Cultural Adaptation and Validation of Humor Style Questionnaire for Children in Hindi

Dr. Vishal Sharma* and Dr. Hardeep Lal Joshi**

ABSTRACT

Research has demonstrated a strong connection between humor styles and general well-being and mental health. In the last two decades, a significant amount of literature has emerged on humor styles, establishing its significance in psychological research. While there has been some exploration of humor styles in India, existing studies have primarily utilized the English version of the Humor Styles Questionnaire. Therefore, the current research aims to adapt this questionnaire into Hindi, making it more accessible for Hindi-speaking populations. A sample of 386 Hindi-speaking adolescents (269 males and 117 females) aged 12 to 19 years was selected for the study. All participants completed the General Health Questionnaire-30 and the Hindi version of the Humor Styles Questionnaire for Children. The factor structure of the Hindi version of the Humor Styles Questionnaire for Children was examined using both confirmatory and exploratory factor analyses. The confirmatory factor analysis yielded satisfactory results, with fit indices indicating a good model fit ($\chi^2/df = 1.91$; GFI = .91, which is above .90; RMSEA = .049, below .08; RMR = .055, also below .08). Additionally, exploratory factor analysis (EFA) using the principal component method with varimax rotation revealed four factors with eigenvalues greater than one, accounting for 12.63%, 10.62%, 10.50%, and 8.61% of the variance, respectively. The concurrent validity of the scale was assessed by examining the link between various humor styles and mental health problems. Overall, the findings indicate that the adapted Hindi version of the Humor Styles Questionnaire for Children is a valid instrument for assessing humor styles in this population.

Keywords: Humor styles; Hindi Adaptation; Adolescents; Confirmatory Analysis.

About Authors

*Assistant Professor, Department of Psychology, Jagannath University, Haryana.

**Professor, Department of Psychology, Kurukshetra University, Kurukshetra, Haryana.

Introduction

When someone says or does something that is deemed humorous and tends to make others laugh, it is considered to be humorous. It also refers to the mental processes involved in creating and recognising such a humorous stimulus as well as the affective response that results in finding it enjoyable (Martin, 2007). The Humor process can be divided into four components: 1) the use of humor in the social context, 2) humor is the cognitive-perceptual process, 3) it is an emotional response, and 4) it is the vocal-behavioral expression of laughter (Martin, 2007).

Different kinds of research have been conducted to examine individual differences in humour throughout the past thirty years. Most of the research concerned the beneficial aspects of humor in physical as well as mental health. Some self-report inventories are available that assess the psychological aspects of humor related to mental well-being. In 1974, Sven Svenbaks developed the Sense of Humor Questionnaire (SHQ) which included 22 items. Rod A. Martin, Fazal Mittu, and Herbert M. Lefcourt (1983) developed the Coping Humor Scale (CHS) which contains 7 statements related to humor that are used by individuals to

cope with stress. Martin and Lefcourt developed the Situational Humor Response Questionnaire (SHRQ) in 1984 which is based on the definition provided by Eysenck on humor. This scale contains eighteen different situational statements and three non-situational statements. James A. Thorson and F. C. Powell combined aspects of the SHRQ, CHS, and SHQ to create the Multidimensional Sense of Humor Scale (MSHS) in 1991. MSHS contains 124 statements with 5-point Likert scale response options. Martin et al. (2003) argued that measures such as SHRQ, SHQ, and MSHS measure smiling, laughter, noticing, enjoying, creating, and expressing humor, but they are typically not designed to assess how people use humor specifically in everyday circumstances. So, Martin et al. (2003) developed a scale that assesses the four different types of humor styles which have been classified as either adaptive and beneficial or maladaptive and harmful to well-being. Affiliative humor is utilised to increase one's relationship with others, which in turn strengthens the interpersonal bond with others and this kind of humor is not detrimental to the self of the person. Self-defeating humor style is also used to enhance the interpersonal relationship with others but it is the denigration of one's self. In the self-enhancing humor style, the person uses humor to enhance his/her sense of self and such types of humor do not degrade others. On the other hand, an aggressive style of humor is detrimental to others and it may increase self but for a shorter duration. In comparison with the research related to the other measures, the Humor style questionnaire (HSQ) gives much stronger associations between well-being and health (Martin, 2007). The reason behind such differences may be because other earlier research does not distinguish between adaptive and maladaptive ways of using humor (Martin, 2003). HSQ measure is widely used by several researchers and adapted in different languages like German, Italian, Turkish, etc.

