Association of Peer Support and Parent-Child Interaction with Subjective Well-Being through the Mediation of Self-Efficacy Beliefs in Students with Hearing Impairment

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Abstract

Background: Subjective well-being is considered as one of the most important indicators of adolescents’ health. The present study aimed to investigate the mediating role of self-efficacy beliefs in the causal relationships of peer support and parent-child interaction with the subjective well-being of students with hearing impairment in Kermanshah city in 2019.

Methods: The study was a descriptive correlation performed employing path analysis. The statistical population comprised 268 girl students with hearing impairment in Kermanshah city, 146 of which were selected as the sample using stratified random sampling. In the present research, we utilized Ryff’s Psychological Well-Being Scales, the Peer Support Questionnaire, Child-Parent Relationship Scale, and Self-Efficacy Beliefs Questionnaire.

Results: The mean±SD of subjective well-being, peer support, parent-child interaction, and self-efficacy beliefs were respectively 53.10±23.86, 47.72±13.51, 101.20±23.78, and 43.20±12.96. A direct and positive association was observed between peer support and subjective well-being (β=0.167, P=0.0001), peer support and self-efficacy beliefs (β=0.398, P=0.0001), parent-child interaction and self-efficacy beliefs (β=0.249, P=0.0001), and between self-efficacy beliefs and subjective well-being (β=0.429, P=0.0001). The results of path analysis indicated that self-efficacy beliefs played a mediating role in the association between peer support (β=0.177, P=0.0001) and parent-child interaction (β=0.193, P=0.0001) with subjective well-being.

Conclusion: According to our results, the proposed model was of good efficiency. Accordingly, by strengthening and improving peer support relationships, parent-child interaction and self-efficacy beliefs can improve the subjective well-being of deaf adolescents.

Keywords: Hearing loss, Health, Parent-child relations, Self-efficacy, Culture, Students


1. Introduction

Hearing is one of the most important sensory abilities whose impairment disrupts the process of human adaptation to the environment (1). According to statistics, 1.5 million Iranians are either deaf or hearing-impaired. Out of every 1000 children born, two are born with serious hearing problems (2). According to the report of the Ministry of Health and Medical Education in 2011, 1000 children are annually born with hearing disorders in Iran. About 5% of adolescents in industrialized countries suffer from at least minimal degrees of hearing problems (3, 4).

Based on Erikson’s theoretical model (5), deaf adolescents face problems in their developmental stages when dealing with personal, familial, and social challenges. Numerous studies have reported that these adolescents may have more problems compared to their normal peers in developing (reliable) friendship and intimacy, self-control, autonomy, as well as demonstrating initiative and confidence in their abilities (self-esteem) (6, 7).

Deaf children need particular attention to learn and be prepared for participating in social life. They should find a way to connect with their peers and participate in the community (8-10). There are various factors that could endanger the subjective well-being of deaf adolescents, for instance attachment, schizophrenia, heterogeneous cognitive, emotional and social development, anxiety, low self-esteem, fear of rejection by others, negativity, isolation, depression, avoidance of group (class) games, conduct disorder, and violence (8, 11).

Adolescence is a period characterized by explicit cognitive, biological, social, and emotional changes (12). It is also a critical period in terms of cognitive, emotional, physical, and sexual aspects with long-lasting consequences for the future life of individuals (13).
Subjective well-being is considered as one of the most important measures for the health of a society. Subjective well-being refers to emotional improvement so that every individual could enjoy life and cope with pain, despair, and unhappiness, along with a level of believing in the value and dignity of self and others (14). According to Voci and colleagues (15), subjective well-being is a combination of positive feelings (emotional well-being) and positive function (social well-being and psychological well-being). The concept of subjective well-being consists of objective well-being, self-efficacy, autonomy and independence, and the ability to recognize the emotions of others (16).

Peer support and peer relations are based on mutual consent, and in contrast to family relations, they are not based on attachment (17). According to Garrick (18), peer support includes mutual social interaction, playing a role in small groups, competition based on the strengths of teenagers, supporting behavioral intervention, and establishing proper educational programs. Peer support increases emotional and social adaptability, engagement in classroom, and engagement in the society for teenagers with impaired vision or hearing, helping them perceive their lives and future in a more hopeful manner (21, 22). Helffdt and colleagues (21) showed that the support from family, friends, and teachers had a positive impact on the psychological well-being of teenagers.

