Cultural Intelligence as a Moderator of Acculturative Stress to Health among College Students

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Abstract: The present examines the moderating role of cultural intelligence in the relationship of acculturative stress and health in a sample of 219 Kashmiri college students (male = 52.10%, female = 47.90%). Cultural intelligence was assessed with the help of cultural intelligence scale (Ang, et al., 2004). While Acculturative stress was measured by using Social, Attitudinal, Familial, and Environmental Scale – Short Form (SAFE-SF; Mena, Patilla, & Maldonado, 1987), and General Health Questionnaire (Goldberg & Hillier, 1979) was used to evaluate general health of the participants. Result of hierarchical multiple regression analysis revealed that cultural intelligence was significant moderator of the relationship between acculturative stress and somatic symptom aspect of general health only. Relevance of the present findings for student’s cultural intelligence, acculturative stress, and health has been implicated.

Keywords: Cultural intelligence, Acculturative stress, Health, Kashmiri students

1. Introduction

Cultural Intelligence

The ability to interact effectively and accurately in other cultures is a skill that not all individuals possess; thus, researchers are now examining this skill more keenly to determine why some people are more effective than others in other cultures. This ability has been recently labeled cultural intelligence, which is grounded in multiple intelligence theory (Alon & Higgins, 2005; Ang, Van Dyne, Koh, & Ng, 2004; Earley & Ang, 2003).

Cultural intelligence is a ability that allows individuals to understand and act appropriately across a wide range of cultures (Thomas, 2006). It is thought to be a culture-free construct that applies across specific cultural circumstance (Ng & Earley, 2006). It is one’s capability to adjust to diverse cultural situations (Ang, Van Dyne, & Koh, 2006; Earley & Ang, 2003) and effectively adapt to various cultural environments (Ng & Earley, 2006). It improves understanding in cross-cultural interactions (Earley, 2002). Researchers of cultural intelligence are seeking to understand why some individuals are more effective than others in adapting to new cultural setting (Ng & Earley, 2006). It is thought that individuals high on cultural intelligence have a strong mastery and sense of emotional display and physical presence (Earley, Ang, & Tran, 2006). Cultural intelligence is consists of four components (1) meta-cognition (2) cognition (3) motivation, and (4) behavior. High cultural intelligence individuals use all four in unison (Ang, Van Dyne, & Koh 2006; Ang, Van Dyne, Koh, & Ng, 2004; Earley & Peterson, 2004; Ng & Earley, 2006).

Although empirical research on cultural intelligence is relatively new, the initial results are promising. Till date, results indicated that cultural intelligence predicts cultural judgment and decision-making and task performance. More important, cultural intelligence improves our understanding of these performance outcomes over and above demographic characteristics, general cognitive ability, emotional intelligence, and openness to experience. In other words, even after accounting for the effects of these other predictors, cultural intelligence further improves our ability to predict and understand decision-making performance. Thus, those who have higher cultural intelligence are more effective and confident in making decisions about inter-cultural situations. Social scientist also demonstrates that cultural intelligence predicts adjustment in situations characterized by cultural diversity. In sum, higher cultural intelligence capabilities are positively related to feeling adjusted in situations characterized by cultural diversity.

Looking at specific factors of cultural intelligence enriches our understanding of these relationships. For instance, cultural intelligence-strategy and cultural intelligence-behavior predict task performance. Those who have the capability to make sense of inter-cultural experiences (such as making judgments about their own thought processes and those of others) perform at higher levels in multi-cultural work settings. The higher the cultural intelligence-strategy, the higher the performance. Similarly, those who have the capability to adapt their verbal and nonverbal behavior to fit specific cultural settings have a flexible repertoire of behavioral responses that enhances their task performance in culturally diverse...
settings. Thus, the higher the cultural intelligence-behavior, the higher the performance.

Finally, cultural intelligence-motivation and cultural intelligence-behavior each predict three different forms of adjustment. Those who are interested in experiencing other cultures and feel confident that they can interact with people who have different cultural backgrounds are better adjusted in culturally diverse situations. Likewise, those who have a broad repertoire of verbal and nonverbal behavioral capabilities feel better adjusted in situations characterized by cultural diversity. This pattern of relationships applies to the three types of adjustment typically included in international research: general adjustment, interaction adjustment, and work adjustment. In sum, the higher the cultural intelligence-motivation, the higher the adjustment, and the higher the cultural intelligence-behavior, the higher the adjustment.

