Well-being of mothers of children with mental retardation: An evaluation of the Double ABCX model in a cross-cultural context

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The present study was designed to compare the psychological well-being of mothers of children with mental retardation in the USA and Korea. The Double ABCX model of stress proposed by McCubbin and Patterson (1983) was evaluated for the two national groups. Thirty-eight American and 40 Korean mothers participated in the home-visit interview. The path models in the present study partially supported the ABCX model, but different path models for the two national groups provided important explanations for the well-being of mothers from the two nations. The cause of stress for the American mothers was specific to the individual variables. For Korean mothers, cultural values that carry social influence were more strongly associated with their attitudes towards the child and their experience of stress.

*Key words: children, mental retardation, mothers, well-being.*

**Introduction**

Raising children can be a challenge to any parents. When families have children with special needs, such as physical or cognitive disabilities, challenges could be salient because of the special demands their children place upon them. Family adaptations to the conditions of children with special needs and the subsequent challenges have been studied as responses to stressful events (Rousey *et al*., 1992; Lustig & Thomas, 1997; Shapiro *et al*., 1998). Several factors were found to be important for the well-being of caregivers and families who take care of children with special needs. These factors include the child’s level of adaptive and maladaptive functioning. When children are severely impaired in their physical and intellectual functioning, this can create increased care demands and burden on caregivers.
and families (Cameron & Orr, 1989; Boyce et al., 1991). Children who show severe maladaptive behavior, such as aggressive behaviors or running away, may impose considerable stress on parents (Orr et al., 1991; Heller & Factor, 1993).

The present study examines the coping of families who have children with mental retardation in a cross-cultural context. Mental retardation is a condition in which people have lower than normal intelligence, usually score below 75 on an IQ test and are unable to function at the level expected for their age (AAMR, 2002). They have difficulties with daily living skills, such as learning to read and write and caring for themselves; thus they need support from families, educators and others who live and work with them. Often it is the families and parents who attend to their special demands on a daily basis and continue to do so when the children become older. This causes daily and life-long demands for the family.

Research that has examined the coping of families with the demands of caring for children with mental retardation has typically focused on the relationships among three sets of variables: the stressors, stress outcomes, and variables that mediate the stressor–stress relationship (Lavee et al., 1985; Orr et al., 1991; Lustig & Thomas, 1997). Among the mediating variables, it has been documented that mothers with positive social support experience less stress than other mothers (K. S. Oh, unpubl. data, 1984, Dunst et al., 1986; C. H. Moon, unpubl. data, 1994, Floyd & Gallagher, 1997). Studies have also found that certain maternal characteristics (e.g. locus of control and the level of education) and family characteristics (e.g. income) have some effect on the level of stress felt by caregivers (Lamb et al., 1986; H. S. Kim, unpubl. data, 1994; C. H. Moon, unpubl. data, 1994).

Among the most widely cited theoretical frameworks for conceptualizing and predicting family stress and coping is the Double ABCX model (McCubbin & Patterson, 1983; Lavee et al., 1985; Bristol, 1987; Orr et al., 1991; Florian & Dangoor, 1994; Smith et al., 1995; Willoughby & Glidden, 1995). Originally adapted from Hill’s ABCX model (1958), McCubbin and Patterson (1983) developed the Double ABCX model of family adjustment to incorporate several factors that influence family adaptation to crisis events. According to this model, the stressful event (A) and related hardships affect the family’s crisis-meeting resources (B); these two components also combine with the meaning the family attaches to the event (C) to influence the family adaptation outcome (X). Over time, the resources available to the family, as well as how the family perceives its stressful situation, continue to affect the family adaptation process.

