Full Length Research Paper

The relation between pre-service music teachers' psychological resilience and academic achievement levels

Tuba YOKUŞ

Muğla Sıtkı Koçman University, Education Faculty, Muğla, Turkey.

Received 28 May, 2015; Accepted 2 July, 2015

This study aims to examine the relation between pre-service music teachers' psychological resilience and academic achievement levels and to determine what variables influence their psychological resilience levels. The study sample consisted of students enrolled in a music education program in the 2013-2014 academic year (N=333). In respect with the study objective; the psychological resilience levels of students were evaluated using the Psychological Resilience Scale for Adults created by Fribog et al. (2005) and translated into Turkish by Basım and Çetin (2010). Students' demographic characteristics and academic achievement levels were assessed using the Personal Information Form developed by the author. The author conducted the data analysis with the Pearson product-moment correlation coefficient, one-way ANOVA and independent sample t test. The study results indicated that the psychological resilience levels of pre-service music teachers were high. Additionally, a significant positive relationship was found between their psychological resilience and academic achievement levels. In terms of the gender variable and total scores on psychological resilience, a statistically significant difference was found between the men and women, where more favorable responses were given by the latter in their perception of self, perception of the future and social resources sub-dimensions. No statistically significant difference was found according to graduation type and class level variables.

Key words: Pre-service music teachers, psychological resilience, academic achievement.

INTRODUCTION

Individuals respond differently to the difficult conditions they experience throughout their lives. Some may develop negative attitudes toward negative living conditions while others may develop positive attitudes and have a successful adjustment process. In this respect, psychological resilience has become a topic of interest for positive psychology in recent years. Many studies on psychological resilience have been conducted in Turkey; however, different names have been variously applied to the concept. For instance, Gizir and Aydın (2006) preferred to use the term “psychological durance”, Terzi (2008b) used “the power to pull oneself together” and
Gürgan (2014) used “struggle.” For the present study, the author chose to use the term “resilience”. Resilience is generally defined as success despite changing or threatening conditions and the process of adapting oneself to the changing environment (Cicchetti and Cohen, 1995; Hunter, 2001; Masten et al., 1990). Numerous studies, however, suggest that resilience is an influential factor in coping with psychiatric illnesses, such as stress, trauma and depression (Connor and Davidson, 2003; Hjemdal et al., 2007; Kobasa et al., 1982; Kosaka, 1996; Terzi, 2008a; Urgan, 2008; Wallace et al., 2001;). Weak resilience increases stress, anxiety and depression and thereby reduces performance (Palmer, 2013).

Alternatively viewed, resilience is the capability of dealing with problems during a crisis or the development of specific responses to complicated social problems and changing conditions (Hutter and Kuhlicke, 2013). In this way, a person’s experiences result in adaptational and developmental outcomes (Schaffer, 2006). According to Basım and Çetin (2010), protective factors, mechanisms and processes that have positive influences on desirable outcomes are accepted as resilience. The outcomes of resilience include good state of mental health, functional capability and social competence (Olsson et al., 2003). Connor and Davidson (2003) developed the following various descriptions of resilience: 1) being capable of adapting oneself to changes, 2) building close and trusting relationships, 3) seeing the humorous side of circumstances or conditions, 4) struggling for the best regardless of what happens, 5) working to reach the goals, 6) being proud of achievements, 7) knowing when and where to ask for help, 8) focusing and thinking clearly under pressure, 9) considering oneself as a strong personality.

From the developmental approach, resilience includes the competence to use protective factors to perform developmental tasks appropriate to the person’s age (Kaplan, 1999). In the relevant literature, the protective factors are described as optimism, empathy, and self-respect, direction or mission, decisiveness and determination (Ungar, 2004). Protective factors are the positive factors in individuals’ lives, as well as factors that predict positive results for their families and communities (Masten and Reed, 2002). On the other hand, Werner (1995) asserts that preschoolers who have psychological resilience develop a coping model by combining their autonomy and the ability to ask for help when they need it. These characteristics are the anticipations of the psychological resilience they will depend on for the rest of their lives. Bernard (2004) describes resilience as the durability and competences that are related with a person’s success in life. In this respect, resilience can be described as the process by which a person uses protective factors to adapt themselves to the risk factors involved in different living conditions or events (negative conditions) that they experience during their developmental processes.

