their suggestions were evaluated and incorporated in the final version of the questionnaire.

Dyadic Adjustment Scale- Hindi version (DAS-H)[36]

The DAS[45] is a standardized assessment of couple's relationship. The DAS consists of 32 items which yields scores on four subscales: (i) Dyadic Consensus (ii) Dyadic cohesion (iii) Dyadic satisfaction and (iv) affectional expression.DAS has good reliability and construct validity. Spanier (1976) reported fairly high Cranach's alpha coefficients ranging from 0.73 to 0.96, DAS correlated fairly high with (r = 0.86) with Locke-Wallace Marital Adjustment Scale). Most researchers,

reasonably enough, simply sum the four scales for discrimination purposes of distressed and non-distressed couples.

Statistical Analyses

The SPSS-version 20 was used to compute descriptive statistics, correlation analyses, and internal consistency. Pearson´s correlation was used to investigate the relationships between Dyadic Adjustment Scale (DAS) and other measures. AMOS version 20 was used to perform confirmatory factor analysis (CFA) using the maximum likelihood (ML) method. Analyses included (i) factor analysis, (ii) average item total coefficients of correlations,(ii) reliability indices (split-half reliability coefficients corrected by Spearman–Brown prophecy formula and Cranach's alpha coefficients), (iii) relationships between the factors, and (iv) construct, convergent and predictive validity of the test scores by confirmatory factor analysis and highlighting gender and age differences on the factors of KMSS.

RESULTS

The Kaiser-Meyer-Olkin measure of sampling adequacy was found to be 0.732 for husbands, 0.727 for wives and 0.729 for the whole sample, and Bartlett's test of sphericity was significant(Chi square = 497.854, df= 3, $p < 0.001$ for husbands, Chi square = 390.805,df= 3, $p<0.001$ for wives and Chi square = 879.544, df= 3, $p < 0.001$ for whole).Factor analysis (principal components) on Hindi version of KMSS with the loading equal to or more than 0.400, Eigen value equal to 1.00 and the Scree plot revealed single factors explaining a total of 81.116 % variance for husband, 77.129% variance for wives and 78.992 % variance for whole sample. The reliability coefficients of the KMSS for husbands (Split half = 0.874, Cronbach's alpha = 0.884, Guttman lambda = 0.884), for wives(Split half = 0.844, Cronbach's alpha = 0.850, Guttman lambda = 0.851) and for the whole sample (Split half = 0.857, Cronbach's alpha = 0.867, Guttman lambda = 0.868) emerged fairly high.
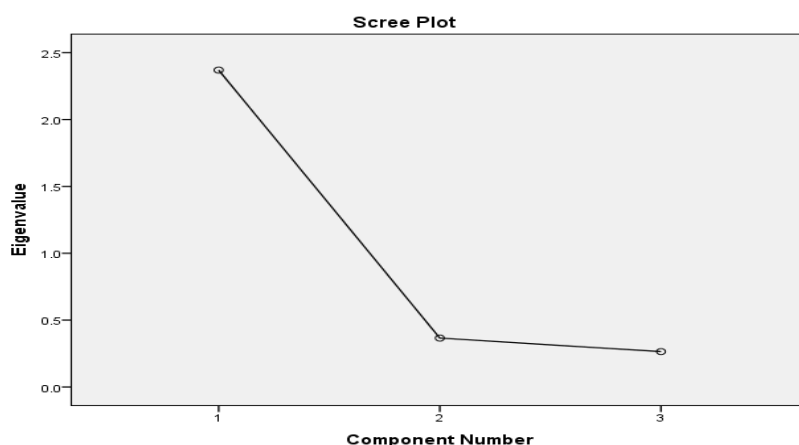

Scree Plot

Table – 1: Factor loadings in the component matrix of KMSS-H for husbands, for wives and for whole sample				
S.NO	Items	Husbands	Wives	Whole sample
2	आप अपने जीवन साथी से कितने सन्तुष्ट हैं ? How satisfied are you with your husband/wife as a spouse?	0.924	0.896	0.910
3	वैवाहिक जीवन में आप अपने आपसी सम्बन्ध से कितना सन्तुष्ट हैं ? How satisfied are you your relationship with your husband/wife?	0.891	0.870	0.879
1	आप अपने विवाह से कितना सन्तुष्ट हैं ? How satisfied are you with your marriage	0.886	0.868	0.877

Measures of Internal consistency

The item-total coefficient and average item-total coefficients of KMSS-Hfor husbands, for wives and for the whole sample were found to be fairly high.

Table -2: Mean ± SD values for KMSS-H and indices of internal consistency and reliability for husbands, for wives and for the whole sample (N= 600)

	Items	Husbands	Wives	Whole sample
Item total coefficients	1	0.887	0.86	0.873
	2	0.925	0.894	0.910
	3	0.890	0.880	0.883
Averageitem-total coefficients		0.901	0.878	0.889
Mean ± SD		3.187±2.377	13.18±2.351	13.183±2.362
Cronbach'sα		0.884	0.85	0.867
Split-half		0.874	0.844	0.857
Guttman lambda		0.884	0.851	0.868

Construct Validity

Confirmatory Factor Analysis (CFA) was used to evaluate the construct validity. We hypothesized that the KMSS-H would consist of single factor. The obtained Chi-square test of overall model fit was significant for husbands ($\chi2$ (df = 00, N = 300) = 000, p <0.001), for wives ($\chi2$ (df = 00, N = 300) = 000, p <0.001) and for the whole sample ($\chi2$ (df = 00, N = 600) = 000, p <0.001). The obtained results indicated that the fit indices were fairly good (CFI = 1.00; GFI = 1.00; SRMR = 0.000; RMR = 000) over the level of analysis (for husbands, wives and whole sample) and structure equation model indicated perfect model fit (Figure-2).. It is recommended that RMR and SRMR should be ≤ .05 and other indexes (e.g., CFI, and GFI) should be ≥ .90 for a consistent mode[16,19,26, 42]. As a result, factor structure of the Hindi form of the KMSS has perfect model fit indices and findings confirmed the construct validity of KMSS-H. The items of KMSS-H and item loadings in component matrix are given in Table -1.

