

**An Online Comparative Study of the Mental Health of Adolescent
Non Procrastinators, Active Procrastinators, and Passive
Procrastinators**

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The present research intended to examine the outcomes of active and passive procrastination among Pakistani educated adolescents via online data collection. To meet the objective measures concerning active and passive procrastination (Aziz & Tariq, 2013; Choi & Moran, 2009; Chu & Choi, 2005), depression, anxiety, stress (Lovibond & Lovibond, 1995), and life satisfaction (Diener, Emmons, Larsen, & Griffin, 1985) were uploaded on a website in English and Urdu. Overall 223 educated Pakistani adolescent participated via online in the study ($M = 19$ years, $SD = 5.19$; age range 13-21 years). The preliminary analysis revealed a sound internal consistency in all the measures. The Findings highlighted that active and passive procrastination are distinct constructs with entirely different implications. There were significant negative correlations between active procrastination depression, anxiety and stress. However a positive relationship was found between passive procrastination and depression, anxiety and stress. Life satisfaction was found to be positively correlated with active procrastination whereas negatively with passive procrastination. No significant differences were observed on demographic variables. One-way MANOVA revealed significant differences among non-procrastinators, active procrastinators, and passive procrastinators. Limitations and future directions for online data collection are also discussed.

Keywords: Active and Passive Procrastination, Depression, Anxiety, Stress, Life Satisfaction⁶

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Introduction

The phenomenon of procrastination is quite common in general population and chronically affecting a substantial portion of adults as well as university students. Earlier it was considered only the problem of contemporary societies as technically advanced societies have number of commitments and deadlines to meet whereas agrarian and underdeveloped societies were not so afflicted but now with the advent of latest technology and impact of globalization, developing societies and people from collectivist cultures also have to deal with multiple pressures, and meet numerous commitments that lead to procrastination tendencies (Klassen, Ang, Chong, Krawchuk, Huan, Wong, & Yeo., 2010). Procrastination is defined as avoidance of the implementation of an intention or the lack of self-regulated performance to achieve a goal (Knaus, 2000; Van Eerde, 2000). It can be temporary or permanent, such as behavioral and cognitive putting off the action or putting off making a decision (Dewitte & Lens, 2000).

Procrastination is not only an issue of time management rather it is a multifaceted phenomenon that entails cognitive, affective, and behavioral elements (Fee & Tangney, 2000). Basco (2010) viewed procrastination as a road block on life's path that slows down the progress, is bit seductive and sometimes also gives pleasure and relief from stress. Previous studies with reference to academic context highlight that procrastination affects approximately 80 to 95% of undergraduate students (Ang et al., 2008; Ozer, Demir, & Ferrari, 2009; Steel & Ferrari, 2013). Chronic procrastination not only effects the individual's performance but also leads to social anxiety, non-competitiveness, dysfunctional impulsivity, lack of energy, behavioral rigidity, maladaptive life style, depression, anxiety and stress and psychological well being (Ferrari & Diaz-Morales, 2007; Habelrih & Hicks, 2015; Steel, 2007; Van Erede, 2003; 2004).

Previously most of the researchers have explained procrastination in cynical behavioral perspective with relatively negative outcomes, considering it as voluntary and irrational postponement of tasks despite of associated negative outcomes (e.g., Abbas & Alghamidi, 2015; Ferrari, 2001; Simpson & Pychyl, 2009; Steel, 2007). This traditional view of procrastination may be problematic due to its nonspecific nature and limited and delayed research in this area (Stead, Shanahan, & Neufeld, 2012; Wilson & Nguyen, 2012). Another line of thought viewed procrastination in a positive sense such as Knaus (2000) and Van Eerde

(2003) who also viewed that not all types of delays ultimately lead to negative outcomes such as, delay that results from time spent in planning and gathering necessary information can be beneficial. Several writers viewed it as a functional delay or as avoiding rush (e.g., Choi & Moran, 2009; Chu & Choi, 2005; Corkin et al., 2011). Chu and Choi (2005) forwarded an unconventional view of procrastination and illustrated that not every type of procrastination behavior is damaging and lead to negative outcomes. They proposed two different types of procrastinators. Passive procrastinators are those traditional procrastinators who put off their tasks till the last moment due to being incapable of making timely decisions and to act upon them accordingly. Cognitively, they do not intend to procrastinate, but they often end up postponing tasks because of their inability to make timely decisions. While active procrastinators make deliberate decisions to procrastinate due to their strong motivation to work under time pressure, and being well capable to complete their projects within stipulated time frame and achieve satisfactory results.

