

The risk factors of smd and ostracism in adolescents

[Sociology](#), [Communication](#)



With increasing use of the internet, there is an increasing attempt to share and interact online. Social networking sites, whose popular synonym is social media (SM), are online arenas where users can create individual public profiles, interact with friends, and meet other people based on shared interests[1]. There is a progressively increasing demand for these sites and this leads individuals to maintain their online social networks in a way that may, in some circumstances, lead to using social media excessively[2].

According to recent data, there are 3.196 billion (42% of world population) SM users worldwide[3]. In addition, the median time spent on SM is 6 hours. Due to increasing exposure to SM, a term called social media disorder (SMD) or addiction (SMA) existed. SMD is not defined as a disorder in DSM-V. On contrary, in literature, it is accepted as a behavioral addiction. It's postulated to cause symptoms like the classical addiction. So, individuals with SMD can suffer from mood modifications, salience, tolerance, withdrawal symptoms and emotional symptoms[4]. In addition, it is claimed that those persons addicted to using SM may experience symptoms similar to those experienced by individuals who suffer from addictions to substances or other behaviors[5].

Although SMD is a new research field, there are numerous data about it. SMD has been associated with depression, anxiety, narcissistic behavioral changes and loneliness [6-8]. Moreover, it has negative impacts on self-esteem, sleep quality and academic performance [9, 10]. Adolescence is a period in which the mankind is open to learn and discover. The adolescents rapidly adopt new technologies. So, they are expected to be most vulnerable to possible negative influences of these new technologies[11]. SM is widely used by adolescents. They use SM more frequently because they feel less

authority and parental pressure [12]. SMD is an important problem in adolescents. However, the literature is limited about SMD in adolescents. Ostracism is a term defined as “ being ignored or excluded by others”. It has important impacts on the sense of belonging, self-esteem, control and meaningful existence[13]. In long-term, ostracism can cause problems with the sense of belonging, self-esteem, control and meaningful existence. In addition, studies have shown that ostracism is correlated with depression and physical health problems[14]. For healthy psychological development, the period of adolescence is important. Through this period, healthy social interactions, understanding social norms, and improvement in perspectives are important. In addition, because of being socially sensitive, social exclusion or being ostracized can cause psychological problems [15, 16].

The study was conducted as a survey study. Institutional Ethics Committee approved the study protocol, and the study was in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki. All the participants were included after having informed consent. University students with an age of ≤ 18 were included. Participants with a history of neuropsychiatric illness causing difficulty to participate in the survey were excluded. Adolescent participants were evaluated with structured questionnaires. The questionnaires were prepared with questions about sociodemographic data, working status, information about faculty, success in school, participation in social activities (theater, cinema...), the purpose of using internet, if they have internet access in their home/ dorm, daily time spent on the internet. In addition scales of OES-A and SMD were used. OES-A

is an 11 item, self-report, five-point likert type instrument that assesses two ostracism subtypes: exclusion and ignorance. The sum of the 11 items results in a score ranging from 11 to 55. There is a positive correlation between the score and the ostracism experienced. Turkish validation of the scale was performed by Akin et al [17, 18].

SMD contains 9 questions and the answers are structured with five-point likert type answers. (1- Never, 2- rarely, 3- sometimes 4- Usually, 5- Always) [19, 20]. The individual questions can be evaluated separately or a total of scores can be used, ranging from 9- 45. Baseline characteristics of the patient group were described by using frequencies and proportions for dichotomous and categorical variables. Univariate analysis of the predictors of OES-A and SMD scores was performed by using Mann Whitney U and Kruskal-Wallis tests. In addition median scores were used for grouping OES-A and SMD scores into high and low. The median scores of 17. 0 for OES-A and 19. 5 for SMD were used. The analysis of factors associated with high OES-A and SMD scores were analyzed with chi-square and fisher exact tests. The answers about parents' being alive or divorced were groups into " both alive" and other. Daily use of social media was grouped into " ≤ 3 hours", "> 3 hours" and non-users. The hobbies of participants are divided into hobby present or absent. The success parameter was group into " not successful" and " more" A Pearson product-moment correlation coefficient was computed to assess the relationship between OES-A and SMD scores. The parameters with a p-value less than 0. 20 were further analyzed in multivariate analysis. For high SMD scores; gender, living in town/village,

mother's educational status, family structure, working status, economical status, the absence of a hobby, success in school and high OES-A scores were further tested in the multivariate analysis by using a logistic regression model.