In education, the key indicators of psychological resilience are being able to cope with learning difficulties, having a relatively high tolerance for disappointment and avoiding problems and disappointments in the learning process (Carr and Claxton, 2002). Alternatively, Hammond (2004) conducted a study on the influence of learning on psychological and mental health and durability, where he suggested that lifelong learning was influential in coping with potential stress and that learning affected psychological qualities such as self-respect, self-efficacy and the sense of goal and hope. In terms of educational environment, resilience is discovering and determining the protect tive factors that exist in the school environment and in the society (Boorn, Dunn, and Page, 2010). The concept of resilience was first included in educational activities in the 1990s, when programs and strategic activities focusing on the improvement of psychological durability of students became more important (Price et al., 2012). For instance, Arastaman and Balci (2013) found that problem solving skills functioned as a factor that developed psychological durability and that it was an important component of resilience. Moreover, this study found that grade point average (GPA) and truancy were important demographical data that helped predict students’ resilience. Robinson (2000) developed a description of resilience factors capable of being adjusted to educational environments, namely 1) Sense of belonging or loyalty to school/institution, 2) Positive assessments and achievement at school/in the educational environment, 3) Having somebody that believes in you, 4) Being in a positive relationship with an adult other than a family member, 5) Having a special skill or talent. The factors that increase resilience are important for educators, as these factors have an impact on effective teaching and learning (Thornton et al., 2006).

A review of the relevant literature shows that many researchers agree on the three factors comprising resilience, namely, 1) Personal predispositions, 2) Family cohesion, 3) Social resources outside the family (Ex: Garmezy, 1993; Werner, 1989, 1993: cited by Hjemdal et al., 2011; Wallace et al., 2001). The sources of personal disposition include structural flexibility, sociability or showing initiative, intelligence, communicative skills and personal characteristics; the sources of family cohesion include supportive familial traits that require certain behavioral characteristics, such as warmth, courage and assistance; and the sources of the social resources outside the family include socio-economic status, school experiences and supporting communities (Olsson et al., 2003). Furthermore, in the study conducted by Huang and Lin (2013) that assessed university students’ resilience, they found it to be a personal trait, involving an individuals' capability of dealing with the difficulties they faced. They described it as a four-factor structure that included 1) empathy and the interaction between persons, 2) cognitive maturity, 3) problem solving and 4) hope and optimism. The resilience factors included in this
study's context feature a six factor structure that comprises all dimensions of resilience within the framework of the scale created by Friborg et al. (2005) and Basım and Çetin (2010), which aimed at evaluating adults' resilience by taking environmental conditions into consideration. These factors include 1) Perceived self, 2) Perception of future, 3) Structural style, 4) Social competence, 5) Family cohesion and 6) Social resources.

It is clear that resilience includes many factors and has a multi-dimensional structure. Although numerous recent studies have aimed to reveal, assess and examine resiliency's correlations with different factors (Ex: Gürgan, 2014; Huang and Lin, 2013; Olsson et al., 2003; Terzi, 2008a; Terzi 2008b), there are few studies within the national or international literature that research the resilience of pre-service music teachers. In Turkey, music education falls under the branch of art education within the framework of the music teaching undergraduate program, and pre-service music teachers who are trained in music education, are expected to acquire an understanding of the full musical spectrum (e.g. instruments, vocals and music repertoire, to name a few). In this process, pre-service music teachers may develop various attitudes and adjustment processes against different risk factors they might encounter in their educational environment; those that are capable of coping with these risk factors and are able to subsequently develop different protective factors are then empowered to demonstrate a higher rate of development and better achievement. In other words, resilience is an important factor in the matriculation of pre-service music teachers insofar as it will enable them to positively respond to the negative conditions they might face during their undergraduate education and thereby stand a stronger chance of academic achievement.

For these reasons, this study aims to identify the correlations between pre-service music teachers' psychological resilience and their academic achievement levels and analyze their psychological resilience levels using different variables. In this respect, the following research questions were formulated:

1. What is the resilience level of pre service music teachers?
2. Does the resilience level of pre service music teachers vary according to gender, type of school they graduated from and class level?
3. Is there a statistically significant correlation between the resilience level of pre service music teachers and academic achievement levels?

METHODOLOGY

Research model

The study was designed as a descriptive study and a survey. A survey includes describing the characteristics of a specific group using different tools, such as questionnaires and tests. This is a descriptive and correlational study. Descriptive studies describe a given situation as precisely and carefully as possible. Correlational studies analyze the correlation between two or more variables without interfering with these variables (Büyükoztürk et al., 2009).

