Child-rearing Practices and Psychological Disorders in Children: Cross-Cultural Comparison of Korea and Australia

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The present study was designed to explore cultural differences in the relationship between parenting behaviors and psychological adjustment of the child. Mother-son interaction behaviors of 37 Korean boys (11 with Anxiety Disorder, 16 with Externalizing Disorders and 10 Non-clinical boys) and 54 Australian boys (20 with Anxiety Disorder, 17 with Externalizing Disorders and 17 Non-clinical boys) between the ages of 7 and 15 were compared in terms of parental negativity and involvement. The results indicated that Korean mothers displayed more overall negativity and lower overall involvement than Australian mothers. Furthermore, anxiety diagnosis was associated with low maternal involvement in the Korean subjects, while in the Australian subjects, high maternal involvement was associated with clinical status in the child.

Key Words: Child-rearing, psychological disorder, child, culture

INTRODUCTION

Much of the research on parenting practices has sought to identify the relationship between different styles of parenting and child behaviors. The two fundamental dimensions that have frequently been used to define parenting styles are warmth (as opposed to rejection) and control (as opposed to autonomy). The dimension of parental warmth, which has also been conceptualized as nurturance or acceptance, has been found to be associated with positive developmental outcome including elevated self-worth and competence. Typically authoritative parenting characterized by high emotional warmth and a moderate amount of control has been proposed to be the "optimal" parenting style with regard to child outcomes. Conversely, parental rejection and too much or too little parental control have been linked to various psychological disorders.

In retrospective studies of adult clinical patients, perceptions of parental rejection and control have consistently been found to be associated with anxiety and depression. Similarly, data from nonclinical subjects have shown a strong association between anxious and depressive symptoms and perceived parental rejection and control. Studies of children and adolescents have also found perceptions of higher parental rejection and control to be related to various psychological disorders including depression, substance abuse, oppositional behaviors and conduct problems, and eating disorders.

Perceived parenting is clearly an important part of the child’s psychological experience, but as retrospective self reports are subject to reporter bias, it will be important to supplement the data with direct observation of parent-child interaction. Observational studies of parent-child interaction generally support the findings from studies of perceived parenting. For instance, Hammen et al. reported that children’s depressive symptoms...
were negatively predicted by the positiveness of the interaction between mother and child six months earlier. A recent study by Hudson & Rapee also reported that interactions between mothers and children with a clinical diagnosis of anxiety disorder or oppositional defiant disorder were rated to be significantly less warm and more negative than those of non-clinical subjects. Similarly, parent-child interactions of anxious or oppositional children were reported to be overprotective and controlling. Low parental control and involvement on the other hand have been reported to be important factors in the development of aggression and disobedience in children.

It is well established that there are differences in parenting attitudes and behaviors across cultures. For instance, parenting practices in collectivist societies are likely to employ high levels of overprotection and control, and are also less strongly characterized by overt displays of affection. It has even been suggested that highly protective and directive parental behavior represents a good “fit” with the authoritarian culture of China.

The parenting styles and characteristics associated with psychological disorders are also likely to be different depending on the cultural context. For instance, it has been reported that the parenting style of “affectionless-control” was not necessarily associated with negative developmental outcome in collectivist societies, as it appears to be in individualist societies. Leung et al. reported that among Chinese/Chinese Americans, the association between social anxiety and the parenting style emphasizing other’s opinions was much less evident compared with non-Chinese Americans. Similarly, while the perception of parental control is reported to be positively associated with parental hostility and rejection in American youths, it is correlated positively with perceived parental warmth and low neglect in Korean adolescents, suggesting that parental control may not necessarily be perceived as negative by Korean youths. Thus the relationship between parenting styles and psychological disorders needs to be carefully re-evaluated through cross-cultural research. However, research in the field has dealt almost exclusively with Western cultures and very limited attention has been given to cultures outside this sphere.

In the Asian region, there have been some studies of Chinese culture, but research regarding other Asian cultures has hardly begun. Although it is generally assumed that the Korean culture shares many of the collectivistic values of the Chinese culture, rapid industrialization in recent years has introduced significant changes in Korean society. Thus there is a possibility that Korean mothers and children show a pattern of results different from what has been reported in studies of Chinese mothers and children.

The present study was designed to explore cultural differences in the relationship between parenting characteristics and psychological disorders in children. Specifically, direct observational data from mother-son interactions in Korean and Australian subjects were compared in order to examine whether there are cultural differences in the characteristics of parent-child interactions associated with anxiety and externalizing disorders in the child. It was hypothesized that high parental involvement is associated with anxiety disorder in the Australian subjects, but not in the Korean subjects.