Humor style questionnaire is also adapted for children and adolescents (Fox et al., 2013; James & Fox, 2016). Humor style questionnaire for children (HSQ-C) includes four subscales and each subscale contains 6 items. In HSQ-C, a four-point Likert-type scale from strongly disagree (1) to Strongly agree (4) is used for rating each item. Humor style questionnaire for children is also translated into Turkish language (Anlı, 2021). There is very little research available in India on humor styles and there is no Hindi psychometric measure available to measure humor styles and their potential benefits on psychological well-being. As a result, the objective of this research was to assess the validity of the HSQ-C in its Hindi translation.

Methods

Sample

A sample of 386 Hindi-speaking Indian adolescents residing in Kurukshetra, Haryana, were used in the current study. The convenient sampling method was adopted and the sample includes 117 females and 269 males. Their age ranged from 12 to 19 years (mean age= 15.48 years, and SD= 1.29 years).

Tools

Humor Style Questionnaire for Children (HSQ-C): This scale assesses individual differences in the use of humor styles. The scale contains four sub-dimensions which are 1) Affiliative style of humor (AFF), 2) Self-enhancing style of humor (SE), 3) Aggressive style of humor(AGG), and 4) Self-defeating style of humor (SD). Originally, the Humor Style Questionnaire (HSQ) for adults was developed by Martin et al. (2003). The HSQ was then adapted for children and adolescents by Fox et al. (2013). The HSQ-C scale can be used for children of age 11 and above. HSQ-C shows good internal consistency for the four subscales (AFF = 0.87, SE =0.70, AGG = 0.75, and SD = 0.75) (Fox

et al., 2003). Exploratory factor analysis of HSQ-C did show the four-factor structure and explained 52.81 % of the total variance. The scale has been found to be a good fit as a result of the CFA analysis used to assess its validity (CFI = .90, GFI = .91, RMSEA = .05).

General Health Questionnaire (G-30): The General Health Questionnaire (GHQ) was developed by Goldberg and Williams in 1988. GHQ is the most widely used measure of mental health and is available in different forms (GHQ-60, GHQ-30, GHQ-28, and GHQ-12). The GHQ can be administered to both adolescents and adults of any age. There are a variety of symptoms that can be measured by GHQ, including anxiety, depression, somatic symptoms, and social withdrawal. The current study used the GHQ-30 form. The split-half (r= .95) and test-retest method (r= .76) showed that the GHQ is a reliable measure. The content validity and construct validity also proved that the GHQ is also a valid measure. This scale provides the overall score of mental health problems. Higher the score of the individual depicts greater mental health problems.

Procedure

First, permission for the Hindi adaptation of the HSQ-C was taken from the original authors. The translation-back-translation cross-cultural process was used to produce the Hindi version of the HSQ-C. Initially, the authors of the study who are proficient in Hindi and English language translated all the items of HSQ-C into Hindi. Special attention was paid to proper grammatical form and psychological sense during the translation of each item. After the translation of the items, the questionnaire was given to five research scholars of psychology for checking the precision of the translation of each item and asked for their suggestions if any items required modification. The suggestions received from research scholars were analyzed and appropriate modification in items was done. These steps lead us to the development of a preliminary Hindi version of HSQ-C. This preliminary version was then sent to the two bilingual experts who have ten years of teaching and research experience in Psychology and their feedback was received. Based on the expert's suggestions, some items were modified. After this modification, the Hindi HSQ-C was then sent to the English language expert for back translation. Finally, the original HSQ-C was compared with the back-translated English version of the Hindi HSQ-C. In relation to the original HSQ-C, the Hindi version proved to be an adequate and accurate translation of the questionnaire.

Results

Confirmatory factor analyses

An attempt was made to validate the four different structures of the construct of humor styles as proposed by Martin et al. (2003) using a maximum likelihood confirmatory factor analysis with the help of AMOS-26. The most widely used goodness of fit (CMIN, GFI, AGFI, CFI, TLI etc.) and badness of fit (RMSEA, RMR etc.) indicator for the factor structure of humor styles were assessed (Bentler & Bonett, 1980; Browne & Cudeck, 1993; Byrne & Campbell, 1999; Hu & Bentler, 1999; Schermelleh-Engel & Moosbrugger, 2003). The ratio of maximum-likelihood chi-square to the degrees of freedom ($\chi 2$ /df, acceptable value < 5) was also used in the present study.

Before conducting Confirmatory factor analysis, data was subjected to normality assessment. The skewness was ranged from -.717 to 1.004 and kurtosis was ranged from -1.277 to .299 which shows that the data of the current study is normal. After achieving the normality of data, CFA was carried out to investigate the four-factor model outlined in the original HSQ-C. The fit indices of the model are found satisfactory as the values of $\chi 2$ = 470.09 (df= 246, p<.001), $\chi 2$ /df = 1.91, GFI= .91, RMSEA = .049, RMR = .055 are all under the

acceptable range. The values of AGFI = .889 and CFI = .862 are slightly below the cut off value of .90, but this can be considered because the value of these indices increases with the increase of sample size.

