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Gender Differences in the Influence of Egocentrism and Focalism on Turkish Young People's Optimism: Are Young Men More Optimistic or Young Women More Realistic?

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Abstract: This study was planned and conducted to define the gender differences in the influence of egocentrism and focalism (cognitive and motivational factors) on young people's optimism and their perception of control which means "controllability of life". This study was conducted face to face by interviewing a total of 263 university students in Turkey, consisting of 127 females and 136 males, who are studying in Ankara University. Three scales were taken into account in this study - unrealistic and future orientation scales have focalism and egocentrism factors; perception of control scale. In order to test the reliability of questionnaire, the findings were calculated by "Cronbach Alpha" as inner consistency coefficient. Each scale was found valid and reliable at the rate of 83 % - 93 %. The impact of two factors (egocentrism and focalism) related to gender on young people's optimism was examined with "independent-samples t test", it was used to define the gender differences in that.05,.01,.001 levels of used throughout the analysis. As a second analysis "spearman's rank order correlation analysis" was used for the interaction among gender differences depending on influence of egocentrism and focalism on young people's optimism bias and their perception of control. The results indicated students' degree of control perceptions and optimism and realistic behaviors according to gender in terms of egocentrism and focalism differed.

Key words: Optimism bias · Unrealistic optimism · Future orientation optimism · Perception of control · Egocentrism · Focalism

INTRODUCTION

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 [1,2].

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) [3].

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 [4]. All these have an effect on young people's perception of control on possible risks in their future life, future-orientation optimism and life-events.

Optimistic biases related with future life events were related to feelings of vulnerability or invulnerability to risky consequences [5]. Optimistic bias is commonly defined as the mistaken belief that one's chances of experiencing a negative life event are lower (or a positive life event higher) than that of one's peers. The bias was first demonstrated by Weinstein [13], who reported that

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a majority of college students believed their chances of events such as divorce and having a drinking problem were lower than that of other students and their chances of events such as owning their own home and living past 80 years of age were higher than that of other students [6]. Because a majority of individuals in a group cannot be above (or below) the mean unless the distribution is highly skewed, these findings represented a bias at the level of the group. Other terms representing the same construct include "unrealistic optimism", "illusion of invulnerability", "illusion of unique invulnerability", "optimism bias" and "personal fable". It is also possible to be optimistically biased by being overconfident about the objective chances of experiencing a positive event or avoiding a before, optimistic bias has been more frequently defined using the comparative definition above due to greater methodological ease [7].

The optimistic biases are extremely robust and not limited by demographics such as age, sex, education or occupation [8]. However, there does appear to be a cultural difference, with members of cultures valuing independence, showing more optimistic bias than member of culture valuing interdependence [9].

Optimistic biases in personal risk perceptions are important because they may seriously hinder efforts to promote risk-reducing behaviors [10]. Individuals' actual risks and their perception of their personal risk are distinctly different. Weinstein [11-13] show that people make comparative risk assessments in an egocentric manner, paying little attention to the risk status of others when asked to determine their own relative risk [11-13]. Weinstein originally labeled this phenomenon as "optimistic bias". Weinstein's research [13] which examined the role of optimism in college students is a classic study. Weinstein [13] showed that people tend to be unrealistically optimistic, thus demonstrate a cognitive error in judgment. Factors influencing the amount of optimistic bias evoked by different events and the mechanisms that produce this bias were examined [13].

In lay terms, individuals believe they are less vulnerable to risks than others. Optimistic bias is a robust finding and has been replicated in a variety of contexts, including especially physical/general health [14] (also social, psychological, functional/performance).

The implications of unrealistic optimism in life events-related (future or current life events) domains of behaviour have long been of concern. Van der Pligt [15] has suggested that an illusion of relative invulnerability to risks might mean that people are less likely to embrace life improving behaviours: "If life events-related risks primarily concern other people and not oneself there is no reason to adapt one's behaviour" [15].

Taylor and Brown [16] have put forward the interesting thesis that optimism might often be actually very useful; that optimism is a sign of good functioning in life. Stressed people, it seems, have fewer illusions (for example, of control, or about the likelihood of possible positive or negative future events) than those who are not stressed. Taylor and Brown [16] suggest that positive illusions are a highly adaptive way of dealing with some negative 'information' from the environment [16].

