Influencing Factors of Adolescent Girl’s Somatization

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Abstract. This study aims to identify the factors influencing somatization in adolescent girls. The participants were 866 adolescent girls in B city from 25, July to 30, September, 2013. The data were collected through self-reported questionnaires and analyzed by using PASW 18. There was a significant positive correlation between somatization and their depression, academic stress, perfectionism. The most important influencing factor of the somatization was the depression. The findings of this study suggest that nursing intervention to reduce somatization of adolescent girls should contain strategies to control their depression, academic stress, perfectionism.

Keywords: Somatization, Adolescent girls, Influencing factor

1 Introduction

1.1 Need for Study

Somatization is a psychological disorder that induces various types of pain and physical discomfort such as continuous headache, indigestion, stomachache, and menstrual pain without pathological opinion. An individual exhibits her emotional hardship through physical discomfort, so it is difficult to approach to the actual problem and help such individual. Main somatization that adolescent girls show are headache, dizziness, abdominal inflation, stomachache, and eye exhaustion [1], and it is reported that 18.3% of adolescent girls, who demonstrates signs of pain such as headache and stomachache, frequently are in pain more than once per week [2]. Somatization experience increases as adolescent girls’ grade level get higher [3], and there was a distinct difference in gender in which adolescent girls experience more somatization compared to adolescent boys[1][3][4].

Adolescent girls with somatization may be isolated from her peers, avoid social relationship, and display problems related to social skills, for example, missing school and going through slump in learning[2][5]. Also, there is a risk that adolescent girls may take an excessive dose of drugs regularly without proper understanding and advice about somatization [6], and it may disrupt daily life and develop into social &
emotional maladjustment [7] and an adult’s somatization disorder [8]. According to DSM-IV-TR (American Psychiatric Association, 2000) somatization disorder usually occurs in teenagers, and it can continue forever without treatment. Therefore, it is important to discover and actively treat somatization disorder at an early stage.

Somatization related factors in adolescent girls are psycho-social factors, for example, depression, anxiety, hardship during childhood, academic stress, perfectionism, and social support[3][4][9-11]. Especially, stress is a factor that influences continuity and cause of somatization in adolescent girls. Stress causes physiological symptoms such as headache, stomachache, indigestion during somatization, and stressed responses such as emotional anxiety and depression [12]. When stress levels were higher, somatization intensified [13][14]. During puberty, adolescent girls experience drastic changes physically and mentally, and experience great amounts of stress. Korea’s adolescent girls had higher levels of stress as their grade level went higher. 7 out of 10 female students were stressed from school life, and the highest amount of stress came from academics (50.4%) [15]. Higher level of academic stress led to intensified experience of somatization [16]. Depression is the one of emotional response from stress, but it can also be an influencing factor of somatization [1][4][17]. Higher level of depression leads to intensified experience of somatization [18]. It is reported that perfectionism is closely related to somatization [9]. In an environment forcing competition due to university admission, perfectionist female students don’t have confidence, compulsively pursue perfection since they are afraid of negative evaluation from others, avoid contact with others and create an emotional distance. These all can result in psychological and physical maladjustment such as depression and somatization. Adolescent girls had higher levels of academic stress and depression [14][15], than that of adolescent boys. Adolescent girls had a more perfectionist’s mindset [19] and they were showing more symptoms due to greater vulnerability towards somatization[20][21]. However, it was difficult to find a study that explains adolescent girls’ somatization including various factors and symptoms mentioned above.

This study will identify the factors that influence somatization and draw a clear understanding in adolescent girls’ somatization. Then it will seek to prevent somatization and help to relieve symptoms from somatization.

1.2 Purpose of Study

1) Identify the level of academic stress, perfectionism, depression, and somatization in adolescent girls.

2) Identify interrelation between academic stress, perfectionism, depression, and somatization in adolescent girls.

3) Identify factors that influence adolescent girls’ somatization.
2 Method of Study

2.1 Design of Study

This study is an attempted descriptive investigation report to identify the level of academic stress, perfectionism, depression and somatization in adolescent girls and discover factors that influence somatization.

2.2 Subjects of Study & Data Collection

In this study, we collected data in a middle school and high school in B city with permission from Sept. 30th 2012 to July 25th 2013. It took 10~15 minutes in preparing a survey. We distributed 900 copies of survey and excluded those without enough information. Conclusively, we used 886 copies for analysis.