Study sample

The sample of this study included freshmen (n=93), sophomores (n=108), juniors (n=56) and seniors (n=76) (N=333) enrolled in Balikesir University Necatibey Faculty of Education Fine Arts Education Department (FAED) Music Education Program (MEP) (N=95), Cumhuriyet University Faculty of Education FAED MEP (N=31), Gaziosmanpasa University Faculty of Education FAED MEP (n=76) and Karadeniz Technical University Faith Faculty of Education FAED MEP (N=66) in the 2013-2014 academic year. The students participated in the study on a voluntary basis. Of the participant pre service music teachers, 196 (58.9%) were female and 137 (41.1%) were male, and 226 participants (67.9%) graduated from Fine Arts and Sports High Schools while 107 participants (32.1%) graduated from other types of high schools.

Data collection tools

The data were collected using the Resilience Scale for Adults (RSA) created by Friborg et al. (2005) and translated into Turkish by Basım and Çetin (2010) and a personal information form. The personal information form was created by the author in order to collect information about the demographic characteristics of the participant students. This form consisted of questions about the university the students were enrolled in, their gender, the type of the high school they had graduated from, and current class and academic achievement levels.

The RSA, used to determine adult resilience levels, includes 33 items within six sub-dimensions - the first sub-dimension, Perceived of Self: (items 1, 7, 13, 19, 28 and 31); the second sub-dimension, Perceived of Future: (items 2, 8, 14 and 20); the third sub-dimension, Structured Style: (items 3, 9, 15 and 21); the fourth sub-dimension, Social Competence: (items 4, 10, 16, 22, 25 and 29); the fifth sub-dimension, Family Cohesion: (items 5, 11, 17, 23, 26 and 32); the sixth sub-dimension, Social Resources: (items 6, 12, 18, 24, 27, 30 and 33). The coefficient of internal consistency for all items was 0.86. This study found the internal consistency coefficient of RSA to be 0.90. The internal consistency coefficients of RSA's sub-dimensions vary between 0.68 and 0.81. The Kaiser-Meyer-Olkin value of this study was 0.90 and the Bartlett's Test result was statistically significant.

The author placed negative and positive statements on different sides to mitigate the possibility of the participants making pre-judgements when selecting choices among items; the author also used five separate boxes placed in a diagram for the answers. In this study, the answer boxes were placed from the left to the right in 1-2-3-4-5 Likert type. In this respect, the scores obtained from this scale increased in direct proportion with the resilience levels of the pre service music teachers. The minimum possible score on the scale is 33 while the maximum possible score is 165.

Data analysis

The data were analyzed using the SPSS (Version 15.0) program. The demographic data of the pre service teachers were evaluated with frequencies and percentages; an independent samples t-test was conducted to determine any statistical significance according to gender and the type of the high school the pre service teachers graduated from, in terms of the sub-dimensions of RSA and the total score; a one-way ANOVA was conducted to determine any...
significant differences in terms of class variable and the total score; and lastly, the Pearson product-moment correlation coefficient was used to find the correlation between resilience and academic achievement levels.

The arithmetic means and standard deviations were calculated for each sub-dimension in the scale and the total in order to ensure a more reliable and accurate interpretation of the data. Based on these arithmetic means, the score limits of each level in this 5-point Likert type scale were identified. Assuming that the intervals in the scale are equal to each other, the range of scores were formed in the following manner: between 1-1.80 is "very low", between 1.81-2.60 is "low", between 2.61-3.40 is "intermediate", between 3.41-4.20 is "high", between 4.21-5 is "very high".

### FINDINGS

Arithmetic means and standard deviations of students’ resilience levels are shown in Table 1.

As Table 1 illustrates, the arithmetic mean of the pre service music teachers’ total resilience scores is $\bar{X}=3.78$. This result indicates that the total resilience level of participants is "high". Additionally, it was found that pre service music teachers had "high" resilience levels in the perception of self ($\bar{X}=3.52$), perception of future ($\bar{X}=3.79$), structural style ($\bar{X}=4.10$) and social competence ($\bar{X}=3.76$) sub-dimensions, while they had "very high" resilience levels in the family cohesion ($\bar{X}=4.54$) and social resources ($\bar{X}=4.46$) sub-dimensions.