Acculturative stress and Health

Over the years, many scholars have shown different interest in regard to the relationship between acculturative stress and health. According to Berry’s (1988) interpretation, acculturative stress is in a way linked to the general psychological model of stress as a response to environmental stressors. Moderate difficulties can be experienced during acculturation, such as psychosomatic problems; major difficulties can be experienced, as psychopathology or mental illness (World Health Organization, 1991).

Accumulated evidence has suggested that acculturative stress may have significant effect on health (Abraido-Lanza, Chao, & Florez, 2005; Ayoob & Singh, 2011; Berry & Kim, 1988; Berry, Kim, Minde & Mok, 1987; Bhugra, 2004; Cuellar, Bastida, & Braccio, 2004; Hwang & Ting, 2008; Mak, Xiaohua, Wong, & Zane, 2005; Parka, 2009; Pillay, 2005; Ramos, 2005; Rodríguez, Myers, Morris & Cardoza, 2000; Suarez-Morales, & Lopez, 2009). Researchers have found that greater acculturative stress increases the risk of developing psychological problems, particularly in the initial months of contact with the new host society (Abraido-Lanza, Arnbister, Florez, & Aguirre, 2006; De la Cruz, Padilla, & Agustín, 2000; Edwards, 2006; Van der Wurf, Beekmana, Dijkshoorn, Spijker, Smitsc, Steka, & Verhoeffb, 2004; Zheng & Berry, 1991).

The relationship between acculturative stresses is likely to be mediated by a variety of variables, including the level of acculturation, phases of acculturation, nature of the larger society, modes of acculturation, voluntariness of migration and mobility, and the degree of similarity between the culture of origin and the new culture (Berry & Kim, 1988; Berry, Kim, Minde, & Mok, 1987). According to Tran, Fitzpatrick, and Wright (1996), less acculturated people experience higher rates of self-reported health problems than were those with higher levels of acculturation. Psychological changes, such as changes in mental health are inevitable as people try to adapt to their new environment.

In the present study, cultural intelligence was used as a moderator of the relationship of acculturative stress to health as no research has been reported in cross-cultural literature examine moderating role of cultural intelligence especially in Indian cultural context. Cultural intelligence is a new concept that emerged recently, perhaps this concept is not yet come into focus of the researchers to use as moderator of the relationship of acculturative stress to health.

It is clear from the literature review that migrant student concerns and experiences are related to their acculturation processes. According to the findings, acculturative stress has been reported negatively related to health among acculturating individuals. The lack of integrative models that specifically examine the relationship between acculturation and health among migrant students is an impetus for further exploration. The inconsistencies reported in the review regarding the contextual demographic characteristics also call for more replication studies. In designing the study, it is hypothesized that cultural intelligence will moderate the relationships of acculturative stress to health of the participants.

2. Method

Participants

A sample of 219 students from Kashmir (114 males and 105 females) studying in different universities and colleges in Bhopal, Central India, were randomly selected for the present study. The age of the participants ranged from 20 to 30 years (M = 23.30, SD = 1.70). The length of acculturative experience of participants of the present study ranged from 1 to 3 years (M = 1.66, SD = 0.73). There were 108 participants (49.30%) with acculturation duration of less than one year. The number of participants with 1 - 2 years acculturation duration was 78 (35.60%), while 33 participants (15.10%) had acculturation experience of 2 to 3 years. Majority (81.30%) of these participants were doing post graduate courses. Some were research students (6.40%) at different departments of the universities.

