ORIGINAL ARTICLE

PREDICTIVE RELATIONSHIP OF ACTIVE AND PASSIVE PROCRASTINATION WITH DEPRESSION, ANXIETY, STRESS AND LIFE SATISFACTION

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ABSTRACT

OBJECTIVE
To explore the extent to which active and passive procrastination predict depression, anxiety, stress, and life satisfaction among young people.

STUDY DESIGN
Correlational study design.

PLACE AND DURATION OF STUDY
The study was carried out in different government educational institutions of Islamabad and Rawalpindi during 2013.

SUBJECTS AND METHODS
Convenient sampling approach was used for selection of 500 participants (52.6% boys, 47.4% girls; M_{age} = 15.77 years old, SD = 1.87: age range = 13-21 years). The respondents' education level was matriculation and intermediate. New active Procrastination Scale, Passive Procrastination Scale, Depression, Anxiety, Stress Scale, and Satisfaction with Life Scale were used for purpose of data collection. To dig out the relationship among variables Pearson correlation and linear regression analysis was used.

RESULTS
Findings revealed that category of procrastinators significantly predict the respondents' level of depression, anxiety, stress, and life satisfaction.

CONCLUSION
Identifying different types of procrastination may help young ones in improving their health and enhancing satisfaction with their lives.

KEY WORDS
Active procrastination, Passive procrastination, depression, anxiety, stress, life satisfaction.

INTRODUCTION

The term procrastinate comes from the Latin word 'procrastinare' and means to put off, or to postpone until another day.[1] The phenomenon of procrastination is as old as human history but the term got popularity with the advent of technology. Initially it was assumed a problem of industrialized societies and agrarian societies were assumed to be not afflicted by this menace. Procrastination is an automatic problem habit marked with putting off an important and timely task to another time, and that has probable consequences too.[2] Procrastination is not identical to idleness rather it implies performing an alternative activity to the intended one.[3] It is also viewed as an interactive dysfunctional and behavior avoidance process, characterized by the desire to avoid an activity, the promise to get to it later, and the use of excuse making to justify the delay and avoid blame.[4] Recent researches viewed procrastination with a slightly different perspective and in positive connotation that is active and passive procrastination. View that delay due to being unable to manage things timely due to fear of failure, lack of self-efficacy (passive procrastination) is different from intentional postponement of tasks (active procrastination). Passive procrastination is traditional negative view whereas active procrastination is emergent and nascent construct.[5]

Both active and passive procrastination have different implications in terms of outcomes such as depression, anxiety, stress, and life satisfaction.[6,7] Present study intended to explore the relationship of active and passive procrastination with other study. As active procrastination is a new construct so it was deemed imperative to examine the incremental validity of NAPS to ascertain its unique role in predicting various outcomes. Previously some studies have been carried out in west but with reference to indigenous context the construct has not been explored yet. So the present study was executed to see whether the phenomenon of active and passive procrastination operate in same manner as it does in West.

SUBJECTS AND METHOD

Participants

In this phase 525 Pakistani adolescents were initially contacted but out of those 500 young people (52.6% boys, 47.4% girls; M_{age} = 15.77 years old, SD = 1.87: age range = 13–21 years) who were selected through convenience sampling volunteered to participate and responded with zeal. The education level of participants ranged from matriculation to graduation. Among them 49.8 % were doing matriculation whereas 50.2% were studying in graduate classes. Correlational research design was used to carry out this study.

New Active Procrastination Scale: the 12 item NAPS has four dimensions and there are four items in each dimension. These dimensions are outcome satisfaction, preference for pressure, intentional decision to procrastinate, and ability to meet deadlines. It is in a Likert-type format that uses 7-point scale as a response format for all the items ranging from 1 (not at all true) to 7 (very true). The score range of total NAPS lies in 16 to 112 and for each dimension it is from 4 to 28. Cronbach's alpha coefficient of scales assessing the four dimensions ranged between .70 and .83 providing support of acceptable internal consistency whereas alpha coefficient for total NAPS (.80) was also satisfactory. For this part of the research Urdu translation of NAPS was used.5 Alpha reliability coefficient of Urdu version of NAPS total was .82 (N = 80) and it ranged from .55 to .88 for four dimensions of the scale.[8]

Passive Procrastination Scale: Passive Procrastination Scale comprises of six items belonging from two already existing measures of procrastination Decisional Procrastination Scale and Academic Procrastination. It was adopted to assess the level of traditional/passive procrastination[5]. The alpha reliability of the English version of the scale was .82. It is a 7-point scale in a Likert type format. It offers response categories ranging from 1 "not at all true" to 7 "very much true'. The score ranges from 6 to 42. Urdu translation of PPS was used in this part of the research. Alpha reliability coefficient of Urdu version of PPS is .75 (N = 80) which is reasonably satisfactory.[8]

