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# A study on the relationship between personality types A and B and problem solving styles in the students of Torbate Heydarieh Universities

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**Abstract:**

The present study was performed to study the relationship between personality types A and B and problem solving styles in the students of Torbate Heydarieh Universities. The statistical population included all elected students with the sample size of 300 (150 girls and 150 boys) that were selected by Single-stage cluster and random sampling method. Data were obtained by using personality types A and B questionnaire and Heppner and Peterson problem-solving questionnaire (PSI). The results showed that there is a significant relationship between personality type A and the components of problem solving styles and personality type B has a significant relationship with the components 3 and 1.

**Keywords:** personality type, type A, type B, problem-solving styles

## *Introduction:*

In daily life, everyone faces different problems. Problem solving is different from one person to another that shows unique personality in psychology. People use different skills in stressful situations for solving their problems. Some people face some barriers and challenges while solving their problems that create different stress, anxiety and mental pressures. They also make the quality of life of people different from each other and this fact refers to the relationship between personality and individuals and their problem solving styles.

## *Problem Statement:*

Human is distinguished from animals due to an ability called thinking. The ability to think has been always considered as a necessary tool for human happiness and life. Thinking is hidden in human nature and every person needs to think for a better life. Thinking is a behavior that is often hidden and implicit in which some symptoms are used in imaginations, beliefs and concepts. (Garet 1968, quoted by Mangal:536) Thinking has many types such as Voluntary, conceptual, Reflective and creative. Thinking has also many functions in human life such as reasoning, decision making, creativity and problem solving that means finding the most important solutions to achieve the target". (Santrek:343) Problem solving model was discussed for the first time by John Davy. Another approach is related to Sorandik and Kalhor .There is some steps in problem solving process. The first step is problem recognition and the last step is evaluation that the person evaluates his solution. In fact, sometimes it causes the achievement to new problems and attitudes that is a new beginning for a newer work. (Sternberg) One of the types of problem solving is Emotion focused problem solving in which the person attempts to make himself/herself calm and in Problem focused problem solving the person tries to do something to remove, reduce or bear stress. (Kiecolt 1986) Diferent factors are involved in problem solving such as the nature of problem and factors related to problem solving. One of the most important factors related to problem solver is personality. (Ketel 1970) Personality is something that allows the prediction of what a person does in a situation. (Mangal:593) The classification of personality in psychology has different approaches that were based on 3 main factors called Bile, emphysema and Mucus a classification based on kertchamer physical structure, Sheldon classification, Jung classification that divided people into two groups of Introvert and extravert and Cattle and Allport classification based on personality attributes. (HaII 2003) Another classification is spline or type theories. In Friedman A and B theory, the people with type A are fighter, competitive, Impatient, aggressive and punctual and the people with type B are less Impatient and more punctual and ordered, ready to counsel about responsibility, less ambitious and have more logical beliefs. (Ganji) Since we referred to the features of problem solver in the factors affecting problem solving, we attempt to examine the relationship between personality types and problem solving methods to see if there is a relationship between these two factors or not?

## *The significance of the study:*

We, humans live in a natural world a world full of problems in daily life that affect the quality of our lives. In modern society, there are many mental –social damages like addiction, Delinquency and … If people do not have the appropriate strategies to cope with these problems, they will be much vulnerable against these damages. One of the important factors of personality mental –social damages is making people familiar with problem solving skills.
Problem solving is a skill that people can use while planning to cope with life problems. It is a Practical – coping skill that is mentally useful. Using these methods increases self-confidence. (Klinke)
In fact, problem solving helps us to find a suitable way to solve problems. It is an educable process that has several steps and people should become familiar with them since school or even family and unfortunately this important thing would not happen. Teaching this desired process needs a change in teacher-based teaching methods to student-based teaching methods. It also needs cultural familiarity with new methods and also modifying the belief and attitude of teachers in the efficiency of teaching problem-solving skills. In addition, students, parents, educational decision makers and all other people in society should be encouraged to learn problem solving. In a society where people have a good problem solving skill, problems are solved more easily in family and will not become big social problems. On the other hand, people act in a different way according to their personality and the way of coping with problems, thus they can change the perceptions, attitudes and responses that are not useful to cope with problems by recognizing their own personality. In general, people with any type of personality can be helped to recognize different aspects of their personality to keep their useful aspects and reduce negative aspects.

