

The Relationship Between Perception of Risk and Decision Making Styles of Turkish University Students: A Descriptive Study of Individual Differences

Sengul Hablemitoglu and Filiz Yildirim

Department of Family and Consumer Sciences, College of Home Economics, Ankara University, Turkey

Abstract: The aim of the study is to investigate the Turkish university students' (aged 17-20+) decision making styles and perception of risk in their life from the aspect of descriptive variables (gender, housing, perceived economical competency and location of residence). This study was conducted face to face by interviewing a total of 263 university students in Turkey (127 females and 136 males) who are enrolled in different faculties of Ankara University (Sciences Faculty, Faculty of Law, Faculty of Agriculture, Faculty of Letters). Questionnaire contained two scales which were taken into account in this study-DMSQ (RatDM, IntDM, DepDM, AvoDM sub-scales) and PRS. For determining the effects of housing, perceived economical competency and location of residence variables on decision-making styles and perceptions of risk "ONE WAY ANOVA" was used; and for finding the groups that are significant for decision-making styles and that create a difference, "TUKEY" statistical analysis method within the framework of "POST HOC TESTS" was used. With the aim of explaining perceptions of risk and decision-making styles of university students, the differences that the gender independent variable alone may cause on reciprocal interaction between the dependent variables (DMSQ subscales-RatDM, IntDM, DepDM, AvoDM; and RPQ) were tested with "Pearson Correlation Analysis".

Key words: Decision-making styles • Rational • Intuitive • Dependant • Avoidant • Perception of risk

INTRODUCTION

Every day, people face decisions in domains as diverse as choosing shampoos, foods, goods and services and friends. When people have not learned what to do through experiment or error, they need a suite of generally applicable decision making skills [1]. A considerable part of the role and functions of individual in democratic societies consists of critical thinking, discussion of opinions, problem solving and decision-making skills. In order to be functional, trained individual of the 21st century must be able to find logical solutions to the problems they face and they also must be able to give effective decisions. The skills of decision-making are not only the results of development and socialization, but also inevitable processes that go on throughout the life of an individual [2]. Historically, the skills that are considered important to effective decision making were based on a normative model of decision making, which prescribes how decisions should be made. These skills include (a) identifying the possible options, (b) identifying the possible consequences that follow from each option, (c) evaluating the desirability of

each consequence, (d) assessing the likelihood of each consequence and (e) making a choice using a decision rule [3]. Furthermore, decision making is an important life skill at all stages in life. The skills in decision making require abstract thinking which involves considering multiple alternatives. However, initially, students may enter university without prior educational training in decision making. And they may not be able to think abstractly [4]. In fact, many students enter university as absolute thinkers (they believe there is only one right and wrong answer) and their thinking becomes more abstract (they can consider more than one right or wrong answer) throughout university [5]. Further, what is going inside the mind is manifested in outside behaviors [6].

Moreover, the values and goals which motivate decisions represent the world view of young people whose decisions are made. They are introduced by young people who act as a decision maker either as individuals or as a group. In addition, the individual provides human resources such as intelligence, knowledge and judgment which are necessary for decision making. The environment, too, provides both resources and constraints and so must be considered in decision making

[7]. We know that generally, peer pressure and young conformity are a well known phenomena in our society. Researches indicate that these factors are the most concrete evident among young people between the ages of 17 to 24. Decision-making styles of young people were studied in western literature for some time. It could be said that such empirical studies on young people in decision making styles are rather recent in Turkey. Decision-making is a subject that is most frequently studied in administrative sciences, industrial psychology and psychological counseling. In spite of the awareness of the importance of making decisions, the processes of making decisions, especially those of youth, were widely studied [2].

There are many studies on the impacts of personal characteristics and socio-demographic ones in making decisions [8-11]. However, most of the information about such effects comes from western literature. Although Turkey is culturally and socially different from those countries, we might expect to find similar findings on this subject in Turkey. We might also expect Turkish youth to indicate different personality features, basing on the differences of family structures, ways of parent interaction, university education and socio-economic status. Our study attempts to investigate whether decisional making styles might vary in given socio-demographic variables. It is hoped that the results of this study will provide practical and objective data on the development decision-making styles of the new young generations, which is the main aim of modern Turkish society.

Turkey's transition process from agricultural community to industrial community, integration with western world, economic and social problems, crisis in adopting modernization, influence by other cultures and societies via communication tools in globalizing world, urbanization and education problem, population increase, ideological and ethnic separations, political instability, unemployment, generation clashes and problems of these kind have a negative effect on university students, whose number is approximately 192.000 (excluding open-university, transfer from Vocational High Schools, 2 year universities and undergraduate programs) [12].

