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ORIGINAL ARTICLE

Parenting Stress and Child Behavior Problems Among Clinic-Referred Youth: Cross-Cultural Differences Across the US and Korea

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Abstract Due to increased multiculturalism in the US and abroad, there is a need for increased understanding of the different ways in which parenting stress is related to child problems across cultures. In the present study, we investigated (a) differences in reported parenting stress and childhood problem behaviors across a Korean (n = 71) and US (n = 71) sample, as well as (b) differences in the ways in which parenting stress and childhood problems were related across Korean and US children based on mothers' reports. Results revealed that Korean mothers reported significantly higher parenting stress yet significantly lower childhood problem behaviors compared to US mothers. In addition, mother-based reports of child problems were significantly associated with parenting stress in the US sample, but not in the Korean sample. Clinical implications and culturally-relevant issues relevant to these findings are addressed, including a potential under-reporting bias of child problems among Asian parents.

Keywords CBCL · PSI · Cross-cultural differences · Korean and American mothers · Parenting stress · Childhood problems

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Introduction

Parenting Stress

Parenting stress can be defined as psychological distress arising from the demands of rearing children [1, 2]. In general, parenting involves a variety of concurrent responsibilities, including knowledge of and competence in long-term child-rearing tasks [3]. Although all parents experience some degree of parenting stress [4], some parents experience significant aversive and negative feelings toward themselves and their children. Such parenting stress has been found to influence parents' psychological well-being [5], marital quality [6, 7], quality of their parenting behavior and, in turn, their children's adjustment and emotional, behavioral, and physical development [3].

Parenting Stress and Child Problems

Researchers interested in parenting factors have found that the presence of child behavior problems are associated with increased levels of parenting stress. The association between parenting stress and behavioral problems in children has been well demonstrated in the US using the Child Behavior Checklist (CBCL) [8, 9] and the Parenting Stress Index (PSI) [10]. For example, numerous studies have found that parents of children with mental health or

medical related problems, such as attention deficit hyperactivity disorder (ADHD) [11], developmental delays (DD) [12, 13], and other chronic illnesses [14] tend to report higher levels of parenting stress compared to their normative counterparts.

The relationship found between child problems and parenting stress in these US samples is important as it has to ability to guide researchers to better understand the contributions of these problems among children and their parents. For example, it has been found that defiance and increased rearing demands associated with parenting disruptive children contributes to increased parenting stress [e.g., 15, 16]. A reciprocal negative interaction pattern between children and their environment (particularly including parents with various types of psychopathology, such as parental depression; [17, 18] has also been found to contribute to heightened parenting stress [15, 19]. The complicated relationship between child problems and parenting stress is slowly beginning to be unraveled and understood as researchers dive into more closely examining the relationship between these family-related factors [11].

Cross-Cultural Research

Outside of the US, however, only a handful of studies have investigated the relationship between parenting stress and child problem behaviors. For example, Kwon [20] found a significant correlation between child problems and parenting stress based on a sample of Korean mothers of typically developing children, supporting this general relationship found in the US. In addition, a study among Japanese parents showed that levels of parenting stress was higher among Japanese parents of children with Asperger's syndrome compared to parents of children with autism [21]. Taiwanese mothers of children with ADHD-combined subtype reported higher levels of parenting stress than those of children with ADHD-inattentive subtype [22]. Although these results in Japan and Korea provide support for the positive relationship between increased child problems and parenting stress reported in US samples [11, 15, 23], studies conducted in non-US cultures remain limited, and the nature of the relationship between child problems and parenting stress in non-US cultures is still largely unknown.

Studies investigating either parenting stress or child behavior problems in various cultures have provided useful information regarding cross-cultural differences in this area. First, cross-cultural studies on parenting stress have reported distinct types and different levels of parenting stress across cultures [14, 24]. For example, Krulik et al. [14] found that Japanese mothers of chronically ill children showed more parenting stress due to role restriction and depression but less parenting stress related to parenting competency compared to mothers from the US, Israel and Jordan. Differences in PSI Total scores can also be seen between US and Korean mothers of children ages 7–12 (based on examination of the PSI manuals [10, 25]); specifically, scores differ from 1 to 14 points between countries, and Korean mothers' reports of parenting stress are consistently higher than US mothers.