Measures

Social, Attitudinal, Familial, and Environmental Scale. Acculturative stress was measured by using Social, Attitudinal, Familial, and Environmental Scale – Short Form (SAFE-SF; Mena, Padilla, & Maldonado, 1987) which assesses acculturative stress in social, attitudinal, familial, and environmental contexts. Respondents are asked to rate the extent to which they perceive 24 items to be stressful in their lives on a 5-point Likert scale ranging from “0” (strongly disagree) to “4” (strongly agree). The overall score of an individual on this measure may range from 0 to 120; high score indicating high acculturative stress while low scores indicating low acculturative stress. Mena, Padilla, and Maldonado (1987) have reported internal consistency reliability for sample of adolescent ethnic minority youth (α = 0.89). In the present study the internal consistency reliability (Cronbach’s alpha) was 0.88.
General Health Questionnaire. Self-reported health was assessed with the help of General Health Questionnaire (Goldberg & Hillier, 1979), a self-administered screening instrument which focuses on the psychological components of ill-health. This measure was developed to detect psychiatric disorders among people in community setting and non-psychiatric clinical setting. This 28-item scale has four factors i.e., somatic symptoms (item 1 to 7), anxiety and insomnia (item 8 to14), social dysfunction (item 15 to 21), and severe depression (item 22 to 28), which provide a state measure of psychological distress. Responses are obtained on a 4-point Likert scale ranging from 0 (better than usual) to 3 (worse than usual). Total score is produced by adding each subscale scores together that ranges from 0 to 28. A high score on this measure indicates greater psychological distress. Goldberg and William (1988) have reported split-half reliability for the total scale as 0.95. Internal consistency reliability (Cronbach’s alpha) of this measure in the present study was found as 0.93.

Cultural Intelligence Scale. The 20-item Cultural Intelligence Scale (Ang, Van Dyne, Koh, & Ng, 2004) measures the four components of cultural intelligence i.e., meta-cognition, cognition, motivational, and behavioral components. Respondents are asked to rate each item on a 7-point Likert scale ranging from “1” (strongly disagree) to “7” (strongly agree). The total score is derived by adding the scores of the items belonging to different areas and mean scores are obtained. A high score on this scale indicates higher level of cultural intelligence. As reported by Ang, et al. (2006), the internal consistency reliability of the scales were 0.76 (meta-cognition), 0.84 (cognition), 0.76 (motivational), and 0.83 (behavioral). In the present sample the internal consistency reliability (Cronbach’s alpha) of this measure was 0.83 (meta-cognition), 0.84 (cognition), 0.76 (motivational), and 0.84 (behavioral).

Procedure

The questionnaire used in the present study included demographic information sheet, General Health Questionnaire, Social, Attitudinal, Familial and Environmental Scale, and Cultural Intelligence Scale. After seeking required permission from concerned colleges and university authorities, the participants were personally contacted. They were briefed about the purpose of research and questionnaire used in the study. After seeking consent of the student a suitable time and date was fixed for data collection.

Before administering the questionnaire, the purpose of the study was again explained to the participants and they were assured that their responses will be kept confidential and will be used only for research and academic purpose only. A good rapport was built with the participants for getting correct responses. Some necessary instruction and guidelines were provided to them for properly filling the questionnaire. After this, the questionnaires were provided to them and they were requested to fill-up the questionnaire as per the instructions given in the questionnaire. It took an average of 45 minutes for the participants to complete the questionnaire. After completion of the questionnaire participants returned the questionnaire and they were thanked for their participation and cooperation.

Data analysis

To test the study research hypotheses descriptive (mean, standard deviation), and multivariate statistical methods were used. Descriptive statistics were used to describe participant’s responses to the different measures of the study. Hierarchical multiple regression analyses was utilized to examine the role of moderator variables i.e., cultural intelligence in the relationship between acculturative stress to health of participants. Following the hierarchical multiple regression procedure discussed by Aiken and West (1991), the predictor and moderator variable were entered at step 1 of each analysis. Next, at step 2, the interaction terms (independent variable × moderator variable) were entered.

3. Result

In the present study it was hypothesized that variables of cultural intelligence will moderate the relationships of acculturative stress to health of the participants. Hierarchical multiple regression analyses was utilized to examine the role of moderator variables in these relationships. This analysis was applied because of its ability to detect the presence or absence of the moderating effects (Aiken & West, 1991). Following the hierarchical multiple regression procedure discussed by Aiken and West (1991), the predictor and moderator variable were entered at step 1 of each analysis. Next, at step 2, the interaction terms (independent variable × moderator variable) were entered. The observed changes in the level of significance (i.e., F-change) were an indicator of the significant role of moderator variables. Although moderating roles of cultural intelligence were examined for all the relationships, only significant results are presented.

