

## DEPRESSION, INTERNET ADDICTION AND LONELINESS RELATIONS IN ADOLESCENTS OF HIGH SCHOOL STUDENTS\*

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### Abstract:

This study is conducted as a cross sectional research in order to investigate the depression, internet addiction and loneliness relationship in adolescents of high school students. It is targeted to reach 690 students. In the study, Personal Information Form, Beck Depression Scale, Internet Addiction Scale and UCLA Loneliness Scale are used. In the evaluation of the data, descriptive statistics (frequency and percentage values, minimum, maximum, average and standard deviation), and Pearson correlation coefficients are used. When the characteristics of adolescents of high school students participated the survey are examined, it is found that 46.0% of the adolescents are women, 30.6% of them study in 9th grade, 30.9% of them are 17 years old, and 74.3% of them have internet connections in their homes. It is determined that the level of internet addiction in the adolescents with depression tendency ( $=19.40\pm 18.61$ ) is significantly higher than the adolescents without depression tendency ( $=9.81\pm 11.77$ ) and the level of loneliness in the adolescents with depression tendency ( $=52.61\pm 6.57$ ) is significantly higher than the adolescents without depression tendency ( $=50.75\pm 6.74$ ). It is determined that there is no significant relation between the levels of loneliness and internet addiction in the adolescents ( $r=0.011$ ;  $p>0.05$ ). Besides, it is determined that there is a positive and high level relation between the depression level and internet addiction of the adolescents ( $r=0.384$ ;  $p<0.05$ ) and there is a positive and low level relation between the loneliness level and internet addiction of the adolescents ( $r=0.090$ ;  $p<0.05$ )

**Key-words:** *depression, loneliness, internet addiction*

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### Introduction

Adolescence is the last period of childhood and the first period of adulthood. Adolescents who expect social acceptance from their environment cannot understand the reason of the rules which they find strict, stereotyped, and strange to them, and can have adaptation problems to their environment [1, 18].

The most crowded group of adolescence period, the high school students, experience some developmental processes because of their ages, like adaptability to self and environment, taking space in society, finding their own identity; and experience a lot of situations more intensively like approval of their behaviors from the environment they live in, acceptance from their friends, choosing right profession, things experienced in growth and development process, anxiety about appearance and opposite

gender, sharing their problems. As a result of this intensity, they can be more sensitive to life events in comparison with adults. Since their physical, mental, social and hormonal changes; their sensitivity may lead to face them with more problems about depression [2].

Depression is a syndrome in which individuals experience deceleration in their speech and actions, slowness, valuelessness, weakness, unwillingness, pessimistic emotion and ideas in a sad mood; and symptoms like deceleration in physical functions [5, 22, 30]. Studies conducted in various nations show that depression prevalence in adolescents change between 1-50%. Depression occur in this period, effects adolescent's development negatively and may cause him/her to tend to have risky behaviors like suicide, alcohol, cigarette, substance use or other addiction types.

One of these addiction types can be internet addiction [4].

Internet addiction is a type of technological addiction which is characterized with being unable to restrict internet use, continuing to use even its negative social or academic results, and feeling anxiety when internet access is restricted [14]. Adolescents are accepted as potential risk group for internet addiction since their psychological maturity is not complete [29]. It is suggested that occurrence of psychopathology like depression and anxiety increases predisposition to problematic internet use [12].

Despite developed technology, transport and communication easiness; human beings slide into loneliness. This loneliness can result in becoming more introverted, fronting occupations like internet which can be conducted single, and finally in addition to loneliness experiencing different mental problems like depression. Actually loneliness, depression and internet addiction are like parts of vicious cycle [20].

Depression concept can be considered as both a cause and a result for internet addiction. Because of other sociological or psychological factors, an individual with depressive state can slide into internet and be dependent for this reason; and also after an individual becomes internet dependent, depression state can be observed because of addiction. Internet dependent adolescents view internet as an environment which diminish their depression states. Also observing depressive state while dependent individuals cannot use internet is possible [15]. Tsai & Lin (2003) mentioned in their study conducted with adolescents that internet world became a place which is used or benefited for relaxation in adolescent depression [28].

