

Investigation effect of moderator role of using social media and social communication between skills of recognition and distinguish emotional facial expressions and social anxiety in relationship

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Abstract

The aim of this study is to determine the moderator effect of using social media between the relationship of recognition and distinguish skills of emotional facial expressions and social anxiety. The study was carried out on 187 university students who were selected randomly (in the range of 18-27 ages; female 134, male 53). Liebowitz Social Anxiety Scale (LSAS), Facial Emotion Identification and Discrimination tests (FID, FDSC) and demographical information form were used for data collection. In addition, participants were asked how many hours per day they use social communication and social media networks. Test of One Way Anova and analysis of multi-regression were used in analysis of data. The findings reveal that there wasn't statistically significant relationship between recognition skills of emotional facial expressions and social anxiety of university students. There was statistically significant relationship between distinguish skills of emotional facial expressions and social anxiety of university students. There was a meaningful effect of using social media as a moderator between distinguish skills of emotional facial expressions and social anxiety of university students. The results were discussed according to the limitations of the study and the suggestions were provided for future studies.

Keywords: Emotional Facial Expressions, Social media, Social Anxiety

1. Introduction

Social interaction and communication is based on correctly recognizing the changes in the mood states of individuals and giving proper reactions to these (Kadak et al., 2013). Facial expressions are the premise of communication among human (Darwin, 1995). Neuronal mechanisms constitute a mirroring system that allows to directly understand the emotions of others (Altunel et al., 2008). These neurons perform mental representation and mimicking of the emotional expressions of others and allow recognizing them (Altunel et al., 2008). The researches made regarding reflecting and perceiving the emotions by facial expressions indicate that this fact starts in very young ages (Çelik et al., 2002). In evolutionary sense, trying to read the inner states of others from faces is a very vital information source (Kadak et al., 2013). Ekman, who has detailed studies on emotional facial expressions, mentions six basic emotions: happy, sad, frightened, angry, confused, disgusted. He tells that each emotion includes accurate, restricted and net intrinsic properties that express itself (Ekman, 2003: 45).

Social anxiety is thinking that the eyes of others may be on the individual when he encounters ones that he doesn't know, feeling specific and continuous fear against one or more social conditions and thinking that he will be humiliated or ashamed (Bayraktutan, 2014). Encountering social

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conditions that the individual is afraid of give rise to a distinct anxiety in the individual, and the individual may exhibit the behavior of avoidance against the conditions giving rise to that anxiety (Bayraktutan, 2014). It keeps the individual away from social interaction and communication. The ability to recognize the emotions reflected by others is a significant component of non-verbal communication; it's inability for adapting to the environment and for arranging environment as per the requirements (Saltali, 2013). Regarding individuals having social anxiety, it is being thought that their skills of recognizing the emotions may be negatively affected due to their social interaction problems. There are studies finding that misinterpretation of expressions systematically decreases in parallel to age as the facial expressions observed will increase by the increase of being present at social environments (Kadak et al., 2013). Some studies had shown that the repression mechanisms function more and high level of social anxiety and obsessive-compulsive symptoms exist in individuals whose levels of recognizing emotions and reassessing the emotions are low (Aka, 2014).

A healthy social interaction and establishing fulfilling and successful connections in interpersonal active relations is also relevant to correct interpretation of clues regarding expression of emotions (Saltali, 2013). Or on the contrary, the perception of social clues either insufficiently or by falsifying cognitively may cause social withdrawal (Altunel et al., 2008). Actually social anxiety and the skill of recognizing emotional facial expressions may seem like processes that mutually affect and trigger each other. Searching this interaction may be significant in respect of clearing up the relation in between emotional processes and cognitive processes (Johnston et al., 2001). In recent researches, it is being emphasized that the skill of recognizing the emotional facial expressions may be affected in different psychiatric disorders such as depression, social anxiety, addiction and schizophrenia (Erol et al., 2009). The environment that the individual lives matters for him to both gain effective socialization skills from small ages and develop reactions proper to emotional facial expressions. The communication within the family and the communication that the teacher establishes with his students in school environment are required to be directed to understanding the emotions and thoughts (Pollak et al., 2010).