In addition, for high OES-A scores; male gender, living in town/village, studying theology, having an extended family, working, the absence of a hobby, bad success in school, time spent in social media and high SMD scores were used. All analyses were performed by using SPSS 17.0 for Windows. Values of p of less than 0.05 were considered to be statistically significant. Results: Between January and June 2018, 864 university students less than 18 years of age were invited to study. 684/864 (79.1%) participated and were evaluated. 525 (76.8%) of them were 18 and 159 (23.2%) adolescents were 17 years old (mean 17.7, $SD=0.42$) (Table-1). Most of them were female (492, 71.9%). Most of the adolescents were students in Education faculty (235, 34.4%) and Economics and Administrative Sciences (100, 14.6%). 51.3% of the participants had lived in the city center. While 94% of them had both parents alive and living together, 81.4% of them had a nuclear family. 78/684 (11.4%) was working in a part-time job and 56.4% of them had a working experience of more than 1 year. Most of the study population (367, 53.7%) had a hobby either in sports or art. In addition, 61.8% of adolescents went to theater/cinema more than once monthly. All of them had internet access in their homes/dormitories. Most of the adolescents use internet only for fun (585, 85.5%) and 374 (54.7%) of

them spent more than 3 hours on social media. Only 3.1% of adolescents didn't use social media. The median score of SMD was 19.5(9-41).

In the univariate analysis; male gender, having an extended family, working, average economical status, the absence of a hobby, being unsuccessful in school and high OES-A scores were associated with high SMD. The participants who had a mother graduated from university had lower SMD scores. (Table-2). In addition, adolescents who spent more than 3 hours in social media had higher SMD scores (24.0 vs 18.0, $p < 0.001$). In the multivariate analysis, male gender (OR= 1.7, CI 95% (1.1-2.7), $p = 0.008$), Absence of a hobby (OR= 1.7, CI95% (1.2-2.5), $p = 0.002$), living in a extended family (OR= 2.2, CI 95%(1.3-3.7), $p = 0.002$) and high OES-A scores (OR= 2.3, CI95%(1.6-3.4), $p < 0.001$) were associated with high SMD scores (Table-4). In addition mother's educational status- university was found to be protective against high SMD scores (OR= 0.1, CI95 % (0.03-0.3), $p < 0.001$). The median score of OES-A was 17.0(11-48).

There was a strong and positive correlation between OES-A and SMD scores ($r = 0.52$, $p < 0.001$). In the univariate analysis; male gender, working, absence of a hobby, being unsuccessful in university, time spent in social media and high SMD scores were found to be associated with high OES-A scores (Table-3). In addition, In the multivariate analysis, male gender (OR= 14.1, CI 95% (8.3-23.7), $p < 0.001$), Absence of a hobby (OR= 1.5, CI95% (1.07-2.3), $p = 0.02$), not being successful in university (OR= 2.1, CI95% (1.1-3.8, $p = 0.01$) and high SMD scores (PR= 2.3, CI 95%(1.6-3.4), $p < 0.001$) were associated with high OES-A scores (Table-4). Discussion: In the

present study, we tried to define the risk factors of SMD and ostracism in adolescents and analyze the association between SMD and ostracism. Male gender, absence of a hobby, living in an extended family and high OES-A were defined as risk factors for SMD. In addition, having a mother who graduated from university was found to be protective against SMD. In addition, male gender, absence of a hobby, less success in school and high SMD were defined as risk factors of Ostracism. We documented an important association between SMD and Ostracism. The Social media addiction has gained more interest in the last 10 years. There have been lots of studies trying to analyze the causes and impacts on adolescents. Social media disorder is a more wide term to define the SMA and internet gaming disorder. The prevalence of SMA has been reported to be ranging from 2.8% to 41% in adolescents. There is limited data about the risk factors of SMD. While in some the literature female gender has been associated with SMD, in others male gender was found to be a risk factor.