Nursing care services require making assessments in a lot of issues while serving patient care interventions. To make a good evaluation, nurses should be aware of symptoms specified to depression, addiction, violence, peer victimization, substance use, leaving school, conduct disorders and other psychiatric problems can be faced in school aged individuals and should have adequate information [25]. The importance of making bio-psycho-social evaluation in school mental health studies for the substance risky adolescent

group is emphasized as psychiatry nurse and addiction consultant.

For risky behaviors perspective, since different factors can come into prominence in different socio-economic conditions and by the time; evaluation of risky behaviors at schools with routine assessments is useful. At the end of these assessments, support and education should be intensified to the groups which are determined as under risk. Changing curriculum in which it can include activities aiming to reduce risky behaviors is also important. When evaluated as adolescent-family relations context; it can be concluded that educations for nature of the addiction and adolescent behaviors and communication must be conducted in all the schools. In adolescent consultancy, adolescent, family, school and youth must be evaluated with the social environment they are inside, and adolescents must carefully participate to activities they can have suitable peer relations outside of the lectures. It is necessary for psychiatric and mental health nurses that achieve competencies for preventing depression, loneliness and internet addiction and for effective therapies and educational interventions in their treatments and evidence based studies in this issue must be increased [2, 6, 16, 26].

Nurses assume a key role for diagnose of depression and suicide prevention in primary level treatment centers. Thanks to psychoeducation, nurses determine adolescents' personalities, use social support resources, improve social skills, encourage a healthy lifestyle and by doing so nurses can support get recover from depression. These precautions can avoid long term welfare of the adolescent and early deaths.

This study is conducted as a cross sectional research in order to investigate the depression, internet addiction and loneliness relationship in adolescents of high school students.

### **Material & Method**

This study is conducted as a cross sectional research. The research was conducted in a northern city of Turkey, in 5 schools which are related to National Education Directorate. Implementation period of the research was applied in 2013-2014 academical year, spring semester.

The universe of the research consisted of 17583 high school students who are taking education in Trabzon city center in 2013-2014 academical years, spring semester. Stratified sampling method was used while choosing sampling method. With this purpose, first of all, numbers of schools determined as stratum were determined and it was detected that there were 24 high schools or equivalent schools in the city where the research will be conducted. For all types of schools, one for each type were choose via random drawing lots method and it was aimed to reach students taking education in totally 5 schools. While choosing sampling method, multiple sampling methods was used. After sample size and schools where the research will be conducted were determined, class levels were accepted as stratum and class branches were accepted as cluster with multiple sampling methods; after determining number of students that will represent each stratum, simple random sampling was used and students in the sample were included. It was aimed to reach all the students in the sample. In the 5 schools determined before, it was detected that there were 3289 students totally in 2013-2014 academical year, spring semester. Within the research, students of whom their views will be asked were requested to take part in research voluntarily.

Sample size was found 345 with 95% confidence level. It is targeted to reach 690 students under the assumption that the pattern effect of the survey is 2. However, because of missing data caused deficient filling of data collection tools by some of the students and some students give up to participate in the survey later on, opinions of the aforementioned students are excluded from the scope of the survey and data of 669 students have been evaluated. In this direction 669 students were reached of whom their opinions were asked, questionnaires and scales were implemented to students observing them.

Inclusion criteria of students were; to be volunteer to participate to study, to be between 14-19 years old, and to have adequate intelligence capacity to follow research instructions. Exclusion criteria of students from the study were; having diagnose of physical and mental illness, and having visual and auditory problems.

### **Hypothesis of the Research**

**H0:** There is no relation between depression, internet addiction and loneliness scores of the adolescents of high schools.

**H1:** There is relation between depression, internet addiction and loneliness scores of the adolescents of high schools.

### **Data Collection Tools**

Data collection tools used to determine views of adolescents of high school students within the research context are:

- Personal Information Form
- Beck Depression Scale
- Internet Addiction Scale
- UCLA Loneliness Scale

Details related to data collection tools are presented below with separate titles.

### **Personal Information Form**

To identify high school students' personal data, this is a personal information form created by investigating literature [10, 13, 21, 24] which thought to effect the correlation between internet addiction and loneliness and includes sociodemographic questions.

### **Beck Depression Scale**

The scale developed by Beck et al. (1961) aims to calculate emotional, somatic and motivational components and also individuals' depressive level and severity [8]. Original version of the scale consists of 21 items. Its adaptation study to Turkish was studied by Tegin (1980) and Hisli (1988) [17, 27]. Its validity and reliability was re-studied by Avşar (2007) [3].