Chu and Choi (2005) viewed that active procrastination has much positive implications in terms of self-efficacy, stress coping, depression, and performance (Liu et al., 2017). By relaxing them from a rigid time schedule and drifting attention from routine to successful accomplishment of the goals, active procrastinators are less prone to stress. They are more involved in constructive responses to work-related stress, and show better performance and greater life satisfaction. In comparison to passive procrastinators, Active procrastinators adopt a task-oriented coping style that reduce their level of stress (Nicholls, Polman, Levy, & Borkolis, 2010). Liu et al. (2017) found that active procrastination is positively related to creative self-efficacy and creative ideation and this relationship is mediated by creative self-efficacy. In another study Taura et al. (2015) observed significant relationship between self-efficacy, task-value, self-regulation strategies, and active procrastination among pre-service teachers. Further their findings indicated the indirect effect of self-efficacy and task value beliefs on active procrastination mediated through self-regulation strategies. Dawson (2007) explored the procrastination and flow experiences of upper level psychology students and found that non procrastinators and active procrastinators perceived themselves as better students than passive procrastinators but no difference was observed between active procrastinators and nonprocrastinators. Non procrastinators are those who perform their tasks in a timely manner

(Barnes, Ferrari, & Steel, 2009) they schedule their activities on a daily basis to perceive and use their time in a purposive and more structured manner. Passive procrastinators, who are less structured in their time orientation, aimlessly drift from one activity to another (Simpson & Pychyl, 2009) whereas active procrastinators intentionally make their decisions on urgent or priority basis considering their preferences. Chu and Choi (2005) had a contrary to popular notion as they noted that active procrastinators hold desirable behavioral and attitudinal personality characteristics, that lead to positive personal outcomes and satisfactory results. They suggested that active procrastination being a multidimensional construct encompass following distinctive features as their unique characteristics: (a) preference for time pressure, (b) intentional decision to procrastinate, (c) ability to meet deadlines, and (d) satisfaction with outcome.

Procrastination imposes time pressure that ultimately leads to stress. Active procrastinators take pleasure in feeling of being challenged whenever they are required to tackle with last-minute time pressure and that in turn leads to increased motivation (Choi & Moran, 2009). Seo (2013) indicated that high identification and low external regulation increases active procrastination whereas high external regulation and low intrinsic motivation leads to passive procrastination. Non procrastinators and active procrastinators are well capable in managing their time orderly and efficiently (Knaus, 2000) but passive procrastinators shift from task to task without prior planning, prioritizing their activities, and organizing the time. As a result active procrastinators deliberately postpone their planned activities and have a tendency to change their schedule even on short notice (Choi & Moran, 2009). Since active procrastinators accurately judge the least amount of time required to complete a task, so they have the ability to progress efficiently towards the goal, even with last minute pressure (Seo, 2012). As active procrastinators are well capable of motivating them in taxing conditions, making deliberate decisions to procrastinate, and completing tasks on time, they generally obtain satisfactory results even though they procrastinate. On the other hand passive procrastinators go for instant fulfillment of their needs, which can lessen stress in the short run but may lead to self-defeating behaviors. Wesel and Hood (2019) demonstrated that active procrastination does not contribute towards behavioral delay while comparing the effects of active and passive procrastination in a field study. With reference to personality traits Kim, Fernandez, and Terrier

(2017) and Zhou (2018) observed different pattern of relationship for active and passive procrastinators for neuroticism and conscientiousness.