Unrealistic optimism refers to tendency. People report that they are less likely than average person of their sex and age to experience a risk (or more likely than average person to experience a 'positive life event') [17]. For example whether applying for a job, vying for an "A" on a curved exam, or waging war, many of life's most consequential pursuits are competitive in nature, therefore these are perceived as the risky life events [18].

There have been different explanations for unrealistic optimism phenomenon, some of them focusing on cognitive factors (hopes, fears) and some of them focusing on motivational factors (value, expectance, control) [17]. A number of factors have been suggested as determinants of unrealistic optimism. The explanations fall into two general categories: cognitive and motivational [19].

Cognitive Factors: Cognitive explanations of unrealistic optimism are based on the assumption that people make systematic information-processing errors when making relative risk assessments. These errors might stem from *egocentrism* [13,19] or from the use of cognitive heuristics such as "representativeness" and "availability" [13].

Egocentrism: When making comparative risk judgments, people may be aware of factors that reduce their own vulnerability but fail to recognize that others may have just as many factors in their own favor [13,19]. Therefore, making people aware of others' reasons for feeling relatively invulnerable should decrease their optimistic bias. In support of this idea, Weinstein [13] found that providing such information to participants did decrease optimism. However, he also found that reduction in the bias was only temporary [13]. Further, Regan *et al*. [20] demonstrated that a lack of discrimination information is insufficient to explain the phenomenon; even when the compared other is someone about whom a great deal of information is known, such as a close friend, individuals are still optimistic [20].

Motivational Factors: Motivational explanations of optimism are based on the notion that acknowledging the possibility that negative events will occur is anxiety provoking [21]. To reduce this anxiety, people use self-deceptive coping strategies such as denial; neglect to consider evidence relevant to other possible outcomes or unacceptation of the threat's existence [13]. Anxiety reduction accounts for the findings that individuals are equally optimistic no matter who is the comparison standard, be it a stranger or a friend [20] and that individuals will choose a highly vulnerable comparison target if given the opportunity, a phenomenon called "downward comparison" [22]. In this case, self-assessments of individuals might have greater impact them competitor-assessments from *focalism*.

Focalism: Past experience with a negative event appears to decrease optimism [8,10]. While some people tend to assume the world is safe and meaningful, several negative life events reject these assumptions and the world becomes perceived as more dangerous [21].

Conversely, never having experienced a negative event seems to promote optimism. This may occur because people believe their past is predictive of their future [8]. If an outcome has not yet arisen in a person's experience, they may feel "exempt" from it ever occurring.

Focalism, broadly construed, is the tendency of people to focus on information relevant to one outcome and fail to consider conclusions relevant to other possible outcomes [23,24].

Perceived Control: Furthermore, there is evidence that unrealistic optimism is positively related to 'controllability' related the perception of control (the more controllable the person's exposure to the risk, the greater the degree of unrealistic optimism) and to the existence of stereotypes about those at risk (if stereotypes about 'at risk' people exist, the greater the degree of unrealistic optimism [17].

Perceived control, the perception that one can take action to get desired outcomes, consists of two parts: locus of control and self – efficacy. Locus of control refers to beliefs about the locus of reinforcements: whether or not people in general can get good outcomes and avoid bad through their own actions (internal locus of control) or whether external factors control these outcomes (external locus of control). Self efficacy refers to the perception that the self has the skills/abilities to enact these effective responses.

People have a sense of perceived control when they believe that, in general, personal action controls outcomes (internal locus of control) and they personally have the skills to enact those actions (self-efficacy). Thus perceived control can be decomposed in two elements ("there are effective responses for people in general" and "I can enact them") or measured as composite belief ("I can take action to get what I want") [25].

Personal control is both a belief that one possesses the ability to act and get desired outcomes (perceived control) and a behavioral orientation toward taking action to solve problems or deal with stress (control strategy). Most research has focused on perceived control, but there are also measures of active or passive control-related strategies, the self- reported tendency to take or not take action in the face of a problematic situation [26].

In this study we focus on gender differences in optimism. It is important to study individual differences in the influence of egocentrism and focalism (cognitive and motivational factors) on young people's optimism and their perception of control which means "controllability of life".

