

Full Length Research Paper

Self-esteem and life satisfaction as mediators between parental bonding and psychological well-being in Japanese young adults

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Today, Japanese young adults are at increased risk for psychiatric disorders. Given that the presence of mental illness early in life increases the risk of further depressive episodes in later life and that psychiatric disorders are associated with college attrition rates and academic performance, investigating the mechanisms contributing to college students' mental health is crucial. This study explored the mediating roles of self-esteem and life satisfaction in the relationship between parental bonding and general mental health among Japanese young adults. Six-hundred-eighty-two undergraduates (358 women and 324 men) completed four measures: Parental Bonding Instrument, Rosenberg's Self-esteem Scale, Satisfaction with Life Scale, and the General Health Questionnaire. A structural equation modeling procedure was used to examine the model of best fit for parental bonding (care and over-protection), life satisfaction, self-esteem, and psychological well-being. Results showed that self-esteem fully mediated the relationship between parental bonding (parental care and parental over-protection) and general mental health. This study demonstrated the mechanism through which perceived parenting style influences Japanese young adults' psychological well-being. Implications for mental health professionals are addressed.

Key words: Parental bonding, life satisfaction, self-esteem, general mental health, Japanese college students.

INTRODUCTION

Obtaining an advanced educational degree has become crucial to success in professional and skilled occupations in the majority of developed societies (Unger, 1994). In Japan, a college education is not only vital for one's

future economic success but can also determine one's self worth and social position because of the well-accepted belief that a person's educational background is all-important (Tomoda et al., 2000). This expectation may result in stress and diminished mental health among Japanese young adults. In fact, researchers have identified psychiatric disorders, such as depression, as a major obstacle to achieving educational goals for many of today's college students. For instance, students with

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psychiatric disorders tend to have lower grades, more incomplete credits, and a higher premature dropout rate than do their peers without mental health problems (Deroma et al., 2009; Heiligenstein and Guenther, 1996; Porter, 1990). These findings are not surprising, given the symptoms of some psychological disorders, such as sleep disturbances, fatigue, and diminished interest in activities—all of which negatively impact academic performance.

College-bound Japanese young adults are at increased risk for psychiatric disorders. Iga (1981) suggested that the extremely high suicide rate among Japanese young adults may be explained by the intensely stressful preparation for the college entrance examination. In fact, Tomoda et al. (2000) found that more than half of their participants (college freshmen) had met the criteria for a major depressive episode within 12 months prior to their study. Given that the presence of mental illness early in life increases the risk of further depressive episodes in later life (Harrington et al., 1990; Kovacs et al., 1984), investigating the mechanisms that contribute to college students' mental health is crucial to ameliorate increasingly problematic college attrition rates and academic performance in Japan.

One significant predictor of psychological well-being is the perceived quality of the relationship between parent and child, or parental bonding (Parker et al., 1979; Gladstone and Parker, 2005; Neher, 1998). Typically, individuals who rate their parents high in affection, warmth, and caring, and low in over-control or over-protection, are better able to cope with stressful events and tend to have a lower occurrence of psychological disorders (Gladstone and Parker, 2005; Neher, 1998). In contrast, individuals who perceive their parents as lower on caring and higher on over-protection show a greater propensity for anorexia, bulimia, depression, suicidality, and other common emotional disorders such as depression and anxiety (Evans, 2003; Ferguson, 2006; Parker, 1983; Parker and Gladstone, 1996; Zemor and Rinholm, 1989). Researchers have found substantial evidence revealing that parental style can significantly affect college students' psychological well-being.

A review of the research exploring Japanese populations reveals similar results: perceived parental style is associated with psychiatric disorders. For example, Sato et al. (1997) found that individuals who view their parents as overprotective and less caring tended to have depressive disorders as adults. Further research (Sato et al., 1998) concluded that dysfunctional

parental styles—low care and high over-protection (or “affectionless control”)—increase the risk for lifetime depression. Research in this area, however, has not addressed the mechanism through which a dysfunctional parenting style impacts psychological well-being.