MATERIALS AND METHODS

Participants

A total of 91 boys and their mothers recruited from Korea and Australia participated in the present study. The Korean subjects consisted of 37 boys between the ages of 8 and 15 and their mothers. Eleven had a clinical diagnosis of anxiety disorder (Anxiety Disorder group); 10 had a clinical diagnosis of attention deficit/hyperactivity disorder or oppositional defiant disorder (Externalizing Disorder group), and 16 were non-clinical boys (Non-clinical group). The two clinical groups were recruited from the outpatient psychiatry clinic of a university hospital in Seoul. Two Korean graduate students in clinical psychology assessed the Korean clinic-referred boys using Kiddie-SADs, the child version of SADS (Schedule for Affective Disorders and Schizophrenia), and the clinical diagnosis for each case was decided on the basis of structured diagnostic inter-
views with both the child and parent. The Anxiety Disorder group consisted of 11 boys with a principal diagnosis of an anxiety disorder: generalized anxiety disorder (n=5), obsessive compulsive disorder (n=4) and separation anxiety disorder (n=2). More than one anxiety disorder was diagnosed in 8 (73%) of these boys. The Externalizing Disorder group consisted of boys with a principal diagnosis of attention deficit hyperactivity disorder (n=8), and with oppositional defiant disorder (n=2). The latter 2 boys also had attention difficulties. In the Non-clinical group, 16 boys and their mothers who had never sought treatment from a mental health professional were recruited from two public schools in Seoul. Initially, subjects were recruited without restriction on gender, but due to the extremely small number of girls in the recruited subjects, analyses were limited to boys. KEDI-WISC, the Korean version of WISC-R, was administered to each boy and those with an IQ below 80 were excluded from the study.

The Australian subjects consisted of 54 boys aged between 7 and 15 years and their mothers. Twenty boys had a clinical diagnosis of anxiety disorder (Anxiety Disorder group); 17 had a diagnosis of oppositional defiant disorder (Externalizing Disorder group), and 17 were non-clinical boys (Non-clinical group). These boys were part of a larger sample recruited for research on anxiety disorders previously reported in Hudson & Rapee. Boys in the Australian Anxiety Disorder group presented for assessment and treatment at the Macquarie University Child and Adolescent Anxiety Clinic, Sydney, Australia. The oppositional defiant boys were recruited from community health centers and clinics in the local area and via local school newsletters offering assessment and a subsequent referral to treatment for child behavior problems. The Non-clinical group consisted of 17 boys from the community who had never sought treatment from a mental health professional. The oppositional-defiant and non-clinical boys were given rewards for participating in the study.

Australian graduate students in clinical psychology assessed the Australian boys in the two clinical groups using a semi-structured interview based on either the Anxiety Disorders Interview Schedule for Children or the Anxiety Disorders Interview Schedule for DSM-IV Child and Parent Version (ADIS-IV-C/P). The principal diagnoses of the boys in the Anxiety Disorder group were as follows: separation anxiety disorder (n=9), overanxious disorder/generalized anxiety disorder (n=5), avoidant disorder/social phobia (n=4), and specific phobia (n=2). In the Externalizing Disorder group, boys were required to meet DSM-IV criteria for a principal diagnosis of oppositional defiant disorder and were excluded from the study if they also met criteria for an anxiety disorder. However, four of the 20 children included in the original sample reported subclinical levels of generalized anxiety. In addition, 2 oppositional boys met the criteria for ADHD, while further 8 oppositional children exhibited subclinical levels of ADHD.

Mean ages for each group are shown in Table 1 (see below). One-way analysis of variance was used to compare the groups on age. There was a significant main effect for Group (p < .001), but no significant effect for Country nor significant Group by Country interaction was observed. Follow-up analyses using Scheffe tests indicated that in both the Korean and Australian samples, the Externalizing Disorder group was significantly younger than the Anxiety Disorder and the Non-clinical groups.

**Procedure**

The procedure was based on that reported in Hudson & Rapee. Boys were seated at a table with their mother and asked to complete a set of difficult tangram puzzles. The mother was given the following instructions before the task:

This is a test of your child’s ability. We want to see how good he is at thinking. You are going to sit there for support and you will have the answers for interest. Most kids can do it but some find it a bit hard to get going. You can help if you think he really needs it.

The mother was given the answers to the puzzle to ensure that help was not limited by her own skill. Different sets of puzzles were used for the Korean and the Australian subjects, but in both countries, the degree of difficulty of the task...
was designed so that the boy would be unable to complete the task in the allocated 5-minute period. A clock was positioned near the mother and son so that they could monitor the remaining time during the task. The entire 5-minute interaction was videotaped.

