

Emotion dysregulation and adolescents' preference for online social interactions: The moderating role of gender

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Abstract. The number of young social media users is increasing year after year, animating the scholar debate about excessive Internet use and its effects. Boys and girls' different social media use motives and purposes might reflect the way in which they display their emotions, indeed increasing attention has been paid to emotion dysregulation role in addictive behaviors. This study aimed at exploring the moderating role of gender on the relation between difficulties in emotion regulation and problematic preference for online social interactions. 693 Italian adolescents (55% female and 45% male; mean age = 16+1.597) were involved in the study. Results showed that gender differently moderated the relationship between emotion dysregulation and preference for web-mediated interactions in males and females: girls with higher difficulties in regulation of emotional states did not prefer online social interactions. On the contrary, boys' problematic preference for web-mediated interactions always increased for difficulties in acceptance, understanding, control, and modulating negative emotions.

Keywords: Emotion Regulation, Problematic Social Network sites Use, Adolescence, Gender.

1 Introduction

Web-based communication via social networking sites (SNSs) is growing fast among adolescents. Indeed, among younger Internet users, 97% of teenagers and 99% of young adults are web users [1,2]. Social media use seems to provide a useful online medium, contributing to self-definition, identity construction, and development of social skills [3,4,5,6,7,42,43]. At the same time, teens' widespread Internet use seems to offer boys and girls risky opportunities [8,9]. The emergence of possible abuse symptoms, especially in adolescence, constantly animates the scholar debate about the excessive Internet use effects and the validity of the umbrella term "Internet addiction" (IA) [6,10,11], and in recent years increasing attention has been paid to emotion dysregulation role in addictive behaviors [12,13,14,15].

In 2004 Gratz and Roemer [16] defined emotion regulation as the awareness, understanding, acceptance, and modulation of own emotional states and some studies

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suggested that these abilities play a major role in inhibiting addictive behaviors, otherwise engaging to escape from or minimize negative moods [12,13,17]. In problematic Internet use (PIU) research field, studies suggested significant associations between web-related activities to manage emotions, uncontrolled Internet use, and negative outcomes of Internet use [12,17,18,19,20,21]. But, these findings highly support the association between difficulties in emotion regulation and PIU in adults. Indeed, although some papers pointed out the pivotal role of improvement of recognition and regulation of emotions abilities in adolescents' PIU and Internet gaming disorder treatments [22,23,24,25], still little is known about the link between emotion dysregulation and Internet-related activities in boys and girls.

After the *feminization* of the web [26], females have become increasingly more engaged on the Internet and, despite similarities, their motives of use were different from those of boys [27]. Overall, girls seem to prefer social and communication activities (i.e. social networking, instant messaging, blogging, photo-sharing) [27,28,29,30], whereas males spent more time surfing, online videogaming, visiting pornographic sites, and file downloading [9,28,31]. Likely, the girls' expressive social media use for social purposes and the instrumental Internet use for non-social purposes [32,33] reflect the way in which adolescents are asked to display their emotions: girls in an expressive way talking about their feelings with others, and boys in a more physical way [17]. However, despite the typical lower capability of self-control and emotion regulation in both boys and girls during the adolescence [9], females seem to display greater awareness of their emotions, ability to describe emotional experiences, and more emotional regulation strategies than males [9,17,34,35,36].

2 Current study

The main goal of this study was to explore the links between adolescents' difficulties in emotion regulation and their preference for online social interactions, as a problematic aspect of Social Network sites (SNS) use, highlighting possible gender-related differences. Based on the literature reviewed, it was hypothesized that gender moderate the predictive role of difficulties in emotion regulation on problematic preference for web-mediated interactions.

3 Methods

3.1 Participants

A total of 693 Italian high-school students (55% female and 45% male; mean age = 16+1.597) were involved. General information about the aim of the study was announced in class. Participants were informed that participation was voluntary, and all students agreed to participate and completed the questionnaires in a classroom setting through their smartphones. No course credits or remunerative rewards were given.

3.2 Measures

Difficulties in Emotion Regulation Scale (DERS). The DERS [16] is a 36-items measure rated on a 5-point Likert scale ranging from 1 (“almost never”) to 5 (“almost always”). This measure was developed to clinically assess difficulties in emotion regulation scored on six scales: Nonacceptance of emotional responses (NOACCEPTANCE); Difficulties engaging in goal-directed behavior (GOALS); Impulse control difficulties due to negative emotions (IMPULSE); Lack of emotional awareness (AWARENESS); Limited access to emotion regulation strategies (STRATEGIES); and Lack of emotional clarity (CLARITY). The Italian adaptation of the DERS [37] has good psychometric properties. In the current study, the Cronbach's alpha was $\alpha = .881$.