METHODS

Sample: A questionnaire was devised to determine gender differences in the influence of egocentrism and focalism (cognitive and motivational factors) on young Turkish people's optimism and their perception of control. Participants, who are students continuing their university education in Ankara University, were chosen by selecting proportional stratified random sample from different departments. In order to carry out the study, permission was taken from dean's office. The questionnaire was administered to a total of 263 volunteers, consist of 127 young females and 136 young males. Participants were interviewed face to face and were informed that they could omit to answer any of items in the questionnaire form.

The sample consisted of university students, 51.7% male and 48.3% female. The students are younger than 20 (53.6%). Rate of the university students in dormitory is 37.3%. In the purpose of university education, students come from different cities (57.8%). Rate of the students whose economic situation was evaluated as "good" is 60.8%. Most of the students were economically supported by their families (85.9%). Rate of the students receiving scholarship is 26.3%. Rate of the students who are economically supported by their relatives and who receive

education loans is equal (7.2%). In addition, the rest has been earning money by working part-time (5.3%).

Questionnaire: Optimism bias can be measured in two different ways – either with the direct or the indirect method. The direct method asks the study participants to assess how much more or less they will experience relevant future life events. The indirect method, on the other hand, asks the study participants to assess their own probability of future life events. According to Otten and van der Plight [27], the preferred method of measuring unrealistic optimism is the indirect method, as it has been found to produce less unrealistic optimism and appears to be a more stable measure than direct measures of unrealistic optimism [27,28]. Questions in this 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". Lickert type scale was used to acquire the data pertaining to the optimism biases and control perception of the young people included in the scope of the study. Therefore, a highly structured questionnaire was used to assess gender differences in the influence of egocentrism and focalism (cognitive and motivational factors) on young people's optimism and their perception of control.

Previous studies regarding the optimism biases consist of unrealistic and future orientation and perception of control have been examined during the formation of the questionnaire.

It is based on the items which include "Future Life Events Inventory" , "New Personel Fable Scales " and "Consideration of Future Consequences Scales" carried out by Grunewald in study [5]. Firstly, because the future life events inventory scale is the other self-reported measurement, inventory explores a perception of optimism by examining how participants calibrate the future probability of experiencing positive and negative future life events related to themselves and other students. Also, items from new personal fable scales were selected to assess a disposition toward entertaining a personal fable by tapping feelings of personal uniqueness, competence and invulnerability related to unrealistic optimism depend on egocentrism and focalism factors. Finally, items consisting of "Consideration of Future Consequences Scales" are judging the desirability and perceived risks of consequence having an impact on the choice of decisions focus on perceived control which means "controllability of current or possible future life".

The questionnaire of our study consisted of five-point Lickert scale including 22 items of three scales (unrealistic optimism scale - 6 items, future orientation optimism scale - 6 items and perception of control scale – 10 items). On the other hand, unrealistic optimism and future orientation optimism basic scales in the questionnaire form was divided in two factors as "egocentrism" and "focalism" (Factor 1= EgoCENT, Factor 2= FoCAL). Questions providing the demographic structure of the participants are also included in the questionnaire. The study participants had approximately five minutes to response the questionnaire. After three scales used for the study have been tested of validity and reliability, data was interpreted and discussed. In order to test the reliability of questionnaire the findings were calculated by "Cronbach Alpha" as inner consistency coefficient. Each scales were found valid and reliable at the rate of 83-93% (Unrealistic optimism cronbach alpha: 83%, Future orientation optimism cronbach alpha: 91%, Perception of control cronbach alpha: 93%).

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

Firstly, the impact of two factors related to young people's optimism was examined with "independent-samples t test", it was used to define the gender differences in that..05,.01,.001 levels were used throughout the analysis. As a second analysis "spearman's rank order correlation analysis" was used for the interaction among gender differences depending on influence of egocentrism and focalism on young people's optimism bias and their perception of control. Shortly, statistical technique adaptation was considered satisfactory. Gender variable found to have significantly different affect on the results.

RESULTS

In the study, the effect of gender on unrealistic and future orientation and life-events controlling perceptions of university students according to egocentrism and focalism factors was analyzed with "t test"; and university students test results of average scores of answers were given in Table 1, 2 and 3, separately for scales of male and female students.