Second, many cross-cultural studies using the CBCL have also reported differences across cultures with respect to child behavior problems on various scales, such as the aggression scale [26], externalizing behaviors scale [27], and total problems scale [28]. The most comprehensive multicultural study to date compared CBCL scores from 31 different societies [29]. While they found that 19 societies, including the United States and Korea, scored within one standard deviation (SD) of the mean on the CBCL total score, they reported that six countries (i.e., Japan, China, Sweden, Norway, Germany, and Iceland) scored more than 1 SD below the overall mean, and six countries (i.e., Puerto Rico, Portugal, Ethiopia, Greece, Lithuania, and Hong Kong) scored more than 1 SD above the mean. The reporting patterns of child problems across cultures thus appear to vary, whereby some countries report much greater levels of child behavioral and emotional problems compare to other countries.

The Present Study

Although such findings suggest that levels of child problem behaviors and parenting stress may differ across cultures, the relationship between these variables remains relatively unexamined in non-US samples. Although Kwon [20] examined the relationship between child problems and parenting stress in a Korea population in non-disordered youth, no studies to date have examined this question using clinic-referred youth from Korea and the US. Importantly, as noted above, differences in how child problems relate to parenting stress may guide future studies to allow both researchers and families to better understand how these factors relate to each other. Based on such findings, both treatment and assessment implications related to the interplay and connection between these family factors and characteristics would likely follow. The purposes of present study was thus to (a) investigate differences in parenting stress and childhood problem behaviors across clinical-referred Korean and US samples, and (b) to examine differences in the ways in which parenting stress and childhood problems are related to each other across Korean and US clinical-referred children and their mothers. Due to relatively low levels of social support reported among Korean parents [39], as well as the high degree of social stigma associated with raising children with mental health problems in Korea [40], we hypothesized that