As Table 2 shows, there is a significant difference by gender in the pre service music teachers’ perception of self ($t_{331}=2.79$, $p<.05$), perception of future ($t_{331}=2.06$, $p<.05$), structural style ($t_{331}=3.58$, $p<.01$) and social resources ($t_{331}=2.77$, $p<.05$) sub-dimensions and in total resilience ($t_{331}=2.99$, $p<.05$). Female participants’ resilience scores in perception of self ($\bar{X}=21.64$), perception of future ($\bar{X}=15.46$), structural style ($\bar{X}=16.94$), social resources ($\bar{X}=27.43$) sub-dimensions and total resilience scores ($\bar{X}=21.45$) are higher than male participants’ scores in perception of self ($\bar{X}=20.37$), perception of future ($\bar{X}=14.71$), structural style ($\bar{X}=15.60$), social resources ($\bar{X}=25.78$) sub-dimensions and in total resilience score ($\bar{X}=20.48$). These findings show a statistically significant difference between total resilience and gender, to the benefit of females.

As Table 3 indicates, there is no significant difference by graduation variable according to independent samples t-test results. Resilience levels of male and female students in sub-dimensions and total resilience showed no difference either.

As Table 4 indicates, pre service music teachers’ resilience levels are not significantly different from each other in sub-dimensions and in total resilience based on one-way ANOVA results. An analysis of Table 5 shows that there is a positive and statistically significant correlation between "resilience and academic achievement" scores ($p<.01$). In this respect, there is a significant and moderately positive correlation between pre service music teachers’ total resilience score ($r= .473$; $p<.01$) and the sub-dimensions of resilience, namely, perception of self ($r= .386$; $p<.01$), perception of future ($r= .355$; $p<.01$), structural style ($r= .424$; $p<.01$), social competence ($r= .345$; $p<.01$), family cohesion ($r= .394$; $p<.01$), social resources ($r= .394$; $p<.01$) and academic achievement scores. In conclusion, the students’ resilience and academic achievement levels mutually influence each other.

### RESULTS AND DISCUSSION

During the course of university education, many students experience psychological problems as they are trying to develop new skills and are receiving an advanced level of training. The university environment is usually stressful and students encounter various risk factors. Compared to high school, there is a minimum level of academic support at university, academic members and counselors are more distant from students than they are at high school and moreover, entering into a new environment can potentially lead to the students becoming isolated and alienated (Kadison and DiGeronimo, 2004). Hartley (2010) expanded on these risk factors adding the experience of: 1) temporary cognitive disorders 2) low academic confidence and 3) conflicts with peers. Relevant studies have shown that resilience is an important element that helps in the students’ struggle against these risk factors.

In the relevant literature, there are many studies of university students’ psychological resilience (PR) and the correlations between PR and a variety of factors. A study by Terzi (2008a) found that there was a significant relationship between PR and perceived social support. Terzi (2008b) also did a study on the correlation between university students’ ability to pull themselves together and their internal protective factors. This study found that there were positively significant correlations between students’ ability to put themselves together and their optimism, self-efficacy, problem-solving and coping strategy scores. There is a study in the international literature by Sills et al. (2006), who found a negative correlation between PR and neuroticism and a positive
Table 2. Independent samples t test results by gender.

| Sub-dimensions       | Gender     | N    |  \( \bar{X} \) | S          | sd         | t      | p       |
|----------------------|------------|------|----------------|------------|------------|--------|---------|
| Perception of self   | Female     | 196  | 21.6429        | 4.16518    | 331        | 2.791  | .006*   |
|                      | Male       | 137  | 20.3796        | 3.91665    |            |        |         |
|                      |            |      |                |            |            |        |         |
| Perception of future | Female     | 196  | 15.4694        | 3.21121    | 331        | 2.065  | .040*   |
|                      | Male       | 137  | 14.7153        | 3.37366    |            |        |         |
| Structural style     | Female     | 196  | 16.9490        | 3.23244    | 331        | 3.580  | .000**  |
|                      | Male       | 137  | 15.6058        | 3.55494    |            |        |         |
| Social competence    | Female     | 196  | 23.0357        | 6.01568    | 331        | 1.814  | .071    |
|                      | Male       | 137  | 21.9343        | 4.52315    |            |        |         |
| Family cohesion      | Female     | 196  | 15.4694        | 3.21121    | 331        | 1.842  | .066    |
|                      | Male       | 137  | 14.7153        | 3.37366    |            |        |         |
| Social resources     | Female     | 196  | 27.4388        | 5.50909    | 331        | 2.778  | .006*   |
|                      | Male       | 137  | 25.7810        | 5.13597    |            |        |         |
|                      |            |      |                |            |            |        |         |
| Total Resilience     |            | 196  | 127.5918       | 21.45709   | 331        | 2.994  | .003*   |