Unrealistic Optimism

Factor 1: Egocentrism: In the study, no difference was found between average scores of answers of female and male university students in terms of "unrealistic optimism" and "egocentrism. It was striking that the

Table 1: Gender Differences in Unrealistic Optimism by EgoCENT and FoCAL

Optimism Bias			
1. Unr-OPT	♀♀	♂♂	
	$\bar{x}$	$\bar{x}$	t
EgoCENT	9.54	9.64	-0.32
I can try many things for the sake of being different	2.62	2.80	-1.17
I believe that I can do anything I think	3.48	3.57	-0.63
I think that if I want something much, I can reach that	3.44	2.72	1.21
FoCAL	8.83	8.86	-0.11
Sometimes it is necessary to tell lies	3.35	3.40	-0.38
For taking some decisions, it may be necessary to toss up	2.51	2.35	0.98
Deciding quickly is an indicator of being clever.	2.97	3.10	-0.88

Unr-OPT = Unrealistic Optimism, EgoCENT = Egocentrism, FoCAL = Focalism

Table 2: Gender Differences in Future Orientation Optimism by EgoCENT and FoCAL

Optimism Bias			
2. FutOri-OPT	♀♀	♂♂	
	$\bar{x}$	$\bar{x}$	t
EgoCENT	10.23	9.86	1.32*
I can not work under supervision of another person even if it is a very high-profit job	3.77	3.64	0.90
I think the fact that smoking cause lung cancer is being exaggerated.	4.09	3.54	3.11**
In the future, I will be the most popular person in the class.	2.37	2.68	-2.10
FoCAL	0.11	9.80	1.27*
I think I will be unemployed even after university of master's degree	2.46	2.51	-0.33
I believe that going to school is important for my future	4.37	4.20	1.44*
If I do not receive my expected marks, I protest my examination paper.	3.28	3.09	1.18

*p<.05 **p<.01, FutOri-OPT = Future Orientation Optimism, EgoCENT = Egocentrism, FoCAL = Focalism

Table 3: Differences in Perception of Control by Gender

	♀♀	♂♂	
Co-PER	$\bar{x}$	$\bar{x}$	t
For me, the day I live is more important than the future	2.99	2.75	1.43
I do not sleep without locking my door at night	3.90	3.35	3.37***
I never let anything to chance	3.54	3.71	-1.39
I certainly take measures against situations such as earthquake, robbery etc	3.72	3.65	0.58
I believe that I have to know anything important in the life	4.03	3.93	0.85
Criticizing oneself results in developing oneself	4.48	4.34	1.44*
I act by accepting difficulties	4.00	4.08	-0.83
Listening to my inner voice speeds up my deciding	3.75	3.63	0.96
I want to earn the skills that I think will facilitate my life	4.37	4.30	0.85
Suicide is not a solution against the difficulties of life	4.57	4.55	0.14
	39.35	38.29	1.93*

*p<.05 ***p<.001, Co-PER = Perception of Control

obtained average scores were quite close to each other (9.54, 9.64) (Table 1).

In "unrealistic optimism" scale the average score of answers given by male students to "*I believe that I can do anything I think*" item (3.57) is higher than answers of female students (3.48). Although the obtained average scores and unrealistic optimism levels influenced by egocentrism for both gender are quite close to each other, it can be said that male students are more unrealistic optimistic than female students.

Under *"egocentrism" in "if I want something very much I think I can reach it thanks to coincidences"* item, it was found that female students had a more egocentric approach (3.44) when compared to males (2.72), which in a sense indicated that, for female students unrealistic optimism level influenced by egocentrism is higher than males.

In average scores of answers given by university students, in "*I can try many things for the sake of being different*" item it was found that male students (2.80) were more unrealistic than females (2.62) and male students approved trying many things for the sake of being different.

Factor 2: Focalism: Between average scores of answers of male and female university students for *"focalism"* which is another factor of *"Unrealistic optimism",* no difference was found and obtained average scores were found quite close to each other (8.83, 8.86). So, unrealistic optimism of both males and females stemming from focalism is lower than egocentrism. According to these results, no statistically significant difference was detected between egocentrism based unrealistic optimisms of male and female university students. However, it can be said that egocentrism-based unrealistic optimisms of male students were higher than focalism-based unrealistic optimisms of females (Table 1).

In *"Sometimes it is necessary to tell lies"* item of "focalism" factor of *"Unrealistic optimism"* scale, it was found that both female and male students evaluated this almost with same scores (3.35 - 3.40), which in a sense indicated that focalism-based optimism level of both gender were higher.