2.3 Instrument for Study

1) Perfectionism

For perfectionism, we used an instrument that Seo[22] developed—validity evaluated from middle/high schoolers—and we used this instrument after receiving approval from the developer. There were total of 31 questions with a 5 point likert scale, and higher points meant higher level of perfectionism. At the time of development of the instrument, its total credibility was Cronbach's $\alpha=0.90$ and the total credibility of this research was Cronbach's $\alpha=0.92$.

2) Depression

For depression, we used the CES-D(The Center for Epidemiological Studies-Depression scale) adaption that Cho & Kim[23] adapted and we received approval for the use of the instrument from the Korean adapters. There were total of 20 questions and their range was ‘Very Unusual(Less than a day within a week) 1 point to ‘Mostly’ 4 points. Higher points meant high level of depression. At the time of development of the instrument, its credibility was Cronbach's $\alpha=0.85$ and the total credibility of this research was Cronbach's $\alpha=0.93$.

3) Academic Stress

For academic stress, we used the teenager’s academic stress instrument that Oh & Chen[24] developed, and we used this instrument after receiving approval from the developers. There were total of 42 questions with a 5 point Likert scale, and higher points meant higher level of academic stress. At the time of development of the instrument, its credibility was Cronbach's $\alpha=0.91$ and the total credibility of this research was Cronbach's $\alpha=0.94$.

4) Somatization

For somatization, we used the Adolescent Symptom Checklist: ASC) adaption that Lee[25] adapted and standardized. There were total of 22 questions with a 6 point
likert scale, and higher points meant higher level of somatization. At the time of Lee’s (2000) research its credibility was Cronbach's α=.89 and the total credibility of this research was Cronbach's α=.91.

2.4 Data Analysis

In this research we used the SPSS 18.0 program and analyzed measuring variables’ real number, percentage, average, and standard deviation. For interrelation analysis, we used Pearson’s Correlation Coefficient and for identifying variables that influence somatization, we used stepwise multiple regression analysis.

3 Study Results

3.1. General Characteristic of Study Subjects

The total number of subjects in this research was 866 with 342 second grade middle schoolers, 219 first grade high schoolers and 305 second grade high schoolers. Average height was 160.48±5.15 and average weight was 52.27±7.56. Regarding subjects’ health, 51.7% said they were healthy, 37.4% said they were on average, 10.9% said they were unhealthy. 78.9% of the subjects said they don’t exercise regularly, and for taking breakfast, 50.7% said they take breakfast at all times, 27.5% said they usually do, 11% said they usually don’t, and 10.9% said they never take breakfast.

3.2. Level of Academic Stress, Perfectionism, Depression & Somatization of Study Subjects

Study subjects’ average academic stress was 119.62±31.80 (with a range from 42 to 210), perfectionism was 88.52±19.17 (with a range from 31 to 155), depression was 34.04±11.17 (with a range from 20 to 80), and somatization was 52.54±17.00 (with a range from 23 to 132).

3.3. Interrelation between Somatization, Academic Stress, Perfectionism & Depression

The study subjects’ somatization had an ordered interrelation of r=.370, p<.001 in academic stress, r=.300, p<.001 in perfectionism, r=.523, p<.001 in depression level of interrelation.
3.4. Factors that Influence Somatization

In order to identify factors that influence study subjects’ somatization, we put somatization as a dependent variable, and put academic stress, perfectionism, depression as independent variables and ran a regression analysis. When we checked the multicollinearity of each independent variables, the number of tolerance was .738 to .837 and VIF was 1.194 to 1.356. Thus, we confirmed that there was no problem with multicollinearity. Analysis results showed that the order of factors that influence female high school students’ somatization were depression, perfectionism, academic stress, and total explanation power of these variables against somatization was 31.7%.

4 Conclusion

In this study, factors that influence adolescent girls’ somatization were depression, perfectionism, academic stress, and somatization could be 31.7% explained by these factors. Depression was the most influential factor that directly affected somatization of adolescent girls. From the following results, we can notice that various variables, for example, depression, academic stress are the cause of adolescent girls’ somatization. Since somatization is caused by variety of factors, it is hard to control by just relieving physical symptoms. Therefore, we need to clearly understand and appropriately mediate adolescent girls’ somatization considering various factors—shown in this study—that influence somatization.

References


22. Seo, J.Y.: Validation of perfectionism scale for middle school and high school student [master's thesis]. Seoul: Sookmyung University (2009)