## *Research Method:*

The research method in this study is correlational because the researcher attempts to study the relationship between the components. The statistical population included all elected students with the sample size of 300 (150 girls and 150 boys) that were selected by single stage cluster and random sampling method. The statistical method used in this study is Pearson correlation coefficient.

## *Tools*

1. Personality A and B questionnaire: This questionnaire has 17 questions. If the respondents give a positive response to the questions 1,3,4,6,8,9,11,12,14,15, and 17 and a negative response to the questions 2,5,7,10,13 and 16 they will have personality type A otherwise they will be among those with personality type B. Personality A and B questionnaire as a validity more than 70% and 80%. (Ganji)
2. Problem solving questionnaire (PSI): This questionnaire was designed by Heppner and Peterson in 1382 to measure the perception of respondents from their problem solving behaviors. PSI has 35 items that were designed to measure the reaction of people to their daily problems. 3 items of

the questionnaire are for research purposes and are not scored. Problem solving questionnaire based on factor analysis rotation has 3 separate sub-scales:

A. Problem solving confidence (PSC): with 11 items, it evaluates self-confidence in the fields of problem solving. Low score in this sub scale shows the confidence of the respondent to his/her beliefs and abilities toward problem solving and self efficiency in problem solving.
B. Orientation - Avoidance style (AA): with 16 items, it measures the tendencies or Avoidances of the respondent in different activities of problem solving. Whether the person is willing to solve or avoid the problems has a very important role in the further behaviors of the person in defining the problem and making efforts to solve it.
C. Personal control (PC): with 5 items, it shows the belief of the respondent in his/her controls on personal behavior and emotions while solving problems. High score shows the high control of the respondents on personal behavior and emotions.

Problem solving test (PST): problem solving questionnaire was adjusted and tested with several samples of respondents. It has a relatively high consistency with alpha coefficients among 72% to 85% in sub-scale (72% PC, 84% AA, 85% PSC) and 90% for total scale. The validity of the test showed that the tool measures the structures that are related to personality variables and are significantly the center of control. The re-test reliability of the total score of the questionnaire during two weeks was reported in a range among 83% to 89% that shows the fact that problem solving questionnaire is a reliable tool to measure problem solving ability.
This questionnaire was translated by Rafati and Kheravi in 1375 and was used for the first time in Iran. The obtained Cronbach alpha was reported 86% in the study of Kheravi, Darvize and Rafati and 66% in the study of Bazl that is acceptable.

## ***Findings***:

General hypotheses: There is a significant relationship between personality type A and problem solving styles of students in Torbate Heydarieh Universities
There is a significant relationship between personality type B and problem solving styles of students in Torbate Heydarieh Universities

| Type and components of problem solving | observed RXY | N | a | df | Rxytable |
|---|---|---|---|---|---|
| Type A | -0/51 | 300 | 0/05 | 299 | 0/195 |
| Type B | 0/42 | 300 | 0/05 | 299 | 0/195 |

Since the Absolute Value of correlation coefficient (-0/51) is bigger than the table coefficient (0/195) at a=0/05 and df=299, thus there is a significant relationship between personality type A and problem solving styles.
Since the observed correlation coefficient (0/42) is bigger than the table coefficient (0/195) at =0/05 and df=299, thus there is a significant relationship between personality type B and problem solving styles.
Sub-hypotheses: There is a significant relationship between the component 1 of problem solving styles and personality type A.
There is a significant relationship between the component 2 of problem solving styles and personality type A.
There is a significant relationship between the component 3 of problem solving styles and personality type A.
There is a significant relationship between the component 1 of problem solving styles and personality type B.
There is a significant relationship between the component 2 of problem solving styles and personality type B.
There is a significant relationship between the component 3 of problem solving styles and personality type B.

| Components | Component 1 (problem solving confidence) | Component 2 (orientation-avoidance) | Component 3 (personal control) | N | a | df | Rxytable |
|---|---|---|---|---|---|---|---|
| Type A | -0/23 | 0/32 | 0/21 | 300 | 0/05 | 299 | 0/195 |
| Type B | 0/195 | 0/16 | 0/28 | 300 | 0/05 | 299 | 0/195 |

Since the observed correlation coefficient (-0/23) is bigger than the table coefficient (0/195) at =0/05 and df=299, thus there is a significant relationship between personality type A and the component 1 of problem solving.
Since the observed correlation coefficient (0/32) is bigger than the table coefficient (0/195) at =0/05 and df=299, thus there is a significant relationship between personality type A and the component 2 of problem solving.
Since the observed correlation coefficient (0/21) is equal to the table coefficient (0/195) at =0/05 and df=299, thus there is a significant relationship between personality type B and the component 1 of problem solving.