It was found that both male a female students evaluated *"Deciding quickly is an indicator of being clever"* item with approximately same scores (3.10 – 2.97) and for both gender, deciding quickly is considered as equivalent of cleverness.

At *"For taking some decisions, it may be necessary to toss up"*item of *"Unrealistic optimism"* scale, it was found from the average scores of answers given by university students that, unrealistic optimism influenced by focalism was close to each other for female (2.51) and male students(2.35) but female students had a higher score.

Future Orientation Optimism:

Factor 1: Egocentrism: There is a difference between average scores of answers given by male and female students in terms of gender variable "egocentrism" factor of "future-orientation optimism" scale and this difference is statistically important ($p<0.05$). It was determined that egocentrism-based future-orientation optimism of female students (10.23) was higher than that of male students(9.86). At this point, egocentrism-based future-orientation optimism level of female students is higher than that of male students (Table 2).

It was found that to *" I think the fact that smoking cause lung cancer is being exaggerated"* item of "focalism" factor of "future-orientation optimism" scale, female students had a more optimistic approach (4.09) than males (3.54) and egocentrism-based future-orientation optimism of female students was higher than that of males. In addition, there is a difference in average score answers of male and female students and this difference was statistically significant ($p<0.01$).

From the average scores of answers given by male and female students to *" I can not work under supervision of another person even if it is a very high-profit job"* item, it was found that female students (3.77) had a higher egocentrism-based future-orientation optimism than that of males (3.64).

It is striking that male students(2.68) had a more optimistic approach to "*In the future, I will be the most popular person in the class"* item of "egocentrism" factor of "future-orientation optimism "scale than girls (2.37) and it was found that for male students egocentrism-based future-orientation optimism level was higher than females.

Factor 2: Focalism: When analyzed according to gender variable, there is difference in terms of "focalism " factor of "future-orientation optimism" between the average scores of answers given by female and male students and this difference is statistically significant ($p<0.05$). It was found that focalism-based future-orientation optimism of female students (10.11) was higher than that of male students. According to results obtained both from egocentrism and focalism, it can be said that female students had more optimistic expectations for future when compared to male students, but they behave in a more realistic manner against future life events (Table 2).

It was found that, in "*I believe that going to school is important for my future*" item of "*focalism"* factor of "future-orientation optimism" female students had a more optimistic approach (4.37) than males (4.20), which in a sense indicated that focalism-based future-orientation optimism of females was higher than that of males. For this article, gender differences are statistically significant($p<0.05$).

Judging from the average scores of answers given by university students to "*If I do not receive my expected*

marks, I protest my examination paper" item of "focalism" factor, it can be said that female students (3.28) gave more positive answers than males (3.09).

In average scores of answers given by university students to *"I think I will be unemployed even after university of master's degree"* item of "focalism" factor of "future-orientation optimism" it was found that both male and female students believed that they will find a job as soon as they completed their education in approximately same rates (2.51-2.46).

Perception of Control: Average scores of answers given by university students who took part in the study according to gender variable to "*perception of control scale*" are given in Table 3. There is a difference in perception of control of life-events between male and female students and this difference is statistically significant ($p<0.05$). From the average scores of answers given by university students, it was found that perception of control of females (39.35) was higher than that of males (38.29) (Table 3).

In average scores of answers given by university students to *"Suicide is not a solution against the difficulties"* item of "perception of control scale" -, it was found that female and male students gave almost the same answers (4.57-4.55) and they noted that committing suicide was not a solution.

From the average scores of answers given by university students to "*Criticizing oneself results in developing oneself*" item, it was found that control of life of female students (4.48) was higher than that of males (4.34). This determined difference is statistically significant ($p<0.05$).

From average scores of answers given to "*I want to earn the skills that I think will facilitate my life"* item of the scale it was found that female students wanted to learn the skills that they think will facilitate their lives at equal degree with male students (4.37 - 4.30).

From average scores of answers given by university students to "*I act by accepting difficulties"* item, it was found that male and female students perceived the difficulties in the life at very close degrees (4.08 - 4.00), which in a sense indicated that both genders had the ability to accept/perceive difficulties of life and act according to it.

From average scores of answers given by students to "*I believe that I have to know anything important in the life "* item, it can be suggested that female students (4.03) were more sensitive in controlling their lives than males (3.93).

