AN EXPLORATORY STUDY ON ADAPTIVE PSYCHOPATHOLOGICAL RISK AND PROBLEMATIC USE OF THE WEB ASSOCIATED WITH PROCRASTINATION IN UNIVERSITY STUDENTS

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ABSTRACT

Procrastination is a growing phenomenon among university students and international research has pointed out that it can affect the quality of students' achievements, and even their psycho-physical well-being. It has been suggested that, besides manifesting in the academic context, procrastination represents in some subjects a stable trend in various areas of daily life and can persist for the rest of their lives. This study has recruited a convenience sample of N=382 university students in Italy, who were administered through the Pure Procrastination Scale, the Adult Self-Report, the Internet Addiction Test, and the Barratt Impulsiveness Scale. Our results confirmed the association between psychopathological risk, impulsiveness, problematic use of the web and a propensity towards academic procrastination in a sample of university students, providing support for the construction of prevention and intervention programs.

Keywords: procrastination; impulsiveness; internet; psychopathological risk; emotions

INTRODUCTION

Academic procrastination refers to the propensity to postpone the tasks related to academic life and the responsibilities associated with it, despite the intention to work on these assignments (Sepehrian and Jabari Lotf, 2011). It affects 50-70% of the university students and it is estimated that about a third of them experience it in a chronic and severe manner (Schouwenburg, 2004). Reducing the time available to work on the assigned tasks, it becomes more difficult to carry out the work successfully, with the consequence that the closer the deadline comes, the more the emotional distress is perceived by the student (Weinstein and Dobkin, 2002). High levels of procrastination have been associated with poorer academic results and a higher rate of renouncement of studies (Pychyl, Morin and Salmon, 2000). In light of these data, the present exploratory study has been carried out as part of a procrastination awareness program aimed at students of an Italian University

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to contribute to a better understanding of the risk and/or protection factors associated with this phenomenon in order to promote effective prevention programs.

FACTORS ASSOCIATED WITH ACADEMIC PROCRASTINATION

Among the main factors associated with the propensity to procrastinate, students frequently report poor ability to manage their own time, lack of energy and interest, poor perceived self-efficacy, aversion to the task, fear of failure, low self-esteem, and belief in making it better under pressure (Simpson and Pychyl, 2009). In addition, procrastination resulted has been also associated with demographic variables such as age and gender (van Eerde, 2003). The recent literature investigating the variables related to procrastination in university students, stressed the importance of considering the dynamic interaction between factors of different nature, genetic and environmental, individual and relational, with a particular emphasis on the role played by the psychological functioning of the student (Mortazavi, 2016).

In addition to some personality variables that have been associated with the procrastination, including conscientiousness, distractibility and perfectionism (van Eerde, 2003), one of the individual factors most strongly associated with the academic procrastination is impulsiveness, that is the tendency to act in a precipitous way, without planning one's own behavior and without evaluating the consequences (Lynam et al., 2006). Overall, impulsiveness is characterized by the general tendency to prefer short-term results over future rewards, even if the latter may be more advantageous, with the consequence that the individual is led to choose less important, but emotionally more pleasant activities (van Eerde, 2000).

Given the central role played by emotions in learning processes and academic life in general (Pekrun et al., 2011; D'Errico, Paciello and Cerniglia, 2016), recently Siros and Pychyl (2013) have suggested that procrastination can be interpreted as a strategy of short-term mood control. In particular, it was highlighted that procrastinators tend to turn their attention to more immediately and emotionally rewarding tasks, in an attempt to manage the negative emotions associated with the assignments.

Some studies have found that procrastination is associated with the problematic use of the Internet (Mohammadi, Tahriri and Hassaskhah, 2015) and with the perception of the Internet as something pleasant that can produce relief from negative pressure or negative emotions. Problematic use of the Internet in academic environments refers to staying online for a long period of time (loosing track of time), with the illusion of the productivity and efficiency (Aparicio & Jimenez, 2017; Martín, 2016). This misuse of the Internet can bring the student to unrealistically postpone the tasks he/she is assigned to (Cerniglia et al. al., 2017; Timothy and Power, 2008).