Table 1 presents moderating role of cultural intelligence in the relationship of length of acculturation experience to health of participants. Results of hierarchical multiple regression analysis (Table 1) revealed cultural intelligence as significant moderator of the relationship of acculturative stress to somatic symptom aspect of general health. When scores on acculturative stress and cultural intelligence scores were entered in the equation, 7% variance was explained jointly by these two variables $R^2 = .07, F_{change} = 8.54, p < .00$. Although acculturative stress was a significant predictor of somatic symptom ($\beta = .20, t = 3.07, p < .01$), cultural intelligence was found negatively but significantly related to somatic symptom ($\beta = -.14, t = -2.17, p < .05$).
Table 1: Hierarchical Multiple Regression analysis testing Moderating role of Cultural Intelligence in the relationship between Acculturative stress and General Health

<table>
<thead>
<tr>
<th>Variables</th>
<th>R²</th>
<th>R² Change</th>
<th>F Change</th>
<th>b</th>
<th>β</th>
<th>t</th>
<th>Partial r²</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Somatic symptom</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Acculturative stress</td>
<td>.07</td>
<td>.07</td>
<td>8.54**</td>
<td>.05</td>
<td>.20</td>
<td>.04</td>
<td></td>
</tr>
<tr>
<td>Cultural intelligence</td>
<td></td>
<td></td>
<td></td>
<td>-.24</td>
<td>-.14</td>
<td>-.217*</td>
<td>.02</td>
</tr>
<tr>
<td>2. Acculturative stress</td>
<td>.09</td>
<td>.02</td>
<td>4.54*</td>
<td>.05</td>
<td>.21</td>
<td>.324**</td>
<td>.05</td>
</tr>
<tr>
<td>Cultural intelligence</td>
<td></td>
<td></td>
<td></td>
<td>-.21</td>
<td>-.13</td>
<td>-.91</td>
<td>.02</td>
</tr>
<tr>
<td>AS x CI</td>
<td></td>
<td></td>
<td></td>
<td>-.01</td>
<td>-.14</td>
<td>-.213*</td>
<td>.02</td>
</tr>
</tbody>
</table>

*p < .05; **p < .01.
AS = Acculturative Stress; CI = Cultural Intelligence

When interaction term (i.e., acculturative stress × cultural intelligence) was included in the equation along with the acculturative stress and cultural intelligence, these variables accounted for 9% variance in the scores on somatic symptom R² = .09, Fchange = 4.54, p < .03. Thus, a change of 2% was indicative of the significant role of cultural intelligence as moderator variable. Acculturative stress and cultural intelligence were found negatively and significantly related to somatic symptom (β = -.14, t = -2.13, p < .05). Figure 1 show that relationship of acculturative stress and somatic symptom was stronger when cultural intelligence was low whereas this relationship was weak when cultural intelligence was high.

Result of hierarchical multiple regression analysis revealed that cultural intelligence was significant moderator of the relationship between acculturative stress and somatic symptom aspect of general health only. Results revealed that relationship between acculturative stress and somatic symptom was stronger when cultural intelligence was low, whereas this relationship was weak when cultural intelligence was high. This indicates that cultural intelligence proved to be strong moderator to the relationship between acculturative stress and somatic symptoms aspect of general health.

The findings of the present study were affected by some methodological limitations which affect the generalization of the results. The data of the present study include only students living and studying in Bhopal city only. Data collected in this cultural context may therefore be unique, and it is entirely possible that a replication of this study in a different part of the country might yield different findings. Furthermore, the use of self-report measures, which are also affected by a participant’s level of self-awareness, was another limitation of this study. In future studies all sources of bias associated with self-report measures should be accounted for. Also, a sample size of the present study was relatively small and homogeneous, which limits generalization. The cross-sectional design used in the present study does not allow drawing conclusions regarding causality. Longitudinal research will be needed to support such conclusions.

Despite the above limitations, the present investigation contributes substantially and uniquely to research on acculturative stress, cultural intelligence and health of students. Findings from this study have broadened our understanding of the acculturation process and its role in health of migrant students in the context of within country migration and acculturation experience. The robustness of the findings indicates that students migrating to a different culture, even with the country like India, experience some acculturative stress which influences their health. These findings have important implications for professionals in research, health care practice and education.

In a large and culturally diverse country like India, it is surprising that no attention has been afforded to within country migration of students and their acculturation. The present study has taken an important step in attempting to examine the relationship of cultural intelligence to acculturative stress and health among Kashmiri students in Bhopal who belong to a different eco-cultural background. It is important that further research be conducted with students who migrate to study in other parts of the country.