From average scores of answers given to *"I do not sleep without locking my door at night "*item it was found that female students (3.90) acted in more controlled manner than males (3.35). In addition, this difference between answers of male and female university students is statistically significant ($p<0.001$).

From average scores of answers given by university students to "*Listening to my inner voice speeds up my deciding"* item it can be said that female students (3.75) acted in a more comfortable manner for deciding than males(3.63).

From average scores of answers to "*I certainly take measures against situations such as earthquake, robbery etc"* item, it was found that female students had a perception of control for possible risky situations in life at approximately equal degree with males (3.72-3.65).

From average scores of answers given by university students to *" I never let anything to chance"* item it can be understood that male students (3.71) had a higher score than females(3.54) for thinking that leaving possible events to chance was not a controlled behaviour.

From average scores of answers given by university students to "*For me, the day I live is more important than the future"* item, it was found that female students (2.99) found the day they are living than future more important than males (2.75).

According to these results, it is understood that female students want to act in a more controlled manner than males, at a considerable level.

COMPARABILITY OF INTERACTION BETWEEN OPTIMISM BIAS AND PERCEPTION OF CONTROL BY GENDER

In the study, for determining egocentrism and focalism-based unrealistic and future-orientation optimism of university students and detecting reciprocal interaction between the scales used for explaining their attitudes towards controlling possible events in the life, we tried to set out the differences that can be caused by gender. The result of "Spearman's Rank Order Correlation Analysis" which is conducted with this aim was given in Table 4 in detail.

As a results of the conducted Spearman's Rank Order Correlation Analysis, it was determined that there was a significant relation effected by gender

Table 4: Spearman's Rank Order Correlations of Scales Scores and Optimistic Bias

Gender	CoPER	Unr-OPT	EgoCENT	FoCAL	FutOri-OPT	EgoCENT
Unr-OPT	0.212*					
EgoCENT	0.201*	0.761**				
FoCAL	0.080	0.770**	0.217*			
FutOri	0.323*	0.155	0.158	0.088		
-OPT	0.199*	-0.027	0.055	-0.111	0.632**	
EgoCENT	0.282*	0.205*	0.166	0.158	0.721**	0.001
FoCAL						
Unr-OPT	0.126					
EgoCENT	0.160	0.767**				
FoCAL	0.007	0.768**	0.214*			
FutOri-	0.223**	-0.089	0.084	-0.172*		
OPT	0.123	-0.147	-0.027	-0.172*	0.788**	
EgoCENT	0.247**	0.006	0.162	-0.120	0.608**	0.042
FoCAL						

*p<.05 **p<.01, Unr-OPT = Unrealistic Optimism, FutOri-OPT = Future Orientation Optimism, EgoCENT = Egocentrism, FoCAL = Focalism, Co-PER = Perception of Control

between participants' egocentrism and focalism-based unrealistic and future-orientation optimisms and perceptions of control on possible life events.

As it is understood from the table, the answers given by "future-orientation optimism" scale influenced egocentrism and focalism-based future-orientation optimism for both female and male students. Here the striking results is that, for female students focalism influenced future-orientation optimism at a higher level ($r= 0.721$, $p<0.01$) and for male students egocentrism was more effective ($r= 0.788$, $p<0.01$).

At unrealistic optimism scale egocentrism and focalism again influenced unrealistic optimism for both male and female students. However, while for female students focalism was more determinant for unrealistic optimism ($r= 0.770$, $p<0.01$); for male students, egocentrism did not effect unrealistic optimism much ($r= 0.767$, $p<0.01$).

Lastly, while in perception of control scale perception of control generally effected future-orientation optimism for females ($p<0.05$), for male students, perception of control for focalism-based future-orientation optimism was determinant ($p<0.01$).

According to obtained gender-based findings;

For Female Students:

- Focalism and egocentrism highly and positively influence unrealistic optimism ($r= 0.770$, $r= 0.761$). As focalism and egocentrism degree rises, generally unrealistic optimism levels of female students also increase.
- At the same time while egocentrism ($r= 0.632$) and focalism positively effected future-orientation optimism, the effect of focalism appears at a higher level ($r= 0.721$).
- Perception of control effects future-orientation optimism at a medium level and in a positive level ($r= 0.323$).