The present study evaluated two potential mechanisms: self-esteem and life satisfaction. Previous research has demonstrated that a low care, overprotective parenting style has been found to be harmful to children's self-esteem (Harvey and Byrd, 1998; Mori, 1999) and low self-esteem negatively impacts one's psychological well-being and overall life satisfaction (Abe, 2004; Emmons and Diener, 1985). Further, life satisfaction has been shown to negatively correlate with suicide deaths in Japan (Fujino et al., 2005) and other Asian countries (Kim and Kim, 2008). Life satisfaction is a term synonymous with happiness or subjective well-being, and is an evaluation by an individual that his or her life is positive. Hence, the purpose of this study was to examine the roles of self-esteem and life satisfaction, as mediator variables, on the relationship between dysfunctional parenting style and the psychological well-being of Japanese college students.

MATERIALS AND METHODS

Participants

A total of 682 undergraduate students (358 women and 324 men) attending four private universities in Japan participated in this study. Two of the universities were located in rural areas and two were located in metropolitan areas. Participants were between 18 and 40 years of age ($M = 19.7$); 96% were single and 4% were married. Ninety percent of participants' parents were still married, 6% were divorced, 2% were deceased, and the remaining 2% were separated. This study was approved by the Brigham Young University Institutional Review Board (IRB), and all participants were treated in accordance with the ethical guidelines of the American Psychological Association. Confidentiality and anonymity were maintained.

Translation

All materials used in this study were translated from English to Japanese by a professional translator. The Japanese versions of these materials were then back-translated from Japanese to English by a Japanese graduate student fluent in both English and Japanese. This student was not shown the original English version. Both the original materials and their reverse-translated counterparts (English versions) were evaluated by a bilingual psychologist to ensure that the translations were correct and that the content was

consistent. The analyses of the psychometric properties of the translated versions of the scales vis-à-vis the English versions are reported in the results section.

Predictor measure

The parental bonding instrument (PBI)

The PBI was developed by Parker et al. (1979) to assess the quality of early parental bonding. The instrument consists of 25 items with two subscales of care and over-protection. The care subscale was measured by 12 items, and the over-protection subscale was assessed by 13 items. Participants were asked to rate each parent separately on 21 items describing their mother's and father's behaviors toward them. Items were rated from strongly disagree (1) to strongly agree (7). Higher scores on the care subscale reflect participants' perceptions of their parents as warm and understanding while low scores indicate perceptions of parents as cold and rejecting. For the over-protection subscale, higher scores reflect parent over-control or intrusion, whereas low scores indicate independence of the individual or parental allowance of individual autonomy. For the purpose of this study, the over-protection subscale items were reversed and summed, with higher scores indicating less over-protection, while lower scores indicate greater over-protection. The PBI has been widely used by Japanese researchers. Cronbach's alphas on the care subscale and the over-protection subscale range from 0.88 to 0.92 and 0.83 to 0.90, respectively (Kitamura et al., 1998; Tanaka et al., 1998). For the present study, the internal consistencies of care and over-protection subscales were 0.89 and 0.83, respectively.

Mediator measures

The Rosenberg's Self-Esteem Scale (RSES; Rosenberg, 1965). The RSES is one of the most widely used and well-validated self-report measures of global self-esteem. The scale includes 10 items rated from strongly disagree (1) to strongly agree (5). Scores range from 10 to 50, with higher scores indicating higher self-esteem. The RSES has been widely used in Japan; Abe (2004) reported the Cronbach's alpha of .86. Similarly, the internal consistency of this measure for the present study was 0.84.

The satisfaction with life scale (SWLS)

The SWLS was developed by Diener et al. (1985) and is widely used in cross-cultural settings. It is a five-item scale assessing the cognitive-judgmental component of subjective well-being. Items were rated on a 7-point scale from strongly disagree (1) to strongly agree (7), with higher scores indicating higher life satisfaction. The reported Cronbach's alphas ranged from 0.79 to 0.89 (Pavot and Diener, 1993). The Cronbach's alpha for the current study was 0.74.