*\( p < .05 \)

**\( p < .01 \)

correlation between PR and being extroverted and hardworking. In another study, Galatzer-Levy et al. (2012) found a strong correlation between college students' coping flexibility and their PRs. In addition to these studies, Klibert et al. (2014) conducted a study with undergraduate students and found that low PR was
correlated with social perfectionism, depression and anxiety.

The results of this study revealed that pre-service music teachers studying in music pedagogy programs had high levels of PR (\(\bar{x}=124.7\)). This shows that pre-service music teachers are successful at coping with potential stressors during their undergraduate education or they have the ability to adapt rapidly to stressful experiences. Additionally, the study results showed that there was a significant correlation between pre-service music teachers’ PR and their academic achievement (\(p<0.01\), which is in accordance with the studies mentioned above.

A majority of social and psychological studies claim that gender is a critical factor in determining the resilience and vulnerability of individuals. Reimer (2002) argues that gender is correlated with stress, coping and PR in early adulthood. However, females are more prone to depression than males in mid-adolescence and adulthood (Culbertson, 1997; Conger et al., 2001; Nolen-Hoeksema and Joan, 1994). This study determined that female music students’ PR levels were significantly higher, as well as their scores on self-perception, perception of the future, structural style and social resources sub-factors.

Some studies in the literature (Arastaman and Balci, 2013; Arokiaraj and Shahrazad, 2011; Terzi, 2008b) have found that PR did not vary significantly by gender, which is not consistent with the results of this study. However, there are also relevant studies which are consistent with this study. For instance, Werner and Smith (2001) found a significant difference in social and interpersonal resources in favor of females. In another study, Friborg et al. (2003) found a significant difference in the social support dimension of PR in favor of females. Thornton et al. (2006) conducted a study with high school students and found that male students’ PR levels were lower than those of the females, which is similar to the results of this study. Another study by Hjemdal (2011) found no significant difference between males' and females' total

---

Table 4. One-way Anova results for resilience level by class.

| Sub-dimensions      | Source of the Variance | Sum of Squares | sd  | Mean Squares | F    | p     | Significant Difference |
|---------------------|------------------------|----------------|-----|--------------|------|-------|------------------------|
| Perception of self  | Between-groups         | 32.054         | 3   | 10.685       | .632 | .595  | –                      |
|                     | In-groups              | 5565.898       | 329 | 16.918       |      |       |                        |
|                     | Total                  | 5597.952       | 332 |              |      |       |                        |
| Perception of future| Between-groups         | 17.581         | 3   | 5.860        | .538 | .657  | –                      |
|                     | In-groups              | 3586.983       | 329 | 10.903       |      |       |                        |
|                     | Total                  | 3604.565       | 332 |              |      |       |                        |
| Structural style    | Between-groups         | 32.218         | 3   | 10.739       | .913 | .435  | –                      |
|                     | In-groups              | 3869.458       | 329 | 11.761       |      |       |                        |
|                     | Total                  | 3901.676       | 332 |              |      |       |                        |
| Social competence   | Between-groups         | 59.724         | 3   | 19.908       | .663 | .575  | –                      |
|                     | In-groups              | 9877.255       | 329 | 30.022       |      |       |                        |
|                     | Total                  | 9936.979       | 332 |              |      |       |                        |
| Family cohesion     | Between-groups         | 65.831         | 3   | 21.944       | 1.126| .339  | –                      |
|                     | In-groups              | 6412.061       | 329 | 19.490       |      |       |                        |
|                     | Total                  | 6477.892       | 332 |              |      |       |                        |
| Social resources    | Between-groups         | 11.419         | 3   | 3.806        | .129 | .943  | –                      |
|                     | In-groups              | 9715.878       | 329 | 29.532       |      |       |                        |
|                     | Total                  | 9727.297       | 332 |              |      |       |                        |
| Total Resilience Level | Between-groups     | 516.963        | 3   | 172.321      |      |       |                        |
|                     | In-groups              | 150312.605     | 329 | 456.877      | .377 | .770  | –                      |
|                     | Total                  | 150829.568     | 332 |              |      |       |                        |
Table 5. Pearson product-moment correlation coefficient results for the correlation between participants’ resilience and academic achievement results.