In addition, young people face many problems brought by education system in university such as adaptation to the new environment, deciding by themselves, taking responsibility and bearing the consequences, being successful at lessons, meeting accommodation needs and making friends [13]. All these have an effect on young people's perception of risk related decision making

Decision making styles	Description of characteristics
RatDM	Total search for and evaluation of alternatives
IntDM	Reliance on feelings and hunches
DepDM	Search for direction and advice from others
AvoDM	Attempts to avoid decision making

Fig. 1: Decision-making styles and their descriptions Scott and Bruce [17]

RatDM = Rational Decision-Making

IntDM = Intuitive Decision-Making

DepDM = Dependent Decision-Making

AvoDM = Avoidant Decision-Making

After adolescence, youth would be continuously the best time to teach the habits of giving decisions freely and in a responsible manner [14]. McCandless and Coop [1979] claim that it is difficult to learn how to give effective decisions and that it takes a long time. However, these are the most important skills expected from youth [15].

Youth, the turning point at the transitional stage of life prior to complete maturity, results from the rapid changes in the physical, cognitive, social and emotional personality. Youth is a pivotal time during life span of human being, during which patterns of adult behavior begin to be established. Youth today face several grave risks related to behaviors, such as physical, economical, psychological, social, performance which are common in this developmental period [16]. At this point we should understand that youth is a period of maturity, but it is a period with limited experiences in terms of cognitive processes of decision-making [2].

The aim of our study is to investigate the university students' (aged 17-20+) decision making styles and perception of risk in their life from the aspect of descriptive variables (gender, housing, location of residence-the place where students came in order to go university, perceived economic competency).

In our study, we considered decision making style concept designed by Scott and Bruce [17] which describes the pattern individual use in decision making styles [17] (Fig. 1).

Rational decision making: Rational decisions mean the decisions that are logically linked to ends or objectives. The solution chosen also appears sensible to an objective observer with broad experience. Rationality assumes deliberation and the weighing of alternatives in order to choose the most effective means to achieve a goal or goals. Individuals who make rational decisions usually assign their own subjective estimates of the probabilities of certain events that occur [7].

Intuitive decision making: Intuitive decision making is aided by experience, but does not necessarily result from it [18]. The intuitive person focuses on a total conception of the risk and does not consider the elements of decision making only. In addition, the intuitive decision making style involves a focus on emotional self-awareness as the basis for choice, little anticipation of the future and little information seeking or logical weighing of alternatives.

Dependent decision making: The dependent decision making style is characterized by use of support from other, such that the choice is based on the expectations or advice of others. However, if we assign the decision-making responsibility elsewhere, the responsibility of coping with the consequences of any decision still remains on us [19]. If the dependent decision maker is viewed as participative, it produces favorable reactions from superiors and subordinates. If it is perceived to be leaning, it produces a negative response.

Avoidant decision making: A fourth type of decision-making style is avoidant. A person with an avoidant decision-making style will make every effort to avoid from having to make a decision.

As we know, perception of risk in decision-making is also related the process of making choices with potential for either positive or negative outcomes. Researches suggest large and stable individual differences in the tendency to seek against avoiding risky choices [20], where risk-taking and related decision-making processes reflect underlying dispositional qualities that vary across individuals.

This study is intended as an exploratory venture to gain further understanding of youth's decision-making styles. And, the study will attempt to understand whether there are individual differences Turkish youth with respect to decision-making styles and perception of risk. Finally, the interaction among decision making styles and perception of risk will be examined. For this purpose, our study attempts to find answers to the following questions:

- Is there a difference in the decision-making style(s) (RatDM, IntDM, DepDM, and AvoDM) and perceived risk of youth based on housing, perceived economical competency, location of residence?
- Are there independent variable groups that are significant for decision-making styles and that cause a difference?
- Is there a significant correlation between youths' decision making style?

MATERIALS AND METHODS

Profile of material: This study focused on understanding whether there are individual differences (housing, perceived economical competency, location of residence-the place where young came in order to go education, gender) of university students with respect to decision-making styles and perception of risk. The material of the study, who are students enrolled in Ankara University, were chosen by selecting proportional stratified random sample from different faculties. The material was purposive from four faculties of Ankara University (Sciences Faculty, Faculty of Law, Faculty of Agriculture, Faculty of Letter). In order to collect data for the study, permission was taken from dean's office. In cooperation with them, the material and date of the application of the questionnaire were determined. The application of research instrument included two-stages.

The first stage was the explaining the aim of the study and content. The participants were informed about the study before. The points that they should pay attention while answering questions were told to them and they were ensured that all their answers would be kept confidential.

The data was collected in the second stage. Participants were allotted approximately 10 minutes to answer the questionnaire. The questionnaire was administered to a total of 263 participants; consisting of 127 young females and 136 young males.

The material consisted of university students, 51.7% male and 48.3% female. Rate of the university students in dormitory was 37.3%. Rate of the students whose economic competence was perceived as "good" was 60.8%. In the purpose of university education, students come from different cities (57.8%) (Table 1).