Procrastination has not been studied extensively with reference to cross-cultural framework and only few researches have investigated procrastination in East Asian contexts (e.g. Klassen et al., 2009; Zhang & Zhang, 2007). Brislin and Kim (2003) advocated that cultural variations in values and norms regarding time perception may affect an individual's ability to foresee enduring consequences, avoid risks, live in the here and now, and his/her focusing on short-term perspectives. Klassen et al. (2009) elucidated that procrastination operates in same manner in adolescents from both Western and East Asian settings. They may procrastinate, and endure the negative consequences of task avoidance or postponement, but the main factor in timely performing the task is their belief to manage the learning environment. Klassen et al. (2010) supported the pervasiveness of procrastination in collectivist at the same rate as in individualist cultures yet the perceived impact of procrastination varied across cultural backgrounds. Aziz and Tariq (2013) also observed a significant positive correlation between procrastination, depression, anxiety, and stress among Pakistani adolescents whereas a pattern of significant negative correlation was found between procrastination and life satisfaction. Chu and Choi's (2005) evidence for an adaptive type of procrastination characterized by those who "suspend their actions deliberately and focus their attention on other important tasks at hand" (p. 247) opens the new vistas of research on procrastination. Internet has played a significant role in changing the communication patterns, economy, and the dissemination of information. It is also making a significant contribution in changing psychological researches. Researchers have also emphasized the role of web in research and are of the view that any study that can be carried out via traditional paper-pencil method can also be conducted through online avoiding the hassles of data entry by hand. Psychologists not only can observe new or unusual phenomena online but can also conduct research more efficiently on traditional psychology related topics that enable them to expand the scale and scope of their research. Most importantly web not only helps to collect data efficiently but also open the doors to the people who are at a great physical distance from us (Fraley, 2007).

Rationale of the study

The rationale behind this research is the ongoing rise in procrastination tendencies all over the world among youngsters as they are misaligned and lack confidence in their abilities which leads them to pend their tasks and linger on important decisions. Moreover based on the emerging interest of Pakistani population in use of internet as 22.2 % population is internet user as per International World Statistics (2018). Above mentioned facts highlight the rising trend of internet usage in adolescent population and signifies its importance as an advance mode of communication. So a need is there to introduce new and latest modes of data collection and to check the reliability of data collected through online population. Keeping in view present research is an endeavor to explore two different types of procrastination i.e., active vs. passive procrastination and its outcomes among adolescents through online mode of data collection as internet has become a widely used tool of data collection for conducting personality research.

Objectives

The current study was designed to meet the following objectives:

1. To determine psychometric properties of research instruments used in this study.
2. To explore the procrastination tendencies among Pakistani internet users adolescents.
3. To explore differences among active and passive procrastinators on depression, anxiety, stress, and life satisfaction.
4. To explore differences in demographic variables such as age and gender on depression, anxiety, stress, and life satisfaction.

Hypotheses

In order to meet the objectives of study following hypotheses were formulated to be tested on online sample of Pakistani adolescents.

1. Non-procrastinators and active procrastinators experience less depression, anxiety and stress as compared to passive procrastinators.
2. Non-procrastinators and active procrastinators experience more life satisfaction as compared to passive procrastinators.

Method

Research Design

The research design of present study was cross sectional. The study was planned to be online. Initially all questionnaires were uploaded on the website with a brief introductory note about nature and purpose of the research. All the measures were uploaded in both languages i.e., Urdu and English. Before making the website public, user testing was performed to ensure whether all the measures were transferred successfully and the pages working properly under configuration of the final server. After making the website public, data was collected on different measures. The responses of the respondents were automatically saved, scored and recoded in case of reverse scoring. Analysis of data and compilation of results were also carried out in this phase. No hypotheses were formulated for demographic variables but no literature confirming any differences. Regarding demographic variables like, age and gender no hypotheses were formulated as previous findings indicate mixed findings, some support boys as high in procrastination and younger participants being more vulnerable whereas few offer contradictory results.

Sample

The Sample of the study was not actively recruited and was restricted to those adolescents who had access to the Internet and were intrinsically motivated to participate in study so this was a nonrandom sample that has certain limitations in interpretation of statistical analysis. As main focus of the study was on positive and negative effects of procrastination on adolescents so inclusion criterion was adolescents (either girls or boys) from any city of Pakistan who fall in age range of 13 to 21 years and exclusion criteria were those who were above 21 years of age. To avoid any sort of deception in terms of age, gender, education, location and profession, no sample restriction to participation was imposed except for those less than 13 years of age based on the principle of ethical concern and Children's Online Privacy Protection (1998). To communicate about the study a message was dropped on different education related community groups to participate in the study with a brief note about the nature and purpose of the study and an advance thanks note. In total 223 adolescents with the age range of 13 to 21 years ($M = 19$ years, $SD = 5.19$) from 22 cities of Pakistan participated in study. Among 223 participants 125 were males (56 %) and 98 were females (44%). Province wise participation ratio showed that 93 (41%)

adolescents participated from Punjab, 58 (26%) from Islamabad, 32 (14%) from Sindh, 18(8%) from Baluchisatn and 22(9%) from Khyber Pakhtunkhwa.

Instruments

Following instruments were uploaded in Urdu as well as in English language because of dual medium of instruction in Pakistani education system.