According to complete version, Beck Depression Scale is scored between 0-3 for each item. Total score is obtained according to respondents choices. The minimum possible score for the scale is 0; and the maximum is 63. After adaptations into Turkish, cutoff score is decided as 17 and persons who have score under or equal to 17 have no depression risk; and upper 17 score have depression risk [3, 17]. Within this study scope, Cronbach alpha factor of 669 adolescents of high school students was calculated 0.91.

### Internet Addiction Scale

In this study, to determine adolescents of high school students' internet addiction levels, "Internet Addiction Scale" was used which was developed by Young (1998) and adopted to Turkish by Bayraktar (2001) [7, 31]. Original version of the scale consists of 20 items and graded in Likert style. Cronbach alpha factor of the scale is 0.91. In internet addiction scale, participant is requested to mark one of the choices between "never", "rarely", "sometimes", "many times", "mostly" and "continuously". These choices are scored 0, 1, 2, 3, 4, 5 respectively. 80 and upper score owners are defined as "pathological internet users". Between 50-79 scores they are defined as "borderline symptom exhibitors", 50 and lower scores are called as "Individuals without symptoms". Within this study, Cronbach alpha factor is found 0.91.

### UCLA Loneliness Scale

Within the study, UCLA Loneliness Scale was used which was developed by Russell et al. (1980) and adopted into Turkish by Demir (1989) to evaluate subjective loneliness emotions of adolescents of high school students [11, 23]. In the original form of UCLA Loneliness Scale there are 10 positive, 10 negative and totally 20 statements and items are graded in Likert style between 1 (never) and 4 (every time). The minimum possible score from UCLA Loneliness Scale is 20; and the maximum is 80. As individuals' scores from the scale increase, it is mentioned that their loneliness levels increase as well. Within this study, Cronbach alpha factor of the scale is found 0.79.

### Data Collection

In the data collection stage, researcher informed students about aim of the study and how they will respond the scale, visiting 9th, 10th, 11th, 12th classes of 5 high schools related to National Education Directorate in Trabzon city center, Trabzon Science High School, Pelitli Ahmet Balli Anatolian High School, Atatürk Medical Vocational High School, Anatolian Imam Hatip High School, and Trade Vocational High School. Questionnaire Form, Beck Depression Scale (BDS), Internet Addiction Scale, UCLA - Loneliness Scale are

implemented in totally 45 minutes after voluntarily participation of students provided.

### Evaluation of Data

To analyse the data obtained from adolescents of high school students under the scope of the survey, firstly answers of the students have been transferred to SPSS (Statistical Package for Social Sciences). And later, descriptive statistics were calculated to analyze the data and in direction with sub problems, process of analyzing the data was performed in accordance with statistics which Büyüköztürk et al. offered (2008) [9].

### Limitations of the Study

1. The research is limited with 5 high schools in Trabzon city.
2. The results obtained from the study are limited with validity and reliability dimensions of measurement tools used in study.
3. The study is limited for 1 year period.
4. Study results are limited with statistical techniques used in the study.

### Ethical Considerations

1. This study was approved by the Non-Invasive Clinical Researches Ethics Committee of Adnan Menderes University Faculty of Medicine (date: 17.01.2014; protocol number: 2014/320, decision number 4).
2. Necessary permissions were obtained from Trabzon Provincial Directorate of National Education.
3. Students were informed with necessary explanations and their voluntarily participation was provided.

### Findings

When the characteristics of adolescents of high school students who participated the survey are examined, it is found that 46.0% of the adolescents (n=361) are women, 30.6% of them (n=205) study in 9th grade, 30.9% of them (n=207) are 17 years old, 31.2 % of them (n=209) study in imam hatip high school, 91.8 % of them (n=614) use home type of shelter, 82.8% of them (n=554) have nuclear family, families of 59.8% of them (n=400) live in metropolitan cities, parents of 96.9% of them (n=648) are alive, 98.5 % of them (n=659) have no step-family members, 68.0% of them

(n=455) state that they have a balanced income and expense budgets, 77.4% of them (n=518) have enough monthly income (pocket money).