For Male Students:

- Egocentrism and focalism effect future orientation optimism positively; but it is understood that egocentrism is a higher level of determinant ($r= 0.788$).
- Egocentrism and focalism effect unrealistic optimism positively at a high level($r= 0.767$, $r= 0.768$).
- It is understood that perception of control effected focalism-based future-orientation optimism positively at a low level.

DISCUSSION

Even though optimism bias and controllability of life are the most robust findings in research on cognitive and motivational factors or egocentrism and focalism, it is poorly understood [29]. Gender research on optimism bias has shown that men and women have different cognitive (hopes, fears) and motivational factors (expectations, value, control) towards current or future life events [30-32] and different definitions of what constitutes a "controllability life/perception of control ". Therefore, as a first goal of this paper we focus on gender differences

in optimism bias (stemmed from egocentrism and focalism factors) and perception of control relation to current life events or possible future life events. It is important to study gender differences in optimism bias (especially unrealistic and future orientation optimisms) and perception of control in contexts where such differences could lead to a mismatch of motivational and cognitive factors between young women and young man, with consequences for their interaction. More generally, studies about life events examining the relationship between perceptions of relative life events, especially risk and actual behaviour, have provided "highly inconsistent" evidence [33]. Some research has shown that egocentrism-based optimism bias and focalism is related to taking fewer precautions or controllability of life. Some has shown that optimism bias especially future orientation is related to perception of control and some found no relationship. Therefore, a second purpose was to assess mutual interaction of egocentrism and focalism on Turkish young people's optimism and controllability life by gender.

Results of this study indicated that in this study, there was not a difference between egocentrism and focalism-based unrealistic optimism of female and male university students, but obtained average scores were quite close to each other. From these findings it was found that female and male students were equally unrealistic optimistic (Table 1). Lavery *et al*. [34] did not find egocentrism to be predictive of risk involvement in this sample of adolescents. This study showed no significant relationship to gender or age on the constructs of "imaginary audience" and "personal fable" suggesting that egocentrism in adolescents appears to have no predictive value regarding risk taking in this clinical sample [34]. In addition, Kruger and Burrus (2004) found that gender did not create difference in people's unrealistic optimism related to egocentrism and focalism. At this point the demonstration of unrealistic optimism may have both beneficial and harmful consequences [35]. Unrealistic optimism may be beneficial in that it may aid maintaining a relatively high level of self esteem [36]. It is also suggested that people are motivated to see themselves as invulnerable in order to reduce anxiety [8]. This may be because vulnerability often creates symptoms of emotional distress such as acute anxiety, depression, helplessness and excessive fear. In addition to maintaining a high self-esteem and reducing anxiety, illusions of invulnerability may be adaptive because they enable people to go about their daily life without being overcome by fear [36]. However, although unrealistic optimism can be beneficial, when things do not go in the expected direction, the demonstration of unrealistic optimism may also be dysfunctional because individuals assert that they are less likely than others to experience life events and therefore these beliefs may interfere with the individual's taking of precautions to reduce their risk [8,13,37,38].

There is difference between average scores of answers of female and male students given to "future-orientation optimism" scale "egocentrism" and "focalism" factor according to gender variable and egocentrism and focalism-based future –orientation optimism of female students was determined to be higher than that of male students. According to findings obtained both from "egocentrism" and "focalism" it can be said that female students had more optimistic expectations for future than males, however, against future life events they behaved in a more realistic manner (Table 2). Klaczynski and Fauth [39] described how future-orientation optimistic biases in adolescents may vary as a function of individual differences in both cognitive and intellectual ability/motivational factor. Klaczynski and Fauth [39] examined the influences of intellectual ability, rationality and intuitiveness as predictors of warranted and unwarranted optimism for future life events in adolescents. They found that most individuals, regardless of their personal qualities, viewed their own futures more positively and more optimistically or egocentric [39]. In another study, adolescent egocentrism was conceived by Elkind (1967) as a cognitive deficiency in adolescent which occurs when in adolescents try to conceptualize the thoughts of others [40].

There was a difference between male and female students in terms of controlling life-events and it was found that perception of control of life events of female students was higher than that of males (Table 3).

It was found that there was a significant relation, influenced by gender, between egocentrism and focalism-based unrealistic and future-orientation optimisms of participant students and their perception of controlling possible life-events (Table 4). In future-orientation and unrealistic optimism scale, egocentrism and focalism effects unrealistic optimism both for male and female students.