Today, communication had become mediated due to technological change and developments. And this had caused the communication forms to become gradually more dominant, and in addition it had brought about many changes in personal and social communication practices (Göker, 2015). In recent years, it is being said that social media technology had become a significant part of personal life (Tess, 2013). Along with the internet and smart phones, the gradual proliferation of messaging applications provides the individuals the availability of social media anytime and anywhere. Gradual proliferation of social media in daily life and increase of number of users each passing day are being assessed as the part of social life and as the transformative subject of life and even as an obstacle before socialization or as a tool isolating the individual. And it is being said that it also brings about social, political, economic and psychological consequences (Göker, 2015).

In the research performed by the university students, it was determined that 96.8% of the students were using social media and that 71% of them spend about 1-5 hours on social media sites (Armağan, 2013). According to the results of 'Youth and Social Media Research' performed by Gençlik ve Spor Bakanlığı in order to understand the attitudes and behaviors of youth in between ages 15-29 regarding social media, it had been found that 86% of the youth participating in the research were connecting the social media at least once a day, 72% of them were connecting a

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couple of times each day, one of each three individuals were spending at least three hours on social media and 13% of them were spending 6 and more hours on social media (2013).

All the media technologies where the individuals establish and develop social relation on internet environment are being assessed within the scope of social media. Even if they differ in respect of content, functioning and form, their common characteristic properties are being indicated as participation, openness, conversation, community and connectedness. Briefly, social media sites are open for feedback, participation, commenting and information sharing. They provide two way, rapid and effective communication for the individuals. Along with being open to individuality and being more mass, they are platforms where common areas of interest, contents such as photograph, music and video, instant messages and e-mail are being shared as having the ability of sending, combining and distributing all the contents from all environments as more than the traditional communication tools (Mayfield, 2008; Şener, 2013; Köroğlu, 2015).

When it is said social media, the individuals think of social networks (Facebook, MySpace etc.), photograph and content sharing sites (Instagram, Flickr and Pinterest etc.), online community and microblog tools (Twitter etc), video sharing sites (YouTube, Vimeo, Vine etc.), personal blogs (Tumblr etc.), discussion- comment sites (Forums, Eksi Sozluk, Inci Sozluk etc.), instant messaging (WhatsApp, Skype etc.) applications (Akar and Topçu, 2013; 14; Tess, 2013; Erol and Hassan, 2014).

It is being specified internet usage had replaced the time allocated to real social relations and the relations established face to face with the social environment (with friends, families). And this brings about social isolation among individuals (Akin et al., 2015; Goer, 2015; Modayil et al., 2003; Chou and Hsiao, 2000).

According to the researches made, women are better compared to men in defining the differences in tones of voice and facial expressions. This ability is able to assist the women in defining the emotions more quickly. Thus, as the social media platforms don't allow the use of these abilities, this condition is able to create stress in women (Lougheed, 2012). The technological tools and social communication networks that are started to be used as from early ages had created differences in time and diligence allocated to mutual communication. It is being thought that this condition may affect correct deciphering of body language, correct interpretation and communicating to the other party the emotions and thoughts. A good listener not only hears the words of the individual that he is in communication with but also hears what the other party does by his face and body (Doğru, 1999). Thus, in interactions formed through social media, the holism of items forming a real communication is being disrupted, and a communication with missing pieces is able to be established.

And in this study, it was intended to reveal the effects of usage period of social media and social communication networks that form the relation in between the skill of recognizing and distinguishing the emotional facial expressions and social anxiety. In the direction of this purpose, a statistical study was performed with a work group consisting of university students in between ages 18-27 studying at Istanbul Kültür University.

Basic Hypothesis: There is a difference in between the points of students with high social anxiety points who spend more time on social media and social communication networks and the points of students with low social anxiety points who spend less time on the same regarding their skills of recognizing and distinguishing emotional facial expressions.

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2. Methodology

2.1. Sample

The research group consists of 187 students in between ages 18-27 who study at Istanbul Kültür University in years 2012-2015.

2.2. Data collection tools

In order to measure the skills of participants in recognizing and distinguishing emotional facial expressions, Test of Recognizing the Emotions Expressed on Face (YDTT), Liebowitz Social Anxiety Scale (LSAS) –for measuring the social anxiety levels- and demographic information form consisting of age and gender were applied. Moreover, how many hours were being spent on social media and social communication networks was asked to the participants.