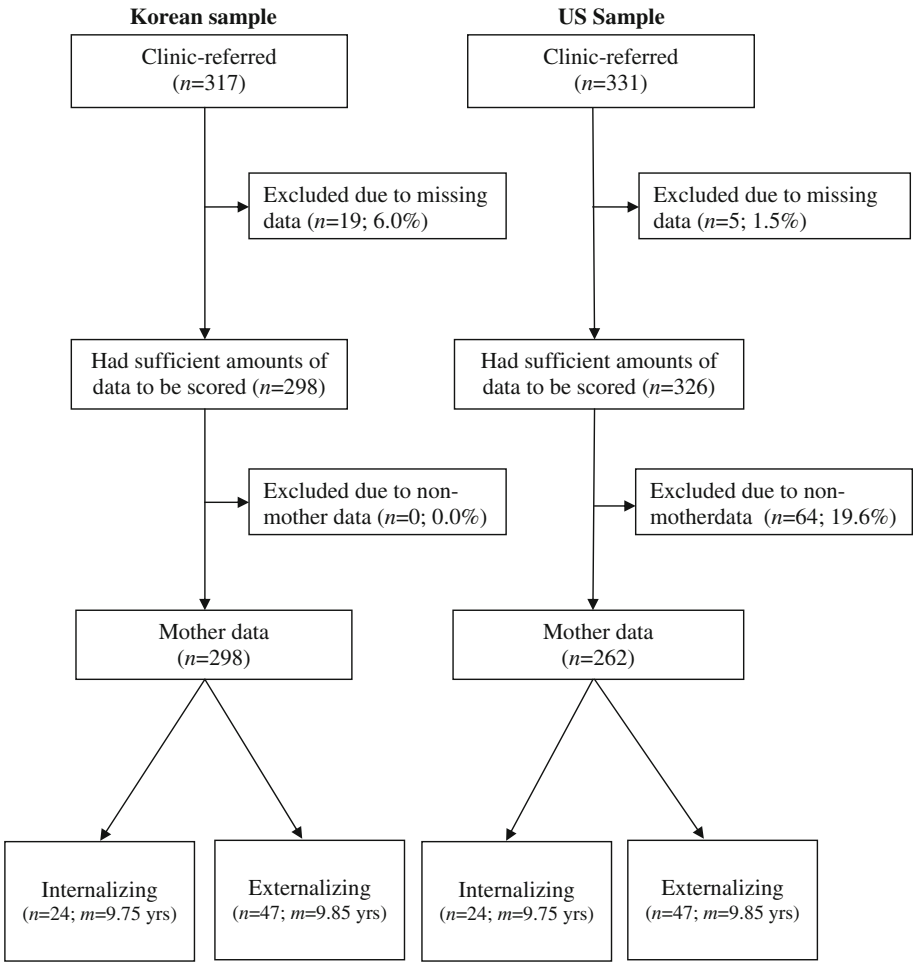

Fig. 1 Flow diagram of inclusion procedures

Korean parents would report higher levels of parenting stress. In addition, given the greater amounts of social stigma present in Korean society regarding having children with disabilities [40], we hypothesized that this societal pressure would contribute to a Korean parental reporting style of under-reporting their children behavior problems.

Methods

Participants

The present study included clinic-referred children who were seeking mental health services in Korea and the US from 2004 to 2009 and from 2005 to 2008, respectively. These data were from archival datasets of two independent, larger studies in the US and Korea which included the PSI-SF, CBCL, diagnostic outcomes and other relevant data. There were a total of 317 Korean and 331 US children whose parents completed the CBCL and PSI-SF and who also received diagnostic intake evaluations.

Actual participants of this study (n = 74 per culture) were selected based on the following inclusionary criteria (see Fig. 1): (1) children having a primary internalizing or externalizing disorder, (2) youth being between 6 and 18 years old (given that this is the age range for the CBCL), and (3) mothers completing the Child Behavior Checklist and Parenting Stress Index-Short Form with acceptable amounts of missing data (see below for more details). We also (4) matched youth across cultures on age, gender and primary diagnosis (i.e., internalizing/externalizing primary diagnosis)[1] since we sought to compare parents' reports across US and Korean children with similar types of problems.

Information about the total number of diagnoses present in the Korean and US samples appears in Table 1. Additional child and primary caregiver demographic information appears in Table 2.

[1] To increase the generalizability of our findings, we allowed children with comorbid disorders (e.g., internalizing and externalizing diagnoses) to be included in the study as long as they had a primary internalizing or externalizing diagnosis.

Table 1 Number of primary diagnoses in youths' diagnostic profile (N = 142)

Diagnoses	Primary	
	Korea	US
Internalizing disorders	24	24
Anxiety disorders	13	13
Affective disorders	11	11
Externalizing disorders	47	47
ADHD disorders	45	43
Conduct disorder	2	4
Oppositional defiant disorder	0	0

Anxiety disorders included generalized anxiety disorder, separation anxiety disorder, specific phobia, social phobia, obsessive–compulsive disorder, post-traumatic stress disorder, anxiety disorder not otherwise specified; *Affective disorders* included major depressive disorder, dysthymic disorder, and depressive disorder not otherwise specified; *ADHD disorders* included ADHD combined, predominantly hyperactive impulsive, and predominantly inattentive types; *Primary* = a child's primary diagnosis

Measures

Child Behavior Checklist for Ages 6–18 (CBCL/6-18; K-CBCL) [9, 30]

The CBCL/6-18 is a parent-report measure of emotional and behavioral problems of youth ages 6 to 18. The 120 items on the CBCL (US and Korean versions) are rated using a 3 point likert scale (i.e., 0 = Not True, 1 = Somewhat or Sometimes True, or 2 = Very True or Often True). Raw scores are summed to yield broad-band scale scores, including the Internalizing, Externalizing and Total Problems scale scores, which were used for analyses in the present study. Normative data for the US and Korean versions of the CBCL are available [9, 30, 31]. Reliability and validity statistics of the CBCL and K-CBCL scores have also been well documented in their respective manuals. Internal consistency reliability estimates for each of the CBCL scales used in this study are presented in Table 3. We used raw scores from the CBCL Internalizing, Externalizing and Total Problems scales for all analyses to account for the full range of scale score variation [9].