Parent-child interaction is a factor that may affect adolescents’ subjective well-being (22). According to the model introduced by Landreth and Bratton (23), the parent-child relationship can tremendously affect various aspects, such as increasing parental understanding and acceptance of the child with a disorder (24) since deafness affects all aspects of family life, including emotional and socioeconomic aspects. In such situations, parents react by denial of reality, non-acceptance of the child’s hearing problem, anger, aggression, depression, feeling guilty, and so forth (25). This disturbs their internal adjustment and hence, they feel responsible towards the child (26). Since they do not have enough knowledge of their responsibility, the causes of the child’s disability, parent-child interaction, and the child’s characteristics, they face additional roles resulting from the birth of such a child (27). Various studies have demonstrated that parent-child interaction has a positively significant association with children’s subjective well-being (28-32).

Both peer support and parent-child interaction could affect the subjective well-being of adolescents with hearing impairment through influencing self-efficacy beliefs. Self-efficacy beliefs refer to people’s beliefs in the successful performance of a behavior (33). People with such beliefs can trust their abilities to control feelings, emotions, and behaviors (34). According to Bandura (35), self-efficacy plays a more prominent role than other traits in the motivation and behaviors of individuals; people with strong beliefs in their abilities try harder and insist on doing their tasks (36) whereas people having doubts about their abilities give up quickly. Therefore, self-efficacy is considered as a driving force for individuals (37). Gholipour (38) found that increased levels of students’ self-efficacy and happiness increase their level of psychological well-being, and vice versa.

Considering the above-mentioned considerations, we conducted the current study to investigate the association between peer support and parent-child interaction and subjective well-being through the mediation of self-efficacy beliefs in students with hearing impairment.

2. Methods

The study was a descriptive correlation performed with path analysis. The statistical population comprised 268 female students aged between 13-17 years with hearing impairment in Kermanshah city during 2019. The sample size was determined using Morgan’s sample size table (n=160 if N>280). The samples were selected based on stratified random sampling. In order to collect the required data, we provided the participants with 160 questionnaires based on the research variables. In this study, completing the questionnaires for students took 60 to 90 minutes. The inclusion criteria were: deafness for over a year, consent to participate in research, age range of between 13-17 years, and having no mental disorders. The exclusion criteria included failure to completely answer all the questions. A total of 146 questionnaires were analyzed following the elimination of incomplete questionnaires. The willingness to participate in the research, information confidentiality (confidentiality principle), and observance of participants’ rights were the ethical considerations of the research.

Instruments

Ryff’s Psychological Well-Being Scale: This scale includes 18 questions and measures six factors of self-determination, environmental mastery, personal growth, positive communication with others, purposefulness in life, and self-acceptance. The
test is a self-assessing instrument that is responded in a six-degree continuum from strongly agree to strongly disagree (one to six) (39, 40). The total score for this scale ranges from 18 to 108. Ryff and Singer (41) reported that the reliability of scale was 0.91 using Cronbach’s alpha. In a study by Shokri and colleagues (42), Cronbach’s alpha coefficients were 0.77, 0.77, 0.72, 0.75, 0.74, and 0.60 respectively for each of components of self-acceptance, mastery, positive relationships with others, purposefulness in life, personal growth, and independence (40). Khanjani and colleagues (43) reported Cronbach’s alpha coefficient of 0.76 for Persian version of the scale. The Cronbach’s alpha coefficient was 0.85 in the present study.

The Peer Support Questionnaire: This self-report questionnaire was developed by Rigby and Slee (44) to explore the relationships among peers. This questionnaire includes 20 items, scored based on a Likert scale from 1 to 5, and it includes three subscales (bullying (7 items), victimization (7 items), and acceptable social behavior (6 items)). The overall score for each subscale is obtained by adding up the scores for the individual items in that subscale. The reliability of the Persian version of the questionnaire, employing Cronbach’s Alpha coefficient, was reported as 0.73 by Esteki Azad and Amiri (45). The Cronbach’s alpha coefficient was 0.84 in the present study.

Child-Parent Relationship Scale (CPRS): The 33-item Child-Parent Relationship Scale was designed by Pianta (46), which measured the parental perceptions of their relationships with children. The questionnaire consists of three components, namely closeness, dependency, and conflict. Scoring the questionnaire is based on a five-point Likert scale from 1 to 5, and it includes three subscales (bullying (7 items), victimization (7 items), and acceptable social behavior (6 items)). The overall score for each subscale is obtained from summing up 33 questions. Content validity of the Persian version of the questionnaire was confirmed by Abedi-Shapourabadi and colleagues (47) and the total test reliability was 0.86. In the present study, Cronbach’s alpha coefficient was 0.82 for the questionnaire. This questionnaire was completed by the participants’ parents.

