

Associations and Differences between Parenting Stress and Feelings of Guilt among Korean Mothers of Adolescents with Autism

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《 Abstract 》

One hundred forty mothers who raise adolescents with autism between the ages of 13 and 19 participated in this study. This study examined the following four parts: (1) Difference in parenting stress between the group of mothers who responded with feelings of guilt towards their adolescents with autism and the other group who expressed that they never felt feelings of guilt; (2) Among the mothers who responded “Yes” to the previous question, difference in parenting stress between the group reporting that feelings of guilt interfered with their ability to provide effective parenting for their children and the other group who responded the opposite; (3) Aspects of feelings of guilt; and (4) Relationships between parenting stress and three different levels of feelings of guilt. The independent samples *t* test, descriptive analyses, one-way ANOVA, multiple regression analysis, and post hoc analyses were used for data analysis. Statistically significant difference in parenting stress for the two groups for the first part was withdrawn in this study. There was not any statistically significant difference found between the two groups of mothers reporting that feelings of guilt ever / never interfered with their ability to provide effective parenting for their children. A few methods to reduce the mothers’ parenting stress and feelings of guilt were proposed in the discussion.

Key Words : adolescents with autism, Korean mothers, parenting stress, feelings of guilt

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I . INTRODUCTION

Autism is one of the disabilities where the prevalence has rapidly increased recently due to the growing awareness of the disorder in the U.S. (Centers for Disease Control and Prevention, 2007; Fombonne, 2003) as well as other countries. This awareness is not exceptional in the Republic of Korea. Autism has been categorized under Emotional Disturbance; however, it became an independent disability category in 2007 by the Special Education Law (Lee & Park, 2011). According to the special education annual report, the number of students with autism was estimated to be approximately 7,922 out of 85,020, which was the entire population of special education students (Ministry of Education, 2012). There has been an increase of around 3,000 students with autism in the past 3 years (4,647 out of 75,187, Ministry of Education, 2009). Autism becomes evident at the children's age of 3, exhibiting the following three major characteristics: social deficits, communication deficits, and repetitive/stereotyped patterns of behavior (American Psychiatric Association, 2000). Along with the trend, it is not difficult to expect that parents, especially, mothers of children/adolescents with autism may face difficulties in parenting.

Any parents who raise adolescents experience parenting stress in their lives. However, parents of children/adolescents with autism appear to deal with a lot of responsibilities and emotional pressures because of the specific characteristics of adolescents with autism such as restricted social, emotional, communicative competencies; uneven cognitive thinking; and challenging behavior (Davis & Carter, 2008; Hastings & Johnson, 2001). According to the existing research, the level of parenting stress for these mothers appears even higher than anybody else. Many studies have compared the level of parenting stress among mothers. Mothers who have children with disabilities responded to higher levels of parenting stress than mothers of children without disabilities (Randall & Parker, 1999; Weiss 2002). In particular, mothers of children with autism reported significantly higher level of parenting stress than mothers of children with other types of disabilities (Abbeduto, Seltzer, Shattuck, Krauss, Orsmond, & Murphy, 2004; Dominick, Davis, Lainhart, Tager-Flusberg, & Folstein, 2007; Matson & Rivet, 2007).

Although raising children of any age can be challenging and stressful in general, Sheras, Abidin, & Konold (1998) pointed out that the stress experienced by parents of teenagers deserves special consideration because of the developmental changes and the turmoil characteristics of adolescence. Moreover, as both mothers and children become older, mothers are concerned about their adolescents' future plan in terms of vocational training, community acceptance, or respite care for their child (Fong, Wilgosh, & Sobsey, 1993; Nova Scotia Partnership on Respite, Family Health & Well-Being, 2012). In addition, the vulnerable mental health condition (e.g., feelings of guilt, depression, anger, etc.) of mothers of adolescents with autism seems to contribute to the stress level of mothers, which was found in the accumulation of the chronic parenting stress trajectory over many years (Bromley, Hare, Davison, & Emerson, 2004; Higgins, Bailey, & Pearce, 2005; Schieve, Blumberg, Rice, Visser, & Boyle, 2007).

DeMyer and Goldberg (1983) discussed an interesting finding with 23 families of adolescents with autism. Mothers shared some of the impacts on their families while raising adolescents with autism. They struggled to maintain positive family relationships, family activities, and less social isolation (Harris, 1984; Harris & Powers, 1983; Norton & Drew, 1994). Mothers expressed that the time for family recreation activities was the greatest impact on them as their children became teenagers. They frequently ended up not going out together because of the difficulties of managing the adolescent's behavior in public places. This often made mothers feel guilty for not only their adolescents with autism but also for their siblings.

