The effects of residential conditions on the problem solving skills of university students

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Abstract

In youth age, problem solving is defined as a response given in an important and difficult situation. This research aims to examine if there is a significant difference between “the problem solving abilities” of the university students on variables of students’ residential conditions, class levels, gender and age. Sample of the study is formed by totally 890 students (452 female, 439 male, 20 of them are living with their families, 271 of them in dormitories, 298 of them in private houses) who are studying in various departments at Selçuk University in Konya during 2008–2009. “Problem solving inventory” is used which was translated by Şahin et al. (1993) and developed by Heppner and Peterson (1982) in order to determine the capability of solving problem. To find out their personal traits “personal information form” is used which was prepared by the researcher. The results of the research indicated significant differences in problem solving ability of undergraduate students depending on all variables.

Keywords: Problem; problem solving; residential conditions; university students; dormitory; education.

1. Introduction

There are many approaches to problem solving, depending on the nature of the problem and the people involved in the problem. The more traditional, rational approach is typically used and involves, e.g., clarifying description of the problem, analyzing causes, identifying alternatives, assessing each alternative, choosing one, implementing it, and evaluating whether the problem was solved or not.

Another, more state-of-the-art approach is appreciative inquiry. That approach asserts that "problems" are often the result of our own perspectives on a phenomenon, e.g., if we look at it as a "problem," then it will become one and we'll probably get very stuck on the "problem.” In general sense, problem is case with a vague result. Within this perspective, problem solving is unveiling the vagueness in the mind of man (Öcalan, 2004).

Research has indicated that appraisal of problem-solving capabilities (i.e., a general sense of self-efficacy) is related to a person's response to stressful situations. Problem-solving appraisal has been linked to a broad array of cognitive, affective, and behavior variables in the coping process, such as attributional style, irrational beliefs, expectations of success, perseveration, resource utilization, self-esteem, and hopelessness (Heppner, 1988). Moreover, problem-solving appraisal seems to moderate the effect of negative life events on depression (Dixon,
Heppner, & Anderson, 1991; Nezu, 1987) and is related to a number of indices of psychological health (see Heppner, 1988).

Problem solving is a common and normal activity of living and can be an important strength in coping with all kinds of demands, from daily hassles to major traumatic life events. Moreover, they noted the consistency of this construct with the profession’s focus on the important role of personal resources, environmental influences, and cultural contexts in people’s lives. (Lopez and Janowski, 2004)

Problem-solving appraisal has been significantly related to a variety of cognitive, affective, and interpersonal variables across diverse populations. Effective self-appraised problem-solving ability has been significantly and consistently associated with lower distress and depression under routine and stressful conditions (Elliott, Godshall, Herrick, Witty & Spruell, 1991; Heppner & Anderson, 1985; Nezu, 1985). Cognitive styles that seem to characterize effective self-appraised problem solving abilities include internal expectancies for control (Nezu, 1985), preferences for cognitive activities and rational thinking (Heppner, Reeder & Larson, 1983), active coping strategies (Larson, Piersel, Imao & Allen, 1990; MacNair & Elliott, 1992), effective study skills (Elliott, Godshall, Shroot & Witty, 1990), and rational career decision-making styles (Chartrand, Rose, Elliott, Marmarosh & Caldwell, 1993). In another study, a six-factor solution was indicated for Turkish university students (Sahin, Sahin, & Heppner, 1993). Five of the six factors in the study reflected approach and avoidance activities in terms of Impulsive Style, Reflective Style, Avoidant Style, Monitoring, and Plan fullness, and one factor reflected problem-solving confidence that could be conceptually linked to approach activities, but might best be conceptualized as a meta-cognitive variable and a form of self-efficacy. Thus, these results indicated that the PSI global and specific constructs of problem solving might have utility in understanding applied or social problem solving in different cultures (David W. Chan, 2001).

Generally young people in Turkey live with their families until they start studying at a university or till they get married. Firstly it is important to understand whether there is a difference or not between the problem solving skills of the students who start living without their families and the students who keep on living with their families.

There is some evidence for a link between mothers’ problem-solving appraisal and children’s behavior. For example, Walker and Johnson (1986) found that the more positively the mothers appraised their own problem-solving style, the more positive were their preschool children’s social and emotional development behaviors, such as more direct coping behaviors in incest victims. Shorkey, McRoy, and Armendariz (1985) reported that a more positive problem-solving appraisal by parents was associated with less reported use of parental punishment in child-rearing situations (Snyder, C. R.; Lopez, S. J., 2006).