Exploratory factor analyses

The value of AGFI and CFI does not reach the cut off value. Therefore, exploratory factor analyses (EFA) were undertaken to gain a clearer understanding of the factor structure of humor styles. Bartlett's Test of Sphericity ($p<.001$) was found significant and the value of Kaiser-Meyer-Olkin Measure of Sampling Adequacy is 0.76, which showed that criteria for EFA was met. Exploratory factor analysis was conducted on the data by using Principal Components Analysis (PCA) method with varimax rotation, extraction of factors fixed to four, and factors loadings below .30 were suppressed. PCA revealed the four components with eigenvalues greater than 1, explaining 12.63%, 10.62%, 10.50%, and 8.61% of the variance. The analysis shows a straightforward four-factor structure, characterized by high loadings of items with their relevant counterparts but two items of Aggressive humor styles show cross-loadings as shown in Table 1. A total of 42.36% of the variance was attributed to the four factors extracted.

Psychometric properties of Hindi HSQ-C

Cronbach's alpha was computed to assess the internal consistency of the test. The value of Cronbach's alpha for the whole test is .73 (N= 386). The Cronbach's alpha values for the Affiliative humor, Self-Defeating humor, Self-Enhancing humor and Aggressive humor styles are .79, .70, .71, and .61 respectively. The Corrected item- total correlation obtained for different humor styles are found statistically significant and ranged from .26 to .41 for Aggressive humor style, .33 to .54 for Self-Enhancing humor style, .28 to .49 for Self-Defeating humor style, and .37 to .64 for Affiliative humor style. The Corrected item- total correlation for the whole test is ranged from .08 to .50. These outcomes indicate that the Hindi version of the Humor Styles Questionnaire for children exhibits satisfactory internal consistency.

Concurrent Validity

In the present study, the relationship between Hindi HSQ-C and mental health problems (GHQ-30) was examined to test the concurrent validity of the Hindi HSQ-C. It was anticipated that the affiliative and self-enhancing humor would be inversely linked with mental health problems while self-defeating and aggressive humor would be positively linked with mental health problems. Pearson's coefficient of correlation was computed with the data of 261 participants only because of missing data. The analysis showed a negative correlation between self-enhancing humor and mental health problems ($r = -0.16$, $p < 0.01$), but affiliative humor did not demonstrate any significant correlation with mental health issues. Furthermore, the connection between self-defeating humor and mental health problems is positive and significant ($r= .268$, $p < .01$). Also, aggressive humor positively correlated with mental health problems ($r= .226$, $p < .01$).

Discussion

This study primarily focused on adapting and validating the Hindi version of the Humor Styles Questionnaire for Children. Structural validity of the Hindi HSQ-C was tested using confirmatory factor analysis. Results revealed that indices of good fit ($\chi 2$ /df = 1.91< 3, GFI= .91 > .90) and bad fit (RMSEA = .049 < .08, RMR = .055 < .08) provide satisfactory results and they are in the acceptable range. But the value of AGFI and CFI (< .90) were slightly lower than the cut off level. So, it was decided to conduct EFA on the same data to understand the factor structure of the adapted scale. The criteria for EFA was established and the PCA method with varimax rotation was

used. The factor loadings obtained in the rotation matrix clearly shows that each item loads on their related factor except for two items of Aggressive humor styles which shows cross-loadings as shown in the table 1. But these two items of aggressive humor are largely loaded on its aggressive humor factor, so it was decided not to delete these items. The same rationale of not to delete these two cross-loadings items were reconfirmed from the original developer Dr. Claire Fox of the Humor Styles Questionnaire for Children.

The Cronbach's alpha for the whole test was .73 which is above the acceptable range of .70. The alpha values for the different humor styles were .79 for Affiliative humor, .70 for Self-Defeating humor, .71 for Self-Enhancing humor, and .61 for Aggressive humor.