However, there is also data showing no relationship between gender and addiction. In our study we demonstrated that males were more exposed to SMD. Younger individuals and adolescents with anxiety and depression experience have been found as risk factors for SMD. The analysis by Şaşmaz et al. found that having a hobby decreased the risk of internet addiction. They also pointed out the importance of mother's educational status which has an important effect on adolescents' internet addiction. In accordance with the data, our analysis showed that having a hobby and a mother graduated from the university were protective against SMD. There are lots of

negative impacts of SMD. It has been also associated with loneliness.

However, it is difficult to conclude what came first the chicken or the egg.

Savci et al. studied the association between social media usage and loneliness and concluded that impulsivity directly, positively and significantly predicts social media usage, that social media usage directly, positively and significantly predicts loneliness.

On the other hand, Bonetti et al. showed that adolescents who self-reported being lonely communicated online more frequently about personal and intimate topics than did those who did not self-report being lonely. Lonely adolescents also were motivated to use online communication significantly more frequently to compensate for their weaker social skills to meet new people. Saharabi et al. also documented that the use of the internet to support interpersonal communication with friends resulted in less intense loneliness. In our study, we demonstrated a positive correlation between SMD and ostracism. However, it is difficult to conclude which one is the cause. The term “Ostracism” originated the word “ostraca” (shards of clay). In 500 B. C. the Athenians were voting by writing the names of a member of the community onto ostraca. So they were deciding to banish the member or not. So it's a term defining social exclusion.

Ostracism can be experienced in different ways, it may be seen as exclusion of an individual or group completely or it may be seen just like paying no attention to an individual or a group, or by ignoring. During the period of adolescence, being a member of a group is essential for psychological development. The exclusion during this period can result in various problem

behaviors and emotional disturbances. The ones more exposed to ostracism have not been clearly documented in the literature. In the study by Gurler et al. they found a more ostracization in younger adolescents[36]. Although the studies have not found an association between gender and ostracism[37], we concluded that male gender increases the risk ostracism 14. 1 fold. The absence of a hobby and low success in school have also been associated with more ostracization. Ostracism can be experienced in different ways, it may be seen as the exclusion of an individual or group completely or it may be seen just like paying no attention to an individual or a group, or by ignoring. During the period of adolescence, being a member of a group is essential for psychological development. The exclusion during this period can result in various problem behaviors and emotional disturbances. The ones more exposed to ostracism have not been clearly documented in the literature. In the study by Gurler et al. they found a more ostracization in younger adolescents[36].

Although the studies have not found an association between gender and ostracism[37], we concluded that male gender increases the risk ostracism 14. 1 fold. The absence of a hobby and low success in school have also been associated with more ostracization. There some limitations in the study. Firstly, due to its being a survey study, the subjectivity of the evaluation process was inevitable. In addition, the documentation of “ success in school” and “ economical status” were declared by the participants. They could be analyzed more objectively. Both the validated SMD and OES-A scales didn't have cut off values for grouping participants. So the analysis

was done by using median values. The analysis of approaching to social media either by cellular phone or internet could have provided important data.

In conclusion, while male gender, the absence of a hobby, living in an extended family and ostracism were defined as risk factors for SMD; mothers graduated from the university were protective against SMD. In addition, male gender, the absence of a hobby, less success in school and high SMD were defined as risk factors of Ostracism. We documented an important association between SMD and Ostracism. The association between them and which one is the cause should be further studied. In addition, maneuvers to decrease SMD in adolescents should be practiced.