Parenting Stress Index-Short Form (K-PSI-SF; PSI-SF) [10, 25]

The PSI-SF is a commonly used measure of parent–child relationships and parenting stress. The PSI-SF contains 36 statements rated by parents on a 5-point likert scale (ranging from 1 to 5). Items are summed to yield a Parenting Stress Total Score, which was used as our measure of parenting stress in the current study. Higher scores on the PSI-SF scales indicate higher levels of parenting stress. The PSI-SF has been used with both children and adolescents [e.g., 32, 33], and its scores have demonstrated good internal consistency (.70 to .90) and test–retest (.63 to .96) reliability in US samples [10]. The Korean version of the PSI-SF (K-PSI-SF) [25] has also demonstrated acceptable internal consistency, ranging from .76 to .91. Internal

Table 2 Youth and Caregiver Demographic Information

	Korea		US	
	Internalizing *n*	Externalizing *n*	Internalizing *n*	Externalizing *n*
Youth gender				
Boys	15 (62.5 %)	40 (85.1 %)	15 (62.5 %)	40 (85.1 %)
Girls	9 (37.5 %)	7 (14.9 %)	9 (37.5 %)	7 (14.9 %)
Youth ethnicity				
Korean national	24	47	0	0
Multiethnic	0	0	5	8
White	0	0	17	24
African American	0	0	0	6
Asian American	0	0	0	4
Latino/Hispanic	0	0	2	5
Caregiver highest level of education				
No high school degree	0 (.0 %)	0 (.0 %)	2 (8.3 %)	7 (14.9 %)
High school/GED degree	13 (54.2 %)	24 (51.1 %)	15 (62.5 %)	29 (61.7 %)
College degree or higher	7 (29.2 %)	21 (44.7 %)	7 (29.2 %)	10 (21.3 %)
Missing	4 (16.7 %)	2 (4.3 %)	0 (.0 %)	1 (2.1 %)

Table 3 Internal consistency (Cronbach's alpha) estimates for the Child Behavior Checklist and Parenting Stress Index subscales

	US ($n = 71$)			Korea ($n = 71$)		
	internalizing group	Externalizing group	Total US sample	Internalizing group	Externalizing group	Total Korean sample
CBCL—INT	.90	.90	.91	.83	.85	.85
CBCL—EXT	.92	.88	.89	.81	.89	.87
CBCL total	.92	.89	.91	.86	.92	.91
PSI—PD	.92	.80	.86	.87	.77	.82
PSI—DPCI	.87	.83	.84	.88	.79	.83
PSI—DC	.92	.85	.88	.73	.72	.73
PSI total	.95	.91	.93	.91	.87	.89

INT internalizing, *EXT* externalizing, *PD* parental distress, *DPCI* dysfunctional parent–child interaction, *DC* difficult child, *CBCL* Child Behavior Checklist, *PSI* Parenting Stress Index

consistency reliability estimates for each of the PSI scales used in this study are presented in Table 3. As with the CBCL, we used PSI raw scores for all analyses.

Procedure

Prior to any data collection, all participants and their legal guardians from both the US and Korean samples underwent their respective standardized Institutional Review Board-approved notice of privacy and consent procedures. The children' primary caregivers in both the US and Korean clinics completed the CBCL and PSI-SF and also participated in parent-based diagnostic interviews. Diagnoses in the US sample were determined based on parent-reported information from the Children's Interview for Psychiatric Syndromes, Parent Version (P-ChIPS) diagnostic interview [34]. US assessors consisted of Ph.D. level clinical child psychologists and doctoral students in clinical psychology. Diagnoses in the Korean sample were also determined based on information from parent-based clinical interviews, and were conducted by psychiatrists. In both samples, assessors were blind to the CBCL and PSI-SF when formulating diagnoses.

