

The comparison between the socio-demographic characteristics and the problematic internet use between gamblers and non-gamblers among university students

Üniversite öğrencilerinde sosyodemografik özellikler ile problemlü internet kullanımının kumar oynayanlar ve oynamayanlar arasındaki karşılaştırması

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SUMMARY

Objective: The purpose of this study is to investigate the differences between the socio-demographic characteristics and the problematic internet use (PIU), and between problem and pathologic gamblers (PPG) and non-problem gamblers (NPG). **Method:** The study was administered to 299 Near East University psychology students in April-May 2015. The questionnaire includes a socio-demographic form, South Oaks Gambling Screening Scale (SOGS) and Problematic Internet Usage Scale (PIUS). Descriptive, chi-square, t-test and Pearson correlation statistical methods were used. **Results:** According to the study more than half of the PPG participated in gambling on the Internet. Moreover, men tended to gamble more than women. It is also found that single and high income level participants are gambling more frequently. Students attending university for more than 5 years were found to have more PPG. However, this study shows that problem and pathological gambling is seen more prevalent among students who have high income level. In this study, it is illustrated that the highest frequency of gambling occurs at casinos (77.7%), which is followed closely by betting offices (70.8%). It is also observed that gambling on games such as horse-racing and dog-racing were seen higher in people with PPG. **Discussion:** PIU has been seen as one of the leading causes of PPG. These studies showed that university students who had PIU were more prone to PPG problems. In order to prevent the inter-related problems of PPG and PIU, effective public health policies, awareness and consciousness programs are needed.

Key Words: Problematic Internet Use, Problem Gambling, Pathological Gambling, University Students

ÖZET

Amaç: Bu çalışmanın amacı, sosyo-demografik özellikler ile problemlü internet kullanımı (PIK) ile problemlü ve patolojik kumarbazlar (PPK) ile problemsiz kumarbazlar arasındaki farkları incelemektir. **Yöntem:** Çalışma Nisan-Mayıs 2015'te 299 Yakın Doğu Üniversitesi psikoloji öğrencisine uygulanmıştır. Anket, sosyodemografik form, South Oaks Kumar Taraması Ölçeği ve Problemlü İnternet Kullanımı Ölçeğini içermektedir. Tanımlayıcı istatistikler, ki-kare, t testi ve Pearson korelasyon istatistik yöntemleri kullanılmıştır. **Bulgular:** Çalışmaya göre, PPK'ın yarısından fazlası internette kumar oynamışlardır. Bunun yanında, erkekler kadınlardan daha fazla kumar oynama eğilimindedirler. Ayrıca, bekar, 5 yıldan uzun bir süredir üniversiteye devam eden ve yüksek gelir seviyeli katılımcıların daha sık kumar oynadığı tespit edilmiştir. Bununla birlikte, bu çalışma yüksek gelir seviyesine sahip öğrencilerde problem ve patolojik kumarın daha yaygın olduğunu göstermektedir. Bu çalışmada en yüksek kumar oynama sıklığının kumarhanelerde (% 77,7) olduğu ve bunu yakından takip eden bahis ofisleri (% 70,8) olduğu görülmektedir. PPK bulunan bireylerde at yarışı ve köpek yarışı gibi oyunlarda kumarın daha yüksek olduğu görülmüştür. **Sonuç:** PIK, PPK'nın önde gelen nedenlerinden biri olarak görülmüştür. Bu çalışma, PIK olan üniversite öğrencilerinin PPK sorunlarına daha yatkın olduğunu göstermiştir. PPK ve PIK'in birbiriyle ilişkili sorunlarını önlemek için, etkili halk sağlığı politikaları ve bilinçlendirme programlarına ihtiyaç vardır.

Anahtar Sözcükler: Problemlü İnternet Kullanımı, Problemlü Kumar, Patolojik Kumar, Üniversite Öğrencileri

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INTRODUCTION

Problem Gambling is referred to the patterns of gambling behaviors which disrupt the social, personal, economic and family lives of the gamblers (1). Investigation of problem gambling (pg) prevalence studies illustrates that severe gambling problem is affecting approximately 1% of the world's population (2). The term 'pathological gambling'(Pg) is similar to severe pg (3). The definition of pg was found first in Harvard Medical Letters in the early 1800s (4). Pg was recognized as an official impulse control disorder in DSM-III (5). According to DSM-IV-TR, diagnosis of the Pg needs to meet at least 5 of 10 criteria. However, in order to be classified under the category of Pg, five symptoms decreased to four symptoms, which are set as the criteria in DSM V. These symptoms include; an increasing needs to gamble, requiring more money to gamble, and irritable behavior if not allowed to gamble. Pg is placed under the title of "Substance Abuse and related Addiction Disorders" in the DSM-V (6).

