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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 21 to 75years old 300 couples (300 husbands and 300 wives), 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 analysis revealed that the fit indexes were very good ( $\chi^2 = 0.00$ ,  $p < 0.001$ ; 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<sup>10,23</sup> and interpersonal relationship<sup>10,5</sup> provide ample evidences to understand venerability and influential traditions in history like psychodynamic model<sup>24, 34</sup>, social-learning models of marital adjustment<sup>43</sup>, cognitive and effective components<sup>1,33</sup>, the dependency of dyadic observation and the dichotomous nature of outcome variables<sup>6,30</sup>. Research have revealed that subjective relationship satisfaction is associated with many optimistic outcomes, including mental health<sup>16</sup>, physical health<sup>48</sup>, and child functioning<sup>22</sup>, while marital dissatisfaction is associated with numerous issues<sup>20</sup> like depressive symptoms<sup>2, 3, 14</sup>. One of the etiological models of depression is known as 'Marital Discord Model of Depression' which is connected with marital dissatisfaction<sup>4</sup>.

In 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)<sup>28</sup>, Spanier's Dyadic Adjustment Scale (DAS)<sup>45</sup>, Snyder's Marital Satisfaction Inventory (MSI)<sup>44</sup>, Roach, Frazier and Bowden's Marital Satisfaction Scale (MSS)<sup>37</sup>. 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 version<sup>34</sup>, Chinese<sup>43</sup>, Korean<sup>9</sup> and US Army personnel populations<sup>39</sup>.

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<sup>13, 49</sup>.

### ***Experimental Section***

#### **Participants and procedure**

A total of 21 to 75 years old 600 married participants (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 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)<sup>41</sup>. 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<sup>41</sup>, 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)<sup>36</sup>**

The DAS<sup>45</sup> 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 Cronach'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,

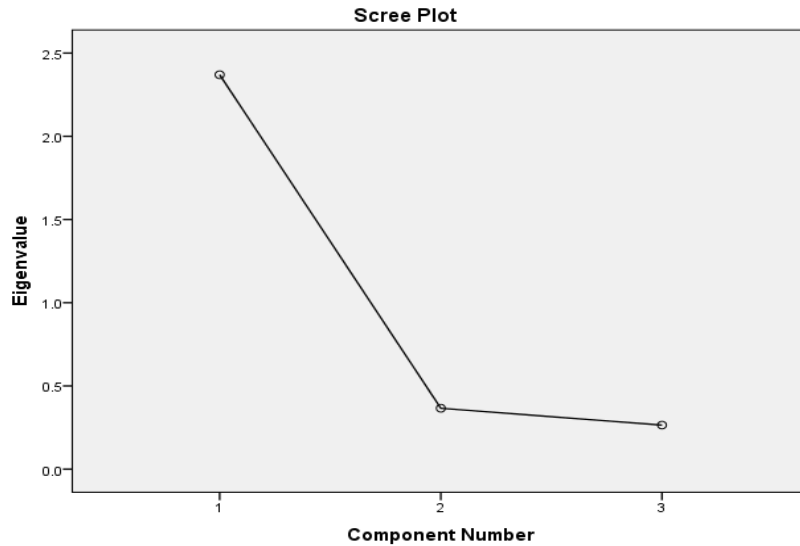
reasonably enough, simply sum the four scales for discrimination purposes of distressed and non-distressed couples.

### **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 Cronbach'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.



**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-H for 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
Average item-total coefficients		0.901	0.878	0.889
Mean ± SD		3.187±2.377	13.18±2.351	13.183±2.362
Cronbach's α		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 factors. The obtained Chi-square test of overall model fit was significant for husbands ( $\chi^2$  (df = 00, N = 300) = 000,  $p < 0.001$ ), for wives ( $\chi^2$  (df = 00, N = 300) = 000,  $p < 0.001$ ) and for the whole sample ( $\chi^2$  (df = 00, N = 600) = 000,  $p < 0.001$ ). The obtained results indicated that the fit indexes 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. It is recommended that RMR and SRMR should be  $\leq .05$  and other indexes (e.g., CFI, and GFI) should be  $\geq .90$  for a consistent mode<sup>16,19,26, 42</sup>. 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)<sup>45</sup>. 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 variables. 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<sup>17, 21, 32, 39</sup>. Confirmatory analysis revealed that the Hindi version of the KMSS has good model fit indices consonant with previous research on factor structure<sup>9, 34, 40</sup>.