Recent theoretical and clinical contributions have also highlighted that procrastination can be associated with emotional-behavioral maladaptive functioning characterized by greater difficulties both internalizing and externalizing areas (Pichardo Martínez, Fernandez Cabezas, Garcia Berbén, & Carcia Berbén, 2014; Wambach, Hansen and Brothen, 2001). In particular, a significant association has been highlighted between procrastination and depressive, anxious and aggressive symptoms (Onwuegbuzie, 2004). It is interesting to note that the studies mentioned above have for the most part deemed that the emotional-adaptive functioning (connected with the presence of internalizing and/or externalizing symptoms) can be interpreted as a consequence of the propensity towards academic procrastination. In this sense, students who tend to procrastinate their academic commitments will find themselves facing a strong emotional distress when confronted with the consequences that this trend has caused. According to the proposed model in this paper, instead, the maladaptive emotional functioning is considered as a predictor of procrastination.

Likewise, although many studies have suggested that problematic use of the of the web can play a role as a medium through which the student implements a strategy of procrastination, the present paper rather proposes that it is configured as a maladaptive strategy of emotional regulation, predicted by the psychopathological symptoms.

OBJECTIVES

The present exploratory study intends to verify the association between variables of psychopathological risk, impulsiveness and propensity to academic procrastination in a sample of university students, also considering their use of the web. According to our hypotheses (and on the basis of the studies mentioned in the previous section), the subjects who get scores for higher risk of psychopathology and impulsivity, will show a greater propensity to procrastination and will use the web in a problematic way.

METHOD

Sample and procedure

A sample of university students (N = 382; first to third year students, evenly distributed) was recruited in an Italian university from January 2015 to February 2018. 45% of the students were males, with an average age of 23.7 years (ds = 3.6). All students agreed to participate in the study by signing an informed written consent form. All participants filled in the instruments individually, through the use of a computer platform of data collection to which they have had access through a randomly generated personal code. All responses were kept anonymous and the study was evaluated and authorized by the Ethics Committee before its start.

Tools

Pure Procrastination Scale (PPS; Steel, 2010). The tool is composed of 12 items on a 5-point Likert scale (0 = never; 5 = always) with higher scores indicating a greater tendency to procrastination. As for the authors' indications, total scores below 19 indicate absence of propensity to procrastination; scores between 20 and 36 indicate an average and non-problematic degree of procrastination; scores from 37 indicate a high tendency to procrastination. For the purposes of this study, total scores were used.

Adult Self-Report (ASR, Achenbach and Rescorla, 2003) is a self-report questionnaire with dimensional classifications that estimate problems and emotional and behavioral skills. It consists of 132 items on a three-point Likert scale (0 = not true; 1 = partially or sometimes true; 2 = very much)

or often true). The measure aims to identify symptoms related to problems of internalization and externalization. Internalization problems include behavioral, emotional and social problems, such as somatic complaints, anxiety, and depression. The externalizing problems relate to aggressive behaviors and rule-breaking behaviors. The other syndromes concern problems of thought, problems of attention and intrusive thoughts. For the purposes of this exploratory study, the global index representing total problems was used (produced by the sum of the values of the syndromic sub-scales).

Internet Addiction Test (IAT; Young, 2004). The measure is composed of 20 items on a 5-point Likert scale (0 = never; 5 = always) and provides an assessment of Internet Addiction. Higher scores represent higher level of severity of compulsiveness and dependence from the Internet. The total scores between 0 and 30 points are considered a normal level of Internet use; scores from 31 to 49 indicate the presence of a mild level of Internet Addiction; scores from 50 to79 reflect the presence of a moderate level of IA; scores from 80 to 100 indicate severe IA.

Barratt Impulsiveness Scale (BIS-11; Patton et al., 1995). It is a self-report tool composed of 30 items on a 4-point Likert scale (0 = never; 4 = always), which evaluates impulsivity as a behavioral variable of personality.

DATA ANALYSIS

Considering the possible heterogeneity of university students in terms of age and the results of previous studies on academic procrastination (Eagly, 2009) a preliminary descriptive analysis of the variables was carried out on sex and age. To check for possible significant differences related to age an analysis of the univariate variance (ANOVA) was employed. For the study of the relationship between procrastination, problematic use of the web, impulsiveness, and psychopathological risk correlations were examined between the variables and regression models have been realized using procrastination and the problematic use of the web as dependent variables.