Internet gambling is seen as an increasing trend among university students (7-9). As the pathological gamblers tend to begin gambling activities at younger ages (10), university students are seen as a high risk group for pg (11,12). Gambling to serve a psychological need (13,14) and to earn income (15,16) increases the likelihood of pg. Gambling problems were previously thought to be unique to adult males (17). However, in recent years, women and young people also found to gamble more frequently after gambling was legalized in some countries (18,19). Moreover, being single, unemployed (20,21) and having low socio-economic status (22) are also found as risk factors for gambling. It is also seen that pg is usually higher among minorities and migrant societies (23,24).

Looking at the studies of the Pg, prevalence ratios seem to be between 1-3% of the adult population (1,25). In the United States, Canada, Australia and New Zealand prevalence studies were conducted and the prevalence of Pg was found to be 0.42 to 4% (20,26-28). According to global statistics, the problematic gambling is more prevalent among Asian Countries, North America and Australia (3).

In some special communities (29-32) there are extremely high prevalence rates whereas the ratios of European countries had lower. Shaffer and Halls (33) found the prevalence of Pg among youth population in North America to be between 4.4% and 7.4%. The Pg ratios among adolescents (5.0%) in the United States were found to be more than three times that of the adult population (1.5%) (34). Studies show that internet gambling is seen intensively among university students (35-37). It has been also found that the problem and Pg in NC have increased rapidly in recent years and with the pathological prevalence of 3,8%, especially internet gambling is seen as a growing problem among young people (29,38).

Besides gambling addiction, dependency covers many areas such as drugs, eating, sex and technological addiction (39). Dependence on technology includes media addiction, TV addiction, cell phone addiction, computer addiction and Internet addiction. The Internet is an important communication and information sharing tool in home and business environments, which contains many activities that change our everyday lives (40). Internet addiction is defined as the inability to control reviewing and using the Internet for a long time (41). The concept of Internet addiction has been assigned different concept names by different researchers and clinicians. These concepts are "Internet dependency" (42), "pathological Internet use" (43), "problematic Internet use" (PIU) (25), "Internet abuse" (43), "Internet addiction Disorder" (44) and so on. Internet is very important in today's modern life and therefore it cannot be removed; hence, solutions should be found to reduce dependency on the Internet (45).

Studies show that PIU is correlated with PPG (46-48). Internet gambling has significantly affected the way things are done, as many people have direct access to the Internet on a daily basis (46). Derevensky (47) stated that those who have never gambled before tended to gamble less on the Internet. However, it is also found that PPG people tended to use the Internet more for gambling games and it is possible to provide a relation between PPG and PIU (49). The aim of this study was to determine sociodemographic differences by comparing PPG with NPG, and also to investigate

the relationship between PIU and PPG.

METHOD

Participants

This study was applied to the psychology university students in Near East University in April-May 2015. The sample among the university students were selected in randomized sampling method. There were 900 students in the psychology department. One person in three was added to study according to the sequence numbers of the students in the classroom. All of the classes (including 1st, 2nd, 3rd and 4th) added to the study. The study included 299 students and the questionnaires were applied to the students by the researcher in approximately 20 minutes. After detailed information was given to the participants, they were asked to sign a consent form signalling their agreement to participate in the study. The study was approved by the Social and Science Institute Ethical Board at the Near East University of NC and was conducted according to the ethical standards laid down in the 1964 Declaration of Helsinki and its later amendments.

Instruments

Survey Form: For the collection of the data, a demographic questionnaire prepared by the researcher which contains two parts as questions including socio-demographic information as the participant's age, gender, place of birth, education, social support and living place in the first part and questions of properties related to the amount, place and time of Internet usage and social networking site features in the second part, the Turkish version of the Revised South Oaks Gambling Screen (SOGS) (50) and Problematic Internet Use Scale (PIUS) (51) were used.

The South Oaks Gambling Screen (SOGS): SOGS was developed by Lesieur and Blume (52) and for the Turkish version, the reliability and the validity of this study was conducted by Duvarcı and Varan (50). The Original SOGS form includes 44 questions: 20 of these questions were used to create the

Index which is a 20-point scale based on DSM-III Pg criterias. The "Yes" response is scored as 1, and the "No" answers are scored as 0. At the end, question scores were added together to create an overall Index. "Possible Pg" SOGS is indicated by 5 or more points and "problem gambling" SOGS is indicated by either 3 or 4 points. The Turkish version of the SOGS consists of 17 out of the 20 original form items and culturally related two items were added where the cut off score for 'Possible Pg' was indicated as 8 (53).