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<sup>8, 9</sup>. 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<sup>11, 18, 25</sup> and non-significant gender effects<sup>12, 15, 31, 34, 50</sup>. Similarly reports are also on record with age effect on marital satisfaction with some studies reporting significant age effects<sup>27, 29</sup> and others reporting non-significant age effects<sup>34, 38</sup>. Overall it can be concluded that the KMSS-H may function as a useful brief measure of marital satisfaction in Indian culture.

### **REFERENCES**

1. Baucom DH and Epstein N. "Cognitive behavioral Marital Therapy". New York: Brunner / Mazel; 1990.
2. Beach SRH, O'Leary KD. Dysphoria and marital discord: Are dysphoric individuals at risk for marital maladjustment? *J. Sex. Marital. Ther.* 1993a; 19: 355 – 368.
3. Beach SRH, O'Leary KD. Marital discord and dysphoria: For whom does the marital relationship predict depressive symptomatology? *J. Soc. Persona. Rel.* 1993b; 10: 405 – 420.



4. Beach SRH, Sandeen EE, O'Leary KD. "Depression in marriage: A model for etiology and treatment". New York: Guilford Press; 1990,
5. Berscheid E. Interpersonal relationships. *Annu. Rev. Psychol.* 1994; 45: 79-129.
6. Bradbury TN and Fincham FD. "A contextual model for advancing the study of marital interaction". In Fletcher GJO and Fincham FD. (Eds.), *Cognition in Close Relationships*. Hillsdale, NJ: Erlbaum; 1991: 127–147.
7. Byrne BM. "Structural equation modeling with amos: basic concepts, applications, and programming". Mahwah, N.J: Lawrence Erlbaum Associates; 2001.
8. Calahan CA. Correlations of scores on the Kansas Marital Satisfaction Scale and the quality marriage index. *Psychol. Rep.* 1996; 78: 530-530.
9. Chung H. Application and revision of the Kansas Marital Satisfaction Scale for use with Korean couples, *Psychol. Rep.* 2004;95: 1015–1022.
10. Clark MS, Reis HT. Interpersonal processes in close relationships. *Annu. Rev. Psychol.* 1988; 39: 609-672.
11. Dillaway H, Broman C. Race, class, and gender differences in marital satisfaction and divisions of household labor among dual-earner couples. *J.Fam.Issues.* 2001; 22: 309-327.
12. Dinna M. "Marital satisfaction in autonomous and arranged marriages: South African Indian sample". Unpublished manuscript, University of Pretoria, Pretoria.
13. Eysenck HJ and Eysenck MW. "Personality and individual differences: A natural science approach". New York, NY: Plenum;1985.
14. Fincham FD, Beach SRH, Harold GT, Osborne LN. (1997). Marital satisfaction and depression: Different causal relationships for men and women? *Psychol.Sci.* 1997; 8:351 – 357.
15. Gager C.T, Sanchez L. Two as one? Couples' perceptions of time spent together, marital quality, and the risk of divorce. *J. Fam. Issues.* 2003; 24: 21–50.
16. Gove WR, Hughes M, Style CB. Does marriage have positive effects on the psychological well-being of the individual? *J. Health. Soc. Behav.* 1983; 24: 122-131.
17. Green RG, Woody D, Maxwell S, Mercer R, Williams S. Reliability and validity of the Kansas Marital Satisfaction Scale in a sample of African- American husbands and wives. *Psychol. Rep.* 1998; 82: 255–258.
18. Guo B, Huang J. Marital and sexual satisfaction in Chinese families: Exploring the moderating effects. *J. Sex.Marital. Ther.* 2005; 31: 21-29.
19. Hayduk LA. "Structural equation modeling with LISREL: essentials and advances. Baltimore": Johns Hopkins University Press; 1987.



