Cross-Cultural Stability of the Factor Structure of the Beard and Ragheb Leisure Motivation Scale

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INTRODUCTION

In 1983, Beard and Ragheb introduced an instrument for measuring leisure motivations. The 48 items comprising this scale were based on dimensions found by Patrick (1916 in Beard and Ragheb, 1988), White (1957), Ellis (1973), and those suggested by the work of Tinsley and his colleagues (1977, 1978). The researchers created a four factor model with 12 indicator items representing each factor. The factors were Intellectual, Stimulus-Avoidance, Competence-Mastery, and Social.

The major test of the scale was a study that involved its administration to 1,205 respondents from many of walks of life: retirees, state government agencies, and students (Beard and Ragheb, 1983). The four factors were verified using factor analysis. The researchers found the alpha reliabilities of the 12 item subscales satisfactorily high. They were 0.90 for the Intellectual component, 0.92 for the Social component, 0.91 for the Competence-Mastery component, and 0.90 for the Stimulus-Avoidance component.

Even when the number of items per subscale were reduced to eight, the alpha reliabilities were virtually unchanged (0.01 drop for three of the four subscales). The shortened instrument reduced the total length of the questionnaire without sacrificing the reliability given the preliminary testing results obtained by Beard and Ragheb.

However, little additional research has been reported on the reliability and validity of this instrument. One of the goals of the present research was to determine and test the stability of the factor structure when administered to ethnic sample populations -- in a sense a test of its cross-cultural universality. The leisure motivations of members of distinctive ethnic groups have not been studied. There is evidence of differences in leisure behaviour and preferences among different ethnic groups (Hutchison, 1988). Differences in socialization is likely to influence leisure motives as well. Therefore, the leisure motivation scale was translated into two other languages — Chinese and Italian — to achieve this purpose.

METHOD

The respondents were male and female Chinese and Italian volunteers, 45 years of age or older, recruited from ethnic recreational organisations in Metro Toronto.

The Chinese and Italian language versions of the survey included Beard and Ragheb's (1983) leisure motivation scale. The responses to the leisure motivation scale were factor analyzed with varimax rotation. Using the same approach as Beard and Ragheb (1983), the analysis initially employed a four factor model. The data were re-analyzed using five and six factor solutions to see if one of these solutions was more appropriate and interpretable.

RESULTS

Examining the Factor Structure of the Leisure Motivation Scale

The factor structure differed for the Chinese and Italian groups, which in turn differed from that reported by Beard and Ragheb. The number of factors or "motives" differed (at least for the Chinese), as well as the content of the items comprising the various factors. The resultant clusters of items did not parallel Beard and Ragheb's findings for either ethnic group, although some factors generated did appear generally similar. Since the analysis procedure differed from this point for each ethnic group, the results will be discussed for each independently.

The Chinese Factor Structure

For the Chinese respondents, the four factor solution explained 54.2 per cent of the total variance. The items found under each factor bore little resemblance to the original factors of Beard and Ragheb.

The decision was made to re-analyze the data using both five and then six factor solutions to determine the most interpretable solution for these data. The six factor solution was the most satisfactory (logical and identifiable factors). With the six factor solution, there were 5 easily identifiable factors which will be referred to as Competence-Mastery, Intellectual, Stimulus-Avoidance, Social Interaction, and Learning. The sixth factor was problematic. One item was moved to Factor 3. Factor 1, the competence-mastery component, contained Beard and Ragheb's competence-mastery subscale intact but also included a social scale item relating to social competency skills. There were four intellectual items and one social item dealing with self-expression and creativity under the Intellectual component, Factor 2. The majority (7 of 8) of the stimulus-avoidance items appear in Factor 3 (the Stimulus-Avoidance component), with one social subscale item, "to gain a feeling of belonging", included as well. This social item may mean avoidance of social isolation to the respondents in the context of this factor. Factor 4, the social interaction component, was comprised of the 4 social items dealing with social interaction. Factor 5, the learning component contained the three intellectual items most related to learning.

Factor six was the only problematic factor in terms of interpretation, and the decisions made in relation to this factor warrant further discussion. The two items "to gain other's respect" and "because I sometimes like to be alone" appeared in this factor. The latter had a factor loading on this factor of 0.82, and very low loadings (less than 0.06) on all the other factors suggesting it is an independent dimension. The other statement did not so clearly load on just Factor 6. On Factor 6, its factor loading was 0.53 and on factor 3, it was 0.42. Referring to the 5 factor solution to determine where this item had appeared in that factor analysis, the item had appeared under Factor 3, along with "to gain a feeling of belonging". If this factor is a stimulus-avoidance measure and the social items included refer to the avoidance of social isolation or rejection, then it intuitively makes sense to include this item under Factor 3. Then, Factor 6 can be identified as Solitude (the need to be alone), making the six factor solution the accepted one.

Coefficient alpha was calculated for the five factors containing two or more items. The alpha coefficient values were as follows: competence-mastery (0.90), intellectual (0.83), stimulus-avoidance (0.82), social interaction (0.83) and learning (0.63).

The Italian Factor Analysis

In the case of the Italian respondents, the four factor solution produced results much more similar to Beard and Ragheb's proposed factors. The four factors identified can be referred to by their original titles: Intellectual, Competence-mastery, Stimulus-Avoidance, and Social. However, differences exist which alter the definitions and meanings of these labels from those proposed by the original researchers.

This analysis explained 56 per cent of the total variance. Factor 1, or the Intellectual component, contained the eight original intellectual items identified by Beard and Ragheb, one of the social items, and 2 competence-mastery items. The latter three items were related to the use of skills which could be interpreted as intellectual skills. Factor 2, or the competence-mastery component, was comprised of 6 of the Competence-mastery items, dealing with physical skills and abilities, and 4 social items dealing with mastery over one's social environment. The stimulus-avoidance component, or Factor 3, contained four of the original stimulus-avoidance subscale items that appear to relate to the avoidance of "over-stimulating life situations". The last factor, the social component, included three of the social items and four stimulus-avoidance items. It should be noted that the item "to sometimes be alone" had a negative factor loading.

The factors were then tested for their internal consistency. The alpha reliabilities for each of the factors were: Intellectual (0.91), Competence-Mastery (0.88), Stimulus-Avoidance (0.79), and Social (0.74). In the case of the Social component, the decision was made to delete the item "to sometimes be alone" in order to achieve the alpha reliability of 0.74. The inclusion of this item reduced the alpha reliability to 0.64 and therefore was considered as relatively unrelated to the other items in the factor. The titles for the four factors are the same as those used by the original researchers, however, as a result of the content of the items under each factor, modifications to the original definitions were necessary.

CONCLUSIONS

As the results indicated, there did appear to be "cultural variability" in the factor structure depending on ethnic group membership. In other words, the factor structure differed for the Chinese and Italian groups, which in turn differed from that reported by Beard and Ragheb. The number of factors or "motives" differed (at least for the Chinese), as well as the content of the items comprising the various factors.

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