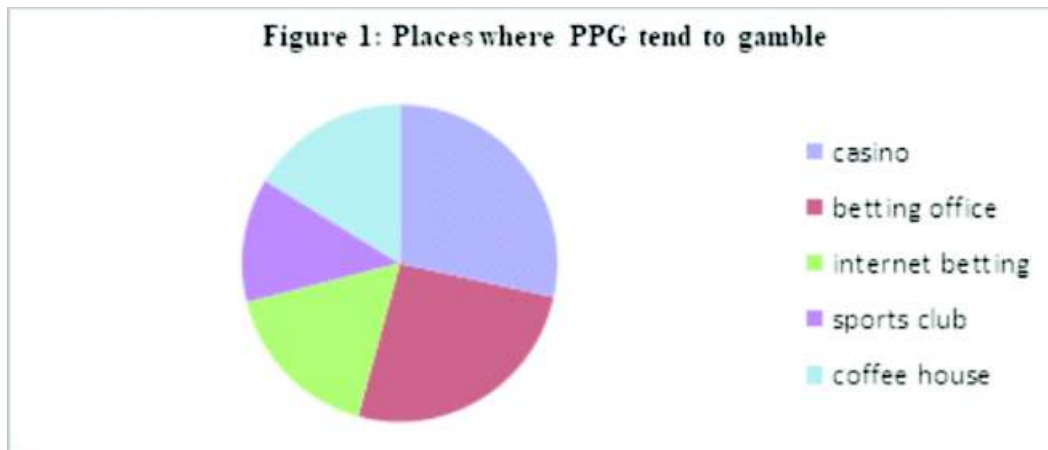
The Problematic Internet Use Scale (PIUS): PIUS has been developed to measure the levels of problematic Internet use among the university students. Scale consists of 33 items ranging from "completely appropriate" to "not appropriate". It is a five point scale. Points taken from the scale can vary between 33 and 165. The scale consists of three subscales where these three factors are listed as "the negative consequences of the Internet", "social benefit/social comfort" and "overuse". The score range of PIUS varies between 33 and 165, and the high scores on the scale indicate that an individual's internet usage is unhealthy, may affect their lives negatively and may create tendency to internet addiction (51).

Data Analysis

Comparison of socio-demographic characteristics of the participants who diagnosed with PPG (SOGS score ≥ 3) and those NPG (SOGS score ≤ 2) were analyzed by descriptive and chi-square statistical methods. The mean of PIUS scores and SOGS scores of PPG and NPG groups were compared by the t-test analysis accordingly. The relationship between PIUS and SOGS scores of the PPG and NPG groups were examined by the Pearson correlation analysis.

RESULTS

In the present study 107 female and 192 male were accepted to complete the questionnaire. Out of 299 participants 259 were born in Turkey, 29 were born in Cyprus and 11 were born in other countries. The mean age of these students were 22.96. According to this study, it has been found that men



gamble more than women do and also it is shown that, the majority of the both groups including people mainly coming from Turkey. Moreover in terms of marital status, it is seen that most of the gamblers from both groups were single. It is also found that those who earn more and who spent 5 years or more at university tended to gamble more. Therefore, when this is correlated with the performance in the class it has been found out that, those who has PPG tended to get a low mark in lessons (Table 1). Also, it is found out that PPG tended to gamble mostly football-horseracing-dog games. Moreover PPG tended to use cash money rather than credit cards while gambling and PPG also tended to play Okay for money, dice games, betting on cockfighting, lotteries and sport toto games in comparison to NPG.

According to the study results it is also found that PPG played the scratch-off games, national lottery game and bet on stock market more than non-gamblers. It is observed that 55.6% of the PPG played scratch-off games whereas the ratio in NPG is 31.3%. Also, it is found out that 59.7% of the PPG played the national lottery game whereas the ratio in NPG is again lower, 31.7%. At the same time, the results for bets on stock markets shows that the ratio for PPG is 32% and for NPG is 11%. In this study, PPG (72.2%) has played more games in the casinos and gambling games on internet compared to NPG (21.6%). It is recognized that PPG have a positive relationship with playing betting games online. PPG (55.6%) has seemed to bet more frequently on the internet than NPG (15.9%). PPG has seemed to play more frequently on the Internet either with money or without money than NPG. 47.2% PPG has played more fre-

quently on the Internet with money compared to NPG (11.9%).