Data Preparation

Based on recommendations from the CBCL [9] and PSI-SF [10] manuals, (a) CBCL forms with more than eight missing items (not including items 2, 4, 56 h and 113) and PSI-SF forms with two or more missing items on any PSI-SF subscale were excluded; further, (b) missing PSI values were imputed using mean substitution [10] (relevant for only the 8.5 % of cases with missing data), and a value of "0" was imputed for missing values on the CBCL [9].

Data Analytic Approach

Independent *t* tests were used to compare Korean & US parents' scores on the CBCL and on the PSI-SF. Regression analyses were used to examine the amount of variance in CBCL scores explained by PSI-SF scores. When conducting regression analyses, we included an interaction terms to examine whether this relationship significantly differed as a function of culture (i.e., US versus Korea), and of primary disorder type (i.e., externalizing disorder versus internalizing disorder). We also conducted correlational analyses to examine the associations between the PSI Total Score and the CBCL Total, Internalizing and Externalizing Scale scores.

Results

Comparison Between Korean and US Mothers' Report of Parental Stress and Child Problems

Independent samples *t* tests were conducted to compare Korean (n = 71) and US (n = 71) mothers' reports of parental stress (based on scores from the PSI-SF total scale). The results revealed that Korean mothers ($M = 102.69$; $SD = 20.06$) reported significantly more parenting stress than US mothers ($M = 91.68$; $SD = 23.33$), $t = 3.02$, $p < .01$.

However, Korean mothers reported significantly fewer problems than US mothers on the CBCL Internalizing Problem scale ($t = 4.03$, $p < .001$), CBCL Internalizing Problem scale ($t = 2.23$, $p = .027$), and CBCL Total scale ($t = 4.65$, $p < .001$). Means and standard deviations for each group may be seen in Table 4.

Relationship Between Parenting Stress and Child Problem Behaviors

Regression analyses were conducted to examine the amount of variance in CBCL scores that was explained by PSI-SF scores. We first conducted a regression model including an interaction term to examine whether results

Table 4 Comparison between US (n = 71) and Korean (n = 71) mothers' reports on the Parenting Stress Index (PSI) and Child Behavior Checklist (CBCL)

	Korea *Mean (S.D.)*	US *Mean (S.D.)*	*t*	Sig.
PSI total	102.69 (20.06)	91.68 (23.33)	3.02	.003
CBCL-total	40.92 (21.60)	60.10 (3.23)	4.65	.000
CBCL-internalizing	10.73 (7.68)	17.25 (11.26)	4.03	.000
CBCL-externalizing	12.65 (8.73)	16.03 (9.33)	2.23	.027

*** $p < .005$, ** $p < .01$, * $p < .05$

differed across cultures (i.e., Korea versus the US). Results of this initial analysis revealed a significant interaction term ($t = 2.64$, $p < .01$), suggesting that the relationship between parenting stress and child problem behaviors differed significantly as a function of culture. We therefore conducted our subsequent analyses separately within our US and Korean samples to examine the relationship between parenting stress and child problem behaviors in each culture (as shown immediately below).

US Sample

The regression model based on the US sample (n = 71) revealed that scores on the PSI total scale were significantly related to scores on the CBCL total score ($F_{1,69} = 35.13$, $p < .001$). Specifically, 33.8 % of the variance in US mothers' CBCL total scores was explained by scores on the PSI total scale. We also examined whether this relationship differed as a function of youth primary disorder type (i.e., internalizing versus externalizing disordered youth). The interaction term related to youth primary disorder type was not significant, suggesting that this positive relationship between PSI Total Scale scores and CBCL Total Scale scores did not differ significantly across internalizing versus externalizing disordered youth. We also examined correlations between US mothers' scores on the PSI and the CBCL broad band scores and found that the PSI Total Scale scores correlated significantly with the CBCL Total Scale scores (r = .58), CBCL Internalizing Scale scores (r = .61), and CBCL Externalizing Scale scores (r = .40), p's < .01. Overall, these results revealed that parenting stress among US mothers was significantly related to their children's internalizing (i.e., anxiety/mood-related) and externalizing (i.e., disruptive/conduct-related) problems, as found in previous US-based studies.