Depression, Anxiety, Stress Scale (DASS): The DASS is a set of three self-report measures of depression, anxiety and stress.[9] All the DASS scales comprise of 14 items resulting 42 items in total. In present study shorter Urdu version of DASS (i.e., DASS-21) was used. The alpha reliability coefficient of Urdu version of Depression (.84), Anxiety (.82), Stress (.87) Scale was quite satisfactory. The DASS original and translated version has been widely used in the indigenous context[10] . DASS is a four point rating scale. The score ranges from 0 to 3 where 0 stands for "did not apply to me at all" and 3 "applied to me very much. There are cut off scores for different levels of depression, anxiety, and stress such as normal, mild, moderate and severe.

Satisfaction With Life Scale: Satisfaction With Life Scale is a measure of global life satisfaction[11]. It provides respondent's overall assessment of their lives. The SWLS consists of 5 items and it is a 5-ponit scale where 1 corresponds to 'strongly disagree' and 5 for 'strongly agree'. For present study Urdu version was used to assess participants' level of life satisfaction. Coefficient alpha for SWLS from present sample was .74.

Procedure

Researcher contacted the heads of different educational institutions for purpose of data collection. Before participation in study participants falling below the age range of 18 years were briefed about nature of study and were asked to seek permission from their parents/guardians. They were told that study is a part of Ph.D research and has been approved by Advance Studies and Research Board, QAU. After seeking verbal permission participants were approached in their respective classes. Each participant completed a consent form, demographic items (e.g., name, age, gender, education level, and institution), two measures of procrastination and measure of DASS, and SWLS. Participants were informed about the purpose of the research and assured that there is no hidden purpose of this study. Participants were given the opportunity to volunteer for the participation. Those who were not willing to participate due to lack of interest in the study or were not feeling energetic were allowed to leave the room. They were told to clarify any ambiguity that arises in their mind during and after administration. It took participants almost twenty minutes to respond on all the measures. It was ensured that participants attempted all the items in each measure and did not select more than one response category on each item. Participants were assured of the confidentiality of the information provided by them and were acknowledged. Statistical package (PASW. 18) was used for the analysis of results.

RESULTS

To explore the nature of relationship between active procrastination and passive procrastination with study variables pearson product moment correlation coefficient was computed. For this from whole sample (N = 500), active (N = 125) and passive procrastinators (N = were identified from nonprocrastinators and correlation was computed only for them as study focused on relationship of active and passive procrastination with other variables. Table 1 highlights the pattern of relationship among study variables for active and passive procrastinators.

Table 1
Correlation Coefficient between passive procrastination and all the Study Variables for Active Procrastinators (N = 125) and for passive procrastinators (N = 125)

	Variables	Active Procrastinators		Passive Procrastinators	
		M(SD)	*r*	*M(SD)*	*r*
1.	Passive Procrastination	31.39(4.11)	-	31.91(3.90)	-
2.	Depression	5.24(3.42)	.12*	10.11(4.91)	.39**
3.	Anxiety	5.29(3.53)	.10**	10.39(4.81)	.34**
4.	Stress	7.6(3.43)	.08	11.44(4.21)	.33**
5.	Life satisfaction	19.1(3.38)	-.27**	15.48(4.98)	.34**

*$p < .05$, **$p < .01$.

For active procrastinators results regarding correlation indicate that active procrastinators being low on procrastination experience less depression and anxiety, and are more satisfied with their life. For passive procrastinators results show that as passive procrastinators report high level of passive procrastination they experience greater level of depression, anxiety, and stress and low level of life satisfaction (Table 1).

Linear regression analysis was carried out for depression, anxiety, stress, and life satisfaction and procrastination as a predictor variable. For the purpose of categorization into non procrastinators, active procrastinators, and passive procrastinators, three equal-sized subgroups were formed in a two-step process. In first step an arbitrary cut-off point which was a median split on Passive Procrastination Scale (Mdn = 29) was used to identify