Self-Efficacy Beliefs Questionnaire: Sherer and colleagues (48) developed the general self-efficacy questionnaire. This scale includes 17 items, measuring three aspects of behavior (the desire to initiate behavior, continuing to strive to complete the behavior, and resistance in the face of obstacles). This questionnaire is scored based on a five-point Likert scale from 1 to 5. Items 1, 3, 8, 9, 13, and 15 are scored as 5 (completely agree), 4 (agree), 3 (neither agree nor disagree), 2 (disagree), and 1 (completely disagree), while the other items are scored in reverse. The minimum and maximum scores for this questionnaire are 17 and 85, respectively. Higher scores indicate a high sense of self-efficacy. The validity and reliability of this questionnaire have been confirmed in Iran. In a study, Bahramiyan (49) reported a Cronbach’s Alpha coefficient of 0.86 for the reliability of the Persian version of the questionnaire. In the current work, the Cronbach’s Alpha coefficient for the entire questionnaire was 0.82.

Statistical Analyses

The obtained data were analyzed with SPSS and AMOS software using descriptive and inferential statistics, such as mean, standard deviation, and Pearson correlation coefficient. We utilized the path analysis for assessing the proposed model.

3. Results

The demographic variables- associated findings implied that 51% of the participants were in the age range of 13 to 15 years, and 49% were 16 to 17 years old. With regards to the duration of the deafness, 39% of them were deaf after birth through various accidents, while 61% were deaf at birth. The mean±standard deviation (SD) of subjective well-being, peer support, parent-child interaction, and self-efficacy beliefs were 53.10±23.86, 47.72±13.51, 101.20±23.78, and 43.20±12.96, respectively (Table 1). According to Table 1, there was a significant correlation between the correlation coefficients obtained for the research variables at the level of P<0.01. An initial proposed model was obtained to explain subjective well-being based on peer support, parent-child interaction, and self-efficacy beliefs (Figure 1).

<p>| Table 1: Mean, standard deviation (SD), and Pearson correlation coefficients among the key study variables (n=146) |</p>
<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Subjective well-being</td>
<td>53.10</td>
<td>23.86</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Peer support</td>
<td>47.72</td>
<td>13.51</td>
<td>0.410**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Parent-child interaction</td>
<td>101.20</td>
<td>23.78</td>
<td>0.291**</td>
<td>0.309**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4. Self-efficacy beliefs</td>
<td>43.20</td>
<td>12.96</td>
<td>0.523**</td>
<td>0.566**</td>
<td>0.667**</td>
<td>1</td>
</tr>
</tbody>
</table>

M: Mean; SD: Standard deviation; **P<0.01
According to Table 2, the root mean square error of approximation (RMSEA) was equal to 0.465, indicating that the initial model requires correction. In order to correct the model, the insignificant association from parent-child interaction to subjective well-being was eliminated. Figure 2 depicts the final model.

Table 3 represents that there was no significant direct association between parent-child interaction and subjective well-being (β=0.085, P=0.364). The association between peer support and subjective well-being was positive and significant (β=0.167, P=0.0001). Moreover, there was a positive and significant association between peer support and self-efficacy beliefs among the students with hearing impairment (β=0.398, P=0.0001). We also observed a direct and significant association between parent-child interaction and self-efficacy beliefs (β=0.544, P=0.0001). The association between self-efficacy beliefs and subjective well-being was positive and significant (β=0.429, P=0.0001). In order to determine the significance of the mediating-based relations, we utilized the bootstrap method.

The indirect path from peer support to subjective well-being through the mediating role of self-efficacy beliefs was significant (β=0.177, P=0.0001). Moreover, the indirect path from parent-child interaction to subjective well-being through the mediating role of self-efficacy beliefs was significant (β=0.193, P=0.0001) (Table 4).
4. Discussion

The present study aimed to investigate the association between peer support and parent-child interaction and subjective well-being through the mediation of self-efficacy beliefs in students with hearing impairment. The obtained results generally showed that all the direct paths to subjective well-being were significant, except for the path of parent-child interaction. The indirect paths to subjective well-being through self-efficacy beliefs were also significant. Our results also illustrated that self-efficacy beliefs had the highest load factor and predictive power for subjective well-being. Accordingly, the proposed model could be highly efficient. It was an important step towards identifying the factors affecting the subjective well-being of adolescents with hearing impairment.