New Active Procrastination Scale (NAPS). New Active Procrastination Scale (Choi & Moran, 2009) is a 16-item measure. It comprises of 4-factors i.e., preference for time pressure, intentional decision to procrastinate, ability to meet deadlines, and outcome satisfaction. Out of 16 items 12 are positively phrased and 4 are negatively phrased and scoring for those items are reverse. In present research the English and Urdu translated versions of NAPS were used to measure the level of active procrastination among adolescents. For English version instead of original English version of the scale the back translated version was used with the permission of the author. The test retest reliability of NAPS ranged from .75 to .90 (Aziz & Tariq, 2019a). The reported alpha reliability coefficient for NAPS was .82 (Aziz & Tariq, 2019b). The reason behind using the back translated version of NAPS was that in the original version few items were somewhat conceptually not clear to the participants so it was decided to use back translated version of the NAPS as Carbonaro and Bainbridge (2000) also highlighted that that web surveys must be designed in a simple way and easy to comprehend by the target sample.

Passive Procrastination Scale (PPS). Passive Procrastination Scale measures the traditional procrastination. To measure the degree of traditional procrastination six items were adopted by Chu and Choi (2005) from Mann's Decisional Procrastination Scale (1982) and Schowenburg's (1995) Academic Procrastination: Theoretical Notions, Measurement, and Research. The alpha reliability of the scale is .82 which is an indication of its being internally consistent. For present research Urdu and English versions of the PPS were used. The test-retest reliability of PPS ranged from .62 to .86 (Aziz & Tariq, 2019a). Alpha reliability coefficient for PPS was .75 (Aziz & Tariq, 2019b).

Depression, Anxiety and Stress Scale (DASS). Depression, Anxiety and Stress Scale is a self-report measure of depression, anxiety,

and stress (Lovibond & Lovibond, 1995). The scale comprised of 42 items with each scale consisting of 14 items. The depression scale assesses the dysphoric feelings, self-deprecation, lack of interest and inertia, hopelessness, and devaluation of life. The anxiety scale gives assessment of autonomic arousal, skeletal muscle effects, situational anxiety, and anxious affect while stress scale is also sensitive to levels of chronic non-specific arousal. It assesses difficulty in relaxing, nervous arousal, being irritable, easily upset, impatient and agitated. DASS is an internally consistent measure with Cronbach's alpha of .94, .88, and .93 for depression, anxiety, and stress scale. In normative sample the alpha reliability of the Depression, Anxiety and Stress items was .91, .84, and .90 respectively. DASS shorter version known as DASS-21 which is also a self-report measure of the intensity of a range of symptoms common to depression, anxiety and stress was used in present research. On each scale respondent has to indicate the existence of a symptom over a previous week. The score range for each item ranges from 0 (did not apply to me over the last week) to 3 (applied to me very much over the previous week). In present study Urdu translated version of DASS-21 (Aslam, 2007) was used. The reason behind selecting the shorter version of the DASS was to maintain their interest and not to over burden and infuriate the respondents while participating in online research as their participation in study was entirely voluntary and free from any verbal persuasion.

Satisfaction with Life Scale (SWLS). Diener, Emmons, Larsen, and Griffin (1985) developed the Satisfaction With Life Scale which was translated by Zahid (2002). The improved version of SWLS was found to have an alpha reliability of .60 and has been extensively used for research in Pakistani context (Ali, 2005). The scale has five items that measure the global cognitive judgment regarding life satisfaction. It measures satisfaction in five domains: self and present life, living situation, social relationships, and work,. The scale is in Likert type format with five point response options ranging from strongly disagree to strongly agree and are scored as 1, 2, 3, 4, and 5 respectively. A total life satisfaction score can be obtained by summing the score on all the five items and it ranges from 5-25. The scale is internally consistent ($\alpha = .87$) and have adequate 2-month retest reliability.