Since the observed correlation coefficient (0/16) is less than the table coefficient (0/195) at =0/05 and df=299, thus there is not a significant relationship between personality type B and the component 3 of problem solving.
Since the observed correlation coefficient (0/28) is bigger than the table coefficient (0/195) at =0/05 and df=299, thus there is a significant relationship between personality type B and the component 3 of problem solving.

## *Discussion and conclusion:*

The results showed that there is a significant relationship between personality types A and B and problem solving styles. Also, the results showed that there is a significant relationship between personality type A and the components 1,2 and 3 of problem solving. Also, the relationship observed between type B and the components 1 and 3 (problem solving confidence and personal control) of problem solving is significant. The people with personality type A have attributes like agitation, less attention to counsel with others, are impatient, aggressive and punctual that have significant and reverse relationship with the components of problem-solving like tendency to solve problems, Orientation – Avoidance style and personal control.
The people with personality type B that more consider the quality of life are more Cautious and ordered, ready to counsel about responsibilities and have more logical beliefs. According to the use of both personality types from problem solving, the people with personality type B are more successful in managing the steps of problem solving and people with type A are more vulnerable against the steps of problem solving. The first style of problem solving (problem solving confidence) that shows the self confidence of the person in different fields of problem solving shows that the people with type A have over self confidence, do not counsel with others, bear more pressure, push themselves to have agitation in works and are self reliant. The disadvantages of these Moral characters will be more than their advantages and the significant and reverse relationship between these two components will emerge. The component 2 of problem solving styles (Orientation - Avoidance) that deals with tendencies or avoidances of the respondents in different activities of problem solving has a very important role in the further behaviors of the person in defining the problem and making efforts to solve it. The people with type A are hasty in solving their problems and since they have difficulty in dividing power, thus they have less readiness to counsel about their personalities and since they see the negative aspects more, they always look for negative criticism. All these features in these people cause tendencies or avoidances in the steps of problem solving. The component 3 of problem solving styles (personal control) shows the person's beliefs in the control of personal emotions and behaviors. The people with type A have too much sense of competitiveness, aggression, unrest, too much speed and agitation in speech and behavior, so that they are known as the patients of agitation. (Karimi:162) These people in our society act as the people who work more seriously in problem solving, are not calm while working, make more efforts and are confirmed in society. However, the people with type A become too much vulnerable both physically and mentally in social life against different problems since they are very hasty in their works, have Impulsive behavior in solving their problems, do not have Reflective questions and are more vulnerable against failure. One of the illnesses of the people with type A is Coronary artery disease that shows the stressful

life of these people that emerges with physiological symptoms. (Aiken 1979) These people have too much expectation from themselves and others and work under too much pressure. Thus, they are more exposed to Coronary artery disease that shows the stress and pressure of their lies. (Sarason, Sarason) Another component of personality type A of behavioral patterns of this type is aggression that shows these people are Excited more easily. Another component is competitive and these people are willing to criticize and blame themselves and despite too many efforts, they are not satisfied with their achievements. Another component of these people is the feeling of time emergency that have permanent fight with time and hour, they become impatient against delays and time-consuming and always have Intensive plans. They often try to do several things simultaneously and always imagine that they have less time. (Alipoor)

In general, all these attributes and components show the lack of personal control in these people. But the people with type B care more about the quality of life, are less ambitious and patient, more catious and ordered , less competitive than type B, thus they are more patient while facing problems and work better in problem solving. Although they are considered as Cool and indifferent people in society, they have better life, do not bear too much stress and have better physical and mental health. The people with personality type B are relaxed, calm and easy going. They have a slow life and are less exposed to Coronary artery disease. (Permusicو quoted by Gholamreza Zadeh). Al these attributes show the relationship between this personality type and the component 1 (problem solving confidence) and the component 3 (personal control) of problem solving styles.

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