The present study examines the predictive value of factors that are associated with stress experienced by families of children with mental retardation in a cross-cultural context. Although there is extensive research to examine the coping of families of children with mental retardation in the USA, very little information is available regarding the adaptation processes of families in different cultural contexts (Stoneman, 1997; Shapiro et al., 1998). The present study compared the experiences of families of children with mental retardation in Korea and the USA by applying the Double ABCX model as a causal model to predict families’ adaptation in each culture. Despite the utility of the model when applied in the US family research context, Korean culture may provide a different explanation for the experiences of mothers of children with mental retardation, as it is distinctively different from any Western culture in terms of child-rearing practices, traditional values and attitudes towards disability. The present study adds information to the role of culture by comparing the experiences of mothers of children with mental retardation from Korea and the USA.

In a cross-cultural study that compared Japanese and American families of children with mental retardation (Nihira et al., 1988), the two national groups showed a similar relationship between cognitive opportunities at home and the child’s social competence. However, higher
levels of conflict, emotion and psychosocial problems were found in Japanese families of children with mental retardation. The authors suggested that Japanese families experienced more emotional stress than their US counterparts, because of the shame and blame the culture ascribed to having children with mental retardation. Other studies conducted in Korea reveal that the traditional Korean culture carries negative attitudes towards people with disabilities (Oh, 1984; Seo et al., 1992). Korean mothers of children with disabilities experience severe stress, particularly due to the blame ascribed to a mother for bearing a child with a disability (H. S. Kim, unpubl. data, 1994; C. H. Moon, unpubl.data, 1994). Many Koreans with disabilities and their families often suffer from shame, guilt, stigma and depression as a result of the belief that disability is caused by something they did wrong in the past (Kim-Rupnow, 2001).

In applying the ABCX model for the present study, the maladaptive behavior of the child was the stressor (A), social support was the resource factor (B), maternal attitudes towards their children with mental retardation was the perception of stress (C), and the mother’s perception of stress was the adaptation (X). In general, we expected that the Double ABCX model would be replicable in both groups of families because family resources and perceptions of stressors are important mediating variables in both cultures. However, as the traditional Korean society carries strong negative attitudes towards disability, we assumed that the level of traditionalism might play an important role in maternal outcomes, especially in Korea. Expanding the model, traditionalism was added to explore the additive explanatory power of the proposed model.

**Methods**

**Participants**

Mothers of children with mental retardation were recruited from elementary schools in two metropolitan areas, Chicago in the USA and Pusan in Korea. The mothers in Chicago were recruited from both city and suburban areas. Sixteen schools from the city of Chicago and seven school districts from Chicago suburban areas participated in the study. Twenty-two schools, both regular and special education schools of Pusan city in Korea, participated in the study. A total of 307 mothers were contacted and 78 (38 American mothers and 40 Korean mothers) met the criteria for participation in the study: mental retardation, children in elementary school and (for American mothers) from the majority culture. It should be noted that the participation rates varied (16% for the American sample and 58% for the Korean sample) due to differences in the recruitment of subjects in the two countries. Teachers made most of the initial contacts with the mothers, but in the USA most contacts were made by mail and in Korea most were made by phone. Teachers who called the mothers elicited a much higher consent rate. This was unavoidable as most of the US teachers would not spend time calling parents, while Korean teachers noted that mailing would not elicit any response from the families. The first author, who is bilingual in Korean and English, conducted the home-visit interviews in both countries.

Table 1 shows the demographic information of the mothers and children who were included in the study. The mothers ranged in age from 31 to 50 years, with a mean of 39 years. Most (87%) American mothers were married. All but one (98%) of the Korean mothers were married. Forty-two percent of the American mothers had completed only high school and 53% had at least 2 years of college education. Forty percent of Korean mothers were high
school graduates only and 31% had at least a 2-year college education. Overall, American mothers had a significantly higher mean level of education than Korean mothers, $t(76)=2.77$, $p<0.05$.

The combined mean number of children in the family was 2.6, with a range of one to five children. For both groups, when there were one to three children in the family, there was no difference in birth order among those with mental retardation. However, for families with four or five children, all the children with mental retardation were either third or fourth in their birth order. The combined mean age of the child with mental retardation was 9.7 years, with a range of 4–14 years of age. The two groups of children did not differ in age, nor in the level of adaptive functioning as measured by the short version of the AAMD Adaptive Behavior Scale (Nihira et al., 1974).

