Peer Attachment, Perceived Parenting Style, Self-concept, and School Adjustments in Adolescents with Chronic Illness

Jeong-Ah Ahn, PhD, RN, Sunhee Lee, PhD, RN

1 College of Nursing, Institute of Nursing Science, Ajou University, Suwon, South Korea
2 College of Nursing, The Catholic University of Korea, Seoul, South Korea

Summary

Purpose: The purpose of this study was to identify how peer attachment and parenting style differentially affect self-concept and school adjustment in adolescents with and without chronic illness.

Methods: A cross-sectional study using multiple group analysis on the Korean panel data was used. A nationwide stratified multistage cluster sampling method was used and the survey was conducted in 2013 on 2,092 first-year middle school students in Korea. We used standardized instruments by the National Youth Policy Institute to measure peer attachment, parenting style, self-concept, and school adjustment. Multiple-group structural equation modeling was used to evaluate the difference of relations for peer attachment, parenting style, self-concept, and school adjustment variable between adolescents with chronic illness and those without chronic illness.

Results: The model fit of a multiple-group structural equation modeling was good. The difference of the path from negative parenting style to self-concept between the two groups was significant, and a significant between-group difference in the overall path was found. This indicated that self-concept in adolescents with chronic illness was more negatively affected by negative parenting style than in adolescents without chronic illness.

Conclusions: Healthcare providers can promote the process of school adjustment in several ways, such as discussing this issue directly with adolescent patients, along with their parents and peers, examining how the organization and content of the treatment can be modified according to the adolescents’ school life.

Introduction

Early detection, diagnosis, and powerful methods for treating and managing pediatric onset chronic illness have improved outcomes for children and adolescents. Currently, the majority of patients with pediatric onset chronic illness, such as congenital heart disease, cancer, and type I diabetes, are expected to live well into adulthood [1]. Consequently, millions of children, adolescents, and their families are now living with significant stress, which is associated with risk for emotional and behavioral problems, as well as their chronic illness and symptoms [2]. Adolescents with chronic illnesses are more likely to have a lower level of emotional well-being than their healthy peers do [3]. They are at risk of developing emotional and behavioral problems in a generic fashion [4]. Some parents and their adolescents with chronic illness are overwhelmed by the problems brought by the health condition, while others adequately cope with the situation. A study undertaken to identify patterns of peer and family relationships that are primary concerns for adolescents with chronic disabilities reported that adolescents with spina bifida or cerebral palsy demonstrated good relationships with their parents, although most parents tended to be overprotective [5].

Adolescence is a period when individuals are particularly concerned about their sense of self [6]. Adolescents can become increasingly differentiated by their own self-concept [7]. However, adolescents living with chronic illness must meet the demands of becoming more self-sufficient in the management of their symptoms [8] because disease management is often complex and requires numerous methods of treatment over long periods of time [9]. The ability to maintain friendship and gain self-concept and independency from parents, which is typical during adolescence,
may be disrupted as adolescents begin to assume greater responsibility for their disease management [10]. Peer relationship or attachment is also an important component to the adolescent with chronic illness [5]. However, the development of peer attachment and self-concept issues may be disrupted and in conflict with the demands of complex chronic illness management or disability [11]. Previous studies on peer attachment, parenting style, or self-concept in school adjustment have mainly focused on healthy adolescents [6,7] and have not considered the presence or absence of chronic illness.

Self-concept may be defined as how one thinks and feels about oneself [12]. Self-concept is strongly associated with school adjustment [13], which is defined as the individual’s level of school bonding, friend’s school bonds, and avoidance of school-related misbehavior in a broad sense, beyond academic performance [14]. Attachment is generally defined as an enduring affectional bond of substantial intensity for psychological fitness [15]. With the increasing amount of time spent at school, early adolescents experience the expansion of attachment relationship, which was centered on parents and family, to the attachment with school friends. Peer acceptance and attachment provide adolescents with reassurance and a sense of security during exploration of a new environment, and often lead them to a higher level of self-concept [13].

Parenting style involves the emotional climate and psychological constructs involved in the strategies used to raise children [16]. It is an essential and influential factor in adolescents' development. For instance, parenting style has been linked to psychological adjustment, social development, academic achievement, and behavioral problems [6]. Positive parenting style is related to self-concept and school performance in adolescents [17]. For example, adolescents fostered in an environment of parental acceptance, dialogue, and affection have a strong sense of self-confidence [17]. In contrast, parental coercive control reduces adolescent self-concept [18]. Therefore, the purpose of this study was to identify how peer attachment and parenting style differentially affect self-concept and school adjustment in adolescents with and without chronic illness.