Research instruments: The instruments used in this study are Personal Information Form (PIF), Decision-Making Styles Questionnaire (DMSQ) and Risk Perception Scale (RPS).

PIF: A list of questionnaire was prepared to gather information about some socio-demographic characteristics of the students. The questions aimed to provide answers about the students' housing, perceived economical competency, location of residence and gender of this study.

DMSQ: The questionnaire related decision-making styles is based on the items which include the Decision Making Styles Questionnaire (DMSQ), was developed by Scott

Table 1: Socio-demographic information (n = 263)

Individual factors	Number	%
Housing		
dormitory	98	37.3
shared home with friends	68	25.9
family	77	29.3
others	20	7.6
$\bar{x} = 2.07 \pm 0.98$		
Perceived economical competency		
very good	5	1.9
good	160	60.8
limited	87	33.1
inadequate	11	4.2
$\bar{x} = 2.39 \pm 0.60$		
Location of residence		
three big cities (Istanbul, Ankara, Izmir)	88	33.5
city	152	57.8
town	20	7.6
abroad	3	1.1
$\bar{x} = 1.76 \pm 0.63$		
Gender		
♀ ♀	127	48.3
♂ ♂	136	51.7

and Bruce [1995] for their study [17]. The questionnaire contained four sub-scales related to rational decision-making (RatDM-8 items), intuitive decision-making (IntDM-5 items), dependent decision-making (DepDM-5 items), avoidant decision making (AvoDM-5 items) (Fig. 1).

The Lickert type scale was used to acquire the data pertaining to decision making styles the young people included in the scope of the study. Therefore, a highly structured questionnaire was used to understand individual differences in the decision making styles and their perception of risk.

Questions in our study were asked with a five-point answering scale of Lickert type varying from 1-“strongly agree” to 5-“completely disagree” and the middle point of the scale had a neither / nor option that it means “no idea”. With this system, the more frequently a particular decision-making style is used, the lower the participants total score for that decision-making styles and perception of risk.

The data related to DMSQ sub-scales indicated that it was a reliable and valid instrument in Turkish university students sample (n= 263). The cronbach alpha coefficients for DMSQ subscales were as follows: RatDM=.74, IntDM=0.83, DepDM=0.90, AvoDM=0.93. The results suggested that the Turkish adaptation of the DMSQ could be used as an effective instrument in researches.

RPS: The risk perception scale of our study consisted of Lickert-type items (7 items) that it is based on the perception of risk questionnaire which was devised by Benthin *et al.* [1993] and by a review of other studies on youth risk taking behaviour [21-23].

Participants made quantitative attitudes for 7 risk behaviours and activities considered to represent risk taking during youth. Items were selected from those used in a variety of studies on youth risk taking behaviour according to the criteria of presumed importance from a risk standpoint. The validity and reliability analysis of RPQ showed the cronbach alpha coefficient was .87.

Statistical procedure: The information obtained as a result of the study was compiled in a database formed with The Statistical Package for the Social Sciences (SPSS-10.00). Descriptive statistics were used to summarize the socio-demographic data.

Firstly, determination of decision-making styles and perceptions of risk in the lives of university students were explained by taking housing, perceived economical competency, location of residence independent variables into account. For determining the relation of decision-making styles with these variables “One Way Variance Analysis-ONE WAY ANOVA” was used; and for observing the variable groups that cause difference in decision-making styles and are effective on decision-making styles, “TUKEY” method, within the framework of “POST HOC TESTS” was used.

With the aim of explaining perceptions of risk and decision-making styles of university students, the differences that the gender independent variable alone may cause on reciprocal interaction between the dependent variables (DMSQ subscales-RatDM, IntDM, DepDM, AvoDM; and RPQ) were tested with “Pearson Correlation Analysis”. Shortly, statistical technique adaptation was considered satisfactory. Gender variable found to have significantly different effect on the results related to decision making styles and perception of risk of youth.

RESULTS AND DISCUSSION

The findings are reported by grouping them in the order of the research questions. To this end, the results of “One Way Variance Analysis-ONE WAY ANOVA” method that is used for determining the effects of housing, perceived economical competency and location of residence variables on decision-making styles and risk perceptions and the results of “TUKEY” method within

Table 2: F values that explain the relation of decision-making styles and perception of risk scores with housing, perceived economical competency and location of residence independent variables

	Housing	Perceived economical competency	Location of residence
	F	F	F
RPS	2.748*		3.102*
RatDM	3.233*		3.882**
IntDM		3.055*	
DepDM			3.916**
AvoDM	4.355**		3.200*

RPS = Risk Perception Scale

RatDM = Rational Decision-Making

IntDM = Intuitive Decision-Making

DepDM = Dependent Decision-Making

AvoDM = Avoidant Decision-Making

*p<0.05, **p<0.01

the framework of “POST HOC TESTS” which is important for decision-making styles and which create difference, were given in Table 2-5.