### Measures

The measures in the present study were administered as part of a larger survey on traditional values, family adjustment and social support for the mothers. The measures reported here are the Traditional Values Scale (K. M Chae, unpubl. data, 1990), the Maladaptive Behavior Scale from the Developmental Disabilities Profile (Brown et al., 1986), the Multidimensional Scale of Perceived Social Support (Zimet et al., 1988) the Maternal Attitudes toward their Children

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**Table 1** Demographic characteristics of sample families of children with mental retardation (MR)

<table>
<thead>
<tr>
<th>Maternal characteristics</th>
<th>Total ($N=78$)</th>
<th>US ($n=38$)</th>
<th>Korean ($n=40$)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>39</td>
<td>40</td>
<td>38</td>
</tr>
<tr>
<td>Range</td>
<td>31–50</td>
<td>31–50</td>
<td>31–48</td>
</tr>
<tr>
<td><strong>Education (%)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; High school</td>
<td>18</td>
<td>6</td>
<td>31</td>
</tr>
<tr>
<td>High school</td>
<td>41</td>
<td>42</td>
<td>40</td>
</tr>
<tr>
<td>Junior college</td>
<td>9</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>College and graduate</td>
<td>32</td>
<td>42</td>
<td>23</td>
</tr>
<tr>
<td><strong>Children’s characteristics</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. children</td>
<td>2.6</td>
<td>3.0</td>
<td>2.3</td>
</tr>
<tr>
<td>Mean</td>
<td>1–5</td>
<td>1–5</td>
<td>1–4</td>
</tr>
<tr>
<td><strong>Age of child with MR</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>10</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td>Range</td>
<td>4–14</td>
<td>4–14</td>
<td>7–14</td>
</tr>
<tr>
<td><strong>Gender of child with MR</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>44</td>
<td>19</td>
<td>25</td>
</tr>
<tr>
<td>Female</td>
<td>34</td>
<td>19</td>
<td>15</td>
</tr>
</tbody>
</table>

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with Mental Retardation (Zuk et al., 1961), and the Short-Form of the Questionnaire on Resources and Stress (Friedrich et al., 1983).

**Measure of traditional values.** The Traditional Values Scale (K. M Chae, unpubl. data, 1990) was given to the mothers in both countries to measure their orientation to traditional values associated with collectivism. The 29 items in the scale include statements on attitudes towards family responsibilities (e.g. ‘The father/husband should make the final decision in all the family matters’), child-rearing values (e.g. ‘Parents should use physical punishment to discipline their children’), emotional expression (e.g. ‘It is foolish for a man to be affectionate with his children by hugging or kissing them in public’), family bonds (e.g. ‘Divorce is wrong regardless of the reasons’) and attitudes towards roles of women (e.g. ‘A woman is equal to man in her home’). The scale asks opinions on a broad range of family practices, such as responsibilities of parents and children, views of child-rearing practices, and gender roles. Mothers rated the degree of their agreement and disagreement with each statement of the scale from 1 (strongly disagree) to 6 (strongly agree), with a possible range from 29 to 174 points. Higher scores indicated higher traditionalism. Chae (unpubl. data, 1990) reported a test–retest reliability (2-week interval) of 0.79 and internal consistency (Cronbach’s alpha) of 0.89 on this scale. The scale has satisfactory validity; it discriminated between Korean and Korean Americans, and Korean Americans and Americans (Chae, unpubl. data, 1990). Cronbach’s alpha in the current study was 0.82 for the American group and 0.77 for the Korean group.

**Measure of maladaptive functioning of the child.** The Maladaptive Behavior Scale from the Developmental Disabilities Profile (MBS; Brown et al., 1986; Jacobson, 1998), which lists 13 inappropriate and aggressive behaviors, was used to assess the maladaptive functioning of children. The internal consistency of the scale was 0.72 for the American group and 0.60 for the Korean group. The criterion-related validity of the scale was demonstrated in other studies by significant differences in mean score across settings, with problem behaviors increasing from less to more restrictive settings (Brown et al., 1986). The respondents rated on a 6-point scale ranging from 1 (not this year) to 5 (once a day or more) for each item. Higher scores indicated higher levels of maladaptive functioning of the child.