Outcome measure

The general health questionnaire-12 (GHQ-12)

The 12-item General Health Questionnaire has been extensively

used in a variety of settings across countries, and validity and reliability of GHQ-12 has been established (Doi and Minowa, 2003). It is a self-administered screening questionnaire used extensively to detect the prevalence of minor psychiatric disorders in non-psychiatric clinical settings. In particular, it is designed to assess respondents' general mental health over the last 4 weeks, and the scale items ask about levels of happiness, depression, anxiety, and sleep disturbance. The respondents of the present study were asked to evaluate their psychological well-being over the past month. Items were rated from never (1) to all the time (4). Higher scores indicate high levels of psychological strain. For the purpose of this study, the items were reversed and summed, with higher scores indicating less psychological strain, while lower scores indicate increased strain. The internal consistency for the current study was 0.80.

Procedure

Participants were informed by a female Japanese researcher that the purpose of this study was to investigate college students' perceptions of their relationship with their parents, as well as students' general health and attitudes toward themselves. They were informed that their participation was voluntary and anonymous and were asked to complete a questionnaire packet containing the PBI, the RSES, the SWLS, the GHQ-12, and a demographic questionnaire. All participants were further instructed that confidentiality of the data would be strictly maintained. The informed consent and questionnaire packet were distributed by the researcher, during the class period, and instructors were asked to leave the classroom to eliminate pressure to participate. The majority of participants completed the survey within 40 min.

RESULTS

Data analysis

A structural equation modeling (SEM) procedure was performed to examine the hypothesized model of best fit among parental bonding (care and over-protection), life satisfaction, self-esteem, and psychological well-being. The hypothesized model is presented in Figure 1. In this model, the observed variables are Mother-Care, Father-Care, Mother-Over-Protection, Father-Over-Protection, Self-Esteem, Life Satisfaction and General Mental Health, while latent variables are Parental Care and Parental Over-Protection. The SEM is the most appropriate statistical procedure because it is used to establish the nature and size of the influence of one or more presumed causes on one or more presumed effects (Keith, 1996). The analytic moment structures (AMOS) model-fitting program was conducted to analyze the data with the SEM procedure.