| Sub-dimensions             | N  | $\bar{x}$ | S    | r       | p     |
|----------------------------|----|-----------|------|---------|-------|
| Perception of self         | 333| 21.1231   | 4.10625 | .386(**)| .000  |
| Academic achievement       | 333| 3.5706    | .82065 |         |       |
| Perception of future       | 333| 15.1592   | 3.29501 | .355(**)| .000  |
| Academic achievement       | 333| 3.5706    | .82065 |         |       |
| Structural style           | 333| 16.3964   | 3.42812 | .424(**)| .000  |
| Academic achievement       | 333| 3.5706    | .82065 |         |       |
| Social competence          | 333| 22.5826   | 5.47089 | .345(**)| .000  |
| Academic achievement       | 333| 3.5706    | .82065 |         |       |
| Family cohesion            | 333| 22.6847   | 4.41721 | .394(**)| .000  |
| Academic achievement       | 333| 3.5706    | .82065 |         |       |
| Social resources           | 333| 26.7568   | 5.41286 | .415(**)| .000  |
| Academic achievement       | 333| 3.5706    | .82065 |         |       |
| Total Resilience Level     | 333| 124.7027  | 21.31445 | .473(**)| .000  |
| Academic achievement       | 333| 3.5706    | .82065 |         |       |

**p<.01

PR scores. However, they found significant differences in the social resources and family harmony dimensions in favor of females. This study also supports the idea that females are more successful at coping with psychological difficulties than males.

The study also searched for differences in PRs due to type of high school and year of study, but found none (See Tables 3 and 4). Thus, the high school type and year of study variables had no effect on pre-service music teachers’ PRs. Arastaman and Balci (2013) conducted a study of the correlation between high school students’ PR levels and certain protective factors and, like this study, found that grade had no influence on PR.

There is a significant and moderately positive relation between pre-service music teachers’ resilience and academic achievement levels in total and sub-dimension scores. Based on this result, it appears that resilience of students is influential on their academic achievement or vice versa. Johns (2005) found a significant relation between students’ academic achievement and resilience levels. Additionally, Arastaman and Balci (2013) determined a significant relation between high school students’ GPA and resilience levels. Thornton et al. (2006) however conducted a study on high school students and found no significant relation between achievement and resilience. This study's result is in accordance with the results of the studies by Johns (2005) and Arastaman and Balci (2013).

Taking the relation between resilience and academic achievement into consideration, these results suggest that alternative approaches be created to increase or support resilience in pre-service music teachers. The relevant literature also offers suggestions about increasing resilience. For instance, Hartley (2010) argues that assistance training programs should be organized to improve students’ awareness about how to use the protective factors to increase resilience and to inform them about the risk factors that weaken resilience. Assistance training programs include career planning, continuing education and social support and research services (Mowbray et al., 2005). Assistance training programs have been proven to improve confidence and perception of self, to help individuals cope with psychiatric illnesses and to increase the number of people who attend university after completing high school (Collins and Mowbray, 2005).

In another study, Robinson (2000) suggested these positive trainings to help build resilience:

1. See any kind of interaction as an opportunity
2. Make a friendly, sincere, open and soft approach
3. Listen and provide positive feedback to young persons
4. Approve of and respect young persons while giving feedback to them, discuss sensitive issues, make efforts to understand them
5. Create a positive framework
6. Have respect for young persons’ life experiences and
inner views
7. Be fair and consistent in educational environments

If Robinson's suggestions were to be taken into consideration in music education environments, they would facilitate the building up and support of resilience levels in pre service music teachers.

In addition, Terzi (2005) conducted a study on education faculty students about the protective factors that support university students' resilience. He found that resilience, as a personal characteristic, had an indirect influence on being in a good state via cognitive assessment and coping. Moreover, he showed that individuals with a high level of resilience used effective coping strategies when they encounter stressful circumstances. In another study by Aydoğdu (2013), it was found that individuals with resilience used problem-focused coping strategies to use as protective factors for fostering resilience.

Conflict of Interests

The author has not declared any conflict of interest.

REFERENCES

Arastaman G, Balci A (2013). Investigation of high school students’ resilience perception in terms of some variables. Educ. Sci. Theory, Pract. 13(2):922-928.