**Measure of social support.** The Multidimensional Scale of Perceived Social Support (MSPSS, Zimet et al., 1988) was used to assess the perceived social support. The MSPSS has high internal reliability (0.88) and stability over time (0.95), and established construct and convergent validity of the scale (Cecil et al., 1995). The scale consists of 12 items (e.g. ‘There is a special person who is around when I am in need’) that measure three components of social support; that is, support from a special person, family members and friends. The mothers rated each statement on a 6-point scale ranging from 1 (strongly disagree) to 6 (strongly agree). Reportedly, the MSPSS has adequate internal reliability (0.88) and stability over time (0.95). High scores on the scale indicate the perception of positive social support. The internal reliability in the present study was 0.92 for the American group and 0.91 for the Korean group.

**Measure of maternal attitudes towards their children with disabilities.** An adapted version of the Parental Attitude Research Instrument (PARI), the Maternal Attitude Scale for their Children with Disabilities was given (Zuk et al., 1961). The scale consists of items on affective response to the child (e.g. ‘I am impatient with my child’), beliefs about the child’s
condition (e.g. ‘An operation would cure the child’s problems’), parental agreement (e.g. ‘Often my husband and I disagree on how to handle our child’), discipline of the child (e.g. ‘I tend to protect my child too much’) and acceptance of the child’s condition (e.g. ‘It is not my fault that the child is slow’). Mothers rated each statement from 1 (strongly disagree) to 6 (strongly agree). The reliability of the scale based on the 17 items was 0.75 for the American sample and 0.65 for the Korean sample.

**Measure of mother’s stress.** The Short-Form of the Questionnaire on Resources and Stress was used to measure the mothers’ stress (QRS-SF, Friedrich et al., 1983; Rousey et al., 1992). For the present study, 30 items were used that comprised the components of the parent and family problems (e.g. ‘I get upset with the way my life is going’), and pessimism (e.g. ‘The child will always be a problem to us’). The reported reliability coefficient for the scale was 0.93. The two factors in the scale correlated significantly with the Beck Depression Inventory (Friedrich et al., 1983). The respondents rated on a 5-point scale ranging from 1 (not at all) to 5 (almost all the time). The reliability coefficient for the QRS-SF was 0.92 for the American group and 0.89 for the Korean group.

**Translation of the instruments.** All the scales were developed in the USA and, as the data on the reliability and validity show, they were considered relevant to the American culture. The relevancy of these scales to the Korean culture was examined. Three evaluators (one Korean and two Korean-Americans) rated each item on each scale as relevant, irrelevant, or questionably relevant; those items rated as irrelevant by a single evaluator or questionably relevant by two or more evaluators were eliminated. For this study, all of the items were considered relevant to the Korean culture.

Semantic equivalence of measurements was established following the back-translation technique suggested by Liang and Bogat (1994). In the present study, a bilingual translator first translated each measure into Korean. Second, another bilingual person back-translated the instruments from Korean to English. Finally, a third bilingual person rated each item on a 3-point scale, from 1 (exactly the same meaning in both versions) to 2 (almost the same meaning in each version) and 3 (different meaning in each version). Items that were rated as different were reworded to maintain consistency. Reworded items were examined by repeating the same back-translation technique. After a few changes, all but one item were rated as having the same meaning to both cultures. The excepted item concerned the child’s level of skill in using a knife, fork and spoon in the Adaptive Behavior Scale. It was dropped because Korean children learn to use chopsticks instead, and the implements seem to demand different levels of skill.