**Measures**

Observation. The videotaped, 5-minute, mother-son interaction was rated on 9 global scales concerning the degree of maternal involvement and negativity of the interaction that had been used in Hudson & Rapee. The global scales consisted of a nine-point continuum ranging from zero to eight, with 4 representing the neutral point. The 9 scales were: 1) degree of unsolicited help (intrusiveness); 2) general degree of help; 3) touching of the tangram pieces; 4) mother’s posture; 5) mother’s focus during the interaction (towards the child or the task); 6) degree of mother’s positive affect; 7) general mood/atmosphere of the interaction; 8) mother’s tension; 9) degree of mother’s verbal/nonverbal encouragement/criticism.

Two factors were derived from factor analyses of the Korean and Australian rating data. The first factor score, named Negativity, was calculated by taking the mean of the following four scales which had factor loadings above 0.5 in both the Korean and Australian data—mother’s positive affect, general mood of the interaction, tension, and verbal or nonverbal encouragement/criticism. Each scale in the Negativity factor was coded to indicate that the higher the score on the Negativity factor, the more negative, critical and tense the interaction. For the second factor, which reflects mother’s involvement during the task, five scales (unsolicited help, general degree of help, touching, mother’s focus and mother’s posture) had a factor loading above 0.5 in the Australian data, but only three of the five scales (unsolicited help, general degree of help and touching) had a loading above 0.5 in the Korean data. Thus the Involvement factor was scored by calculating the mean of the three scales with a loading above 0.5 for both the Korean and Australian samples. Higher scores on the Involvement Factor scale indicated a greater involvement and intrusiveness of the mother during the tangram task. More detailed information on coding criteria is available from the authors on request.

In order to establish inter-rater reliability across the two countries, one of the authors who developed the scoring system trained both Korean and Australian raters. Intraclass correlations were calculated using Shrout and Fleiss model 2 (Rater’s random) to determine inter-rater reliability within each country and also across the two countries. Inter-rater reliability between the two Korean raters was ICC (2,1)=.93 (p < .01) for the Negativity factor and ICC (2,1)=.96 (p < .01) for the Involvement factor. Inter-rater reliability between the two Australian raters was ICC (2,1)=.50 (p < .01) for the warmth factor, and ICC (2,1)=.90 (p < .01) for the involvement factor. In order to establish reliability between raters from two different countries, a Korean rater and an Australian rater scored 10 videotapes of Korean mother-son interactions independently. The intraclass correlation between them was ICC (2,1)=.70 (p < .01) for the Negativity factor and ICC (2,1)=.92 (p < .01) for the Involvement factor.

Questionnaires. Boys completed the Revised Children’s Manifest Anxiety Scale (RCMAS). Mothers completed the Child Behavior Checklist (CBCL). For the Korean subjects, the Korean version of the CBCL (K-CBCL) and RCMAS were used.

**RESULTS**

Since there was a significant difference between groups in terms of age, correlations between age and the main dependent variables were calculated. No significant relationship was shown between the boy’s age and the negativity of the interaction. However, the involvement factor was significantly related to the boy’s age (p<.05). That is, the older the boy, the less help the mother gave. Thus in subsequent analyses, the boy’s age was entered as a covariate.

The mean scores on the RCMAS and the CBCL Internalizing and Externalizing problem scores for the Korean and the Australian boys are presented in Table 1.

Significant differences were found across the
three diagnostic groups on RCMAS ($p<.001$), CBCL-Internalizing ($p<.01$), and CBCL-Externalizing ($p<.01$) scores. Follow-up comparisons using the Scheffe test indicated that the Anxiety Disorder group scored higher on RCMAS than the Non-clinical group ($p<.001$) and that the difference between the two clinical groups approached statistical significance ($p=0.055$). The difference between the Non-clinical and Externalizing Disorder groups in RCMAS score was not significant.

For CBCL-Internalizing score, the Anxiety Disorder group, again, had a significantly higher mean than either the Externalizing Disorder group ($p<.001$) or the Non-clinical group ($p<.001$). On CBCL-Externalizing score, the Externalizing Disorder group had a higher mean than either of the other two groups ($p<0.001$). Significant country differences were also found on CBCL-Internalizing score ($p<.01$), and CBCL-Externalizing score ($p<.01$). Specifically, the Australian boys showed higher scores on both CBCL-Internalizing and CBCL-Externalizing scores. Country by Group interactions were not significant on any of the measures.