Test of Recognizing the Emotions Expressed on Face (YDTT)

Test of Recognizing the Emotions Expressed on Face (YDTT) is a test that was developed by Kerr and Neale in 1993. It is in the form of a slide presentation covering 19 black and white face photographs showing different emotional expressions. The photographs include six main emotions (joy, sadness, anger, fear, confusion, embarrassment). The test is adjusted as displaying the photographs for fifteen seconds respectively and as having ten seconds in between the photographs. An answer key consisting of 19 articles is given to the respondent in which six main emotions are written next to each question. In here, the skill of emotion recognition skill is being measured by 19 articles. It is asked for the respondent to mark which one of the main six emotions correspond to the displayed photograph. And then it is expected for them to mark the same/different answer options for the 30 photograph pairs displayed afterwards in order to measure their ability to distinguish whether it is the same or different emotion. 1 point is assigned for correct answers and 0 point is assigned for incorrect ones. The highest point that can be received from the test is 19 for the first emotion recognition section, and 30 for the second emotion distinction section. Validness and reliability study was performed by Erol et al (Ulusoy et al., 2015).

Liebowitz Social Anxiety Scale (LSAS)

Liebowitz Social Anxiety Scale (LSAS) (Liebowitz 1987) was developed in order to assess the social relation and performance states of SAB individuals in which they exhibit fear and/or avoidance behavior. The scale consisting of 24 articles had included two sub-scales as being 11 articles for social relations and 13 articles for performance. The questions are answered on a Likert type scale in between 1-4 (4 points) considering the severity of fear and avoidance of the patient in the recent one week. The total point is obtained by summing up the points of fear and avoidance. The ones that are group 1 which get a point in between 55-65 are included in the category of “mid degree social anxiety”, the ones that are group 2 which get a point in between 65-80 are included in the category of “distinct degree social anxiety”, the ones that are group 3 which get a point in between 80-95 are included in the category of “severe social anxiety”, and the ones that are group 4 which get a point of 95 and over are included in the category of “very severe social anxiety”. The internal consistency (Cronbach alpha) of LSAS, whose validness and reliability was performed by Dilbaz and Guz (2001) in our country, was found as 0.96. And the connection coefficient among raters was determined as $r=0.83$. Consequently, the Turkish version of LSAS was found as objective, valid and reliable (Gültekin and Dereboy, 2011).

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2.3. Data collection operation

It was asked for the students to first complete the social anxiety scale. And then in order to measure the skills of recognizing and distinguishing emotional facial expressions, the visuals of Test of Recognizing the Emotions Expressed on Face (YDTE) were displayed by a slide show in a manner that everyone would be able to see, and it was told that they should mark the answer keys being available in front of them. By the end of the implementation, the total YDTE points of the students were calculated as per the correct answer chart of YDTE, and it was statistically analyzed along with the social activity points.

3. Analysis and findings

The analysis of data was performed on SPSS version 22.0 packaged software. Whether the distribution of continuous variable was close to normal or not was researched by Shapiro-Wilk test. The difference among the groups in respect of averages and the significance of difference was researched by one way variance analysis (one way ANOVA). It was observed whether a correlation exists among continuous variables. In addition, variables of social networking, social media usage, discrimination and recognition of facial expressions, and social anxiety were analyzed with interactional regression analysis. For all these analyses, the results for $p < 0,05$ were deemed as statistically significant.

The relation in between the point for social anxiety and the point for skill of recognizing emotional facial expressions was considered, and it was not found statistically significant. There is a statistically significant and directly proportional relation in between points for social anxiety and points for distinguishing emotional facial expressions. It can be said that the points for skill of distinguishing emotional facial expressions had increased as the social anxiety points of the students increased ($p = .021$; $R = .169$).

Table 1. One Way Variance Analysis between social anxiety and skill of recognizing emotional facial expressions

	Sum of Squares	Square of Averages	F	p
Intergroups	12,624	4,208	,732	,534
Intragroups	1052,445	5,751		
Total	1065,070			

* $p < 0.05$ requirement was not met.

One way ANOVA analysis was performed according to the Levene homogeneity analysis ($p = 16$) performed in order to consider the variance analysis in between sub-group points for social anxiety and points for skill of recognizing emotional facial expressions, but statistically significant difference couldn't be found.