**Results**

**Comparisons between American and Korean mothers**

The two groups were compared on their children’s maladaptive behavior functioning and maternal traditional values, perceived social support, attitudes towards their children and perceived stress. There was no difference in maladaptive behavior functioning between the two groups of children. However, compared with the American mothers, the Korean mothers were more traditional, \(t(76) = 10.9, p < 0.001\); perceived lower support, \(t(76) = 6.4, p < 0.001\); had more negative attitudes towards their child, \(t(76) = 6.6, p < 0.001\); and had higher
perceived stress, \( t(76) = 4.2, p < 0.001 \). The means, standard deviations (SD), and ranges for the measures and the correlation matrix for the variables are presented in Table 2 for the American sample and in Table 3 for the Korean sample.

**Path analyses**

A series of path analyses was performed on the data for the American and Korean groups. Tests of causal models were performed using hierarchical analysis with SPSS/WINDOWS regression procedures. This technique enters each variable in order of causal priority (Cohen & Cohen, 1983). The variables in the present study were entered into the multiple regression equation in the order of their causal explanation of other variables based on the Double ABCX model. Variables that have an effect on the dependent variable without going through other variables are direct effects; those that go through other variables are indirect effects. The path coefficient is the standardized regression coefficient \( (\beta) \), enabling a comparison of the relative importance of the effects of the intervening variables. The present study also adopted a procedure that dropped the variables that did not contribute to any direct effect outcome (Peyrot, 1996). With the remaining variables, hierarchical analyses were repeated until succinct models in which all variables participated in the full description of the model were produced. Therefore, the reduced path models in Figures 1 and 2 presented only those paths that showed a one-tailed \( p < 0.05 \) level of statistical significance.

For both American and Korean groups, the independent variables (child’s maladaptive behavior, perceived social support, and mothers’ attitudes towards their children) were entered in that order in a series of multiple regression equations with perceived stress as the dependent variable. For the American sample (Figure 1), maladaptive behavior of the child was found to have a direct and indirect effect on stress. Mothers whose children showed more maladaptive behaviors had a higher level of stress. Maladaptive behavior of the child was also a good predictor of attitudes towards the child and perceived social support. Mothers whose children had more maladaptive behavior had more negative attitudes towards their children and also felt that they received less support. Maternal attitudes had a direct impact on maternal stress. Those mothers with more negative attitudes towards their children were more stressed.

The mediating roles of maternal attitudes were examined. There are four conditions that must be met for a variable to be considered a mediator: (i) the predictor must be significantly associated with the hypothesized mediator; (ii) the predictor must be significantly associated with the dependent variable; (iii) the mediator must be significantly associated with the dependent variable; and (iv) the impact of the predictor on the dependent measure is less after controlling for the mediator (Baron & Kenny, 1986; Holmbeck, 1997). The test that followed these recommendations revealed that maternal attitudes played a significant role in mediating the relationship between the child’s level of maladaptive behavior and maternal stress: mothers with children with more maladaptive behaviors were more stressed because of their more negative attitudes. Perceived social support did not affect maternal stress directly, but indirectly via maternal attitudes. Maternal attitudes also played the mediating role between social support and stress: those mothers who perceived less social support were stressed due to their negative attitudes towards their children.

The same path analysis was run for the Korean sample considering the same variables and entering them into the regression equation in the same order. Perceived social support and attitudes towards the child were direct causes of stress for Korean mothers. Those with higher perceived social support and with more positive attitudes towards their children.
Table 2  Means, SD and correlations among variables for the American sample (n = 38)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>Mother’s education</th>
<th>Traditional value</th>
<th>Child’s level of maladaptive behavior</th>
<th>Perceived social support</th>
<th>Maternal attitudes towards child</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother’s education</td>
<td>4.00</td>
<td>1.38</td>
<td></td>
<td>–</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional value</td>
<td>137.32</td>
<td>14.72</td>
<td>– 0.35</td>
<td>–</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child’s level of maladaptive behavior</td>
<td>22.95</td>
<td>8.30</td>
<td>– 0.23</td>
<td>0.02</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Perceived social support</td>
<td>63.13</td>
<td>9.01</td>
<td>0.29</td>
<td>– 0.08</td>
<td>– 0.36</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Maternal attitudes towards child</td>
<td>66.87</td>
<td>10.07</td>
<td>0.21</td>
<td>– 0.04</td>
<td>– 0.44</td>
<td>0.45</td>
<td>–</td>
</tr>
<tr>
<td>Mother’s stress</td>
<td>65.76</td>
<td>17.87</td>
<td>0.09</td>
<td>– 0.08</td>
<td>0.56</td>
<td>– 0.40</td>
<td>– 0.56</td>
</tr>
</tbody>
</table>