Table 1. The correlation between internet addiction, loneliness, and depression levels of adolescents of high school students

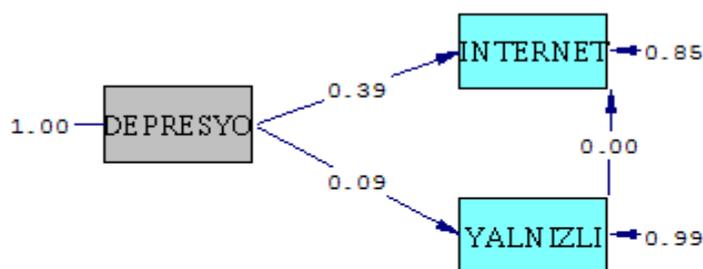
Variables	Internet addiction	Loneliness level	Depression level
Internet addiction	r	1.00	0.011
	p	---	0.786
	N	669	657
Loneliness level	r	0.011	1.00
	p	0.786	---
	N	657	657
Depression level	r	0.384**	0.090*
	p	0.000	0.022
	N	669	657

p<0.01\*\* p<0.05\*

Within study, it is found that there is no significant correlation between loneliness levels and internet addiction levels of the adolescents of high school students (r=0.011; p>0.05). In addition to this, there is positive, high level correlation between depression levels and internet addiction (r=0.384; p<0.05); and positive low level correlation between depression levels and loneliness levels (r=0.090; p<0.05).

To determine the correlation between depression, loneliness and internet addiction levels of the adolescents participated to study, a model was created in which "depression" variable was set as dependent variable and path analyze was calculated in direction with this model.

Path diagram obtained after path analyze is shown in Figure 1.



Chi-Square=0.44, df=1, P-value=0.50795, RMSEA=0.000

Figure 1. Path diagram (DEPRESYO=depression, YALNIZLI=loneliness)

In figure 1, in path model in which non-standardized factors take place, it is determined that depression levels of adolescents of high school students mostly predicted by internet addictions of adolescents (R2=0.15; p<0.05). Although depression levels of adolescents of high school students are predicted with loneliness variable significantly also, this significance rate is low (R2=0.008; p<0.05).

It is detected that internet addiction levels of adolescents of high school students are not predicted significantly by loneliness levels (R2=0.00; p>0.05). It is determined that the model established with depression, loneliness and internet addiction variables of adolescents of high schools is confirmed; depression levels

of adolescents is predicted by their internet addiction; as internet addiction of adolescents increase, their depression tendency increase as well. In addition to this, it is detected that loneliness levels of adolescents do not predict depression and internet addiction variables significantly.

### Conclusion

When t test results of internet addiction levels of participant adolescents are examined according to their depression tendency in unrelated measurements; internet addiction levels of participant adolescents differentiate significantly when compared with depression tendency.

When averages of the answers given by adolescents for the clauses of scales in the survey are analyzed, adolescents who have tendency to depression are found to have significantly higher level of internet addiction compared to adolescents who do not have tendency to depression. When t test results of loneliness levels of participant adolescents are examined according to their depression tendency in unrelated measurements; loneliness levels of participant adolescents differentiate significantly when compared with depression tendency. When mean scores of the answers given by adolescents for the clauses of loneliness scale items in the survey are analyzed; loneliness of adolescents who have tendency to depression are significantly higher than adolescents who do not have tendency to depression.

When the correlation between internet addiction and loneliness levels of the participant adolescents are examined, there is no significant correlation between loneliness levels and internet addiction levels of adolescents of high school students of whom their opinions have been investigated. With another explanation, internet addiction level of adolescents is not affected by loneliness levels, or loneliness level of adolescents is not effected by internet addiction levels. Furthermore, there is positive and low correlation between depression and internet addiction levels of adolescents and there is positive and low correlation between depression and loneliness levels of adolescents.

### Suggestions

There is a positive correlation between depression and internet addiction. Protective mental health studies, education programmes' working on this issue can be suggested.

It was detected that there is positive and low level correlation between depression levels and internet addiction of adolescents; and there is positive and low level correlation between depression and loneliness levels. It is concluded that depression predicts both internet addiction and loneliness. For this issue; it can be suggested that parents, educators, school psychological consultants should be in communication with each other and organize group studies.

It can be suggested that this study which

was conducted in 5 schools in Trabzon city center with adolescents of high school students, can be repeated with more crowded universe and sample size in different cities and geographical areas and with the results obtained from these studies, comparisons can be done. The same study can be repeated for secondary school students as well.

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