Methods

Study design

This study was a multiple group analysis of the first wave data of Korean Children and Youth Panel Survey (KCYPS), which was a nationally representative survey collected by the National Youth Policy Institute (NYPI). The survey was conducted in 2013 for first-year middle school students in South Korea [19]. In this study report, the adolescents-reported data were drawn from KCYPS based on the four domains of peer attachment, parenting style, self-concept, and school adjustment.

We conducted a descriptive and exploratory study to compare peer attachment, parenting style, self-concept, and school adjustment between adolescents with and without chronic illness. To compare the impacts of peer attachment and parenting style on self-concept and impact of self-concept on school adjustment between adolescents with and without chronic illness, two-group structural equation models were introduced.

Data collection and sample

KCYPS has been conducted using a nationwide stratified multistage cluster sampling method. For the sampling procedure, the Korean nation was divided into 27 areas according to regional nearness; 95 sample schools were selected using probability proportion to size for systematic sampling from the 27 areas. Then, 95 classes were extracted randomly from 95 sample schools. The survey was conducted in 2013 on 2,378 first-year middle school students in Korea [19]. We included 2,092 samples in this study after excluding 286 samples due to missing data.

Measurements

In the survey, adolescents completed a self-report questionnaire including standardized instruments to measure peer attachment, parenting style, self-concept, and school adjustment, which were collected using a 4-point Likert scale ranging from 1 (strongly disagree or not at all) to 4 (strongly agree or very much).

To measure peer attachment, the Peer Attachment Scale [19], a revision of the Inventory of Parent and Peer Attachment, was used. It has two subscales of communication and trust with friends, which consisted of 3 items each. The subscale scores range from three to twelve, with higher scores indicating higher levels of peer attachment. The scale has documented construct validity with a Cronbach’s α of .82 [19]. Internal reliability of the scale was also adequate in a sample of this study (α = .90).

The Parenting Behavior Inventory for assessing Korean adolescents’ perceived parenting style was developed by NYPI [19] and consisted of 18 items. Among the subscales, affection and rational explanation affect children positively [17] while inconsistency, excessive expectation, and over-involvement affect children negatively [18]. Therefore, affection (3 items) and rational explanation (4 items) were categorized as positive parenting style while inconsistency (3 items), excessive expectation (4 items), and over-involvement (4 items) were categorized as negative parenting style. The scores of affection and inconsistency range from 3 to 12, and the scores of rational explanation, excessive expectation, and over-involvement range from 4 to 16. Higher scale scores indicate a greater recognition of the parenting style in each domain. The scale has documented construct validity and criterion validity with a Cronbach’s α of .83 [19]. Internal reliabilities of the scales of positive parenting style and negative parenting style for this study were adequate (α = .87 & α = .86, respectively).

Self-identity and self-esteem were included as measurements of self-concept. The measurement for self-identity included eight items and was revised by NYPI from the original version by Oh [19]. The scale scores range from 8 to 32, and a higher score indicates a higher level of self-identity. The scale has documented construct validity with a Cronbach’s α of .93 [19]. Internal reliability of the scale for this study was adequate (α = .74). Self-esteem was measured by the Self-esteem Scale revised by NYPI from the original version by Rosenberg and consisted of 10 items [19]. The scale scores range from 10 to 40, and a higher score indicates a higher level of self-esteem. The scale has documented construct validity with a Cronbach’s α of .85 [19]. Internal reliability of the scale for this study was also adequate (α = .84). Higher scores of self-identity and self-esteem indicate a higher level of positive self-concept.

Finally, school adjustment was measured by the School Life Adjustment Scale developed by Min [19]. The scale consisted of four subscales and 20 items (5 in each subscale) including learning activities, school rules, relationship with friends, and relationship with teacher. The subscale scores range from 5 to 20, with higher scores indicating higher levels of school adjustment in each area. The scale has documented construct validity with a Cronbach’s α of .82 [19]. Internal reliability of the scale for this study was adequate (α = .90).