Preference for Online Social Interactions Sub-Scale (POSI). The POSI is a sub-scale of the Generalized Problematic Internet Use 2 (GPIUS2; [19]). It measures the degree to which individuals prefer the online communicative context on a scale ranging from 1 (“strongly disagree”) to 8 (“strongly agree”). According to Casale and Fioravanti [38], the participants were asked of referring only to their use of SNS. In the current study the Cronbach's alpha was $\alpha = .694$.

3.3 Data Analysis

Means, standard deviations, and Pearson's correlations between the study variables were performed (Table 1). Preliminary analyses of variance (ANOVAs) were also run in IBM SPSS 23 to point out possible gender-related differences in considered dimensions. ANOVAs revealed a significant effect of gender on GOALS [$F_{(1,692)}=28.707$; $p < .001$]; IMPULSE [$F_{(1,692)}=10.801$; $p = .001$]; CLARITY [$F_{(1,692)}=9.203$; $p = .003$]; and AWARENESS [$F_{(1,692)}=45.328$; $p < .001$]. Females showed higher means in all dimensions except AWARENESS. To examine the potential moderating effect of gender on the relationship between DERS dimensions and POSI we tested six separate models using the SPSS macro PROCESS suggested by Hayes [39]. This SPSS macro PROCESS is specifically developed for assessing the complex models including moderator variables. Simple slope analyses were completed to determine the nature of the moderation effects.

Table 1. Means, standard deviations, and Pearson's correlations between the study variables. Males' data below the diagonal, females' data above the diagonal.

	M(SD)		1	2	3	4	5	6	7
	Males	Females							
1 POSI	2.46(1.498)	2.47(1.510)	-	.101*	.090	.092	.030	.079	.083
2 DERS <i>NoAccept</i>	2.54(.954)	2.55(1.054)	.322**	-	.424**	.550**	.443**	.307**	-.018
3 DERS <i>Goals</i>	3.11(.949)	3.50(.950)	.235**	.489**	-	.594**	.573**	.314**	-.230**
4 DERS <i>Strategies</i>	2.83(.669)	2.80(.740)	.256**	.553**	.421**	-	.526**	.393**	.144**
5 DERS <i>Impulse</i>	2.88(.936)	3.13(1.019)	.241**	.473**	.694**	.390**	-	.214**	-.138**
6 DERS <i>Clarity</i>	2.76(.868)	2.97(.907)	.282**	.293**	.269**	.488**	.195**	-	.257**
7 DERS <i>Awareness</i>	2.75(.893)	2.32(.794)	-.021	-.044	-.363**	.218**	-.381**	.270**	-

4 Results

Table 2 shows the results from testing gender as moderator. A moderating effect exists if the coefficient of the product term (independent variable by moderator) is significant. The coefficients of NOACCEPTANCE, GOALS, STRATEGIES, IMPULSE and CLARITY * gender were significant at the 0.05 level, indicating that gender moderated the relationships between these DERS dimensions and POSI. Thus, the moderating roles of gender on the relation were confirmed.

Table 2. Moderating effect test for gender.

	β	SE	t	p
<i>Model 1</i>				
NOACCEPTANCE	-.293	.171	-1.7105	.088
Gender	-.850	.311	-2.7340	.006
NOACCEPTANCE * Gender	.350	.113	3.1133	.002
<i>Model 2</i>				
GOALS	-.239	.194	-1.2330	.218
Gender	-.782	.414	-1.8876	.060
GOALS * Gender	.250	.120	2.0845	.038
<i>Model 3</i>				
STRATEGIES	-.525	.254	-2.0685	.039
Gender	-1.010	.469	-2.1534	.032
STRATEGIES * Gender	.376	.162	2.3258	.020
<i>Model 4</i>				
IMPULSE	-.474	.178	-2.6645	.008
Gender	-1.006	.375	-2.6797	.008
IMPULSE * Gender	.347	.117	2.9509	.003
<i>Model 5</i>				
CLARITY	-.353	.194	-1.8197	.069
Gender	-.984	.379	-2.5995	.010
CLARITY * Gender	.363	.127	2.8626	.004
<i>Model 6</i>				
AWARENESS	.318	.214	1.4863	.138
Gender	.483	.359	1.3446	.179