It is predicted that students’ residential conditions effect their success in acquiring problem solving skills during their study and this research aims to examine if there is a significant difference between “the problem solving abilities” of the university students on variables of students’ gender, age, class level and residential conditions.

2. Method

Sample of the study is formed by totally 890 undergraduate students (452 female, 439 male; 322 of them living with the family, 271 of them living in the dormitory, 298 of them living in houses) who are studying in first, second, third and forth classes in various departments of Selcuk University Konya-Turkey during 2008–2009. Students were selected by random sampling method. SPSS Package Program has been used in data analysis. In the study, the significance level has been accepted as .05. We explained each student the purposes of the study, content of the questionnaire, and consent procedures face to face. Two instruments were used to explore the presence of probable problem solving ability of the university students and these are: Problem Solving Inventory (PSI) and “Students’ Personal Information”.

Students’ Personal Information (SPI): SPI is prepared by the researchers and is used to collect data for the study. SPI includes questions concerning gender, age, class level and residential conditions of the undergraduates.

Problem Solving Inventory (PSI): To assess the problem-solving ability, the 32-item PSI is used and it is developed by Heppner and Petersen (1982) and adapted into Turkish by Sahin et al. (1993). The possible total scale score of PSI ranges between 32 and 192. Heppner & Petersen (1982) suggested that PSI scores should not be viewed as measures of actual problem solving ability, only as perceived problem-solving. Higher scores indicate negative perceptions of one's problem-solving ability. In the reliability and validity study conducted with university students, Sahin et al. (1993) found the internal consistency of the scale to be “.88”. The high score obtained from the scale indicates that the individual perceives oneself insufficient of in the skills of problem solving. We have considered in this study that PSI’s total scores, not the sub-scales scores. The data of PSI can also scored by total score like in many researches (Serin, N., B., Derin, R. 2008; Gulseren K., & Gul, O. Y., 2008; Çam, S., 1999).
3. Findings

Table 1. Independent Test Results Introducing the Values of Mean, Standard Deviation of Total Scores in Problem Solving According to the Gender Differences of the Students

<table>
<thead>
<tr>
<th>Sex</th>
<th>N</th>
<th>Mean</th>
<th>S</th>
<th>sd</th>
<th>T</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>452</td>
<td>90.93</td>
<td>22.66</td>
<td></td>
<td>872.31</td>
<td>4.896</td>
</tr>
<tr>
<td>Male</td>
<td>439</td>
<td>83.06</td>
<td>25.24</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

When examining the Table 1, from the average score point of view and variables of PSI according to the gender of the students, it has been examined by means of t test whether there is meaningful difference for the mean scores of PSI or not. According to statistical analysis performed, there was a meaningful difference between the male and female students’ mean scores of PSI ($t=4.90; P<0.05$). The means indicated that males are more capable of solving their problems than females.

Table 2. One-Way ANOVA Test Results about Total Scores of PSI to the Class Level Differences for the Students

<table>
<thead>
<tr>
<th>Class Level</th>
<th>N</th>
<th>Mean</th>
<th>S</th>
<th>F</th>
<th>P</th>
<th>Meaningful Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>353</td>
<td>102.10</td>
<td>21.05</td>
<td></td>
<td></td>
<td>1→2</td>
</tr>
<tr>
<td>2</td>
<td>116</td>
<td>94.48</td>
<td>21.10</td>
<td>188.57</td>
<td>.001</td>
<td>1→3, 1→4</td>
</tr>
<tr>
<td>3</td>
<td>214</td>
<td>80.62</td>
<td>18.88</td>
<td></td>
<td></td>
<td>2→3, 2→4</td>
</tr>
<tr>
<td>4</td>
<td>208</td>
<td>64.13</td>
<td>13.45</td>
<td></td>
<td></td>
<td>3→4</td>
</tr>
</tbody>
</table>

When examining the Table 2, from the average score point of view, from the variables of PSI for the class level of the students, it has been examined by means of One-Way ANOVA test whether there is a meaningful difference between the mean scores of PSI or not. According to statistical analysis performed, there was a meaningful difference from the total score from the variables of PSI in the class level of the student’s ($F=188.57; P<0.05$). The means indicated that students’ problem solving abilities are increasing from the first grade to the fourth grade.