Six experiments investigated people's optimism in competitions by Windschitl *et al*. [18] and focused on two possible explanations for the shared-circumstance effects: egocentrism (the tendency to base optimism on self-relevant assessments more so than other-relevant assessments) and focalism (the tendency to overweight assessments relevant to the focal rather than complementary outcome). It has evidence that both

mechanisms contribute to the effects. In Experiment 4, it is variable whether trivia game contestants predicted their own chances of winning or their competitor's chances. The pattern of results for the likelihood judgments suggested that egocentrism and focalism combined to produce strong shared-circumstance effects in the self-target condition, whereas in the other-target condition, focalism partially mitigated the impact of egocentrism to produce a weaker but still reliable shared-circumstance effect. Path analyses provided additional evidence that when participants judged their own likelihood of winning, they based those judgments on their assessments of their own knowledge of the trivia categories more than their assessments of their competitor's knowledge [18].

In our study, for male students, egocentrism does not effect unrealistic and future-orientation optimism more. Cognitive development, egocentrism and self-esteem were examined in relation to contraceptive knowledge, attitudes and behavior by Holmbeck *et al.*, (1994) [41]. Subjects were 300 high school students and college freshmen (age range=14-19 years) who completed a battery of self-report instruments. Analysis revealed that adolescents who had higher scores on the cognitive development and self-esteem scales had more knowledge about sexuality and contraception and were more likely to report using contraception during sexual intercourse. Self-esteem was also predictive of more positive attitudes toward contraceptives. Subjects who reported using contraceptives had lower scores on the imaginary audience egocentrism scale than did contraceptive nonusers. Gender-specific analyses revealed that females had significantly more knowledge about contraceptives than males, but males had higher scores on the cognitive development and self-esteem scales than females. In addition, self-esteem was predictive of contraceptive use for females but predictive of sexual activity for males. And in this study, focalism is more determinant for future-orientation and unrealistic optimism for female students. Additional evidence for focalism comes from related research by Moore and Kim [42], who conducted a study in which participants took either a very difficult or simple 10-item quiz. Some participants then placed a bet on the possibility that their score was better than a randomly selected person's score. Other participants placed a bet that a score from one randomly selected person was better than that from another randomly selected person. Whether participants were betting on their own score or the score of a randomly selected person, they bet more in the simple-quiz condition than the difficult-quiz condition. Whereas egocentrism or focalism could explain the simple/difficult effect when respondents bet on themselves, only focalism could explain the simple/difficult effect when respondents bet on a randomly selected individual.

Again in our study, while for female students, perception of control generally effected future-orientation optimism; for male students, perception of control for focalism-based future-orientation optimism was found as determinant. Theory of planned behaviour, perceived behavioral control is assumed to be a proxy indicator of actual behavioral control. Research with this has found that the theory is accurate at predicting intentions to perform future life events (health behaviours) [43,44]. More recently, Sparks and Shepherd [45] found future orientation optimism for a variety of future life events –especially relating to nutritional hazards. It has been demonstrated that hazards that are perceived as controllable attract more optimism; evidence suggest that exposure to nutritional hazard is widely perceived to be highly controllable [45].

It is important that these findings contribute to a broader understanding of optimism bias and perception of control by gender and may explain some of the inconsistent findings relating to risk behaviour in the literature

CONCLUSIONS

To summarize, we could not find a scalable significant difference that can be measured statistically between egocentrism and focalism-based unrealistic optimism of male and female university students participating in our study. However, we concluded that egocentrism-based unrealistic optimism of male students was higher than their focalism-based unrealistic optimism when compared to females. So it can be suggested that, male students are more egocentric optimistic than female students. However, female students are more realistic. In addition, this realism of theirs stem from focalism.

According to data obtained from both focalism and egocentrism, it can be suggested that female students had more optimistic expectations for future than males, but they behaved in a more realistic manner against future life events.

The level of optimism and realistic behaviors of university students in terms of focalism and egocentrism differ according to gender. For male students, egocentrism is more effective on their optimism. In addition, perception of control of males is a low-degree determinant of focalism-based future-orientation optimism. And as for female students, future-orientation optimism effect their perception of control to a high extend. In this situation, it

can be suggested that when compared to male students, female students tend to control life-events more and have a more realistic point of view.

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