Feelings of guilt, which has proven to be associated with parenting stress of mothers who rear children with autism, was examined in some previous parenting stress studies. Mothers encounter various emotional reactions such as shock, shame, sadness, feelings of guilt, and anger when a child is diagnosed with a disability including autism (Lee, 2000). Lee (2000) specifically mentioned that guilt was the fourth stage of the mothers' emotional and psychological reaction. In the past, mothers were considered as a direct cause of autism by terms such as the "refrigerator mother" theory of autism. This theory stated that the mother's cold attitude caused the child's autism; however, this has proven not to be true these days (Rudy, 2011). Despite the falseness of the theory, mothers of adolescents with

autism still question themselves if they may have inadvertently passed their negative genetic factors to their child during pregnancy or contributed to their child's atypical developmental pattern (Siegel, 1997; Sullivan, 1997). They would also most likely have strong feelings such as guilt, worry, and jealousy towards their children in their lives in this study (Brodey, 2008).

Kuhn and Carter (2006) examined the relationships between maternal self-efficacy, maternal agency, and maternal feelings of guilt among 170 mothers of children with autism. Maternal agency refers to the mother's active playing role in relation to their child's development, by engaging in child-parent interactions (Kuhn & Carter, 2006). This can help identify strategies that reduce the child's maladaptive behaviors and maximize adaptive behaviors. 80% of mothers who participated in the study expressed that they have felt feelings of guilt and this was measured by an instrument called the Maternal Guilt Questionnaire (MGQ). 21% of the mothers responded "Yes" to the question of whether guilt has ever interfered with their ability in raising their child effectively. The researchers found that mothers' feelings of guilt were positively related to parenting stress ($r=.35$, $p<.001$). On the other hand, mothers' guilty feelings towards their child were negatively correlated with maternal efficacy. Additionally, Kuhn and Carter (2006) concluded that mothers with a high level of maternal agency reported less feelings of guilt.

In other studies, mothers of child with ASD(Autism Spectrum Disorder) expressed significantly elevated parenting stress level due to their feelings of guilt, parenting incompetence, and role restrictions(Coleman & Karraker, 1997; Hassal, Rose, & McDonald, 2005; Jackson & Huang, 2000; Scheel & Rieckmann, 1998). In particular, mothers expressed guilt about 'not doing enough' for their child through a personal interview. From a qualitative study that examined the parenting experience of 17 mothers in a family with a child with autism and 17 mothers with a typically developing child, strong associations were found between mothers' parenting stress, guilt, and depression (Meirsschaut, Roeyers, & Warreyn, 2010). The researchers emphasized the importance of interventions to alleviate these maternal emotional feelings. Lee (2013) investigated differences in parenting stress between the Korean mother groups who responded with feelings of guilt about "not doing enough" and the other group who expressed that they

never felt feelings of guilt. The study also examined the frequency and situations of feelings of guilt these mothers experienced in their daily lives. The participants were 160 mothers of children with autism whose child's age ranged from 3 to 12 years old. The results showed statistically significant differences in parenting stress between the two groups. Mothers also reported that they experienced these feelings everyday or almost every day when they felt overwhelmed by caring for their children.

Research studies that have been conducted in the Republic of Korea and other countries withdrawn similar findings that feelings of guilt affect parenting functioning and competence among mothers of children with autism (Coleman & Karraker, 1997; Hassall, et al., 2005; Jackson & Huang, 2000; Kuhn & Carter, 2006; Kwon, Choi, & Kim, 2008; Scheel & Rieckmann, 1998). That is to say, guilt makes mothers' ability to cope with their children's autism much more difficult.

In the past, a number of stressors of parenting stress have been speculated in the early studies, which included marital status and education level (Lee, 2011); the gender of the parents (father *vs.* mother) (Bristol, Gallagher, & Schopler, 1988; Hastings, 2003; Milgram & Atzil, 1988); family composition and income (Lee, 2011); age of the child (Bristol, 1987; Gray & Holden, 1992; Hastings, Kovshoff, Brown, Ward, Espinosa, & Remington, 2005; Lee, 2011; Tehee, Honan, & Hevey, 2009); and degree and type of social support (Bristol, 1984; Bristol, 1987; Bristol et al., 1988; Milgram & Atzil, 1988; Gray & Holden, 1992). However, it seems that relatively not many research studies have explored the difference and relationships between parenting stress and feelings guilt, especially for mothers of adolescents with autism. Thus, it would be worth investigating how feelings of guilt affect mothers' effective parenting for their adolescents with autism.

Therefore, the purpose of this study was folded into four different areas: (1) Difference in parenting stress between the group of mothers who responded with feelings of guilt towards their adolescents with autism and the other group who expressed that they never felt feelings of guilt; (2) Among the mothers who responded "Yes" to the previous question, difference in parenting stress between the group reporting that feelings of guilt interfered with their ability to provide effective parenting for their children and the other group who responded the opposite; (3) Aspects of

feelings of guilt; and (4) Relationships between parenting stress and three different levels of feelings of guilt. The four primary research questions were proposed in this study:

Research Question 1: Is there any significant difference in parenting stress between the group of mothers who had dealt with feelings of guilt about “not doing enough” in care of their adolescents with autism and the other group who reported never feeling guilty?