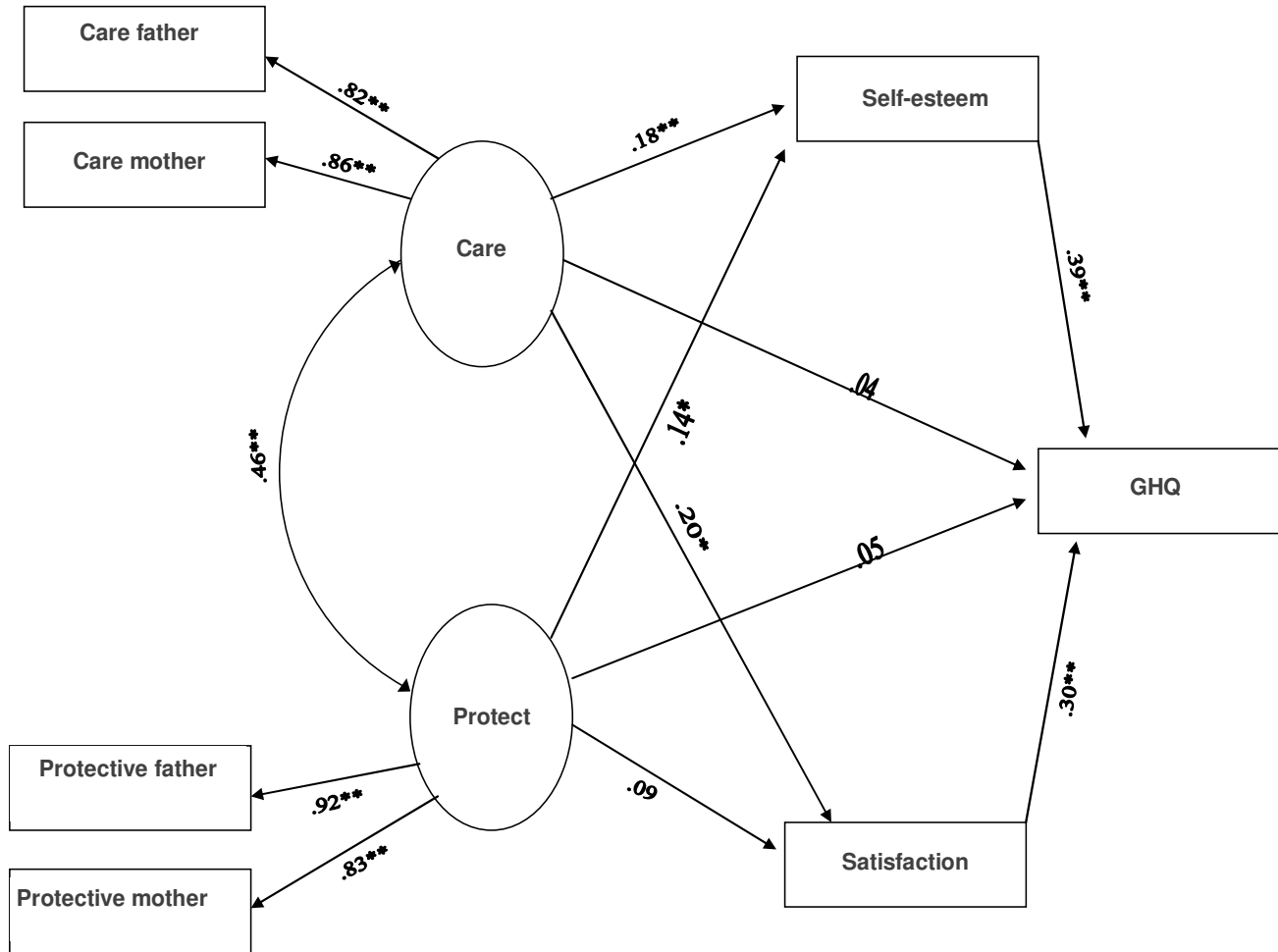


Figure 1. Mediated model. Values are standardized coefficients. *p < .01, ***p < .001.

Missing data

A total of 29 cases were found to have missing values, which is approximately 4% of the sample. Among these, 16 cases showed no systematic pattern with regard to missing data and were excluded from the analyses. The other thirteen cases also indicated some missing values. However, the patterns of missing values were systematic; that is, 13 participants indicated that a parent had died when they were children. Therefore, they could not complete the PBI, which asks respondents to rate their current relationship with each parent. To deal with this

systematic missing data, the maximum likelihood estimation procedure for missing data was used by AMOS, and these cases were included in the analysis of structural equation modeling. Therefore, the total number of participants was 666.

Preliminary analysis

Analyses were conducted on participants with complete data on all variables of interest. Missing data occurred due to time constraints or failure to complete more than

Table 1. Means, standard deviations, and intercorrelations among tested variables.

Variable	M		SD		1	2	3	4	5	6	7
	Male	Female	Male	Female							
Care-F	34.77	35.57	6.34	6.74	-	0.71	-0.32	-0.29	0.21	0.21	-0.22
Care-M	36.23	38.01	6.18	6.04		-	-0.37	-0.46	0.22	0.19	-0.19
Protect-F	26.62	27.58	5.45	5.90			-	0.76	-0.20	-0.16	0.19
Protect-M	27.43	28.10	5.58	5.84				--	-0.21	-0.14	0.18
RSES	31.20	30.40	7.52	7.38					--	0.48	-0.56
SWLS	16.90	17.16	5.64	5.29						--	-0.51
GHQ-12	28.69	29.72	5.92	5.96							--

Note. All correlations are significant at the 0.01 level. 1. Care-F = Care father; 2. Care-M = care mother; 3. Protect-F = overprotective father; 4. Protect-M = overprotective mother; 5. RSES = Rosenberg's Self-Esteem Scale; 6. SWLS = Satisfaction with Life Scale; 8. GHQ-12 = General Health Questionnaire-12.