Korean Sample

The regression model based on the Korean sample (n = 71) revealed that scores on the PSI total scale were *not* significantly related to scores on the CBCL total score ($F_{1,69} = 3.18$, $p = .08$). Only 4.4 % of the variance in Korean mothers' CBCL total scores was explained by scores on the PSI total scale. This relationship did not differ as a function of youth primary disorder type (i.e., internalizing versus externalizing disordered youth). Upon examining correlations between Korean mothers' scores on the PSI and the CBCL broad band scores, we also found that the PSI Total Scale scores did not correlate significantly with the CBCL Total Scale scores (r = .21, *ns*), CBCL Internalizing Scale scores (r = .12, *ns*), or CBCL Externalizing Scale scores (r = .14, *ns*). These results revealed that parenting stress among Korean mothers was not significantly related to their children's (internalizing or externalizing) problems—despite Korean parents reporting significantly more parenting stress and significantly fewer child problems relative to US mothers.

Discussion

The current study investigated cross-cultural differences in parenting stress, child problem behaviors and the relationship between these variables based on reports from US and Korean mothers of children with clinically-elevated emotional (i.e., anxiety/mood-related) and behavioral (i.e., disruptive/conduct-related) problems. Findings supported the presence of cross-cultural differences in parenting stress, childhood behavior problems and the relationship between them. Specifically, Korean mothers reported significantly higher parenting stress (on the PSI) and significantly lower child emotional and behavior problems (on the CBCL) compared to American mothers. In addition, nearly 34 % of the variance in CBCL total scores was explained by the PSI total scale scores based on the American mothers' reports; however, no relationship between child problems and parenting stress was found among the Korean mother sample. Positive correlations were also found between parenting stress and child problems for US mothers, but not for Korean mothers. Parenting stress was thus positively related to anxiety, mood and disruptive behavior problems in the US sample, but not in the Korean sample.

The significant relationship between child problems and parenting stress found among the US mothers is consistent with previous studies conducted in western cultures [23, 35–37]. However, the lack of a relationship found between child problems and parenting stress among the present (clinic-referred) Korean sample is not consistent with Kwon's recently finding (whereby she found a positive correlation between parenting stress and child problems among a group of typically developing Korean children) [20]. Kwon's sample however was a non-clinical sample of children, whereas the present sample was comprised of

clinic-referred youth with internalizing and externalizing disorders [20]. More research is needed to determine whether this difference in sample-type could account in part for these discrepant findings. For example, as discussed further below, there may be a greater tendency for Asian parents to under-report their children's problem behaviors, and importantly, this phenomenon may be present only when Asian children present with clinically-elevated problems.

Although no mediators were included in this study to explain the present set of findings, it is possible that the higher parenting stress found among Korean parents was due to limited social support, social stigma and society notions related to Confucianism (the principles historically underlying Korea's society). Korean society was greatly influenced by Confucianism dating back to the 16th century, which has imposed authoritarian parenting styles and a sense of collectivism among Korean families. It is well documented that these characteristics are closely related to heightened levels of parenting stress [3, 35]. Further, as adequate social support has been shown to serve as a buffer against parenting stress [38], lower levels of social support typically reported by Korean mothers [39] could also contribute to higher parenting stress among Korean mothers.

In terms of the lower behavior child problems among Korean children reported by their parents, it is important to note that negative social reactions and stigma related to raising children with disabilities is greater in Korea compared to the US [40]. These societal characteristics could thus affect parental reporting styles, and in particular, could have contributed to Korean mothers under-reporting their children's clinically-elevated problems (so as to avoid stigma and other negative societal responses). Rescorla et al. [29] also speculated that the differences in the CBCL total score that they found between countries may have been in part due to Asian parents being more reluctant to report on their children's clinically-elevated problems. They also added the rationale that Asian societies have been found to be typically more concerned with "saving face" than Western societies [41], potentially leading to the phenomenon of under-reporting their children's problems. Other explanations that may have led to lower reported child problems among the Korean parents include differences in parental tolerance as well as differences in how child behavior problems are perceived across cultures. More research is indeed needed to determine whether these (and/or other) factors are the main contributors to the different levels of reported child problems across these countries.