4. Discussion

The aim of the present study was to examine whether variables of cultural intelligence serve as moderators of the relationships of acculturative stress to health of the participants as no research has been reported in the cross-cultural research literature examining moderating role of these variables The present study is perhaps the first to reveal the moderating role of cultural intelligence variables in the relationship of acculturative stress to health of students in within country context. Although the variables of cultural intelligence were not found moderating the relationship of acculturative stress to all aspects of health, the observed relationship are convincing about the moderating role of these variables. However, further studies are needed to examine the role of cultural intelligence in the relationship between acculturation and health of the acculturating students especially in cross-cultural research in the within country context.
To develop a richer understanding of such groups, further research assessing the impact of acculturation and other variables like social support, models of acculturation (i.e., assimilation, separation, integration and marginalization), and cultural identity is encouraged.

From an intervention point of view, current findings suggest that professionals who work with migrant students should be culturally competent and sensitive by becoming familiar with the students’ cultural expectations and experiences. By doing so, professionals can be able to develop and implement culturally sensitive programs that not only identify at risk students but also offer a positive academic and social environment that facilitates cross-cultural skills.

Furthermore, professionals can design programs that address acculturation issues from a more vigorous preventive and educational approach by incorporating the social context that is a reflection of the migrant students’ lived experiences. Assessment of support system of the students should be helpful before designing and implementing the intervention programmes. The role of friends and important others in the student’s acculturation process should be determined and emphasized. In addition, programs that offer support for faculty to help students can also be beneficial in the student’s acculturation process. The knowledge gained through this research may increase the cultural competence of health care professionals responsible for managing acculturative stress, particular for migrant students, enabling host culture to develop an appropriate, effective health promotion and mental distress prevention strategy.

The findings of the present study could also be utilized by the educators. As the number of migrant students in higher education classes increases, professors and host students face the need to examine their assumptions about the teaching and learning process. It has been found that holding collectivistic values can impact the students’ acculturation experience. The experience that emerge from this kind of cultural value difference can have implications for teaching and learning. Therefore, it is important for the faculty as well as host students to be aware of the cross-cultural differences surrounding migrant students’ academic adjustments. The cultural diversity that migrant students bring into the academic arena should be used as an opportunity for facilitating teaching and learning.

The present study may serve as a framework for similar research using Kashmiri students. It is hoped that these findings will help clinicians and researchers to incorporate acculturative stress (and methods of coping to reduce it) into their conceptualization of the health of Kashmiri students. Understanding the patterns and predictors of individual differences in the acculturation experience, as well as the acculturative stress, cultural intelligence and health can help us to better promote health and adjustment of Kashmiri and perhaps other students who migrate to different parts of the country.

The findings from the current study have significant implications for future direction. In order to construct theoretical assumptions and theories that describe influence of cultural intelligence and acculturative stress of student migration in the within country context, research should continue to study the effects of student migration on acculturation experience, acculturative stress of different groups of students. The existing theories explain the relationship of acculturative experience, stress and health that have used samples from between country migration of students that may not accurately portray other minority groups who migrate within their own country but to the regions with marked eco-cultural differences.

This study provided a comprehensive assessment of within country student acculturation, covering issues related to acculturative stress, cultural intelligence and health. The study also advanced knowledge of within country acculturation by testing numerous theoretical and empirically based hypotheses proposed by previous researchers. Thus, this study lays the groundwork for future research on within country acculturation of student population. Finally, longitudinal studies may be another recommended research direction to study acculturation, cultural intelligence and health of acculturating students over time. Longitudinal studies can provide a broader picture of adaptation process. Migrant students’ experiences can be explored more realistically from the beginning of their arrival. Also characteristics of each phase of acculturation need to examined in detail which can be possible only through well designed longitudinal studies.

In conclusion, this study sought to determine the relationships between acculturative stress, cultural intelligence and health of Kashmiri students. Although several limitations were found regarding the empirical analyses of data of the present study, the investigator was able to generate a more thorough understanding of the role of acculturative stress and cultural intelligence in health in the context of within country acculturation of a minority group of students who are culturally different from student populations of other parts of the country.

References