Research Question 2: Of those mothers who reported “Yes” to research question 1, is there any significant difference in parenting stress between the mother group responding that guilt interfered with their ability to provide effective parenting for their adolescents and the other group who responded the opposite?

Research Question 3: Among the mothers, who reported feelings of guilt, how frequent are these episodes of guilt and in what situations do those feelings arise?

Research Question 4: What are the relationships between the parenting stress and different levels of frequency of feelings of guilt that mothers experience daily?

II. METHOD

1. Participants

One hundred forty mothers who currently reside in South Korea and raise adolescents with autism participated in this study. The adolescents' ages ranged from 13 and 19. They have already been diagnosed with autism through professional evaluation tools, such as Gilliam Autism Rating Scale (GARS) (Gilliam, 1995), Childhood Autism Rating Scale (K-CARS) (Schopler, Reichler, & Renner, 1988), or Ewha-Check List for Autistic Children (E-

CLAC) (Language & Hearing Children Clinical Center of Ewha Women's University, 1990). For this study, Korean Version-CARS was administered to identify the severity of the adolescents' autism. Mothers who raise adolescents with autism that scored between 30 and 60 participated in this study (e.g., 30-37 mild to moderate autism, 38-60 severe autism, $N=140$).

The mean age of 140 mothers was 42.26 years ($SD=4.02$). Their age ranged from 32 to 58 years old. The mean of the duration of the mothers' marriage was 18.00 years ($SD=4.73$). Their duration of marriage ranged from 0 (e.g., single mother) to 32 years. <Table 1> demonstrates the demographic characteristics of mothers and adolescents with autism. 90.7% ($n=127$) of mothers were married. 77 out of 140 mothers (55%) held a Masters degree; 32.1% ($n=45$) of the mothers had a High School diploma; and the rest held a Post Secondary School degree ($n=18$, 12.9%). 69.3% ($n=97$) of the mothers were employed. 73.6% ($n=103$) of the children were boys and the rest were girls ($n=37$, 26.4%). 95% ($n=133$) of the mothers reported that they have other children who have no disabilities. Three mothers (2.1%) responded that they have another child with a disability excluding the child participating in this study.

<Table 1> *Demographic Characteristics of Mothers & Adolescents*
($N=140$)

	<i>N</i>	<i>%</i>
Mother's Marital Status		
Married	127	90.7
Divorced / Single / Widowed	13	9.3
Educational Level		
Graduate School	77	55.0
High School Diploma	45	32.1
Post Secondary School	18	12.9
Work Status		
Employed	97	69.3
Housewife	43	30.7
Sex of Child		
Boy	103	73.6
Girl	37	26.4
Child's Siblings		
Child's Sibling(s) without Disabilities	133	95
With no Other Siblings	4	2.9
Child's Sibling(s) with Disabilities	3	2.1

2. Procedures

A pilot study was conducted to examine whether the survey questionnaire packet was appropriate prior to the actual research. Time requirement, clarity of the survey questionnaire format, and other factors were speculated. Thirty Korean mothers and three special education professionals were the reviewers of the packet. As a result of the pilot study, some changes were made based on the participants' feedback. Some open-ended questions were changed into questions with multiple choices because this would make data coding clear and easier for later. A word, "adolescent with autism" was changed to "your child" because the reviews pointed out that this would reduce aversion to questionnaire packet to mothers. The measures were translated to Korean and in order to ensure the accuracy of the translated versions of the instrument, back translation was applied. This was done through utilizing a bilingual Korean-English speaker who translated the instrument from Korean to English, then back to Korean to examine whether or not the instrument was translated correctly and contained the original contextual meaning. This entire translation process was implemented by the same individual. Afterwards, several Korean special education professionals reviewed each instrument to evaluate and determine if the instrument was appropriate for use.

The school principals and the special education teachers who teach the adolescents with autism informed the Korean mothers of this study. Afterwards, the researcher either called or met the mothers in person to explain about the study. The mothers who consented to participate in the study became a part of the research. The mothers responded to the survey at their home or a place convenient for them. The survey packet took approximately 25 minutes to complete. The survey packets were distributed to the mothers of adolescents of autism who were enrolled in 27 special education schools throughout the cities in South Korea. The survey packets were collected in the following ways: collected right away at the site after the mothers finished the survey, returned by mail, or returned to either the special education teachers and given to the researcher.

In this study, the operational term of autism was defined as an autistic disorder, showing three major conditions: impairments in social interaction, impairments in communication, and stereotyped patterns of behavior, interests,

and activities (American Psychiatric Association, 2000).

3. Measures

1) *Stress Index for Parents of Adolescents (SIPA)* (Sheras et al., 1998)

The SIPA is a screening and diagnostic instrument to identify areas of stress in parent–adolescent interactions, allowing examination of the relationship of parenting stress to adolescent characteristics, parent characteristics, the quality of the adolescent–parent interactions, and stressful life circumstances. This tool contains 112 items. Parents respond to 90 items, using a 5–point rating scale ranging from *Strongly Agrees* to *Strongly Disagrees* and the rest of the items by circling *Yes* or *No*. Internal consistency coefficients of the tool ranged from .80 to .90. Test–retest reliability coefficients for the subscales range from .74 to .91. A high score is an indicator that mothers experienced high levels of parenting stress. Sheras et al (1998) stated that the raw score above 259 is clinically significant. Hence, it would be good for parents who fall into the category to receive professional support and service.