Based on the present findings, research and clinical implications are as follows. First, the present study highlights the need for additional informants to be included in assessment protocols to assure the validity of information gathered. Although parents often provide valuable information regarding the mental health status of their children [e.g., 9, 42], multi-informants assessment continues to be recommended to both increase the breadth of information available, as well as to allow for the integration of reports from various sources to obtain the most accurate picture of the child as possible [43].

When working with clients from different backgrounds and cultures, the present findings also suggest that additional time may be needed to be spent with caretakers prior to beginning assessments to discuss the importance of clinical information gathering—while assuaging concerns related to the mental health care process and its ramifications—in order to maximize the validity of reports provided by third-party reporters. When further examining differences in cross-cultural parent reporting styles of their children's emotional and behavioral problems, future studies would do well to examine whether under-reporting styles are reflective of Asian mothers in general (as opposed to only of Korean mothers). This would be relevant given that other Asian cultures have also been influenced by similar society factors such as Confucianism and increased negative societal stigma related to raising children with emotional and behavioral "disorders." However, not all Asian countries have been found to provide low reports of their children's behavior [29], further speaking to the need of further research in this area to better understand contributions of these cultural factors.

Based on the present findings that Korean mothers reported higher levels of parenting stress, interventions that directly address stress management and coping skills for distressed mothers may also be particularly useful and needed for parents experiences challenges related to raising children with emotional and/or behavioral problems. Finding effective ways to reduce parenting distress, such as via coping skills and stress management strategies, may help reduce and prevent the continuation of the negative cycle that exacerbates problems between parents and their children.

Limitations were also present in this study that warrant careful consideration. First, the present study was based on a cross-sectional design, which limited our ability to make inferences regarding directionality and causation of the examined variables. Our sample size was also relatively small due to our inclusionary criteria (i.e., mother-only reported data; matching across cultures on primary problem, age and gender). The diagnostic procedures for our Korean and US samples were also not identical, which could have introduced systematic differences between diagnostic data across samples. Related to the diagnostic procedures, we also lacked (diagnostic) severity data from both countries to rule out the possibility that Korean youth's CBCL scores were significantly lower due to actually having less severe problems. However, given that

a recent study has shown that a national sample of Korean and US children fell within one standard deviation apart from each other on the CBCL total score [29], and that both samples of our clinic-referred youth in the present study were matched on primary disorder type, our samples likely did not differ significantly (in actuality) on emotional and behavioral problems. Instead, the differences in CBCL scores across these cultural groups seem to have derived from differences in various societal factors affecting parental reports of child problems (as noted above). The unusual relationship (i.e., no correlation) between reported child problems and parenting stress among the Korean sample only also points to this as a likely explanation. Future studies that consider these issues to increase the generalizability of the present findings would enhance understanding in this area related to differences of parenting stress and child behavior problems across cultures.

Summary

The present study identified differences in the relationship between child problems and parenting stress as reported by US and Korean parents. Specifically, Korean mothers reported significantly higher parenting stress and significantly lower child behavior problems compared to US mothers. In addition, child behavioral problems were significantly related to levels of parenting stress among the US mothers' reports, but not among the Korean mothers' reports. These cross-cultural differences speak to the need for more research to be conducted in other non-US countries to better understand how child behavior problems are related to parenting stress. The present pattern of findings also suggests that Korean mothers may under-report their children's emotional and behavior problems, highlighting the importance of multi-informant assessment of emotional and behavioral problems in children. Due to increased globalization and multiculturalism in an increasingly growing number of nations across the world, it is likely that clinicians will need to work with families from a variety of different cultural backgrounds. Understanding the different ways in which parenting stress is experienced and reported across cultures as well as the differential ways in which parenting stress is related to child problems may enhance the effectiveness and abilities of clinicians to understand and work with their clients and families in need.

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