AWARENESS * Gender	-0.173	.134	-1.2918	.197
Dependent Variable: POSI				

Figures 1, 2, 3, 4, 5 graphically show the changes of POSI between genders: males prefer online social interactions more than women when have difficulties in emotion regulations. Specifically, as can be seen in Figure 1, for high difficulties in emotions acceptance, boys report a much higher preference for online social interactions, but for low NOACCEPTANCE the males' preference is lower than females. Similarly, for higher difficulties engaging in goal-directed behavior (GOALS) the males' POSI increases (Figure 2). In Figures 3 and 4 while for higher limited access to emotion regulation strategies (STRATEGIES) and impulse control difficulties (IMPULSE) boys report higher preference for online social interactions, girls show lower POSI. Finally, Figure 5 shows that gender moderates the CLARITY-POSI relation: for higher lack of emotional clarity (CLARITY) boys' POSI increases. For girls the effect appears almost unchanged.

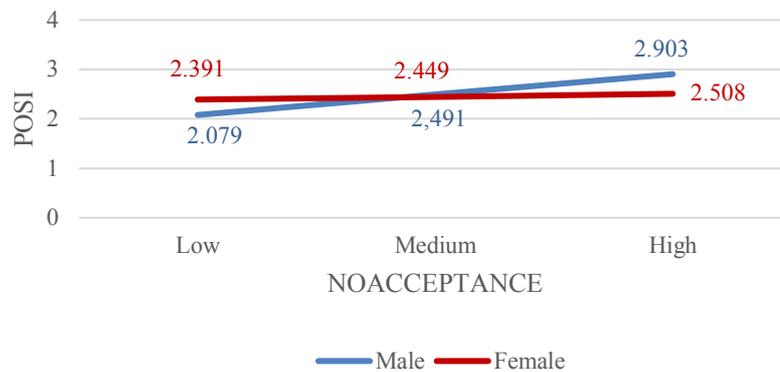


Fig. 1. Moderating effect of gender on NOACCEPTANCE-POSI relation.

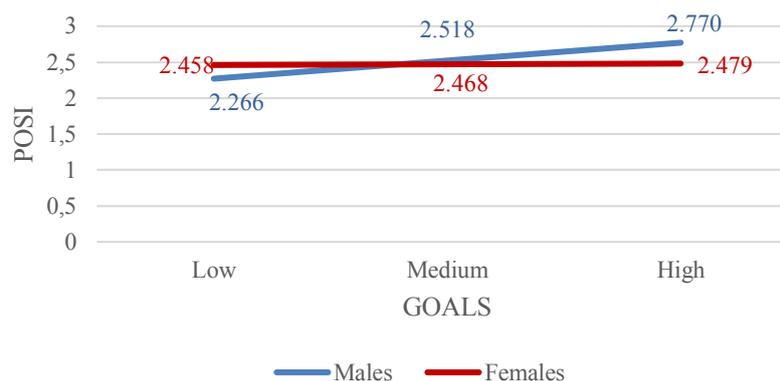


Fig. 2. Moderating effect of gender on GOALS-POSI relation.

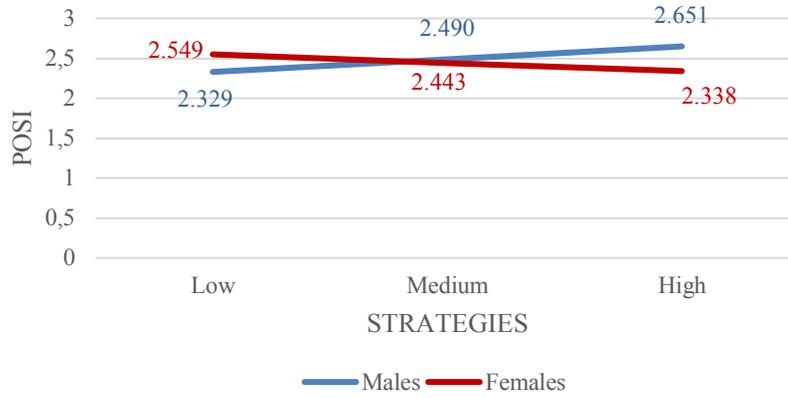


Fig. 3. Moderating effect of gender on STRATEGIES-POSI relation.