2) *Maternal Guilt Questionnaire (MGQ)* (Kuhn & Carter, 2006)

This questionnaire contains four questionnaires (Kuhn & Carter, 2006). These questionnaires ask whether they ever feel responsible or guilty when raising their child with autism (Question 1). If a mother responds “Yes” to experiencing feelings of guilt, the mother is asked again to answer the frequency (Question 2a with 4 choices) and specific situations (Question 2b with 13 choices) of their feelings of guilt. Question 2b is an open–ended question. With a Question 2c, mothers are inquired to answer if these feelings ever interfere with their ability to provide effective parenting for their child.

The author did not compute and report the reliability of the instrument, stating that the items of the instrument have a variety of formats (e.g., yes/no answer, choices, check list, and open–ended question). The total score for the test, MGQ, is 4. The score ranged from 0 to 4. Mothers who scored a high total score indicate that they are experiencing a high level of

feelings of guilt.

4. Method of Analysis

The data were analyzed using SPSS statistical package version 19.0, which involved descriptive and analytical analyses. For research question 1 and 2, the independent samples *t* test was conducted to compare Parenting Stress in “Yes–mother group” and “No–mother group”. For research question 3, descriptive analyses were used to obtain mothers’ response through an open–ended question. For the last question, a one–way ANOVA and multiple regression analysis were employed to explore the relationships between Parenting Stress and a factor, which are three different levels of frequency of feelings of guilt. As post hoc analyses, two additional tests were conducted to find contrast among factor level (three levels of frequency of feelings of guilt) means.

III. RESULTS

The mean parenting stress score of the all the mothers was 249.85 ($SD=31.15$). 49 out of 140 mothers (35%) scored SIPA score below 238, which was the normal range (e.g., SIPA score from 161 to 238). 42 (30%) mothers fell in the border line range (e.g., SIPA score from 239 to 258). The rest scored from 260 to 338 ($n=49$, 35%) and this was in clinically significant range. No mothers obtained score of 259 in this study.

<Table 2> shows the frequency and percent of Korean mothers responding to the MGQ pertaining to the question of whether they have felt feelings of guilt about “not doing enough” for their child with autism (Question 1). Within 140 participants, 85% of Korean mothers responded “Yes” (119 out of 140 mothers). The remaining 15% of the mothers responded “No” ($n=21$).

<Table 2> *Frequency and Percent of Mothers Response on Whether They Ever Felt Feelings of Guilt* (N=140)

	Mothers' Response	
	N	%
Yes-mother group	119	85
No-mother group	21	15

Note. Total Percent = 100

<Table 3> summarizes the results for the comparison between the Yes/No-mother groups. The independent samples *t* test was conducted to compare Parenting Stress in the “Yes-mother group” and the “No-mother group” for this analysis. Given a violation of Levene’s test for homogeneity of variance, $F(2, 138) = 2.83, p = .10$, the homogeneity of variance has been satisfied. The results of this test indicated that there was a statistically significant difference in parenting stress between the Yes-mother group and No-mother group ($t(138) = -3.40, p = .001$, two-tailed). The mean parenting stress score of the Yes-mother group was 253.48 with a *SD* 28.70 and No-mother group was 229.29 with a *SD* 36.92. This indicates that the Yes-mother group experienced significantly higher parenting stress than the No-mother group.

<Table 3> *Results for the Comparison between the Yes / No-Mother Groups on Whether They Ever Felt Feelings of Guilt* (N=140)

	Yes-mother group	No-mother group	<i>t</i>	<i>df</i>	<i>P</i>
Parenting Stress	253.48 (28.70)	229.29 (36.92)	-3.40***	138	.001

Note. *SD* appears in parentheses below the Mean
*** = $p < .001$

1. Comparison of Yes / No-Mother Groups on whether Feelings of Guilt Ever Interfered with Their Ability to Provide Effective Parenting

<Table 4> presents Korean mothers' responses on the question of whether feelings of guilt have interfered with effective parenting. In response to the question of whether or not feelings of guilt interfere with raising their adolescents, 59.7% of Korean mothers responded "Yes" (71 out of 119 mothers). The remaining mothers responded "No" ($n=48$, 40.3%).