10% of the items. A one-way multivariate analysis of variance (MANOVA) was performed to examine the gender differences on self-esteem, general mental health, and life satisfaction. A main effect for gender was found ($F [3, 678] = 3.30, p < .05, r = .015$). Follow-up univariate analyses were conducted and results indicated that female participants had higher GHQ-12 scores than did male participants, indicating greater psychological strain in female participants than in male participants ($F [1, 682] = 5.05, p < .05, r = .007$; mean scores for male and female were 28.69 and 29.72, respectively). There were no gender differences on life satisfaction or self-esteem measures. Table 1 summarizes the means, standard deviations, and intercorrelations for all scale scores.

Model's goodness of fit

Several indexes were used to show the overall fit of the hypothesized model and observed data, and the fit indexes were as follows: $\chi^2/df = 1.47, p = 0.20$, root mean square residual (RMSR) = 0.026, Bentler comparative fit index (CFI) = .999, and Tucker-Lewis Index (TLI) = 0.993. The p level for χ^2 was 0.20 for this data, indicating that there was no significant difference between the observed and the hypothesized model. Further, according to Arbuckle and Wothke (1997), χ^2/df in the range of 2 to 1 is considered to be an excellent fit. Although χ^2 is generally considered to be a highly sensitive and conservative statistic, this number indicates

that the hypothesized model was an excellent fit. RMSR is the average difference between observed and hypothesized model implied covariance. Arbuckle (1997) suggested that the smaller the RMSR, the better the fit. An RMSR of less than .05 is considered to be a close fit; therefore, the RMSR in the present data, 0.026, indicates a desirable fit. CFI is an index to show whether the data fits better to the hypothesized model than to a model in which variables have no relationship. A CFI close to 1 (goal is $> .9$) indicates the better fit. The CFI for this data is very close to 1 (= .999), suggesting that our model is highly acceptable in terms of fit. In addition, TLI in our data was also close to 1 (= 0.993). All indexes reviewed showed strong evidence that our hypothesized model fit excellently with the data from the present study and was appropriate for path analysis.

Interpretation of the structural equation modeling

Our hypothesized model examined the effects of self-esteem and life satisfaction on the relationship between parental bonding (perceived care and over-protection) and general mental health (Figure 1). In regard to perceived parental care, in line with our hypothesis, the path between perceived parental care and self-esteem and the path between parental care and life satisfaction were both positive and significant ($\beta = 0.18$ and $\beta = 0.20$, respectively). Further, the path between self-esteem and general mental health and the path between life satisfaction and general mental health were significantly

associated ($\beta = 0.39$ and $\beta = 0.30$, respectively). The path between parental care and general mental health, however, was not significant ($\beta = 0.04$). Perceived parental over-protection was significantly associated with self-esteem ($\beta = 0.14$), while the path between perceived parental over-protection and life satisfaction was not significant ($\beta = 0.09$).

We also examined whether the reduction of the direct effect of perceived parental care to general mental health due to the hypothesized mediator (satisfaction with life and self-esteem) was statistically significant. Sobel's test of significance of indirect effect was calculated. These analyses indicated that satisfaction with life and self-esteem fully mediated the relationship between parental care and general mental health ($p < .0001$ and $p < .001$, respectively).

DISCUSSION

The purpose of the present study was to investigate whether self-esteem and life satisfaction mediate between the quality of the parent-child relationship and the general mental health of Japanese young adults. Given that no study has investigated the mechanism through which a perceived dysfunctional parenting style in childhood impacts the psychological well-being of Japanese young adults; our findings contribute to current literature by revealing such a mechanism. Our results showed that self-esteem and life satisfaction fully mediated the relationship between parental care and general mental health of Japanese college students. That is, young adults who viewed their parents as warm and caring (on the caring subscale) reported higher self-esteem and satisfaction in life, both of which contributed to psychological well-being through direct pathways.