There was a positive and significant association between peer support and subjective well-being. This finding is consistent with the results of Hellfeldt and colleagues (21), Wang and colleagues (32), Aboutalebi and colleagues (50), Behroozi and colleagues (51), and Savi Cakar and Tagay, (52). In order to explain this finding, it could be said that the association between the individual and others, and the extent of social support he/she receives could determine mental health and subjective well-being. Companions, as sources of support, can have a major impact on the sense of well-being of the teenagers through various types of support. The support received from this network plays a pivotal role in determining the type of the response the individual has toward self and the environment (21). Regarding teenagers, friends and peers are the most important elements in this network, and they play an important role in overcoming problems and having a positive evaluation of themselves and their lives. Various studies have shown the importance of perceived social support in several positive psychological and physical characteristics, and also in helping to improve the problems and complications of children and teenagers whose parents are divorced, or those with learning disabilities, those exposed to dangers, those who are dysfunctional, and even those who are gifted (50).

The second finding of this study implied no significant direct associations between parent-child interaction and subjective well-being. This finding is inconsistent with those of Mirzaei and colleagues (29), Shenaar-Golan and Goldberg (30), Niu and colleagues (31), and Wang and colleague (32). Herein, the hypotheses were examined with path analysis and due to the existence of a mediating variable, all the contribution of parent-child interaction with subjective well-being was explained through the association between self-efficacy beliefs and subjective well-being. This finding can be explained according to the theory of attachment, whereby parents are a means of verbal and non-verbal emotional exchange. This theory mostly focuses on the ability of parents to meet the child’s needs, security, warmth, sensitivity, and the method of parental responsiveness. Thus, parents can establish a healthy and high-quality interaction with their child through a loving relationship with the child, using words and gestures. This indicates the acceptance of the child, being responsive and committed to the child’s needs and values, using a positive and compassionate tone without humiliating, explicitly criticizing, or blaming the child. Once children feel as though they are understood, their love for their parents deepens and they internalize their parents’ values and norms, express their feelings and problems and ask for encouragement in the face of conflict (29). Therefore, the healthier the parent-child interaction is, the more

Table 3: Path coefficients of direct effects between the research variables in the initial and final model

<table>
<thead>
<tr>
<th>Path</th>
<th>Initial model</th>
<th>Final model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer support to subjective well-being</td>
<td>Direct 0.159</td>
<td>Direct 0.167</td>
</tr>
<tr>
<td>Parent-child interaction to subjective well-being</td>
<td>Direct 0.085</td>
<td>Direct -</td>
</tr>
<tr>
<td>Peer support to self-efficacy beliefs</td>
<td>Direct 0.398</td>
<td>Direct 0.398</td>
</tr>
<tr>
<td>Parent-child interaction to self-efficacy beliefs</td>
<td>Direct 0.544</td>
<td>Direct 0.544</td>
</tr>
</tbody>
</table>

Table 4: The results of the Bootstrap method for investigating the indirect and intermediary paths

<table>
<thead>
<tr>
<th>Predictor variable</th>
<th>Mediator Variable</th>
<th>Criterion variable</th>
<th>Initial model</th>
<th>Final model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peer support</td>
<td>Self-efficacy beliefs</td>
<td>Subjective well-being</td>
<td>0.203 0.0001</td>
<td>0.177 0.0001</td>
</tr>
<tr>
<td>Parent-child interaction</td>
<td>Self-efficacy beliefs</td>
<td>Subjective well-being</td>
<td>0.221 0.0001</td>
<td>0.193 0.0001</td>
</tr>
</tbody>
</table>
the children develop a desire to express acceptable social behaviors. This means that children will have a high level of subjective well-being.

Our third result presented a positive association between peer support and self-efficacy beliefs. This finding is in accordance with that of Behroozi and colleague (51). In other words, with the increase in peer support, their self-efficacy beliefs could increase. In order to explain this finding, it could be said that friendship with peers in students with hearing impairment can help them to understand their disability. Consequently, they can share their experiences and have a more positive perspective towards the future, while pursuing their potentials and capabilities in terms of their other senses. Therefore, the quality of friendship with peers is of great importance in self-efficacy (51). Thus, close and warm relations between two individuals, which is considered as friendship, would increase the peace of mind of both parties, pave the way for supporting each other when needed, and it could increase their sense of security and belonging. These factors would increase the level of self-efficacy beliefs in these individuals.