<Table 4> *Frequency and Percent of Mothers' Response on Feelings of Guilt Interferes with Effective Parenting* (N=119)

	Mothers' Response	
	N	%
Yes-mother group	71	59.7
No-mother group	48	40.3

Note. Total Percent = 100

Only mothers who already responded to experience feelings of guilt in terms of raising their adolescents with autism were included. Thus, $N=119$

In <Table 5>, a summary of the results for the comparison between the Yes/No-mother groups can be found. The independent samples t test was also conducted to compare Parenting Stress in "Yes-mother group" and "No-mother group" for this analysis. Given a violation of Levene's test for homogeneity of variance, $F(2, 117) = .03, p = .86$, the homogeneity of variance has been satisfied. The results of this test indicated that there was not a statistically significant difference in parenting stress between the Yes-mother group and No-mother group ($t(117) = .48, p = .629$, two-tailed). The mean parenting stress score of the Yes-mother group was 254.63 with a SD 27.31 and No-mother group was 252.04 with a SD 25.93. Thus, it is hard to conclude that the Yes-mother group experienced significantly higher parenting stress than the No-mother group.

<Table 5> *Results for the Comparison between the Yes / No-Mother Groups on Whether Feelings of Guilt Interferes with Parenting (N=119)*

	<i>Yes-mother group</i>	<i>No-mother group</i>	<i>t</i>	<i>df</i>	<i>P</i>
<i>Parenting Stress</i>	254.63 (27.31)	252.04 (25.93)	.48	117	.629

Note. *SD* appears in parentheses below the Mean; Only mothers who already responded to experience feelings of guilt in terms of raising their adolescents with autism were included. Thus, *N*=119

2. Frequency of Feelings of Guilt

Data was analyzed through descriptive analyses (Table 6 & 7). Table 6 shows the frequency and percent of the Korean mothers' responses on the frequency of feelings of guilt (Question 2a) on the MGQ (Kuhn & Carter, 2006). Guilt, as measured by this instrument, stems from the feeling of not being effective enough in the context of raising their children. Of the mothers surveyed, 55.7% (*n*=78) expressed that they have feelings of guilt everyday/almost everyday and weekly; 21.4% (*n*=30) of the mothers experience these feelings approximately once a week; 7.9% (*n*=11) of the mothers stated that they feel guilt approximately once a month.

<Table 6> *Frequency and Percent of Korean Mothers' Response on the Frequency of Feelings of Guilt Item of the MGQ (N=119)*

	<i>Mothers' Response</i>	
	<i>N</i>	<i>%</i>
Everyday/Almost Everyday & Weekly	78	55.7
Monthly	30	21.4
Less than monthly	11	7.9

Note. Total Percent = 100

Only mothers who already responded to experience feelings of guilt in terms of raising their children with autism were included. Thus, *N*=119

3. Situations of Feelings of Guilt

The mothers were allowed to check as many situations that applied to them. The largest number of the mothers, 61.3% ($n=73$), checked “When I am feeling overwhelmed by caring for my child with autism (dealing with discipline, coordinating activities and services)”. The next common choice was with 47.1% ($n=56$) of the mothers answering “When I see a younger, typically developing child do something that my child cannot do.” 41.2% ($n=49$) of the mothers completing the survey checked “When I am feeling down and blue”. The fourth most commonly chosen answer with 34.5% ($n=41$) of the mothers was “Spending time with children who do not have autism”. Lastly, the mothers chose “When I am by myself ($n=35$, 29.4%)”. A summary for the remaining mothers’ responses can be found in <Table 7> in order”.

<Table 7> *Occasions of Feelings of Guilt of Korean Mothers’ Response*
($N=119$)

<i>Occasions of Feelings of Guilt</i>	<i>Mothers’ Response</i>	
	<i>N</i>	<i>%</i>
When I am feeling overwhelmed by caring for my child with autism (e.g., dealing with discipline, coordinating activities and services)	73	61.3
When I see a younger, typically developing child do something that my child cannot do	56	47.1
When I am feeling down and blue	49	41.2
Spending time with children who do not have autism	41	34.5
When I am by myself	35	29.4
Family gatherings	32	26.9
Family celebrations (e.g., birthdays, anniversaries, holidays)	31	26.1
Spending time with parents of children who do not have autism	27	22.7
When a family or friend offers me parenting advice	26	21.8
After I have had a conflict with my partner or family member	25	21
Vacations	22	18.5
When I am feeling angry	21	17.6
Other	20	16.8

Note. Total $f = 160$, Total $% = 100$; Only mothers who already responded to experience feelings of guilt in terms of raising their adolescents with autism were allowed to check these items ($N=119$). Mothers were asked to check multiple answers if they needed. Hence, number of total f may vary in this case

In addition to the responses aforementioned above, the mothers were allowed to write their additional situations on their answer sheets in the section of *Other*. The situations they described are as follows: “When I am sick and when I realize that I lose consistency in terms of rearing my child ($n=4$)”, “When I cannot afford to pay for rehabilitation treatment or other service fees for my child ($n=3$)”, “When I am swamped because of my own work so I am not able to take care of my child ($n=3$)”, “When I feel that the condition of my child would have been better if I had been able to provide earlier service and effective parenting ($n=2$)”, “When I see that my child feels bored ($n=2$)”, “When my child shows challenging behaviors in public places ($n=2$)”, “When my child has injuries due to self-injurious behavior”, “When I feel that I focus on myself more”, “When I find that other mothers take better care of their child to improve their child’s independent and adaptive functioning skills compared to what I do for my child”, “When my child’s siblings feel lonely”, and “When I am not able to provide my child with an the opportunity to hang out with other typically developing child”.