nonprocrastinators from procrastinators. Those participants who scored less than 29 were categorized as nonprocrastinators and those who scored above 29 were identified as procrastinators. In our total sample of main study (N = 500), 250 participants were categorized as nonprocrastinators and 250 as procrastinators. As the study explored two distinct types of procrastination that is active versus passive so in the next step, 250 procrastinators were further categorized into two groups: active and passive procrastinators. Median split on NAPS (Mdn = 70) was used as a cut-off point such as, among participants whose score was more than 70 were considered as active procrastinators (n = 125) and whose score was less than 70 were categorized as passive procrastinators (n = 125). As respondents took both the measures of procrastination so a closer examination of scores revealed that nonprocrastinators were those who were below the median on NAPS and PPS, passive procrastinators were marked as high on PPS and low on NAPS, whereas active procrastinators were those who scored below the median point on PPS and high on NAPS. To see the power of the test with large effect size (i.e., .35) and prespecified sample size (N = 500), post hoc: compute achieved power option was selected for linear regression analysis. Findings showed that with above mentioned sample size, alpha of .05, and large effect size, power of the test is 1.0 which indicates that the sample was quite adequate for this analysis.

As procrastination was a categorical variable (i.e., non-procrastinators, active procrastinators, and passive procrastinators) so dummy coding was used which is a way of representing groups of people using only zeroes and ones. For this several variables were created by recoding our grouping variable into dummy variables. As there were three groups; nonprocrastinators, active procrastinators and passive procrastinators so for dummy coding nonprocrastinators were chosen as baseline group and rest of two groups were compared with this baseline category.

Table 2
Linear Regression Analysis of Different Groups of Procrastinators as Predictors for Depression (N = 500)

Model	*B*	95% CI	
		LL	UL
Constant	6.50**	5.83	7.17
NP vs. AP	-1.26**	-2.19	-.32
NP vs. PP	3.61**	2.68	4.53
R^2	.19**		
F	59.41		
ΔR^2	.19		

*Note. **p< .01. NP = nonprocrastinators; AP = active procrastinators; PP = passive procrastinators; CI = confidence interval*

Findings shown in Table 2, 3, 4, and 5 indicate change in level of depression, anxiety, and stress as if an adolescent's category changes from nonprocrastinator to active procrastinator or passive procrastinator. For active procrastinators this change is significant for variable of depression, stress, and life satisfaction but not for anxiety. In case of passive procrastinators the change in category of procrastinator is significant for all the variables that are depression, anxiety, stress, and life satisfaction.

Table 3
Linear Regression Analysis of Different Groups of Procrastinators as Predictors for Anxiety (N = 500)

Model	*B*	95% CI	
		LL	UL
Constant	5.90**	5.23	6.57
NP vs. AP	-.60	-1.54	.32
NP vs. PP	4.49**	3.57	5.41
R^2	.22**		
F	72.45		
ΔR^2	.22		

Note. NP = nonprocrastinators; AP = active procrastinators; PP = passive procrastinators; CI = confidence interval

Table 4
Linear Regression Analysis of Different Groups of Procrastinators as Predictors for Stress (N = 500)

Model	*B*	95% CI	
		LL	UL
Constant	8.66**	8.05	9.28
NP vs. AP	-1.03**	-1.89	-.17
NP vs. PP	2.77**	1.92	3.62
R^2	.14**		
F	42.63		
ΔR^2	.14		

Note. NP = nonprocrastinators; AP = active procrastinators; PP = passive procrastinators; CI = confidence interval

Table 5
Linear Regression Analysis of Different Groups of Procrastinators as Predictors for Life Satisfaction (N = 500)

Model	*B*	95% CI	
		LL	UL
Constant	18.11**	17.46	18.76
NP vs. AP	1.07*	.16	1.98
NP vs. PP	-2.63**	-3.52	-1.73
R^2	.12**		
F	35.87		
ΔR^2	.12		

Note. NP = nonprocrastinators; AP = active procrastinators; PP = passive procrastinators; CI = confidence interval

DISCUSSION

Phenomenon of procrastination is quite widespread in general population. People vary in their tendencies to procrastinate as some procrastinate more than others whereas some declare to be totally free of this nuisance. The view that procrastination is a problem of only technologically advanced countries is negated by the studies conducted in East Asian settings. Findings of these studies revealed that procrastination equally afflicts Asian cultures. The difference between cultures lies in how the time is perceived, the value and significance attached to it, which is purely a subjective experience.

The significance assigned to the related outcomes of dilatory behavior also determine our actions. Earlier, most of the studies were carried out in west and explored the negative effects of procrastination. With reference to Pakistani context very few studies have explored procrastination thoroughly and almost all of them have investigated the negativities associated with it. Keeping in view the cultural milieu current study paved the way to explore the procrastination tendencies of Pakistani youngsters who are constantly under social and cultural pressures that associate their worth with their achievements.