Correlations are underlined when $p < 0.05$. 
Table 3  Means, $SD$ and correlations among variables for the Korean sample ($n=40$)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>$SD$</th>
<th>Mother’s education</th>
<th>Traditional value</th>
<th>Child’s level of maladaptive behavior</th>
<th>Perceived social support</th>
<th>Maternal attitudes towards child</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mother’s education</td>
<td>3.15</td>
<td>1.33</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Traditional value</td>
<td>102.39</td>
<td>13.68</td>
<td>$-0.14$</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Child’s level of maladaptive behavior</td>
<td>20.78</td>
<td>6.59</td>
<td>$-0.23$</td>
<td>0.35</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Perceived social support</td>
<td>48.95</td>
<td>10.47</td>
<td>0.36</td>
<td>$-0.32$</td>
<td>$-0.11$</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Maternal attitudes towards child</td>
<td>52.35</td>
<td>8.07</td>
<td>0.24</td>
<td>$-0.49$</td>
<td>$-0.18$</td>
<td>0.42</td>
<td>–</td>
</tr>
<tr>
<td>Mother’s stress</td>
<td>82.73</td>
<td>18.11</td>
<td>$-0.24$</td>
<td>0.43</td>
<td>0.08</td>
<td>$-0.55$</td>
<td>$-0.63$</td>
</tr>
</tbody>
</table>

Correlations are underlined when $p<0.05$. 

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experienced a lower level of stress. Also, perceived social support was a good predictor of attitudes towards the child. Those who perceived a higher level of social support had more positive attitudes towards their children. However, maladaptive behavior of the child did not affect any of the variables in the model. Contrary to the proposed Double ABCX model,
maladaptive behavior (A) was not a significant contributor in this model. Only perceived social support (B) and attitudes towards child (C) were significantly related to stress (X). While the analyses confirmed the Double ABCX model for American mothers, the outcomes were different for Korean mothers. Although perceived social support and maternal attitudes played important roles for the Korean mothers in explaining perceived stress, maladaptive behavior was not related to any other factors in the model.

Traditional value orientation was added as an antecedent variable to the Double ABCX model to examine whether it contributes to explaining the maternal outcomes. When the path model was drawn again for the American mothers incorporating traditional value orientation, it was almost identical to the previous one because traditional value orientation did not relate to any of the factors in the model. Therefore, traditional values did not contribute to the explanation of stress experienced by American mothers.

For the Korean sample, the model that included traditional value orientation more fully explained the variables in the model than did the one without it (Figure 2). In addition to the significant influence of perceived social support and maternal attitudes on maternal stress as consistent with the previous model, traditional value orientation had direct impacts on the perception of the child’s maladaptive behavior, social support and maternal attitudes. Mothers with more traditional values perceived their children as having more problems, perceived less social support and had more negative attitudes towards their children. Traditional value orientation did not have a direct impact on stress, but influenced it indirectly through perceived social support and maternal attitudes. The mediating roles of social support and maternal attitudes between traditional values and maternal stress were significant. Mothers who had more traditional collectivist values perceived more stress, attributable to their perception of receiving less social support, and negative attitudes towards their children. Probably, the addition of traditional value orientation summarizes a variety of factors outside the model that may affect perception of stress for Korean mothers in a collectivist cultural context.