4. Relationships between Parenting Stress and Frequency of Feelings of Guilt

The relationships between Parenting Stress and Frequency of Feelings of Guilt among Korean mothers were examined through one-way ANOVA (Table 8) and multiple regression analysis (Table 9). Specifically, table 8 presents that regression model for Korean mothers’ parental stress by independent variable (e.g., frequency of feelings of guilt) which could explain approximately 4% of the total variance of the dependent variable (Adjusted R-squared=.04). The F ratio of the regression model was 3.42. Therefore, the model was statistically significant at the .05 level ($p=.036$). This implies that mothers experience high parenting stress due to feelings of guilt. This also indicates that the frequency of guilt among Korean mothers has significant impacts on the amount of their parenting stress.

<Table 8> *One-way ANOVA Summary for Parental Stress by Frequency of Feeling of Guilt* (N=119)

Source	df	F	P	n^2
Frequency of Guilt	2	3.42*	.036	.06
Error	116			

Note. R-squared=.06 (Adjusted R-squared=.04); n^2 = partial eta squared;
 * = $p \leq .05$.; Only mothers who already responded to experience feelings of guilt in terms of raising their children with autism were allowed to check this item (N=119)

<Table 9> shows the results of multiple regression coefficients of the same model which was conducted to examine if there are any significant relationship between Parenting Stress and two different levels of frequency of feelings of guilt. The result shows that “Everyday/Almost Everyday & Weekly group” was found to be significantly different from the other groups regarding Parenting Stress ($t(116) = -2.31, p = .023$). This indicates that mothers who reported their feelings of guilt “Everyday/Almost Everyday & Weekly” experienced more parenting stress than mothers who indicated that they felt guilty on a “Monthly” and “Less than Monthly” basis (Standardized Coefficients Beta = -.21).

On the other hand, the “Monthly” group were not found to have any significant differences compared to the others with regards to Parenting Stress ($t(116) = -1.64, p = .103$).

<Table 9> *Summary of Multiple Regression Coefficient for Parental Stress by Frequency of Feeling of Guilt* (N=119)

Variable	B	SE	Beta	t	P	n^2
Every day/Almost Every day) & Weekly	-13.85	6.01	-0.21	-2.31*	.023	.04
Monthly and Less than Monthly	-14.81	9.01	-0.15	-1.64	.103	

Note. R-squared=.06(Adjusted R-squared=.04); n^2 = partial eta squared;
 * = $p \leq .05$.

As it is proven that there are mean differences among the three levels of frequency of feeling of guilt, two individual contrasts were tested to figure out which level causes the differences in parental stress. In particular, it was interesting to test if parenting stress in “Everyday/Almost Everyday & Weekly” level is significantly different from the average parenting stress of the remaining two levels, “Monthly” level and “Less than Monthly” level (Contrast 1). Also, it was interesting to test if the average parenting stress in the two levels “Everyday/Almost Everyday & Weekly” level and “Monthly” level is significantly different from that of the “Less than Monthly” level (Contrast 2).

As post hoc analyses, two additional tests were conducted to find contrast among the factor levels (three levels of frequency of feeling of guilt) (Table 10 & 11). <Table 10> presents test results for two contrasts which shows that there is a significant difference between parenting stress in “Everyday/Almost Everyday & Weekly” level vs. the average parenting stress of “Monthly” level and “Less than Monthly” level ($F(1,116)=5.98$, $p=.016$) while there is no significant difference between the average parenting stress of “Everyday/Almost Everyday & Weekly” level and “Monthly” vs. “Less than Monthly” level ($F(1,116)=.78$, $p=.38$).

<Table 10> *Contrast Results of Factor Level Means for Parenting Stress by Frequency of Feeling of Guilt*
($N=119$)

Contrast	<i>Df</i>	<i>F</i>	<i>P</i>	<i>n</i> ²
Every day/Almost Every day & Weekly vs. Monthly, Less than Monthly	1	5.98*	.016	.05
Every day/Almost Every day & Weekly, Monthly vs. Less than Monthly	1	.78	.380	

Note. * = $p \leq .05$

Particularly, <Table 11> shows in contrast 1 that parenting stress In “Everyday/Almost Everyday & Weekly” level is significantly higher than the average parenting stress of the remaining two levels, “Monthly” and

“Less than Monthly”. (Value of Contrast=28.66, $t(116)=2.45$, $p=.016$). This indicates that the mothers responding to feeling guilty “Everyday/Almost Everyday & Weekly” deal with parenting stress more than the mothers who responded that they experience those feelings “Monthly” or “Less than Monthly”.