In the study it was found that rational decision-making styles of students was influenced by housing and location of residence; intuitional decision-making style was influenced by economical competency; dependent

decision-making style was influenced by location of residence and avoidant decision-making style was influenced by location of residence independent variables. In addition, perceptions of risk of students’ were influenced by housing and location of residence independent variable. At this point, it can be suggested that location of residence is the independent variable which have the most predicative effect on both perception of risk and decision-making styles of the students (Table 2).

When average points of housing and decision-making styles and the answers of perception of risk were compared, it was found that there was a significant difference between the average scores of perception of risk ($p<0.05$), rational decision-making ($p<0.05$) and avoidant decision making ($p<0.05$). As it is seen from Table 3, housing groups that create the difference in perception of risk in students’ lives, could not be statistically determined. However, a statistically significant difference was found between attitudes of rational decision-making styles between university students who accommodate at dormitory and who stay with their families ($1>2>3>4$). At this point, while it was observed that the students staying in dormitories had a higher rational decision-making style; it was striking that

Table 3: According to housing, POST HOC test results that explain the group which cause the difference in DMSQ sub-scales (RatDM-AvoDM) and RPS

	Housing						
	Dormitory (1)	Shared Home with Friends (2)	Family (3)	Others (4)	F	Significant difference	Post Hoc
RPS	24.66	25.01	26.12	24.05	2.748*	-	-
RatDM	30.21	29.84	28.61	28.15	3.233*	1-3	1>2>3>4
IntDM	16.32	15.89	16.12	15.90	0.528	-	-
DepDM	15.47	15.63	14.97	16.20	2.533	-	-
AvoDM	16.29	16.65	15.17	15.65	4.355**	1-2-3	2>1>4>3

RPS = Risk Perception Scale RatDM = Rational Decision-Making IntDM = Intuitive Decision-Making DepDM = Dependent Decision-Making

AvoDM = Avoidant Decision-Making

*p<0.05, **p<0.05

Table 4: According to perceived economical competency POST HOC test results that explain the group that cause the difference in IntDM

	Perceived economical competency						
	Very Good (1)	Good (2)	Limited (3)	Inadequate (4)	F	Significant difference	Post Hoc
RPS	28.40	25.04	24.91	26.73	1.966		
RatDM	29.00	29.59	29.03	31.02	1.650		
IntDM	17.60	16.22	15.69	17.36	3.055*	-	-
DepDM	16.00	15.57	15.06	15.91	1.570		
AvoDM	17.20	15.83	16.26	16.00	0.805		

RPS = Risk Perception Scale RatDM = Rational Decision-Making IntDM = Intuitive Decision-Making DepDM = Dependent Decision-Making

AvoDM = Avoidant Decision-Making

*p<0.05

Table 5: POST HOC test results that explain the group which cause the difference in DMSQ sub-scales (RatDM-DepDM-AvoDM) and RPS, according to location of residence independent variable

	Location of residence				F	Significant difference	Post Hoc
	Three big cities (1)	City (2)	Town (3)	Abroad (4)			
RPS	25.41	25.13	23.30	29.67	3.102*	3-4	4>1>2>3
RatDM	28.40	29.97	30.10	33.00	3.882**	1-2	4>3>2>1
IntDM	16.03	16.19	15.65	18.00	1.076	-	-
DepDM	14.86	15.75	15.25	16.33	3.916**	1-2	4>2>3>1
AvoDM	15.33	16.27	16.95	16.33	3.200*	1-2	3>4>2>1

RPS = Risk Perception Scale, RatDM = Rational Decision Making, IntDM = Intuitive Decision Making, DepDM = Dependent Decision Making, AvoDM = Avoidant Decision-Making

* $p < 0.05$, ** $p < 0.01$

the students which were staying with relatives such as aunt and uncle had a lower rational decision-making level. And it was found that the difference in attitudes of avoidant decision-making stemmed from the answers of students who stay especially in dormitories or at a shared house with their friends and the ones who live with their families ($2 > 1 > 4 > 3$). According to this data, it can be suggested that the university students who stay at a shared house with their friends mostly adopted avoidant decision-making style; and the university students who stayed with their families did not adopt avoidant decision-making style much. No predicative effect of housing independent variable was found on intuitive decision making and dependent decision making styles of university students (Table 3).

When the average scores of answers given to perceived economical competency and decision-making styles and perception of risk were analyzed; a statistically significant difference was found between intuitive decision-making average scores ($p < 0.05$); however, the housing groups that cause difference was not statistically detected. In a study conducted by Tasdelen [2001] in Turkey it was found that socio-economical status and dependent decision-making was related [18].

It was understood that perceived economical competency independent variable was not effective in perception of risk, rational, dependent and avoidant decision-making styles of university students (Table 4).