Results also showed that, PPG has played more in casinos (77.7%) and betting offices (70.8%) more than NPG (18.1% and 27.8%, respectively). PPG found to play betting on Internet games, in sports clubs and in coffee house more than NPG. 45.8% of the PPG has played betting on Internet games whereas this ratio for NPG was 11.4%. Moreover, 44.5% of the PPG seem to play betting in coffee house whereas this ratio for NPG was 7%. 34.7% of the PPG has played gambling in sport clubs whereas this ratio for non-gamblers was 6.1% (Figure 1).

Both PPG and NPG groups were found to be over 22 years of age. PPG tended to invest more money in gambling in a day compared to non-gamblers. However, the amount of money that was invested by PPG was significantly higher than those invested by NPG. Moreover, PPG has preferred different places in comparison with NPG. The most popular place to bet has been discovered as home in both groups. In addition to this, PPG were found to play more different types of games on Internet compared to NPG. PIUS total score ($t=4.666, p=0.00$) and PIUS social benefits, social comfort ($t=5.187, p=0.070$) and internet negative consequences ($t=4.141, p=0.00$) subscale scores found to be higher among PPG compared with NPG (Table 2). It is found that, there is a weak relationship in a positive direction between SOGS total scores and PIUS subscale scores. When the SOGS total score increases, PIUS total score, PIUS social benefits, social comfort subscale and PIUS negative consequences subscale scores increase (Table 3).

Table 1. Demographic of PPG (SOGS score ≥ 3) and NPG (SOGS score ≤ 2) in North Cyprus.

Demographic variables	SOGS score ≥ 3 (n=227) %	SOGS score ≤ 2 (n=72) %	χ^2	p
Gender				
Female	11.1	43.6	25.127	0.000**
Male	88.9	56.4		
Birth Place				
Cyprus	1.4	10.6	9.033	0.020*
Turkey	93.1	85.5		
Britain	1.4	0.0		
Other	4.2	4.0		
Marital Status				
Married	2.8	1.3	12.266	0.031*
Engaged	1.4	4.4		
Single	90.3	93.8		
Divorced	1.4	0.0		
Widow	2.8	0.0		
Monthly Income				
No income	51.4	62.1	25.127	0.000**
1560-3000 TL	37.5	33.5		
3000 TL and more	11.1	4.4		
Academic Performance				
Very Good	11.1	22.5	17.884	0.001**
Good	23.6	40.1		
Normal	56.9	31.7		
Bad	6.9	5.3		
Very Bad	1.4	0.4		
Enrolled at university				
1 year	19.4	25.6	11.536	0.021*
2 year	9.7	22.0		
3 year	19.4	16.7		
4 year	15.3	15.9		
5 year	36.1	19.8		
Newly started	5.6	11.5	12.269	0.015*
Passed from all courses	38.9	53.3		
Failed in some courses	25.0	16.7		
Postponed one semester	9.7	9.3		
Postponed more than one semester	20.8	9.3		

* p < .05. **p < .001

DISCUSSION

(20,26,56,57).

According to the current research, among the university students the ratio of pg is 18.4% and Pg ratio is 5.7%. In the study, it is found that the PPG among university students are more prevalent rather than the general population. This claim is supported by a corresponding study (29) which found out that in NC at the age of 18 to 65 year group the pg ratio is 9.5% and Pg for life ratio is 3.5%. It is found that the trend of Pg is 2% in Asian countries like Hong Kong, Singapore and Macau (54,55). High risk gambling problems are present among adolescents, indigenous minority groups, and communities (23,24) When the studies about pg are examined, it is found that being young is seem to be one of the main risk factor of pg

Both in NC and in other countries, (29,46,48) gambling is considered to be an entertainment and a type of recreation. Moreover, it is increasing in popularity day by day. Researches in NC done in recent years are showing that the problem of Pg is increasing in NC (38). Ratios of NC (29) correspond to those found in Puerto Ricans in Puerto Rico (30), the Maoris in New Zealand (31) and Native Americans in North Dakota (32). The reasons of finding such similar ratios of Pg are explained by Volberg (30) as similar colonization, limited economy and sociological problems (29). In present study it is found out that the level of PPG is high among the university students. Although it is banned to enter casinos and betting offices for the

Table 2. Comparison of PPG and NPG in terms of PIUS total and subscales scores

	PPG	NPG	t	p
	Mean – SD	Mean – SD		
PIUS total scores (n=299)	84.–29.6	66.1–5.9	4.666	0.000**
PIUS total scores excessive use (n=299)	19.4–4.5	17.9–6.4	1.821	0.070
PIUS Social benefits, social comfort scores. (n=299)	24.6–10.0	17.8–8.2	5.187	0.000**
PIUS Internet negative consequences scores.	14.5–6.4	11.0–5.3	4.141	0.000**

* p < .05. **p < .001

university student this prohibition is not applied effectively as the university students can enter casinos very easily.