<Table 11> *Summary of Contrast Coefficient for Parenting Stress by Frequency of Feeling of Guilt* (N=119)

Contrast	Value of Contrast	SE	t	p
Every day/Almost Every day & Weekly vs. Monthly & Less than Monthly	28.66	11.72	2.45*	.016
Every day /Almost Every day & Weekly & Monthly vs. Less than Monthly	-15.78	17.91	.88	.380

Note. * = $p \leq .05$

IV. DISCUSSION

This study examined whether any significant differences exist in parenting stress among Korean mothers that is related to guilty feelings towards their adolescents with autism as well as the relationships between parenting stress and the frequency of feelings of guilt. In addition, some of the aspects of feelings of guilt of mothers were investigated.

The mean parenting stress score of Korean mothers was 249.85 ($SD=31.15$) and the number of mothers who scored within border line and clinically significant range was 91 (65%) out of 140 mothers. The mean parenting score was similar to the U.S. study. However, it was different from that of Lee’s study (2013) that has been conducted on Korean mothers who raise children with autism between the ages of 3 and 12. The mean parenting stress score was 249 (Keller & Honig, 2009) and 246 (Johnston, Hessel,

Blasey, Eliez, Erba, Dyer–Frieman, Glaser, & Reiss, 2003) from previous U.S. studies. However, Lee (2013) found that mean score was that 284.89 ($SD=36.07$) and the number of mothers who scored within clinically significant range was 129 out of 160 mothers (80.6%). This implies that mothers of children with autism experience different difficulties in parenting depending on their children's age and the cause of parenting stress may vary. Social support and services to reduce their level of stress would be imperative for these mothers. Bristol and Schopler (1984) stated that mothers with younger children deal with child developmental progression related issues such as shock and confusion with the initial diagnoses of autism, the chronic fatigue that results from the need for constant vigilance and supervision, child's sleeping pattern, limited diet, oblivious behavior to danger, tantrum, and so forth. Whereas, mothers with adolescents with autism have more subsequent concerns focusing on self-help training, family stability, and later family concerns focusing more directly on community acceptance issues and securing critical services.

In terms of mothers' educational level, an unequal sample distribution was found after data analysis. Although this was a randomly chosen sample, the majority of mothers finished graduate schools ($N=77$, 55%), whereas, only 18 mothers graduated post-secondary schools which included the community college or the university level. The mean parenting stress score of these 18 mothers was 254.53, which was a little bit higher than the mean parenting stress score of the entire Korean mothers in this study (e.g., 249.85). 14 out of 18 mothers responded that they have felt feelings of guilt towards their children. Among the mothers responded that they have felt feelings of guilt, 10 out of 14 reported that guilt has interfered with their effective parenting. Thus, these mothers' responses appeared to follow the flow of the majority of mothers, which means that they also experience high parenting stress and feelings of guilt in terms of raising their children.

With respect to parenting stress and mothers' feelings of guilt, Korean mothers reported that they have felt guilt (85%) and they feel these feelings everyday/almost everyday or weekly (77.1%). This was fairly consistent with that of existing studies. 80% of mothers in Kuhn and Carter's study (2006) and 83% of Korean mothers from Lee's study (2013) also responded that they have felt the feelings. 61.9% of the Korean mothers expressed that they deal with this everyday/almost everyday or weekly. Both Lee's

study (2013) and the present study found that mothers who responded to experience feelings of guilt deal with significantly higher parenting stress than other mothers who responded the opposite.

Among the mothers who responded to experiencing feelings of guilt, 59.7% of mothers agreed that these feelings interfered with effective parenting. From Lee's study (2013), 65.4% of the mothers expressed the same response and 21% of the U.S mothers responded the same (Kuhn & Carter, 2006). With regards to parental stress, no significant difference in parenting stress was found between the groups of mothers responding that guilt interfered with their ability to provide effective parenting for their child and the other group who reported the opposite in this study. This was inconsistent with Lee's study (2013).

Based on the mothers' responses regarding situations when their guilty feelings arise the most, mothers are seeking for help with their child's care, especially in disciplining their child and with coordinating services. Mothers need some information or professional training to better perceive their child's autism. It seems that it would be most beneficial to have someone such as professional helpers or family members who can support the mothers' emotional needs (e.g., feeling blue and lonely) to be available to offer support/service at an appropriate timing. Also, some mothers reported that they feel perplexed due to their adolescents' behavior especially when they are outside in public places or when they join family gatherings/celebrations. Thus, behavior management training/intervention, which decreases the child's challenging behavior or increase appropriate target behavior should be provided to the mothers. In addition, the mother's financial strain and neglect on additional children (siblings) seemed to be associated with feelings of guilt. Hence, a social system that reduces special education service fees and the development of a program that all family members can participate in would be useful to these mothers and families. The above mothers' responses were fairly similar to that of mothers who participated in the Lee's study (2013).