When the average scores of answers given to location of residence variable and decision-making styles and perception of risk were compared, a statistically significant difference was detected between perception of risk ($p < 0.05$), rational (0.1), dependent ($p < 0.01$) and avoidant decision making styles ($p < 0.05$). The perception of risk attitudes of university students who came to Ankara from towns or foreign countries point out to statistically significant differences ($4 > 1 > 2 > 3$). At this

point, it can be said that perception of risk of foreign students had the highest scores and perception of risk of students who came from towns had the lowest scores. The rational decision-making attitudes of university students who came from three big cities of Turkey and other cities were statistically different ($4 > 3 > 2 > 1$). While the foreign students took more reliable decisions, it was found that the university students who came from other cities and especially from three big cities gave less rational decisions. The dependent decision making and avoidant decision making style attitudes of university students were significantly different. It was found that this difference in dependent decision-making and avoidant decision-making stemmed from the answers of students who came from especially three big cities and other cities. According to these findings, it is understood that students who came from foreign countries took more dependent decisions; and the students who came from three big cities and other cities took less dependent decisions ($4 > 2 > 3 > 1$). It can be suggested that the students who came from town took the most avoidant decisions and the students who came from three big cities took the least avoidant decisions ($3 > 4 > 2 > 1$) (Table 5).

At this point, it can be thought that the fact that the decision-making styles that the students adopted differ in terms of location of residence, may have stemmed from cultural differences. In the study of Mau [24], while rational and intuition decision-making styles of students from Taiwan and United States were similar, a significant difference was detected in their dependent decision-making style levels. Dependant decision-making style level of Taiwanese female students was higher ($F: 4.1434$; $p < 0.001$), while self-adequacy of male students was higher ($F: 1.4334$; $p < 0.01$). In addition, as a part of Decision Strategies Scale, Kuzgun [1993] analyzed gender-based differences in decision strategies of high school students in Turkey. The results of the study

Table 6: Pearson correlations of scales scores related to decision making styles and perception of risk by gender

	Gender			
	RPS	RatDM	IntDM	DepDM
♀ N=127				
RatDM	0.123			
IntDM	0.038	0.287**		
DepDM	-0.101	0.181*	0.165	
AvoDM	-0.109	0.339**	0.143	0.126
♂ N=136				
RatDM	0.120			
IntDM	0.118	0.263**		
DepDM	0.034	0.073	0.014	
AvoDM	-0.25	0.215*	0.042	0.024
♀♂ N=263				
RatDM	0.122*			
IntDM	0.106	0.239**		
DepDM	-0.025	0.116	0.086	
AvoDM	-0.066	0.278**	0.058	0.066

RPS = Risk Perception Scale

RatDM = Rational Decision Making

IntDM = Intuitive Decision Making

DepDM = Dependent Decision Making

AvoDM = Avoidant Decision-Making

*p<0.05, **p<0.01

indicated that female students adopted a decision-making style which is less impulsive than that of male students'. In addition to this, it was observed that females took more dependant decision than males and suffered from indecision more[25]. Kuzgun [1993] noted that these variations stemmed from cultural differences[25].

COMPARABILITY OF INTERACTION BETWEEN DECISION MAKING STYLES AND PERCEPTION OF RISK BY GENDER

In the study, we tried to determine the reciprocal interaction between the scales that were used for explaining the perception of risk and decision-making style attitudes of university students and the differences that can be caused by social gender. The results of "Pearson Correlation Analysis" that is conducted with this aim and the answers of female and male students to the scales are given in Table 6 in detail.

As a result of the Pearson Correlation Analysis, it was found that gender had a significant effect on the relation between perception of risk and decision-making styles of the students who took part in the study.

As it is understood from the Table, perception of risk of both female and male students effect their rational

decision-making positively and at a low level ($r=0.122$, $p<0.05$). Perception of risk is, in a sense, is determinant of decision-making for university students. At this point, it is understood that as the perception of risk of university students' increase, they will take more rational decisions (Table 6). Many studies have shown that those engaging in risk taking perceive less risk than those who refrain from engaging in such behavior-a finding consistent with rational decision making. For example Benthin *et al.* [1993] found that young people who had experience with risky behaviors perceived the risks to be smaller, better known and more controllable than did inexperienced youths [21]. Ben-Zur and Reshef-Kfir [2003] showed that risk perception for HIV / AIDS decreased as relevant personal-risk behaviors increased; as in the Benthin's *et al.* [1993] study, those taking more risky perceived those risks to be smaller [26, 21]. At this point, unlike our study, in the study of Bechara *et al.* [1994] they draw attention to the fact that rational thinking is related with perception of risk in decisions to be taken about the future [27] and according to Stanovich [2006] distortions in risk perceptions can be examined in at least three ways: (a) Adolescents' perceptions of their own risks can be compared to their perceptions of peers' risks, (b) adolescents' perceptions of their own risks can be compared to adults' perceptions and (c) adolescents' perceptions of risks can be compared to published estimates of objective risks. Specifically, with respect to the first type of comparison, adolescents can be asked to estimate their own risk relative to the risk of peers, acquaintances, or other adolescents[28]. According to Stanovich [2006] it is understood that, perception of risk attitudes should be studied together with the determinants that effect dependant decision-making of young people [28].