The fourth finding of ours revealed a positive association between parent-child interaction and self-efficacy beliefs. It confirmed the hypothesis claiming that as parent-child interaction increases, the adolescents’ self-efficacy beliefs can be expected to increase. According to the literature review, no studies were found to compare this finding to. This result can be explained by the fact that people's self-efficacy beliefs are influenced by the feedback received from others and their perception of this feedback. Since girls often spend more time with their mothers, their self-efficacy beliefs are directly related to their relationships with their mothers. From the perspective of the present study, this is achieved if mothers and fathers adopt a development-oriented parenting style. All the stages of adolescents’ development are in line with their development of identity; the formation of a coherent identity during adolescence is one of the criteria of self-efficacy beliefs. Accordingly, adolescents’ spiritual growth can also help their identity and personality development. Why they were born and what they should be looking for in life are the most important mental concerns associated with this age. Parents who respond creatively to adolescents’ age-specific abstract questions can witness their cognitive development, which could improve their learning and academic and social achievement or self-efficacy beliefs.

Our fifth finding demonstrated a positive association between self-efficacy beliefs and subjective well-being. This is consistent with the results of Behroozi and colleagues (51), Demirtas (53), Sabri and colleagues (54), and Tommasi and colleagues (55). In other words, with the increase in self-efficacy beliefs of teenagers with impaired vision, their subjective well-being might be improved. Self-efficacy is a factor which acts as a cognitive mediator, impacting the cognition, thoughts, and emotions of individuals. Once teenagers with impaired vision are exposed to negative events and/or stressful situations, a high level of the sense of self-efficacy will help them manage and control those events and situations, thereby protecting themselves from many mental and psychological problems (56). When people have accurate judgments of their own abilities, they could correctly and precisely evaluate situations and conditions in order to cope with problems in a way that vulnerabilities and diseases would not be developed. On the other hand, high levels of self-efficacy beliefs in the course of the treatment will help individuals express higher levels of effort, participation, and engagement. Therefore, these beliefs could be highly useful in the process of healing. Belief and the ability to adapt to a situation would result in a reduced level of tension (51). Accordingly, teenagers with weak self-efficacy might lose all their hope in the future when facing their disability, which in turn causes a larger number of problems attributed to subjective well-being.

The sixth result herein showed that self-efficacy beliefs play a mediating role in the association between peer support and subjective well-being. In order to explain this finding, it can be stated that peer support plays an important role in increasing self-efficacy beliefs. Accordingly, a positive environment and positive relations with peers helps individuals in terms of interpersonal and social relations to be able to control their problems and tensions from a cognitive, emotional, and physiological perspective. Furthermore, they would help them take responsibility for their thoughts and behaviors in conflicts and struggles, and to try to change those thoughts and behaviors. These individuals will have higher levels of self-efficacy beliefs, and would in turn have a higher level of subjective well-being. As a result, it could be concluded that self-efficacy beliefs are able to play a mediating role in the association between peer support and subjective well-being.

Our seventh result indicated the mediating role of self-efficacy beliefs in the association between parent-child interaction and subjective well-being. We found
no studies in the literature review to compare this finding to. This finding reflects the fact that parents, particularly when they have high-quality relationships, act as a shield against the stresses of adolescence. Girls with good feelings towards their parents would feel more mentally secure. However, parental rejection could trigger increased anxiety and aggression and decreased self-efficacy beliefs in adolescents. Adolescents’ self-efficacy beliefs and a sense of worth stem from the attitude of family members towards them (28). Thus, adolescents’ subjective well-being is a combination of their physical, mental, emotional, and intellectual well-being, on top of the well-being of parents and the quality of communication between them. Since the statistical population of this study consisted of female adolescents with hearing impairment in Kermanshah, the generalization of the results to adolescent girls and boys and other communities should be performed with caution.

5. Conclusion

Peer support and self-efficacy beliefs were directly and positively associated with subjective well-being in students with hearing impairment. Parent-child interaction through self-efficacy beliefs could have an indirect effect on students’ subjective well-being; therefore, strengthening and improving peer support relationships, parent-child interaction and self-efficacy beliefs improve the subjective well-being of deaf adolescents. Further research is suggested to be conducted in other cities and on boys in order to improve generalizability. Holding workshops on the effects of peer support and self-efficacy beliefs in people with hearing impairment might increase their hope and subjective well-being. It is also suggested that similar studies be conducted on other educational levels and the results be compared.

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Ethical Approval

All the participants provided informed consent prior to their participation in the study. The Ethics Review Board of Islamic Azad University Ahvaz Branch approved the present study with the following number: IR.IAU.AHVAZ.REC.1399.045.

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References

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