Present study explored the predictive relationship of active and passive procrastination with depression, anxiety, and stress and life satisfaction. Correlation coefficient of active and passive procrastination with study variables revealed the pattern of relationship for both type of procrastinators differently. Linear regression analysis was also run to examine the role of different types of procrastination in predicting various outcomes (i.e., depression, anxiety, stress, and life satisfaction). Results showed that category of procrastinators significantly predict the respondents' level of depression, anxiety, stress, and life satisfaction. These findings highlight that as the respondent's category changes from baseline category (i.e., nonprocrastinator) to active procrastinator his/her level of depression and stress decreases and level of life satisfaction increases. On the other hand if the respondents' category changes from baseline category (i.e., nonprocrastinator) to passive procrastinator his/her level of depression, anxiety, and stress increases whereas level of life satisfaction decreases. These results are in accord to previous studies carried out in Western setting that highlight those who tend to procrastinate passively are more prone to be anxious, emotional distressed, and in poor mood[12,13,14].

The view that procrastination is a problem of only technologically advanced countries is negated by the studies conducted in East Asian settings. Findings of these studies revealed that procrastination equally afflicts Asian cultures.[15,16] The difference between cultures lies in how the time is perceived, the value and significance attached to it, which is purely a subjective experience. Results of current study also document the previous findings that the significance assigned to the related outcomes of dilatory behavior determines our actions.

Through process of globalization cultures influence one another. The impact of globalization has made both Eastern and Western cultures vulnerable towards each others' values and life styles. However, in recent years, the intensity of the connections among different cultures and various parts of the world have dramatically increased due to boom in technological advancement and a rampant increase in economic and financial interdependence. Globalization has played a significant role in the psychological development and psychological makeup of the people of the 21st century specifically generation Z. In past many cultures had deep rooted customs and rituals that were barely influenced by anything global whether Western, or Asian, but now the generation Z (young people bron between 1995-2010) from every part of the world are the most vulnerable segment of societies who are affected by globalization. People belonging to collectivist cultures have number of expectations and demands to meet that keep them under pressures and at times lead to procrastination tendencies. Youngsters in Asian setting such as Pakistan live with their immediate or extended family where they are influenced by family and cultural norms and resulting behavior is the outcome of interaction between multiple influencers. The self in collectivist cultures such as Asian settings is strongly fused, enmeshed, interdependent, and linked with its close relations such as family and peers, and emphasize on its socially contingent nature. The area of procrastination is yet to be explored in more detail and further research is needed regarding procrastination to understand its complexities and its role in several contexts. Though traditional (passive) procrastination has some short-term benefits for procrastinators such as lessened anxiety and stress but in the longer run the cost one has to pay is greater than its benefits. Future research should continue to find out the more positive aspects of active procrastination and highlight that major difference between the two types (i.e., active vs. passive) might be their degree of adaptiveness[17]. as active procrastinators intentionally procrastinate and do not worry about it due to being confident of their success regardless of their engagement in the task now or later whereas passives are well aware of their being behind the schedule yet they still procrastinate because of feeling incompetent and afraid of being exposed.

LIMITATIONS OF THE STUDY

Even though results of the present study are meaningful extension of existing research and are of great theoretical interest, still the study is not free from limitations and is constrained by its reliance on self-report measures. Measures of procrastination (i.e., NAPS & PPS) were not balanced in terms of negatively phrased items that might also be a possible methodological limitation. Data for study was collected only from adolescents in urban and rural areas of Islamabad and Rawalpindi due to which results may not generalize well to other young populations residing in rural areas and different cities of Pakistan. As sample was based on convenience sampling which may also have an effect on generalizability of findings. Although this initial study of active procrastination in indigenous context provides useful opening data on procrastination yet future procrastination research should explore additional variables that are previously shown to be strongly related to procrastination, such as self-efficacy for self-regulation, self-esteem, parenting styles, impulsiveness, sensation seeking, distractibility, self-control, and task appeal.

RECOMMENDATIONS

Though for present research power analysis was run to see the power of the test with pre-specified sample size, post hoc compute achieved power was calculated that revealed sample size as reasonably large. Future studies may run power analysis as priority to compute required sample size to determine the appropriate sample size for the study. Moreover further studies should explore the role of age, gender, and academic level as moderators for active and passive procrastinators. In addition there is difference in actual procrastinatory behavior and procrastination tendencies reported by respondents as study did not incorporate any behavioral measure of procrastination so including both the measures of procrastination such as, direct behavioral indices and self-reports may enhance the validity of findings.

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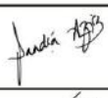
1	**Saadia Aziz**	Department of Applied psychology, NUML. Islamabad	Planning, writing, proof reading of draft, data collection and analysis	
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