Mean involvement and negativity scores for the 6 groups are presented in Table 2 and the results of ANCOVA in Table 3.

Analysis of covariance (ANCOVA) controlling for differences in age revealed that the Korean mothers were significantly more negative in their interaction with their sons compared to their Australian counterparts ($p<.001$). The Korean mothers also showed significantly lower level of involvement ($p<.001$). For the negativity factor, neither the Group effect nor the Country × Group interaction was significant. That is, the three groups did not differ significantly in the degree of negativity in parent-child interaction in either Korean or Australian samples. For the involvement factor, however, there was a significant Country × Group interaction ($p<.01$), suggesting that the relationship between maternal involvement and the son’s clinical status was different in the two countries. Follow-up comparisons revealed that in the Korean sample, the Anxiety Disorder group showed significantly lower level of involvement compared to both the Non-clinical group and the Externalizing Disorder group.
Table 3. ANCOVA Table of Negativity and Involvement Score

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negativity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>1</td>
<td>0.07</td>
<td>0.67</td>
<td>0.796</td>
</tr>
<tr>
<td>Country</td>
<td>1</td>
<td>23.02</td>
<td>21.74</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Group</td>
<td>2</td>
<td>2.39</td>
<td>2.26</td>
<td>0.111</td>
</tr>
<tr>
<td>Country × Group</td>
<td>2</td>
<td>1.48</td>
<td>1.4</td>
<td>0.253</td>
</tr>
<tr>
<td>Involvement</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>1</td>
<td>12.06</td>
<td>4.23</td>
<td>0.043</td>
</tr>
<tr>
<td>Country</td>
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<td>32.66</td>
<td>11.44</td>
<td>0.001</td>
</tr>
<tr>
<td>Group</td>
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<td>2.83</td>
<td>0.99</td>
<td>0.375</td>
</tr>
<tr>
<td>Country × Group</td>
<td>2</td>
<td>18.33</td>
<td>6.42</td>
<td>0.003</td>
</tr>
</tbody>
</table>

Age=covariate.
Country=Korean: Australian.
Group=Anxiety Disorder group : Externalizing Disorder group: Non-clinical group.

(Scheffe test; p<.01). In the Australian sample, however, the two clinical groups showed significantly higher involvement than the Non-clinical group, with no significant difference between the two clinical groups.

In the Korean subjects, the correlation between the negativity and involvement factors was not statistically significant, whereas in the Australian subjects the two factors were positively correlated (p<.01), suggesting that the psychological meaning attributed to the two dimensions of parenting might be very different in the two cultures.

**DISCUSSION**

Results from the present study suggest interesting cross-cultural differences in parenting behaviors and their relationship to psychological disorders in children. First, Korean boys and mothers displayed significantly less overall warmth and higher negativity in their interactions compared with Australian boys and their mothers. Second, Korean mothers showed lower overall involvement in their interactions with their sons during a cognitively demanding task compared to their Australian counterparts. Furthermore, in the Korean sample, the Anxiety Disorder group showed lower maternal involvement than either the Non-clinical group or the Externalizing Disorder group, while in the Australian sample, the two clinical groups showed significantly higher involvement than the Non-clinical group. Thus maternal involvement appears to have a very different impact on the son in the two cultures.

The finding that mother-son interactions of the Korean subjects were rated as more negative than those of the Australian subjects is consistent with the report of Lin and Fu from their study of Chinese subjects. In collectivistic cultures such as China, parental care and acceptance for the child are communicated in an implicit (as opposed to explicit) way, which is why Korean mothers in the present study might have displayed fewer expressions of parental affection such as smiling and giving praise. It should also be recognized that in the present study, parental warmth/negativity was quite specifically defined; the negativity scale in the present study consisted of items measuring the general atmosphere of parent-child interaction during a cognitively demanding task. It is possible that high maternal negativity in the present study reflects a critical attitude concerning the child’s performance rather than general maternal rejection. Considering that parental concern and anxiety about the child’s achievement is normative in the Korean culture, it is not surprising that Korean mothers were rated as more negative compared to Australian mothers. In short, negativity of interaction as assessed in the present study might not actually reflect maternal rejection and also might not be perceived as such by the child in Korean culture. Maternal negativity was not significantly correlated with any of the child adjustment measures in the Korean sample, while it was significantly correlated with
the CBCL-internalizing problem score in the Australian sample ($r=.30$, $p<.05$), supporting the hypothesis that the psychological meaning of maternal negativity as defined in the present study might be different across the two cultures.