Table 2. One Way Variance Analysis between social anxiety and skill of distinguishing emotional facial expressions

	Sum of Squares	Square of Averages	F	p
Intergroups	126,504	42,168	5,862	,001
Intragroups	1316,362	7,193		
Total	1442,866			

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One way ANOVA analysis was performed according to the Levene homogeneity analysis ($p=.59$) performed in order to consider the variance analysis in between sub-group points for social anxiety and points for skill of distinguishing emotional facial expressions, and statistically significant difference was found among the groups ($p < 0,05$). According to this, the points of students for distinguishing emotions differ from 4 sub-groups of social anxiety points ($F=5,862$; $p<0,05$). According to the results of Turkey test performed in order to determine among which groups the difference is, it is being observed that the points for distinguishing emotional facial expressions increase along with the increase of social anxiety points in group 1 ($m=23.28$, $sd=3.025$), group 2 ($m=25.93$, $sd=2.489$) and group 3 ($m=26.12$, $sd=2.881$) But in group 4 ($m=26.05$, $sd=2.550$), a decrease is being observed in average points of social anxiety. According to this, the difference among groups is in favor of the "severe social anxiety" category which is the group 3 of social anxiety.

Table 3. Multiple Regression analysis among social media usage, social communication and social anxiety as the skill of recognizing emotional facial expressions being the dependent variable

Model	Standardized Regression Coefficients	t	p
Social Anxiety	,009	,127	,899
Social Communication	-,067	-,636	,526
Social Media	-,051	-,481	,631

When the results of the analysis are evaluated, it was observed that points for social media usage, social communication and social anxiety have no statistically significant predictor effect on the point for skill of recognizing emotional facial expressions ($p>0.05$).

Table 4. Multiple Regression analysis among social media usage, social communication and social anxiety as the skill of distinguishing emotional facial expressions being the dependent variable

Model	Standardized Regression Coefficients	t	p
Social Anxiety	,182	,127	,012
Social Communication	,044	-,636	,666
Social Media	-,232	-,481	,026

When the results of the analysis are evaluated, it is being observed that points for social media usage period ($R=-.232$, $R^2=.053$, $F=4,530$, $p<0.05$) and social anxiety ($R=.182$, $R^2=.033$, $F=4,530$, $p<0.05$) have statistically significant predictor effect on the point for skill of distinguishing emotional facial expressions ($p<0.05$). If the time that the students spend on social media is high, their points for skill of distinguishing the emotional facial expressions are decreasing. And it was found that their skill of distinguishing the emotional facial expressions was increasing as their points for social anxiety increased.

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4. Result and discussion

According to the findings of the research, it was observed that there was no significant relation in between social anxiety and skill of recognizing emotional facial expressions, but that it had a significant relation with the skill of distinguishing emotional facial expressions. In addition, we can say that social anxiety creates a difference on the skill of distinguishing emotional facial expressions. When the results of the analysis are evaluated, it was observed that social media, social communication network usage and social anxiety had no predictor effect on the skill of recognizing emotional facial expressions. But against this, it was observed that social media usage periods and social anxiety levels of the students had significant predictor effect on the skill of distinguishing emotional facial expressions. According to this, one of the causes of positive oriented predictor effect of social anxiety may be shown as requirement of presence of optimum level of anxiety for the successful fulfilment of a task. In this case, it can be said that the skill of distinguishing emotional facial expressions increases if the social anxiety levels of the students increase to optimum level. It may be possible to evaluate the 6 sub emotion categories of skill of recognizing emotional facial expressions –being addressed in the research- by including them individually in the analysis (happy, angry, confused, sad, afraid and ashamed), or to evaluate them in the next studies. Moreover, the study may be repeated by a larger sample group and by a wider age range considering that the wide age ranges may be a variable that may affect the emotional facial expressions.

For the next studies, the comparisons of test and control groups -as being individuals diagnosed with social anxiety and not diagnosed by it- may be evaluated. Moreover, it can be thought that some environmental variables such as attitude of parents, incidents arising in the social environment and cultural differences may be effective in the relation in between skill of recognizing emotional facial expressions and social anxiety. In order to observe the relation in between the skill of recognizing and distinguishing emotional facial expressions and social anxiety, and the disruptive effect of usage of social media and social communication networks, the starting age of the group of being exposed to social media and social communication can also be considered. Prensky specifies that the future generations will consist of “digital natives” who are born in an environment in which today’s technology is present, who grow up with technologies such as computer, video games, digital music players, video cameras, cellular phones and internet, and who learn technology as if learning their mother language (Prensky, 2001; Köroğlu, 2015). And he characterizes the generation that tries to adapt to technological era afterwards as “digital migrants”. And it is being thought that comparing the two generations as digital natives and digital migrants may show the effect of social media more distinctively. Because the children and youth of this era are being exposed to technological tools and their consequences for a longer period compared to digital migrants. The inclusion of these variables in the next studies may contribute to deepening and development of studies regarding the subject.

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