Convergent validity

Previous results have indicated that the Kansas marital satisfaction scale significantly positively correlate with the sub factors of Dyadic Adjustment Scale (DAS)[45]. It was hypothesized

that marital satisfaction would positively correlate with the sub-factors of marital adjustment. Consistent with the hypothesis, marital satisfaction correlated significantly and positively with sub-factors of Hindi version of Dyadic Adjustment Scale (DC, DS and DCH)and total score of DAS-H, and these observations support the convergent validity of KMSS-H.

Table – 3: Relationships between KMSS-H and sub-factors of DAS-H

PMCEQ-H measures	KMSS
Dyadic Consensus	0.407**
Dyadic Cohesion	0.379**
Dyadic Satisfaction	0.260**
DAS-H Total	0.448**
N	600

** indicates $p < 0.01$.

Gender Differences

One-way analysis of variance was used to determine the gender differences on marital satisfaction with 'gender' as independent variable and KMSS-H total scores as dependent variable.. Results revealed no significant gender effect on KMSS-H (F (1,598) = 0.001, p > 0.05). Results suggested that husbands (Mean = 13.187; SD = 2.377, N = 300) and wives (Mean = 13.180; SD = 2.351, N = 300)(p > 0.05) to be more or less equal on marital satisfaction.

Age differences

To elucidate the age effects on marital satisfaction one-way ANOVA was performed on the scores of KMSS-H with age as independent variable. The spouses were divided into two age groups: participants falling below mean age of the sample were designated as younger participants (37 years and below) and those falling above mean age of the sample were designated as older participants (38 years and above). The analyses yielded insignificant age effects (F(1, 598) = 0.893, $p> 0.05$) on marital satisfaction. Younger spouses (Mean = 13.107; SD = 2.479, N = 354)and older spouses (Mean = 13.293; SD = 2.182, N 246) (p > 0.05) displayed almost similar levels of marital satisfaction.

DISCUSSION

The study demonstrated robust reliability and high internal consistency indices for KMSS-H in a sample of Indian married men and women separately as well as for couples and the findings are consistent with previous studies[17, 21, 32, 39]. Confirmatory factor analysis revealed that the Hindi version of the KMSS has good model fit indices consonant with previous research on factor structure[9, 34, 40.]

Convergent validity was assessed by correlating the KMSS-H with the sub-factors of Dyadic Adjustment Scale (DAS-H). The Kansas Marital Satisfaction Scale and sub-factors (DC, DS and DCH) and DAS-H positively correlated, confirming convergent validity of the instrument, which

corroborate with previous studies[8, 9]. Taken together these results support the contention that marital satisfaction may play an important role in stability in relationship, reduce the degree of interpersonal tension and better wellbeing. The present results also indicated no significant gender differences on KMSS-H, however, previous reports have both evidenced significant gender[11, 18,25]and non-significant gender effects[12, 15, 31, 34, 50]. Similarly reports are also on record with age effect on marital satisfaction with some studies reporting significant age effects[27, 29]and others reporting non-significant age effects[34, 38]. Overall it can be concluded that the KMSS-H may function as a useful brief measure of marital satisfaction in Indian culture.

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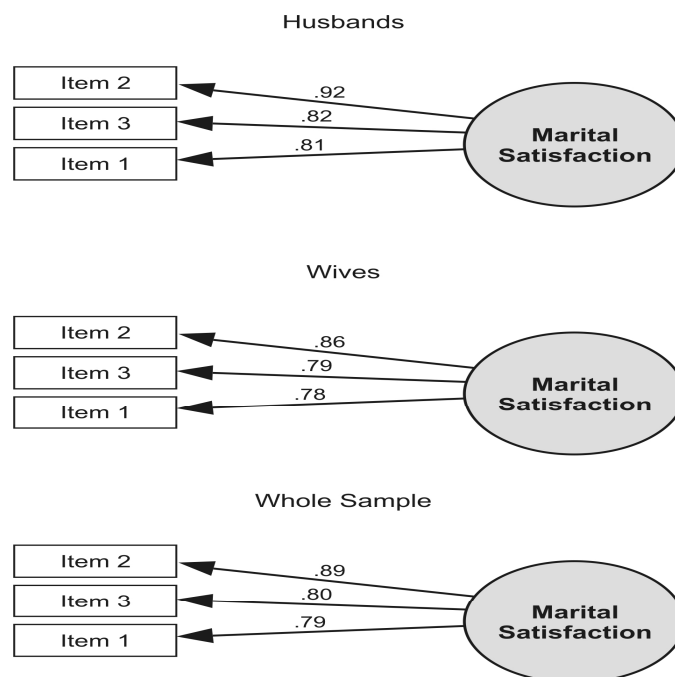
Figure - 2: Confirmatory factor analysis of KMSS-H:
Path Diagram and Standarized estimates
for husbands, for Wives and for the whole sample