The difference between the two countries was more apparent in maternal involvement. The overall level of involvement in the Non-clinical group was comparable in the two countries, but the relationship between maternal involvement and clinical status of the son was quite different. While higher maternal involvement was associated with clinical status in Australia, the two clinical groups showed a significantly lower level of maternal involvement than the Non-clinical group in the Korean sample. The pattern of results obtained in the Korean sample is the opposite of what has been typically found in several previous studies conducted on Western populations.\textsuperscript{11,32}

Involvement in the present study was defined in terms of unsolicited help and intrusiveness. Thus a parent with a low involvement score would be someone who sits back and watches the child do the task on his own. Such a parental attitude might be perceived by the child as either respecting the child’s autonomy or as a lack of interest or concern, depending on the cultural context. The finding that low maternal involvement was associated with the clinical status of the child in Korea suggests the possibility that to Korean youths, maternal involvement can be perceived as an expression of parental interest and concern, and that a lack of parental involvement might be seen as a sign of rejection and neglect as has been suggested by Rohner & Pettengil.\textsuperscript{21} The involvement scale was significantly related to the negativity scale in the Australian sample ($r=.50$, $p<.01$), indicating higher involvement with higher negativity, while in the Korean sample the correlation between the two scales was negative, although not significant ($r=-.20$).

It has been proposed by many researchers that parental overprotection is one of the contributing factors to the development of anxiety disorders.\textsuperscript{33} The present study strongly suggests that the generality of this model needs to be reconsidered in light of cultural differences. In the Korean subjects, low maternal involvement was associated with anxiety disorder in the child. Leung and colleagues\textsuperscript{20} have also reported that the association between the parent’s psychological control and social anxiety was significantly weaker among Chinese and Chinese Americans than among Americans. It should also be noted that even in the Australian sample, maternal involvement failed to discriminate the two clinical groups, suggesting the possibility that parental over-involvement is not specific to the anxiety disorders. Thus the role of parental involvement needs to be more carefully delineated.

In the present study, the Externalizing Disorder group in both Korean and Australian samples was significantly younger in age than the Anxiety Disorder group. It is possible that the higher involvement observed in the Externalizing Disorder group might be, at least in part, a function of the age of the child rather than the clinical diagnosis of the group. Although the effect of age was statistically controlled for in making group comparisons, further study with more carefully matched clinical groups will be necessary to clarify the relationship between parental involvement and the child diagnosis.

It is generally agreed that cross-cultural research is a valuable tool for distinguishing culture-specific and culture-general aspects of psychological theories.\textsuperscript{34} However, methodological difficulties involved in cross-cultural studies often make it difficult to interpret study findings. For instance, it is often difficult to ascertain the cross-cultural equivalence of the measures used, particularly for measures based on verbal reports. The present study is unique in that collection of direct observational data of parent-child interactions in a standardized situation across two countries made it possible to compare the relationship more directly.

Although efforts have been made to ensure that data from Korea and Australia were collected following equivalent procedures, some methodological differences remained that might have contributed to the cross-national differences in the results. For instance, it is possible that the Korean mothers and sons in the clinical groups might have been more inhibited than their Australian counterparts in their mother-child interaction because they were videotaped in a hospital setting. Furthermore, although both Korean and
Australian mothers were instructed to help if their son "really needs it", mothers from the two countries might have interpreted the instruction differently.

Differences in the diagnostic composition of the two clinical groups in the two countries are another factor that needs to be considered in interpretation of cross-national differences. While the Australian Externalizing Disorder group consisted of boys with the diagnosis of Oppositional Defiant Disorder although many of them also exhibited ADHD symptoms, the Korean Externalizing Disorder group mostly consisted of boys with ADHD diagnosis. The distribution of specific diagnoses within the Anxiety Disorder group was also different in the two countries. Therefore, it is possible that at least some of the country differences obtained in the present study reflect differences in the diagnostic composition of the two clinical groups. Further study with groups more specifically matched on clinical diagnoses is necessary to rule out this possibility.

It is possible that effects of maternal behaviors on the child's psychological adjustment vary depending on the gender or developmental level of the child. For instance, maternal over-involvement might have more detrimental effects for adolescents than young children; similarly, girls might be more sensitive to different parenting styles than boys. However, very few girls seek psychiatric services in Korea, resulting in an extremely unbalanced gender ratio in clinical subjects. Similarly, adolescents are greatly under-represented in psychiatric clinics in Korea, making it difficult to attain a sample size adequate for statistical analysis within the time allocated for the study. Thus, in the present study, analyses were limited to boys and relatively few adolescents were included. Further study will be necessary to determine whether the present findings can be generalized beyond this specific population.

REFERENCES