In regards to the relationship between parenting stress and feelings of guilt, mothers' high levels of parenting stress was correlated with feelings of guilt. This was also found in other research studies (Coleman & Karraker, 1997; Hassall, et al., 2005; Jackson & Huang, 2000; Kuhn & Carter, 2006;

Kwon, Choi, & Kim, 2008; Lee, 2011; Meirsschaut et al, 2010; Scheel & Rieckmann, 1998). Therefore, the above findings imply that Korean mothers need social support and services to better cope with their parenting stress and to find ways to vent out their guilty feelings towards their adolescents.

V. LIMITATIONS AND FUTURE STUDY

Although this study broadened perspectives concerning mothers' parenting stress and feelings of guilt, there were some limitations. The first limitation is that this study counted on mothers self-report. It would have been better if additional qualitative perspectives that contained interviews or observations of mother-adolescent interactions had been added in this study. Through this, a variety of factors could be considered. These factors included the following: child factors (e.g., child's maladaptive behavior, severity of autism, years elapsed since diagnosis, and response to treatment); mother factors (e.g., depression, parenting skills, and financial status); and environmental factors (e.g., helpful information associated with autism, intervention service condition, training/workshop program), and so forth. This should be considered for future study. Secondly, although the SIPA and MGQ have been used in the existing studies and were also well-known, it is unknown if the measurements were able to fully deliver the mothers' responses to the best capacity. The first question of the MGQ inquired those mothers if they ever felt guilty because they believed that they were "not doing as much" for their child with autism as they think they should be doing. This question may have made the mothers limit themselves when responding to the question. This should be kept in mind when administering the measurement in the future research study. Also, a better tool to measure the level of feelings of guilt for mothers/parents with autism should be designed and developed. Lastly, there was a large gap of sample distribution between the groups of mothers. This was a randomly selected sample. Hence, unequal number of sample distribution was found during data analysis (e.g., "Yes-mother group" was 119 and

“No-mother group” was 21).

VI. CONCLUSION

This study presented implications pertaining to Korean mothers of adolescents with autism who encounter significant challenges that increase parenting stress and feeling guilty towards their child. It appears that these mothers should find a way to cope with their adolescents' developmental changes through collaboration among family members, school, professional personnel, and special education.

VII. IMPLICATIONS FOR FUTURE PRACTICE

First of all, the findings of this study suggested that Korean mothers of adolescents with autism definitely need help. In order to better support Korean mothers of adolescents with autism, professionals who are in the field of special education, mental health, and social work should be able to link the mothers stress with their feelings of guilt. It would be easy for the professionals to be on the same page with the mothers if they have knowledge about this factor. Secondly, a future study regarding the reasons that cause mothers to feel guilty should be further investigated. Through this, mothers will be able to receive appropriate social support to reduce their guilt. For example, if support group, which is a ground to exchange useful information, and workshop training, to understand their child's autism, are considered to be good ways to alleviate mothers' feelings of guilt and parenting stress, they should be facilitated and encouraged. Lastly, a better instrument to reflect mothers' feelings of guilt should be designed and developed and this should be used for future practice. The instrument that shows the aspects of feelings of guilt and parenting stress for mothers who rear adolescents is indeed required.

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청소년기 자폐성 장애 자녀를 양육하는 어머니들의 양육스트레스의 차이와 양육스트레스와 죄책감과의 관계

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<요 약>

13세에서 19세의 청소년기 자폐성 장애자녀를 양육하는 140명의 한국 어머니가 본 연구에 참가하였다. 이 연구는 다음과 같은 네 부분을 살펴보았다. (1) 자녀를 양육하면서 “죄책감을 느낀 적이 있다”고 답한 어머니 그룹과 “없다”라고 답한 어머니 그룹간의 양육 스트레스의 차이, (2) “죄책감을 느낀 적이 있다”라고 답한 어머니들 중, 이러한 죄책감이 그들이 그들의 자녀를 양육하는데 방해가 되는지에 대한 질문에 “그렇다”고 답한 어머니들과 “아니다”라고 응답한 어머니 그룹간의 자녀 양육스트레스 차이, (3) 죄책감의 양상, 그리고 (4) 양육스트레스와 죄책감 빈도와의 관계를 살펴보았다. 데이터는 독립표본 t 검정 (independent samples t test), 기술통계(descriptive analyses), 일원배치 분산분석 (one-way ANOVA), 중다회귀분석(multiple regression analysis), 사후 분석(post hoc analyses)를 통해 분석되었다. 죄책감을 느낀다고 답한 어머니와 “아니다”로 응답한 어머니 그룹간에 통계적으로 유의한 자녀 양육 스트레스의 차이를 보였고, 죄책감이 효과적으로 자녀를 양육하는 데 방해가 된다고 대답한 어머니와 그렇지 않다라고 대답한 어머니 그룹 사이의 양육 스트레스는 통계적으로 무의미한 차이를 보였다. 어머니들의 죄책감과 자녀양육스트레스를 완화시키는데 도움이 되는 구체적 방법들이 논의되었다.

주제어 : 청소년기 자폐성 장애아동, 한국어머니, 자녀양육 스트레스, 죄책감

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