Arokiajar AS, Nasir R, Shahrizad WSW (2011). Gender effects on self-esteem, family functioning and resilience among juvenile delinquents in Malaysia. Pertanika J. Soc. Sci. Hum. 19:1-8.

Aydoğan T (2013). Bağlanma stilleri, bağımlılık stratejileri ile psikolojik dayanıklılık arasındaki ilişkin incelemesi [Attachment styles, coping strategies between psychological hardiness examining of the relationships]. Unpublished Master’s Thesis, Gazi University Institute of Educational Sciences.

Basım N, Çetin F (2010). Reliability and validity studies of resilience scale for adults. Turkish J.Psychiatr.. 22:1-13.

Bernard B (2004). Resilience: What we have learned. Oakland, CA: West Ed.

Boorn C, Dunn PH, Page C (2010). Growing a nurturing classroom. Emot.Behav.I Difficult.15(4):311-321.

Büyüköztürk Ş, Özyılmaz G, Yetkiner E, Kursat E, Demirel F (2009). Bilişsel araştırma yöntemleri [Scientific research methods] (10th ed.). Ankara: Pegem Akademi.

Carr M, Claxton GL (2002). Tracking the development of learning dispositions. Assess.Edu.9(1):9–37.

Cicchetti D, Cohen D (1995). Developmental psychopathology, Vol. 2: Risk, disorder, and adaptation. New York: John Wiley & Sons.

Collins ME, Mowbray CT (2005). Higher education and psychiatric disabilities: National survey of campus disability services. Amer. J. Orthopsychiat.75(2):304-315.

Connor KM, Davidson JR (2003). Development of a new resilience scale: The Connor-Davidson resilience scale (CD-RISC). Depression and Anxiety. 18(2):76–82.

Culkertson FM (1997). Depression and gender: An international review. Am. Psychol. 52:25-31.

Friborg O, Barlaug D, Martinussen M, Rosenberg BH, Hjemdal O (2005). Resilience in relation to personality and intelligence. Int. J. Methods Psychiatr Res. 14(1):29-42.

Friborg O, Hjemdal O, Rosenberg BH, Martinussen M (2003). A new rating scale for adult resilience: What are the central protective resources behind healthy adjustment? Int. J. Method. Psychol. Res. 12:65-76.

Galatzer-Levy IR, Burton CL, Bonanno GA (2012). Coping flexibility, potentially traumatic life events, and resilience: A prospective study of college student adjustment. J. Soc. Clinical Psychol. 31(6):542-567.

Ge X, Conger RD, Elder Jr GH (2001). Pubertal transition, stressful life events, and the emergence of gender differences in adolescent depressive symptoms. Develop. Psychol. 37(3):404-417.

Gizir CA, Aydin G (2006). The adaptation of the resilience and development module: Validity and reliability studies. Turkish Psychol. Counsel. d Guid. J. 26:87-99.

Gürgün U (2014). Üniversite öğrencilerinin yıklılık ve ilikilik halini bazı değişkenlere göre incelemesi [The investigation of the resilience and wellness of university students according to some variables]. NWAS-Edu.n Sci. 9(1):18-35.

Hammond C (2004). Impacts of lifelong learning upon emotional resilience, psychological and mental health: Field work evidence. Oxford Rev.Edu. 30(4):551-568.

Hartley MT (2010). Increasing resilience: Strategies for reducing dropout rates for college students with psychiatric disabilities. Am. J. Psychiat. Rehabil. 13:295-315. doi:10.1080/15487768.2010.523372

Hjemdal O, Aune T, Reinffel T, Stiles TC (2007). Resilience as a predictor of depressive symptoms: Correlational study with young adolescents. Clin. Child Psychol. Psychiat. 12(1):91-104. doi:10.1177/1359104507071062

Hjemdal O, Vogel PA, Solem S, Hagen G, Stiles TC (2011). The Relationship between resilience and levels of anxiety, depression, and obsessive–compulsive symptoms in adolescents. Clinical Psychology and Psychotherapy Clin. Psychol. Psychother. 18: 314-321. doi:10.1002/cpp.719

Huang YC, Lin SH (2013). Development of the Inventory of college students’ resilience and evaluating the measurement invariance. Br. J. Guid.Counsel. 41(5): 471-486. http://dx.doi.org/10.1080/03069885.2012.749973.