According to this study, it is found that men tended to gamble more in comparison to women. Derevensky's (48) study also revealed that men gamble more than women. In a similar study conducted in Sweden the trend of men gambling more than women were illustrated (59). When an assessment is done in terms of marital status, it has been observed that single people gamble more. Another study done by the Duvarcı and Varan (53) showed that only 37.1% of divorced and widowed people play gambling. The study of Derevensky (48) shows that 47.5% of the gamblers are single. Our study focuses more on unmarried students. Universities are the period of pre-marital life. Students who have high academic performance have less time to gamble. However, this study shows that students who have money tend to spend it more on gambling and it affects their academic performance. In a corresponding study it is seen that for a college student the major problems due to gambling are loss of money intended for living expenses and spending a lot of time on gambling resulted in low grades (60) One of the criteria of academic success in school is, undoubtedly, to pass the course. Those who gamble tend to finish their studies later than those who don't. Students are turning to gambling and they do not have the time to focus on their studies.

It is observed that most of the people who play

gambling games preferred the games of dog and football. In the study of Çakıcı (29) it has been also found that horse-dog-football games are the most preferred game in NC. PPG also tend to spend more money on gambling games. Also, Derevensky (48) concluded in his work the majority of PPG playing coin games is higher than non-gamblers. Those who have never played dice games tended to play it comparatively more. Alternatively, cock-fighting is another popular gambling game. Similarly, PPG tended to play more sports toto lottery, national lottery games as well as scratch-off games (29). The relationship between gambling and stock market is very frisky and it is observed that those who are more PPG tended to trust the stock market and played more betting on it in comparison with the non-gamblers. According to another study results, PPG involved in casino playing illustrates that pathological gamblers are more involved in casino games (50).

According to the current study it is illustrated that the highest number of gambling occurs at casinos (77.7%) followed closely by betting offices (70.8%). Although there is a ban on underage university students, it has been found that many students in NC, particularly Turkish students can enter the casino and play betting even if it is prohibited (29). It is also observed that environment matters a lot in conducting gambling studies and if the environment is positive and alluring, people tended to gamble more. It's found that 32% people gamble at the casinos.48 In relation to betting offices, it is

Table 3. The relationship of SOGS total scores total and PIUS Subscales scores of participants by using Pearson correlation analysis

Total SOGS Scores of Participants	r	P
PIUS Total Scores (n=299)	0.300	0.000**
PIUS Social benefits, social comfort scores. (n=299)	0.336	0.000**
PIUS Internet negative consequences scores. (n=299)	0.273	0.000**

* p < .05. **p < .001

found that PPG used the betting offices more. Similarly, out of other places, coffeehouses were another popular place for holding gambling games.

This study found that there is a relationship between PIU and PPG. Some studies suggest that PPG and PIU exhibit frequent co-occurrence among adults (61,62) and youths (63). It has been shown that Internet is largely being used in recent years for gambling and can be seen as a start of Internet addiction. It also leads us to the finding that one addiction can be replaced with another addiction and Tarhan (64) observed that gambling addiction is a leading way for the Internet addiction. There is no bar on gambling on Internet with or without money. Both categories are showing significant increase in usage of Internet for gambling. It is also observed that addiction is the use of any substance or material and the inability of leaving that particular action and letting it control your behavior (65). So the control of one addiction can lead to the addiction of another subject. This has been observed by Aasved (66) who believes that increasing in eating behavior exists after a person stops smoking addiction. This problem is important to illustrate as the human brain is capable of being addicted and if gambling is stopped, it can link to the Internet in a harmful way.

It should be noted that this study has several limitations. The main limitation of the present study is the limited sample size so which prevents making generalizations about the whole population. In addition to this, the sample does not include all departments at the university. Moreover, self-report response bias is a limitation.

CONCLUSION

The current study showed that in the universities the psychological counseling and guidance centers can be useful for education and treatment of youths in order to reduce these problems. In addition, students who applied in these centers because of the PIU and PPG Internet gambling problem should be taken into consideration. The gambling is a growing problem of NC and to avoid the PIU and PPG, effective public health policies are needed. University students are the most who are under

threat when it comes to these issues. In particular there is a need for awareness and consciousness programs at the universities.

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