Ethical considerations

This multiple group analysis on panel data was approved by the institutional review board of the Catholic University of Korea (IRB No. MIRB-0E135-001) in 2016 prior to initiating the study.
Data analysis

Data were analyzed using SPSS 20.0 (IBM Corp., Armonk, NY, USA) and AMOS 20.0 (IBM Corp., Armonk, NY, USA) software. Descriptive statistics were used to explain participants’ general characteristics, peer attachment, parenting style, self-concept, and school adjustment. Multiple-group structural equation modeling was used to evaluate the difference of linear structural relations for the variables peer attachment, parenting style, self-concept, and school adjustment between adolescents with chronic illness and those without chronic illness. The maximum likelihood estimation method was used for structural equation modeling to determine model specification, model estimation, and goodness-of-fit assessment.

Results

General characteristics

The general characteristics of adolescents with and without chronic illness are presented in Table 1. All participants were 14 years old (first-year middle school students). In the group with chronic illness, 93 were boys (65.5%) and 49 were girls (34.5%); and in the group without chronic illness 1,005 were boys (51.5%) and 945 were girls (48.5%). Participants in the chronic illness group had a number of difficulties to cope with related to the frustration and stress associated with their disease in daily life: 54.9% had rhinitis, 28.9% had atopic dermatitis, and 23.2% had obesity. In Table 2, the scores of observed variables in adolescents with chronic illness are summarized.

As shown in Table 2, the means of the observed variables in both groups with and without chronic illness (n = 1,950) were 28.9% had atopic dermatitis, and 23.2% had obesity. In Table 2, the scores of observed variables in adolescents without chronic illness (n = 2,895) were 94.5% had rhinitis, 95.1% had atopic dermatitis, and 100% had obesity. In Table 2, the means of the observed variables in adolescents without chronic illness (n = 1,950) were 54.9% had rhinitis, 28.9% had atopic dermatitis, and 23.2% had obesity. In Table 2, the scores of observed variables in adolescents with chronic illness are summarized.

Effect of peer attachment, perceived parenting style, and self-concept on school adjustment of adolescents

To investigate the effects of peer attachment, perceived parenting style, and self-concept on school adjustment of adolescents, we examined the parameter estimates of the structural model of adolescents with and without chronic illness (Table 3). The effects of peer attachment (β = .48, p < .001), positive parenting style (β = .39, p < .001), and negative parenting style (β = -.35, p < .001) on self-concept were significant for adolescents with chronic illness. The effects of peer attachment (β = .43, p < .001) and positive parenting style (β = .40, p < .001), and negative parenting style (β = -.18, p < .001) on self-concept were significant for adolescents without chronic illness. Additionally, the effect of self-concept was significant (p < .001) on school adjustment in both groups with and without chronic illness (β = .78 & .79, respectively).

Multiple-group structural equation modeling was specified to test the pathways as shown in Figure 1. The model fit was good (χ² = 1051.63, df = 116, normed fit index = .913, Tucker Lewis index = .876, comparative fit index = .921, root mean square error of approximation = .062), which indicated that the model was adequate. The estimated path coefficients indicated that peer attachment and parenting style were significantly related to better adolescent self-concept both directly and indirectly through more positive adolescent school adjustment.

We found that negative parenting style had different effects on the outcome variables based on the existence of chronic illness (Table 4). The difference in the path from negative parenting style to self-concept between the two groups was significant (p = .008). This indicated that self-concept in adolescents with chronic illness was more negatively affected by negative parenting style than in adolescents without chronic illness.

Discussion

This study showed that parenting style influenced self-concept and school adjustment in adolescents with chronic illness as well as for adolescents without chronic illness. In addition, there was a...
difference in the path from negative parenting style to self-concept across two groups. Self-concept in adolescents with chronic illness was more strongly and negatively affected by negative parenting style than was in healthy adolescents. The primary responsibility for managing the chronic illness of children rests with parents. The parents should administer medication and medical intervention as well as developmentally appropriate play and social experience [20]. The literature suggested that adaptation to illness seems to be related to family characteristics rather than illness characteristics [20]. It makes chronically ill children depend on their parents without autonomy [21]. Also, adolescents with chronic illness began to feel guilty after recognizing their parents’ suffering from their chronic illness [22]. Therefore, we assert that the adolescents with chronic illness might be more affected by negative parenting style than would the adolescents without chronic illness. However, parents of adolescents with chronic illness may perceive their children as being more vulnerable and tend to over-protect their children and over-involve in their children’s lives, because these parents perceived that their children required a higher level of vigilance than necessary [23]. Parents of adolescents with chronic illness tend to be over-involved in their children’s school lives. Over-involvement included negative parental style, and more negatively affected self-concept and school adjustment in adolescents with chronic illness than in healthy adolescents in this study. Consistent with this study, Tiffany et al [24] insisted that excessive parental control and protection of adolescents with chronic illness are related to an increase in negative psychological symptoms in these adolescents. Therefore, nurses can encourage parents to increase positive parenting behaviors such as affection and rational explanation, while decrease negative parenting behaviors such as inconsistency, excessive expectation and over-involvement.