Hunter AJ (2001). A cross-cultural comparison of resilience in adolescents. J Pediatr Nurs.16:172-179.

Hutter G, Kuhlcke C (2013). Resilience, talk and action: Exploring the meanings of resilience in the context of planning and institutions. Planning & Practice & Research. 28(3):294–306. doi:10.1080/02697459.2013.787706

Johns ES (2005). Student achievement, risk and resilience in elementary schools. Unpublished doctoral dissertation, Wayne State University, Detroit.

Kadison R, DiGeronimo TF (2004). College of the overwhelmed: The campus mental health crisis and what to do about it. San Francisco, CA, US: Jossey-Bass.

Kaplan HB (1999). Toward an understanding of resilience: A critical review of definitions and models. MD Glantz, JL Johnson (Eds). Resilience and development: Positive life adaptations. Kluwer Academic/Plenum Publishers, New York.

Kilbert J, Lamis DA, Collins W, Smalley KB, Warren JC, Yancey CT, Winterowd C (2014). Journal of Counseling & Development. 92:75-82. doi:10.1002/j.1556-6676.2014.00132.x

Kobasa S, Maddi SR, Kahn S (1982). Hardiness and health: A prospective study. J. Personal. Soc. Psychol. 42:168-177.

Kosaka M (1996). Relations between hardiness and psychological stress response. J. Perform. Stud. 3:35-40.

Kysor S, NWSA-Edu.n Sci. 9(1):18-35.

Kysor S, NWSA-Edu.n Sci. 9(1):18-35.

Kysor S, NWSA-Edu.n Sci. 9(1):18-35.

Kysor S, NWSA-Edu.n Sci. 9(1):18-35.
Szilvagyi S (2005). Supported education for adults with psychiatric disabilities: An innovation for social work and psychosocial rehabilitation practice. Social Work. 50:7-20.

Nolen-Hoeksema SG, Joan S (1994). The emergence of gender differences in depression during adolescence. Psychological Bulletin. 115(3):424-443.

Olsson CA, Bond L, Burns JM, Vella-Brodrick DA, Sawyer SM (2003). Adolescent resilience: A concept analysis. Journal of Adolescence. 26:1-11.

Palmer S (2013). Resilience enhancing imagery: A cognitive behavioural technique which includes resilience undermining thinking and resilience enhancing thinking. Coach.Psychol.9(1):48-50.

Price A, Mansfield C, McConney A (2012). Considering teacher resilience from critical discourse and labour process theory perspectives. British J. Sociol. Edu. 33(1):81-95.

Reimer MS (2002). Gender, risk, and resilience in the middle school context. Children and Schools. 24(1):35-47.

Robinson E (2000). Building resilience: Helping young adults in the adult education classroom. ARIS Resources Bulletin. 11(4):1-4.

Schaffer HR (2006). Key concepts in developmental psychology. London: Sage.

Sills LC, Cohan SL, Stein MB (2006). Relationship of resilience to personality, coping, and psychiatric symptoms in young adults. Behaviour Research and Therapy. 44:585-599.

Terzi Ş (2005). Öznel iyi olmaya ilişkin psikolojik dayanıklılık modeli [Psychological hardiness model for subjective well being]. Unpublished PhD Thesis, Gazi University Institute of Educational Sciences Department of Counseling and Guidance, Ankara.

Terzi Ş (2008a). The relationship between psychological hardiness and perceived social support of university students. Turkish Psychological Counseling and Guidance Journal. 29:1-11.

Terzi Ş (2008b). The relationships between resilience and internal protective factors in university students. Hacettepe University Journal of Education. 35:297-306.

Thornton B, Collins M, Daugherty R (2006). A study of resiliency of American Indian high school students. Journal of American Indian Education. 45:4-16.

Ungar M (2004). A constructionist discourse on resilience multiple contexts, multiple realities among at-risk children and youth. Youth & Society. 35(3): 341-365. doi: 10.1177/0044118x03257030

Wallace KA, Bisconti TL, Bergeman CS (2001). The mediational effect of hardiness on social support and optimal outcomes in later life. Basic and Applied Social Psychology. 23(4):267-279.

Werner EE (1995). Resilience in development. Current Directions in Psychological Science. 4(3):81-85.

Werner EE, Smith RE (2001). Journeys from childhood to midlife: Risk, resilience and recovery. Ithaca, NY: Cornell University Press.