In our study it was found that, for university sstudents, rational decision-making was in interaction with intuitive and avoidant decision-making ($p<0.01$). As a result of these findings, it was determined that rational decision-making effected avoidant decision-making and intuitive decision-making at a low level and in a positive way ($r = 0.278$, $r = 0.239$). In a sense, it can be derived that as rational decision-making increases, avoidant decision-making will also increase and the interaction between both decision-making will be determinant for intuitive decision-making. At this point, it can be suggested that the university students who evaluate the alternatives in a rational way and who investigate them more attentively may act in an avoidant way according to risky situations in decision-making and the intuitions and emotions can be

effected by this situation. According to Stanovich [2006] if adolescents perceive risks to be sufficiently high, then, according to rational decision making, they should not take those risks. Thus, one remedy for risk taking is to assess risk perception and, if subjective risk is too low, provide information that brings perceptions into line with objective reality[28].

“Rational decision-making” according to gender independent variable effect intuitive decision making ($p<0.01$), dependent decision making ($p<0.05$) and avoidant decision making ($p<0.05$) for female students. And for male students, rational decision-making is determinant for intuitive decision making ($p<0.01$) and avoidant decision making ($p<0.05$).

The interesting result according to these findings is that, rational decision-making of female students is determinant for avoidant decision-making most at a low level ($r = 0.339$) and in a positive way. This interaction was found at a low level ($r = 0.287$) and positive way for intuitive decision-making. It can be suggested that as female students evaluate the alternatives in a rational way, having avoidance tendency for risky situations, their confidence in their intuitions and motions may vary. This finding is in line with that of health-belief model can be roughly understand as an instantiation of a behavioral decision-making perspective in a health context [29, 30]. The model's components are used to explain why people engage in health-promoting (or destructive) behavior and, thus, has implications for interventions. The model's components are a person's assumed goal of achieving health (e.g., avoiding or curing illness), perceived vulnerability to health threats, perceived severity of health threats, belief that specific behaviors will promote health cure illness (e.g., beliefs about benefits and barriers to engaging in behaviors to achieve health), environmental cues to the actions or behaviors that are believed to be effective in achieving health. For example, according to this model, young would be expected to stop smoking if they perceive that the health threats posed by smoking are great.

And as for male students, rational decision-making effected intuitive decision-making most however, this interaction occurs at a low level and in a positive way ($r = 0.263$). At this point, it was suggested that as male students evaluate all alternatives in decision-making stage with a more attentive and detailed way, their confidence in their intuitions and emotions will increase. At this point, the findings from the sample of Turkish youth support study of Currie [1999] examined

Table 7: Individual-based factors and dominant decision making style (s)
order: Final report

Individual Factor	RatDM	IntDM	DepDM	AvoDM
Housing				
dormitory	X			
shared home with friends				X
family others	-	-	-	-
Perceived economical competency				
very good	-	-	-	-
good	-	-	-	-
limited	-	-	-	-
inadequate	-	-	-	-
Location of residence				
three big cities	-	-	-	-
city	-	-	-	-
town				X
abroad	X(1)		X(2)	
*Gender				
♀♀	X(1)			X(2)
♂♂	X(1)	X(2)		

RPS = Risk Perception Scale

RatDM = Rational Decision Making

IntDM = Intuitive Decision Making

DepDM = Dependent Decision Making

AvoDM = Avoidant Decision-Making

*Interaction level between decision-making styles according to gender variable are indicated in sequence (from high to low)

relationship between coping response, decision making and aspect of self-perception of offending and non-offending youth. It was found out that rational decision-makers tended to report a reliance on intuitive decision-making. The relationship between the two is unclear and may require further formal examination [31].

CONCLUSION

To summarize, we found a scalable significant difference that can be measured statistically individual differences between decision making styles; risk perception of young person is differenced by descriptive characteristics of individual (Table 7).

And as for housing situation, the students who stay at dormitories take more rational decisions than the ones who stay at home with their friends or families. They are, in a sense, “efficient decision makers”. We can suggest that the students who stay at dormitories develop standards for decision-making and analyze each stage of decision-making in a rational way and use these standards in case of risk or indecision. Those who are subjectively rational are expected to reduce complexity

and uncertainty first by dividing the decision problem into its major components and then by using a specified and defined procedure to aggregate these components to produce a decision [32].

When the average scores of perceived economical competency and decision making styles and perception of risk of university students were compared in our study, a statistically significant difference was found between intuitive decision-making average scores, however housing group that caused the difference could not be detected ($p < 0.05$).