This study also showed that peer attachment affected self-concept, and self-concept affects school adjustment without group differences between adolescents with and without chronic illness. It is with peers that adolescents exchange thoughts and feelings, and these greatly contribute to the formation of self-concept [11]. Moreover, peer-support is consistently identified as an important factor for school adjustment of adolescents. Higher peer-support predicts fewer adjustment problems, while peer-rejection is associated with increased adjustment problems [25]. Adolescents with chronic illness are no exception to this rule, so it will be both important and helpful for them to encourage all forms of socialization with peers. Lewis et al [26] showed that a peer support program for adolescents with chronic illness improved their resilience. Obviously, improvements in peer relationships are a benefit for adolescents with chronic illness in the school environment [27]. Therefore, having the opportunity for open discussion will be helpful for adolescents with chronic illness [28]. Additionally, nurses can recommend that the adolescent join formal and informal peer groups such as sports clubs, music associations, and scout organizations.

Table 4 Comparison of Differences in Adolescents With and Without Chronic Illness.

<table>
<thead>
<tr>
<th>Paths</th>
<th>χ²</th>
<th>df</th>
<th>CR</th>
<th>Δχ²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Default model</td>
<td>1,051.63</td>
<td>116</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Peer attachment → self-concept</td>
<td>1.60</td>
<td>1</td>
<td>-1.214</td>
<td>1.051.03</td>
<td>.206</td>
</tr>
<tr>
<td>Positive parenting style → self-concept</td>
<td>0.95</td>
<td>1</td>
<td>-0.929</td>
<td>1.050.68</td>
<td>.330</td>
</tr>
<tr>
<td>Negative parenting style → self-concept</td>
<td>7.10</td>
<td>1</td>
<td>2.493</td>
<td>1.044.53</td>
<td>.008</td>
</tr>
<tr>
<td>Self-concept → school adjustment</td>
<td>2.81</td>
<td>1</td>
<td>1.936</td>
<td>1.048.82</td>
<td>.094</td>
</tr>
<tr>
<td>All constrs</td>
<td>10.06</td>
<td>4</td>
<td>1.041.57</td>
<td>.039</td>
<td></td>
</tr>
</tbody>
</table>

Note. CR = critical ratio.
The role of healthcare providers can be catalytic for successful ongoing management of adolescents who suffer not only from a single chronic disease but also from complex developmental challenges in daily social life, mostly at school. The nurse’s role is to support, inform, and educate with regard to the care and treatment of the adolescents with chronic illness, and help them and their parents adapt to the circumstances associated with the illness [29]. They can promote the process of school adjustment in several ways, such as discussing the issue of school life and adjustment directly with the adolescents, along with their parents and peers, examining how the organization and content of the treatment can be modified according to the adolescents’ school life. An important direction for future studies is to develop and evaluate interventions that improve the ability of adolescents with a wide range of chronic illnesses to adjust to school and familial lives and to deal with their chronic illnesses.

Limitations

As this was a panel data analysis, the data were collected by self-report questionnaires. The data on chronic illness were also collected not by chart reviews but by self-report questionnaires, possibly limiting the accuracy of our data on chronic illness. Further research is needed to collect data by chart reviews and explore the differences of the relationships among peer attachment, parenting style, self-concept, and school adjustment depending on the type of chronic illness.

Conclusion

In this study, parenting style influenced self-concept and school adjustment in adolescents with chronic illness as well as for adolescents without chronic illness. Also, self-concept in adolescents with chronic illness was more strongly negatively affected by negative parenting style than were in healthy adolescents. It is vital that healthcare providers encourage parents to increase positive parenting behaviors such as affection and rational explanation, while decrease negative parenting behaviors such as inconsistency, excessive criticism and over-involvement. Moreover, continued efforts should be taken to develop and evaluate interventions to improve the ability of adolescents with a wide range of chronic illnesses to adjust to school and familial lives and to deal with their chronic illnesses.

Conflicts of interest

The authors declared no conflict of interest.

References