20. Heaton TB, Albrecht SL. Stable unhappy marriages. *J Marriage Fam.* 1991; 53: 747-758.
21. Henson RK. *Methods, Plainly Speaking. Understanding Internal Consistency Reliability Estimates: A Conceptual Primer on Coefficient Alpha.* *Meas. Eval. Couns. Dev.* 2001; 34: 177-189.
22. HowesP, Markman HJ. Marital quality and child functioning: A longitudinal investigation. *Child Dev.* 1989; 60: 1044– 1051.
23. Huston TL, Levinger G. Interpersonal attraction and relationships. *Ann. Rev. Psychol.* 1978; 29: 1 15-56.
24. Jacobson NS and Garman AS. “*Clinical handbook of marital therapy*”. Guilford: New York;1986
25. Joes O, Alfons V. Do demographics affect marital satisfaction? *J. Sex.Marital. Ther.* 2007; 33: 73-85.
26. Kelloway EK. “*Using LISREL for structural equation modeling: a researchers guide*”. Chicago, IL: Scientific Software International; 1998.
27. Lee G, Shehan, CL. Retirement and marital satisfaction. *J. Gerontol.*,1989; 44: 226–230.
28. Locke HJ, Wallace KM. Short marital-adjustment and prediction tests: Their reliability and validity. *Marriage Fam. Living.* 1959; 21: 251–255.
29. Maryam R, Mahmood K. Gender differences on marital satisfaction and social relations among diabetic patients. *Int. J. Sci. Eng. Res.* 2014; 5-45.
30. Montgomery BM and Duck S. “*Studying Interpersonal Interaction*”. Guilford: New York; 1991.
31. Myers JE, Madathil J, Tingle LR. Marriage satisfaction and wellness in India and in the United States: A preliminary comparison of arranged marriages and marriages of choice. *Fam. J. Counsand Dev.* 2005; 83:183-190.
32. Nunally JC and Bernstein IH. “*Psychometric theory*”, 3rd ed., McGraw-Hill, New York; 1994.
33. O’Leary KD. “*Assessment of marital discord: An integration for research and clinical practice*”. Hillsdale, NJ: Lawrence, Erlbaum; 1987.
34. Omani-Samani R, Maroufizadeh S, Ghaheri A, Amini P, Navid B. Reliability and validity of the Kansas Marital Satisfaction Scale (KMSS) in infertile people. *Middle East Fertil. Soc. J.* 2018; 23: 154–157.
35. Paolino TJ and McCrady BS. “*Marriage and Marital Therapy: Psychoanalytic, Behavioral and systems theory perspectives*”. New York: Brunner / Mazd; 1978.

36. Rani R, Singh LN, Jaiswal AK. Factorial validation of Hindi version of dyadic adjustment scale. *Indian J PsycholEdu.* 2019; (Communicated).
37. Roach AJ, Frazier LP, Bowden SR. The Marital Satisfaction Scale: Development of a measure for intervention research. *J. Marriage Fam.* 1981; 43: 537 – 546.
38. Schmitt M, Kliegel M, Shapiro A. Marital interaction in middle and old age: a predictor of marital satisfaction? *Int. J. Aging Hum. Dev.* 2007; 65: 283–300.
39. Schumm WR, Crock RJ, Likcani A, Akagi CG, Bosch KR. Reliability and validity of the Kansas Marital Satisfaction Scale with different response formats in a recent sample of US Army personnel, *Indiv. Diff. Res.* 2008; 6: 26-37.
40. Schumm WR, Bollman SR, Jurich AP, Hatch RC. Family strengths and the Kansas Marital Satisfaction Scale: a factor analytic study. *Psychol. Rep.* 2001; 88: 965–973.
41. Schumm WR, Paff - Bergen LA, Hatch RC, Oborah FC, Copeland JM, Meens LD, Bugaighis MA. Concurrent and discriminant validity of the Kansas Marital Satisfaction Scale. *J Marriage Fam.* 1986; 48: 381-387.
42. Scott LJ. “Confirmatory factor analysis: a preface to LISREL”. Beverly Hills: Sage Publications; 1983.
43. Shek DT, Lam M, Tsoi K, Lam C. Psychometric properties of the Chinese version of the Kansas Marital Satisfaction Scale. *Soc. Beh. Per: Inte. J.* 1993; 21: 241–249.
44. Snyder D. “*Manual for the Marital Satisfaction Inventory – Revised*”. Los Angeles: Western Psychological Services; 1997.
45. Spanier GB. Measuring dyadic adjustment: New scales for assessing the quality of marriage and similar dyads. *J Marriage Fam.* 1976; 38: 15 - 28.
46. Thibault J and Kelley H. “*The Social Psychology of Groups*”. London: John Wiley & Sons; 1959.
47. Weishaus S, Field D. A half century of marriage: Continuity or change? *J Marriage Fam.* 1988; 50: 763-774.
48. Weiss RL, Aved BM. Marital satisfaction and depression as predictors of physical health status. *J. Consult. Clin. Psych.* 1978; 46: 1379–1384.
49. Witkin HA, Berry JW. Psychological differentiation in cross-cultural perspective. *J. Cross-Cultural Psychol.* 1975; 6: 4-87.
50. Wong S, Goodwin R. Experiencing marital satisfaction across three cultures: A qualitative study. *J. Soc. Personal. Rel.* 2009; 26: 1011-1028.