In terms of the places from where the students came to receive education, it was found that the students who came from towns took more avoidant decisions than the students who came from three big cities or other cities. For example, choosing to start a conversation with a stranger could result in a new friendship or it could result in rejection, depending upon the stranger's reaction. The students who came from towns are said to avoid risky choices [20] where in risk-taking and related decision-making processes reflect underlying dispositional qualities that vary across individuals. It was found that the students who came from foreign countries perceived risk more than others and they were rational, intuitive and dependant decision-makers.

When female and male students were evaluated together, it was found that, although at a low level, the perception of risk was in interaction with rational decision-making and among decision-making styles, rational decision-making was determinant for intuitive decision-making most. According gender, for female students, rational decision-making effected avoidant decision-making most and for male students, rational decision-making was effected by intuitive decision-making. It was understood that female students avoided decision-making while evaluating alternatives in a rational way and investigating them in a more detailed way and in uncertain situations, or they acted in a negative way. And as for male students, it was suggested that rational decisions were used as a guide in direct comprehension of a problem, concept or fact without a close investigation and without assessing according to mind and logic.

These findings which were obtained according to gender variable indicate that the current data about traditional female and male roles was confirmed once more. However, in addition to evaluating these complementary findings which we chose according to independent variables and which enrich the literature with a larger point of view, it is also important in making profiles of young people in Turkey in terms of their decision-making styles.

Appendix A

The DMSQ

RatDM Subscale

- A.1. I act slowly in application a stage of the decision I took.
- A.2. I think before I decide on anything.
- A.3. While solving a certain problem, I pay attention to decision-making stages.
- A.4. Reason is the best guide in decision-making (reverse score).
- A.5. "Decision-making" should mean evaluation of all important information like in data processing machine.
- A.6. If I have problem in decision-making I give take my time.
- A.7. I know that in decision making there will be more than one alternative and each alternative will have results that are for and against.
- A.8. I never took I decision without collecting enough information about the alternatives.

IntDM Subscale

- A.9. I act by taking sudden decisions (reverse score).
- A.10. I take decide according to my experience.
- A.11. Sometimes I do things that will make me regretful for deciding suddenly.
- A.12. My intuitions do not mislead me (reverse score).
- A.13. While taking a decision, even if it is weaker than other alternatives, I choose the alternative that is more attractive to me.

DepDM Subscale

- A.14. While taking a decision, knowing other people's decisions I advance relieves me.
- A.15. While taking decisions about my family, the idea everyone in the family is asked and the interest of every member is sought.
- A.16. While taking a decision I want other people to lead me and advise me (reverse score).
- A.17. What other people would say about my ideas is important for me.
- A.18. Knowing what other people think or feel help me take the accurate decision.

AvoDM Subscale

- A.19. My philosophy is to avoid from taking risks always.
 - A.20. It is risky to lend money to someone.
 - A.21. I do not engage in works that can cause money loss in the end
 - A.22. I never tried ice skating.
 - A.23. I do never loose time on alternatives that have low possibility to realize.
-

Appendix B

RPS

- B.1. I act as I feel (reverse score).
 - B.2. Being different from other people has always scared me.
 - B.3. If it is shorter, I chose the shabby road on my bicycle.
 - B.4. I do not hesitate to pass over an old and battered bridge.
 - B.5. Some ideas should be taken by flipping a coin
 - B.6. I do not want to engage in an action that I do not know.
 - B.7. As long as it does not harm me, taking risk is easy (reverse score).
-