Table 1: ***Factor loadings of items using varimax rotation***

Statements	AF	SD	SE	AG
1. अगर कोई गलती करता है तो अक्सर उस गलती को लेकर मैं उन्हें चिढाता हूँ		.321		.461
2. अगर मैं उदास महसूस कर रहा हूँ, तो मैं कुछ मजाकिया सोच कर स्वयं को खुश कर सकता हूँ			.549	
3. मैं लोगों को मुझ पर हँसने या मेरा मजाक बनाने का जितना अवसर देना चाहिए उससे अधिक अवसर देता हूँ		.511		
4. मुझे लोगों को हँसाना आसान लगता है	.679			
5. अगर मुझे कुछ भी मजाकिया लगता है, तो भी मैं उस को लेकर ना तो हँसूंगा और ना ही ऐसा मजाक करूँगा जो किसी को दुखी करे|				.530
6. अगर मुझे कोई समस्या है तो मैं उस समस्या के बारे में कुछ मजाकिया सोच कर बेहतर महसूस करने की कोशिश करता हूँ|			.694	
7. अक्सर मैं चुटकुले बनाते हुए या मजाकिया बनने की कोशिश करते समय स्वयं को मूर्ख या निचा दिखाता हूँ।		.673		
8. मैं अक्सर चुटकुले और मजेदार कहानियाँ सुनाकर दूसरों को हँसाता हूँ।	.636			
9. जब मैं चुटकुले सुनाता हूँ तो इससे किसी को बुरा लगेगा, मैं इस बात की परवाह नहीं करता हूँ।				.574
10. अगर मैं डर रहा होता हूँ तो हँसना मेरी मदद करता है।			.620	

11. जब मैं अपने दोस्तों या परिवार के साथ होता हूँ, तो वह सभी सिर्फ मेरा ही मजाक बनाते हैं |		.469		
12. जब मैं अन्य लोगों के साथ होता हूँ, तो कहने के लिए मजाकिया बातें सोचना मेरे लिए कठिन होता है |	.580			
13. मेरे दोस्तों और परिवार वालों को मेरा मजाक बनाकर हँसने देना, मेरा उनको खुश रखने का एक तरीका है |		.562		
14. मुझे दूसरे लोगों को हँसाने में ज्यादा मेहनत नहीं करनी पड़ती है-- मैं स्वाभाविक रूप से एक मजाकिया व्यक्ति हूँ।	.739			
15. मैं कभी दूसरों का मजाक बनाकर उन पर नहीं हँसता भले ही मेरे सभी दोस्त उन पर हँस रहे हों |				.652
16. मैं अक्सर अपनी कमियों या गलतियों के बारे में कुछ भी मजाकिया बातें बोलकर, यह कोशिश करता हूँ की लोग मुझे और ज्यादा पसंद करें |		.582		
17. मेरे चुटकुले और मजेदार कहानियाँ अन्य लोगों को खूब हँसाते हैं।	.722			
18. मैं कभी-कभी किसी के बारे में कुछ मजाकिया सोचता हूँ और उसे कहने से स्वयं को रोक नहीं पाता हूँ, फिर भले ही यह मुझे किसी मुसीबत में डाल दे|		.334		.525
19. अगर मैं किसी स्थिति में मुश्किल महसूस करता हूँ तो उसमें कुछ मजाकिया कह सकना मेरे लिए सहायक होता है |			.639	
20. मैं अन्य लोगों को हँसा सकता हूँ।	.755			
21. मुझे यह पसंद नहीं है जब लोग किसी को मूर्ख दिखाने के लिए उन पर हँसते हैं |				.612
22. मुझे लगता है कि हँसना और चुटकुले सुनाना समस्याओं का सामना करने का आसान तरीका है |			.440	
23. मैं अक्सर अपने मित्रों व परिवार वालों को हँसाने के लिए स्वयं		.694		

को नीचा दिखा देता हूँ।				
24. जब मैं किसी कठिन परिस्थिति में होता हूँ तो मैं आमतौर पर कुछ मजेदार सोचने की कोशिश करता हूँ।				.697
Percentage of variance explained	12.63	10.62	10.50	8.61
Eigenvalue	3.03	2.55	2.52	2.07

Note. AF- Affiliative humor; AG- Aggressive humor; SE- Self-enhancing humor; SD- Self-defeating humor.

The Cronbach's value for aggressive humor is in the questionable range but can be accepted. So, the results obtained in future research using this adapted scale should be taken with caution. The concurrent validity of the scale is also tested with mental health problems. Self-Enhancing humor style shows negative correlation with mental health problems which is expected. Conversely, Self-Defeating and Aggressive humor showed positive associations with mental health problems (Fox et al., 2016; Frewen et al., 2008; Martin et al., 2003; Tucker et al., 2013). Results confirmed the concurrent validity of the adapted scale.

Limitations and future directions

The findings of the present study are satisfactory and are useful for research on humor styles in Indian context. But this study has some limitations. First limitations is the lower value of Cronbach's alpha for aggressive humor style (.61 < .70 cut off value) and also two items of this humor style show cross-loadings in EFA. Due to this future studies can work on this dimension. The current authors suggest generating new items for this subscale in future research. Second limitation is the sampling methods. The current study used a convenient sampling method. So, future research can use probability sampling methods for generalizing the scale.

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