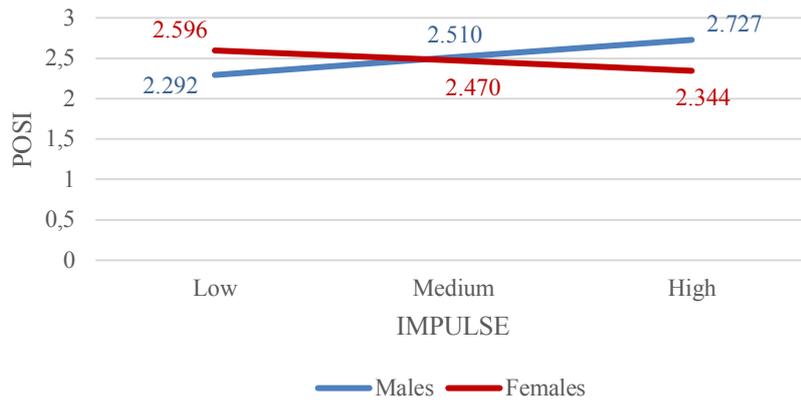


Fig. 4. Moderating effect of gender on IMPULSE-POSI relation.

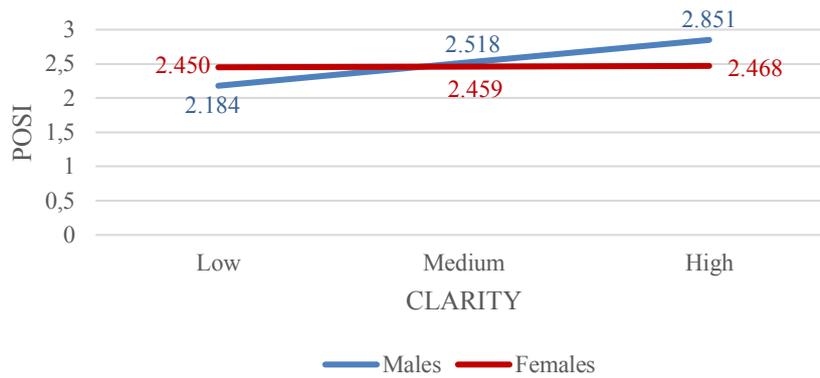


Fig. 5. Moderating effect of gender on CLARITY-POSI relation.

5 Discussion and conclusion

This present study explored the relation between adolescents' difficulties in emotion regulation and their problematic preference for web-mediated interactions, highlighting gender-related differences.

Contrary to previous findings where males were more predisposed to difficulties in emotion regulation [9,17,34,35,36], in this study girls showed higher mean scores than boys in difficulties engaging in goal-directed behaviors, controlling impulses due to negative emotional states, and in clear understanding of experienced emotions. Moreover, girls showed lower awareness of their emotions than boys. No statistically significant gender-related differences were found in mean scores of preference for online social interactions and difficulties in acceptance of their own emotions and in access to emotion regulation strategies.

Gender was found to have a moderating role on the relationship between emotion dysregulation and preference for web-mediated interactions. Indeed, the effect of poor ability to understand, accept, modulate, and manage negative emotions was significantly different between males and females. Despite higher levels of emotion-related difficulties and an inclination for social and communicative activities online [4,28,29], girls with higher difficulties in regulation of emotional states did not prefer online social interactions. On the contrary, boys' problematic preference for web-mediated interactions always increased for difficulties in acceptance, understanding, control, and modulating negative emotions. Likely, even though girls use social media for social purposes, they could prefer to express and display their emotional experiences mostly turning to others in face-to-face relations. In another way, girls could carry out other online and offline activities to try and regulate their negative emotions. On the contrary, boys that might express their emotions in a more physical way [17] could prefer online social interactions and other web-related activities to manage and take out their negative emotions [12,17,18,19]. These controversial findings could be related to the involved boys' and girls' cultural context, their personal characteristics, or, overall, to the rapid changes in adolescents' online interests and activities that reflect how fast are the changes in social media landscape [40,41].

Some limitations need to be addressed. Firstly, this preliminary study explores just one dimension of problematic Social Network sites use in association with difficulties in emotion regulation. Other aspects should be explored, especially the SNS misuse as mood regulator [19]. Secondly, other psychosocial factors should be investigated in association with emotion dysregulation, trying to identify gender-related differences in SNS use. In this regard, this study highlighted that the heterogeneity of scholar findings reflects the need of problematic social media use research field of further exploration. Finally, these findings clearly showed the importance of interventions aimed to increase teens' awareness, understanding, acceptance, and regulation of emotions, in online and offline contexts.

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