RESULTS

Sex and age differences

With regard to gender and age differences, no significant differences emerge from ANOVA ($p < 0.01$). Therefore, there are no significant differences related to these factors in the total scores.

Relationship between procrastination, problematic use of the network, impulsiveness, risk

As can be seen from Table 1, all variables correlate with each other with high Pearson coefficients r. In particular, the correlation between procrastination and impulsiveness and that between problematic use of the web and psychopathological risk are very high.

*Tab. 1. Relationships between procrastination, problematic use of the web,
impulsiveness, psychopathological risk*

	Procrastination	Internet Addiction	Impulsivity
Procrastination			
Internet Addiction	.71**		
Impulsivity	.72**	.63**	
Psychopathological risk	.64**	.88***	.69***

**p<.01; ***p<.001

Influence of impulsiveness and psychopathological risk on procrastination and the problematic use of the web.

As can be seen from Table 2, impulsiveness and psychopathological risk significantly influence procrastination and problematic use of the web.

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Tab. 2. Influence of impulsiveness and psychopathological risk on procrastination and the problematic use of the web.

	Procrastination	Internet Addiction
	β	β
Impulsivity	.44***	.60***
Psychopathological risk	.51***	.55***
R^2	.10***	.12***

**p<.01; ***p<.001

DISCUSSIONS

The objective of this exploratory study was to verify possible associations between variables of psychopathological risk, impulsiveness and propensity to academic procrastination in a sample of college students, considering also the problematic use of the web. The results obtained are partially in line with the previous literature. In fact, the sex- and age-related differences that have been suggested by other studies, have not been confirmed in this sample. For example, the study of Ozer, Demir and Ferrari (2009) had reported a higher rate of procrastination among male students, in particular younger students, who identified the main causes of this behavior in their tendency to take risks and their rebellion against control, unlike the girls, who linked their propensity to procrastinate to the fear of failure and to a general sense of laziness. On the contrary, in this case the analysis of the variance univariate showed no significant differences. It can be assumed that the relative size of the sample has limited the effectiveness of the statistical analysis, preventing the identification of possible age- and sex-related differences.

As for the correlation between variables of maladaptive emotional functioning, impulsiveness, propensity to procrastinate and the problematic use of the web, our results are in line with previous research contributions. Bidirectional associations between these variables showed very high coefficients, confirming the hypothesis that the investigated dimensions share a theoretical and statistical relationship. Despite the fact that this is a cross-sectional study, on the basis of what has been proposed by Wood and his colleagues (Wood et al., 2011), this study also suggests an influence of the variables of emotional-adaptive functioning on the tendency to procrastinate and to the problematic use of the web. According to previous literature, the negative outcomes of procrastination would be the basis of the maladaptive symptoms in students (e.g. anxiety and depression). In fact, procrastination has been associated with greater academic failure, which in turn is in causal relationship with higher levels of anxiety and psychomotor agitation, depressive symptoms, sense of loneliness and social anxiety, hostility, anger, tension, tiredness and shyness (Caplan, 2007).

According to psychodynamic literature, it can be assumed that the difficulty in emotional regulation and problematic emotional-cognitive contents precede the tendency to procrastinate and are the cause of it. Of course, the relationship between procrastination and psychopathological symptoms is not unidirectional, but it is possible that they are in relationship with each other within a self-reinforcing vicious circle. One the crucial dimensions that seem to predict academic procrastination is impulsiveness. In particular, in the previous literature, higher levels of impulsivity were found to

be associated with a higher trend to procrastinate (Rebetez, Rochat and Van der Linder, 2015). Despite it may seem a functionally opposite trait to the trend to procrastinate, the two constructs seem to share the difficulty of managing the achievement of objectives, and the inability to identify priorities.

As for the problematic use of the web in procrastinating students, literature has suggested that the fact that the web is a resource particularly useful for numerous academic purposes increases the probability that its use may have negative effects. Students would tend to better justify the tendency towards procrastination by means of the use of the Internet, compared to other activities, as they often interact with information they consider useful for the task (Lavoie, 2000). However, our results show that the problematic use of the Internet does not configure itself as a means by which to implement procrastination, but rather as a result of an emotional adjustment strategy following experimentation of maladaptive emotional symptoms (which statistically predict problematic use). This result is consistent with previous studies (Odaci e Çıkrıkçı, 2014).

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