REFERENCES

1. Parker, A.M. and B. Fischhoff, 2005. Decision-Making Competence: External Validation through an Individual-Differences Approach. *Journal of Behavioral Decision Making*, 18: 1-27.
2. Guçray, S.S., 2005. The Analysis of Decision Making Behaviors and Perceived Problem Solving Skills in Adolescents. *Pastoral Care in Education*, 23: 34-44.
3. Furby, L. and R. Beyth-Marom, 1992. Risk Taking in Adolescence: A Decision-Making Perspective. *Developmental Review*, 12: 1-44.
4. Baxter-Magolda, M.B. and W. Porterfield, 1988. Assessing Intellectual Development: The Link between Theory and Practice. Alexandria, VA: American College Personel Association.
5. Baxter-Magolda, M.B., 1992. Knowing and Reasoning in College: Gender-Related Patterns in Students' Intellectual Development. San Francisco: Jossey-Bass.
6. Gregorc, A.F., 1982. *An Adult's Guide to Style*. Columbia, CT: Gregorc Associates, Inc.
7. Gross, I.H., E.W. Crandall and M.M. Knoll, 1980. *Management for Modern Families*. Englewood Cliffs, New Jersey: Prentice-Hall, Inc.
8. Heppner, P.P., J. Hibel, G.W., Neal, C.L. Weinstein and F.E. Rabinowitz, 1982. Personal Problem Solving: A Descriptive Study of Individual Differences. *Journal of Counseling Psychology*, 29 (6): 580-590.
9. Brown, Y.E. and L. Mann, 1991. Decision Making Competence and Self-esteem: A Comparison of Parents and Adolescents. *Journal of Adolescence*, 14 (4): 363-371.
10. Naftel, M.I. and M. Driscoll, 1993. Problem Solving and Decision Making in An Eighth Grade Class. *Adolescent Psychology*, 66 (3): 177-187.
11. Eldeleklioglu, J., 1996. The Relation Between Decision-Making Strategies and The Parents Attitudes. Unpublished Ph.D. Thesis, Gazi University, Ankara.
12. Bayhan, V., 1997. *Universite Gencliginde Anomi ve YabancIlasma*. Kùltür Bakanlıđı Yayinlari, Ankara.
13. Ultanir, E., 1996. Yeni Acilan Universitelerde Psikolojik Danisma ve Rehberlik Merkezlerinin Açilmasina Duyulan Gerekliklik. *Cagdas Egitim Dergisi*, 220 (21): 10-14.
14. Mann, L., R. Harmoni and C. Power, 1988. Adolescent Decision-Making: The Development of Competence. *Journal of Adolescence*, 12 (3):265-278.
15. McCandless, B.R. and R.H. Coop, 1979. *Adolescents: Behavior and Development*. New York: Rinehart and Winston.
16. Yildirim, F., 2007. The Examination of The Gender Influence on Risk Perceptions of College Students in Life, Ankara University, Unpublished M.S Thesis, Ankara.
17. Scott, S.G. and R.A. Bruce, 1995. Decision Making Style, The Development and of A New Measure. *Educational and Psychological Measurement*, 55 (5): 818-831.
18. Tasdelen, A., 2001. Öğretmen Adaylarının Bazi Psiko-Sosyal Degiskenlere Göre Karar Verme Stilleri. *Pamukkale Universitesi Egitim Fakùltesi Dergisi*, 10: 40-52.
19. Argyropoulou, K. and D. Sidiropoulou, 2003. Applications of Self-Efficacy Theory to The Understanding [of] Career Decision Making of Higher Education Students. *Quality Development in Vocational Counseling and Training*, International Conference, Berlin, Switzerland.

20. Levin, I. and S. Hart, 2003. Risk Preferences in Young Children: Early Evidence of Individual Differences in Reaction to Potential Gains and Losses. *Journal of Behavioral Decision Making*, 16 (5): 397-413.
21. Benthin, A., P. Slovic and H. Severson, 1993. A Psychometric Study of Adolescent Risk Perception. *Journal of Adolescence*, 16: 153-168.
22. Beyth-Marom, R., L., Austin, B., Fischhoff, C., Palmgren and M. Jacobs-Quadrel, 1993. Perceived Consequences of Risky Behavior: Adults and Adolescents. *Developmental Psychology*, 29: 549-563.
23. Lavery, B., A.W., Siegel, J.H., Cousins and D.S. Rubovits, 1993. Adolescent Risk Taking: An Analysis of Problem Behavior in Problem Children. *Journal of Experimental Child Psychology*, 55 (1): 277-294.
24. Mau, W.C., 2000. Assessing Career Decision-Making Difficulties. In *The Proceedings of The American Counseling Association Meeting*, Washington, DC.
25. Kuzgun, Y., 1993. The Scale of Decision-Making Strategies: A Study on The Improvement and Standardization. *The Studies of VII. National Psychology Congress*. (Ed.). Rüyeyde Bayraktar and Ihsan Dağ. Publication of the Turkish Psychological Association.
26. Ben-Zur, H. and Y. Reshef-Kfir, 2003. Risk Taking and Coping among Israeli Adolescents. *Journal of Adolescence*, 26: 255-265.
27. Bechara, A., A.R. Damasio, H. Damasio and S.W. Anderson, 1994. Insensitivity to Future Consequences Following Damage to Human Prefrontal Cortex. *Cognition*, 50: 7-15.
28. Stanovich, K.E., 2006. Rationality and The Adolescent Mind. *Psychological Science in the Public Interest*, 7 (1): 1-49.
29. Becker, M.H., 1990. Theoretical Models of Adherence and Strategies for Improving Adherence. In: Shumaker, S.A., E.B. Schron, J.K. Ockene, C.T. Parker, J.L. Probstfield and J.M. Wille (Eds.). *Handbook of Behavior Change*. New York: Springer.
30. Byrnes, J.P., 1998. *The Nature and Development of Decision Making: A Self-Regulation Model*. Mahwah, NJ: Erlbaum.
31. Currie, F., 1999. *Non-Offender and Young Offender Self-Perception of Coping and Decision-Making*. MS Thesis, Mount Saint Vincent University, Canada.
32. Stein, J.G. and R. Tanter, 1967. *Rational Decision Making: Israel's Security Choices*, A Publication of The Mershon Center for Education in National Security, Ohio State University Press.