Research conducted in Western societies has reported that warm, loving and caring parenting practices in childhood helped to foster the development of healthy self-esteem in children and therefore increased their psychological well-being as young adults (Restifo et al., 2009). However, the current study is the first to demonstrate this mediating relationship among Japanese young adults. Our findings suggest that warm and caring parenting practices in a child's youth may be a universally crucial factor for individuals' psychological well-being later in life. On the other hand, the results of this study also suggest that poor parenting, such as low parental care and warmth, was significantly associated with low

self-esteem and life-satisfaction, which may lead to poor psychological well-being. A recent study by Lue et al. (2010) further showed the crucial role of such dysfunctional parenting on psychopathology for Taiwanese young adults. They found that the perceived criticism from parents, which is rather contradictory to warm and caring parenting, directly contributed to high levels of young adults' depression and was related indirectly to their antisocial behavior. Together, the study by Lu et al (2010) and our findings demonstrate the effect of poor parenting style on young adults' psychological well-being and more severe forms of psychological problems, such as depression and antisocial behavior.

Interestingly, individuals' perceptions of their parents' dysfunctional parenting style appear to be consistent across time. Lizardi and Klein (2005) showed long-term stability of ratings of parental bonding in depressed patients. In Japan, Nitta et al. (2008) tested the effects of negative cognition on PBI scores in depressed outpatients before and after treatment for depression. Their results suggest that despite the significant improvement in depressive symptoms, 8 weeks after the beginning of treatment there was no corresponding change in PBI scores; patients' PBI ratings remained stable. With this in mind, we suggest that mental health professionals and college counselors implement preventative interventions aimed to treat cognitive aspects of self-esteem among young adults, rather than seeking to change the negative cognition of PBI.

While self-esteem was a significant mediator between optimal bonding (high parental care/low over-protectiveness) and general mental health, life satisfaction did not mediate the relationship between over-protectiveness and general mental health. However, previous research has shown that individuals who perceived parents as punitive, rejecting, and controlling reported lower ratings of life satisfaction than those with a more positive experience with parents (Lamborn et al., 1991; Petrowski et al., 2009; Winefield et al., 1989). Additionally, over-protective, punitive parenting was related to interpersonal problems and lower mental health; individuals who recalled strict and rejective parents reported their own quarrelsome and resentful attitudes, with a desire to control or dominate, as well as difficulties trusting, supporting, and caring for others (Petrowski et al., 2009). In general, parents' over-protection and invasiveness were related to increased levels of anxiety and depression in college students (Love, 2008).

Studies conducted in Japan have also demonstrated the negative effects of over-protective parenting: Sato et al. (1997) found that high parental over-protectiveness predicted nonmelancholic depressive disorders among a clinical sample of adult men and women, while Kitamura et al. (1994) showed that high over-protectiveness predicted antenatal depression among 120 pregnant women. Our investigation of college students, however, did not support their findings; Japanese young adults' perceptions of their parents as over-protective were not associated with diminished mental health. Interestingly, Petrowski et al. (2009) found that the age of participants was associated with ratings of parental rearing: older participants rated their parents as less emotionally warm and more rejecting than did younger participants. The authors suggest that changes in parenting and behavior in child rearing, over time, might explain the age effect. In addition, the culture in which the participants are reared should also be considered. It is also notable that Sato et al. (1997) used a clinical sample while we investigated a non-clinical sample of Japanese college students. It appears that additional research is needed in this area.

Limitations of this study should be considered. Self-report questionnaires are subject to bias and the accuracy of the reports cannot be verified. Additionally, research on attachment has focused largely on the impact of parenting on the attachment relationship; however, attachments are bi-directional in that children's characteristics, such as temperament and personality, interact with parents' characteristics to influence the relationship (Love, 2008). Caution should also be used when generalizing the findings of this study to samples other than Japanese college students. Additional research should clarify whether these results are unique to this sample, as well as identify additional mechanisms that may impact the general mental health of Japanese college students.

In conclusion, mental health professionals seeking to improve the general psychological well-being of Japanese young adults may use the results of this study to consider evidence-based interventions aimed at increasing self-esteem and life satisfaction.

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