Table 3. One-way ANOVA Test Result of the Total Scores of PSI According to Students’ Age Differences

<table>
<thead>
<tr>
<th>Age</th>
<th>N</th>
<th>Mean</th>
<th>S</th>
<th>F</th>
<th>P</th>
<th>Meaningful Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-20</td>
<td>487</td>
<td>99.22</td>
<td>23.59</td>
<td></td>
<td></td>
<td>18-20→21-23</td>
</tr>
<tr>
<td>21-23</td>
<td>322</td>
<td>87.74</td>
<td>24.56</td>
<td>15.445</td>
<td>.001</td>
<td>18-20→21-23, 21-23→24-after</td>
</tr>
<tr>
<td>24-after</td>
<td>82</td>
<td>83.00</td>
<td>23.13</td>
<td></td>
<td></td>
<td>24-after</td>
</tr>
</tbody>
</table>

When examining the Table 3, from the average score point of view, from the variables of PSI for the ages of the students, it has been examined by means of one-way ANOVA test whether there is a meaningful difference or not between the mean scores of PSI. According to statistical analysis performed, there was a meaningful difference in the average score of the variables of PSI for the ages of the student’s ($F=15.44; P<0.05$). The means indicated that 18-20 years of age group students are more incapable in solving their problems than 21-23 age group of students’ and 21-23 ages group students are more incapable in solving their problems than the 24 and more age group students ($p<.05$). The means indicated that, older students are more capable of solving their problems than younger ones.
When examining the Table 4, from the average score point of view, from the variables of PSI for the residential conditions of the students, it has been examined by means of One Way ANOVA test whether there is a meaningful difference between the mean scores of PSI or not. According to statistical analysis performed, there was a meaningful difference from the average score from the variables of PSI for the residential conditions of the student’s. The means indicated that “WF” group students are more incapable in problem solving skills than “D” group students and “D” group students are more incapable in problem solving skills than the “H” group students (F= 362,66; P < 0.05). The means indicated that, students who live in houses while they are studying are more capable in problem solving skills than others.

4. Discussion, Conclusion and Recommendation

When examined according to gender, the findings show that females’ PSI scores are higher than the males. The means indicated that males are more capable of solving their problems than females. This is because of the form of Turkish culture; as in Turkish culture, boys are more independent than girls in their relationships outside, they are not limited and under control as much as girls. When they are leaving their families in order to have an education for most of the girls it is their first separation. So they have more difficulties in problem solving skills compared to boys. Since boys meet outside world earlier than girls, it can be considered that they are more capable of solving problems by them.

According to the total score results gathered from PSI, it is observed that the more the students grow older and the higher their classroom levels get, the more their problem solving ability increase. Problem solving skill can be learned (Heppner & Petersen, 1982). In parallel with age and class level, it is considered that the increase in problem solving ability shows that this cannot be ignored. Besides as the teen get used to his or her new social and academic environment, the problems in adaptation lessen and in parallel with his or her living the problem solving skills develop and increase.

Related to students’ residence findings the total PSI scores last findings show that it is more advantageous for them to separate from their families and stay by themselves than to stay in a dormitory or in a house in terms of problem solving skills. The effort students give by themselves in cooking, cleaning, heating, accommodation and social life might help them to improve their problem solving skills and might affect them positively. However when the students are living with their families and partially the ones in dormitories don’t have to deal with such problems as they are solved for the students and this might affect the problem solving skills of the students negatively.

Suggestions below might be developed according to the findings of the research;

- Families shouldn’t solve all of their daughters’ problems for them and they should give their girls the chance to solve their problems by themselves starting from the early ages.
- The orientation activities are very important especially for the freshman students in their adaptation to their new environment and academic life so the orientation activities should be increased.
- Regarding the problem solving skills parallel with the increase in age, adults should lessen their protectiveness on these teens taking in consideration their developmental stages.
- It is important for the teens to create an atmosphere to solve their own problems by themselves in order to become adults. It should be understood that to have their independence and improve problem solving abilities teens should be by their own than living with families or in houses. The ones who want to stay at home should be supported and the others who can’t should be given the chance to solve their problems by themselves.
References