Discussion

The Double ABCX model proposed by McCubbin and Patterson (1983) was tested in the present study using separate path analyses for American and Korean mothers. For American mothers, the maladaptive behavior of the children strongly affected maternal stress. It could be that when children show serious behavior problems, mothers have to devote more time and energy to disciplining their children. They may also feel that the situation is beyond their control, regardless of the available support. When children show severe behavior problems, their mothers need more intensive support, considering the demands for care that the children place upon their mothers. The results of the present study confirmed the important mediating roles of the factors identified in the ABCX model, and support for the causal pathways posited in the model.

Korean mothers were affected more globally by their attitudes towards the disability and by Korean traditional values, rather than by the children themselves. Korean mothers were more stressed than American mothers. Beyond the stress the child could cause, traditional values tied together with negative attitudes towards disability may affect very strongly the stress they experienced. This confirms the initial assumption that those who live in the collectivist culture and have family members with a disability cannot rely on social support as they typically do in their culture and, therefore, experience severe stress. The present
findings suggest that people in a collectivist culture may feel stronger shame about the mental retardation of their children. These findings are consistent with the previous studies and a recent survey that examined Koreans’ attitudes toward disabilities (JoongAng Ilbo, 2001). The survey found that the strong negative attitudes of Koreans towards disabilities compared to the findings between 1984 and 2000, revealing that Koreans’ attitudes towards disability have not improved at all over the 15-year interval. Although Korea has adopted modern and Western values in many respects, traditional ideas and attitudes towards disability are very resistant to the change following the modernization of the country and seem to have persistent and enduring negative effects on the well-being of individuals with disabilities and their families.

It will be important for professionals who work with Korean families, or families from similar backgrounds, to understand the cultural backgrounds of these families and their effect on caring for children with disabilities. Those who work with families from cultures where negative attitudes towards disability prevail, may need to focus on changing the families’ attitudes towards their children in addition to providing other professional support. If mothers do not have positive attitudes, it is less likely that they will believe in the growth and development of their children, and in their right to live a fulfilling life. Helping the mothers to have positive attitudes towards their children could be an important step in motivating them to be advocates of their children. Mothers may not seek help if they do not have information. However, those who do not believe in the growth and rights of their children will not even consider looking for information or services to better care for their children.

In the present study, the American families were treated as homogeneous; race and ethnicity were controlled for by looking at only Euro-American families to facilitate the contrast with the Korean mothers. Furthermore, larger scale studies that include other ethnic and racial groups and that look at ethnic variation will be important in extending the results. Mothers were recruited from major metropolitan areas in two countries; thus, the study may be limited to families living in highly urbanized areas, and to those who volunteered to participate in such a study. The discrepancy in the participation rate may reflect that Korean mothers may be a more representative sample than their counterparts. Also, the American sample consisted predominantly of two-parent families in which the mother worked mostly part-time or did not work outside the home.

Although this study attempted to describe a causal relationship based on the Double ABCX model to explain the experiences of mothers of children with mental retardation, the path analyses were based on correlation coefficients that described two related variables in a cross-sectional study. Although the substantive reasoning was based on the model established in the literature of family mental retardation research, caution should be exercised in drawing conclusions on causal relationships regarding the experiences of mothers of children with mental retardation. In addition, traditional values were found to affect the well-being of Korean mothers, but the scale that measured this construct was developed based on the collectivist values of Korean culture; thus it may not have been relevant to the American culture. There may be other inherent cultural values that affect the functioning of American mothers.

A final limitation of the present study concerns the selection of variables for inclusion in the study. The factors in the model were operationally defined according to single scales. In order to represent a comprehensive characterization of psychological well-being, multiple indicators could have defined the factors in the model more competently. Research is needed to discover other related factors or indicators that further explain the process of adaptation for the families of children with mental retardation in culturally diverse groups. Factors
inherent in a culture may explain the different outcomes and processes of family adaptation. Therefore, further studies are warranted to advance discovery of the variables that explain the outcome of the families of children, and revisions, modifications and extensions of the models will be accomplished by testing the models in cross-cultural contexts.

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**References**