Procedure

As current study was an online study so a message for volunteer participation in research was dropped on different educational community groups. Respondents who volunteered for participation had to go through the process of registration which required some basic demographic information such as name, user name, password, sex, age, e-mail address, qualification, occupation, country, and city. For name, user id, password and e-mail address, text boxes were used where user had the liberty to type the information in provided space, whereas for sex, age, qualification, occupation, country and city, a pull down menu was used in which the user clicks on the menu to see the available response option, and makes selection. Mandatory fields were marked with asterisk (*). Only the option of name was left on respondents' choice as if they wanted to remain anonymous they may not feel any compulsion. After completion of registration one could proceed ahead and participate in study by filling out the questionnaires. Participants had to indicate the option that best described them by clicking on radio button which is an input option commonly used in Likert-type rating scales. No respondent could use the same log in and user name more than once. After completion of survey respondents were sent an auto generated thank note for their volunteer participation in the study. The responses were automatically saved, scored and recoded in case of reverse scoring. Researcher could use the admin panel to retrieve the results of the respondents and with the help of selection criteria could only retrieve selected responses such as entering male in search criteria may reveal only the results of male participants.

Reactions from respondents. While participating in study online respondents were given an option of 'feedback' where e-mail address of the researcher was accessible to them. During and after the survey researcher received 24 e-mails from different respondents which were about the nature of study, results, and their concerns about their habit of procrastination, and queries regarding management of procrastination tendencies. Most of the respondents found the study interesting and were keen to be part of some psychological research in future. Some of the respondents showed their lack of interest and left the study half way by registering themselves but not completing the questionnaires and this may be attributed to certain reasons such as problems related to electricity, connectivity, and speed of internet. In future giving due

importance to respondents' feedback may prove to be useful in enhancing the response rate and validity of findings.

Results

Data was collected online on a set of measures such as NAPS, PPS, DASS, and SWLS. Preliminary analysis was about descriptive statistics, alpha coefficients, and interscale correlations. Some further analysis explored the differences among active, passive and non procrastinators regarding their level of depression, anxiety, stress, and life satisfaction. Table 1 shows mean scores, standard deviation and score range (minimum-maximum) on NAPS, PPS, subscales of DASS and SWLS. Alpha reliability coefficients of scales for online population revealed satisfactory reliability of the scales that ranged from .79 to .88.

Table 1

Mean, Standard Deviations, Range, and Alpha Coefficients of Scales and Subscales (N=223)

S.No	Scales	No. of Items	M	α	Score Range		SD	Skew	Kurtosis
					Potential	Actual			
1.	NAPS	16	64.14	.79	16-112	26-107	14.2	-.006	.41
2.	PPS	6	26.01	.80	6-42	6-42	9.43	-0.25	-.73
3.	Depression	7	8.13	.88	0-21	0-19	4.81	0.26	-.97
4.	Anxiety	7	6.95	.81	0-21	0-19	4.82	0.43	-.60
5.	Stress	7	6.27	.84	0-21	0-20	5.34	0.69	-.68
6.	SWLS	5	17.1	.85	5-25	7-25	4.44	-0.12	-.10

Note. NAPS = New Active Procrastination Scale; PPS = Passive Procrastination Scale; DASS = Depression Anxiety Stress Scale; SWLS = Satisfaction With Life Scale

Interscale correlation among different measures were computed which showed that no such relationship exist between NAPS and PPS which showed the distinct nature of the constructs. NAPS scores were significantly negatively correlated with DASS subscales i.e. depression, anxiety, and stress, and were significantly positively correlated with SWLS. Moreover a significant positive correlation was observed between passive procrastination and subscales of DASS depicting that passive procrastination leads to depression, anxiety and stress. A significant negative correlation between passive procrastination and life satisfaction indicated that passive procrastinators are less satisfied with their life (See Table 2).

Table 2

Correlations for Scores on NAPS, PPS, DASS Subscales, and SWLS (N=223)

Scales	1	2	3	4	5	6
1. NAPS	-	-	-	-	-	-
2. PPS	.04	-	-	-	-	-
3. Depression	-.49**	.19*	-	-	-	-
4. Anxiety	-.38**	.23**	.79**	-	-	-
5. Stress	-.48**	.40*	.80**	.76**	-	-
6. SWLS	.41**	-.18*	-.39**	-.25**	-.45**	-

Note. NAPS = New Active Procrastination Scale; PPS = Passive Procrastination Scale; DASS = Depression Anxiety Stress Scale; SWLS = Satisfaction With Life Scale, **p < .01

T-test revealed no significant gender and age group differences. One way MANOVA or multivariate analysis of variance was carried out to see that one or more independent variables, or factors, have an effect on a set of two or more dependent variables. To see the difference among respondents with regards to their procrastination tendencies and other variables such as depression, anxiety, stress, and life satisfaction, series of comparisons was run among groups of participants and three groups were created in a two-step process. First on the basis of PPS median score (*Mdn* = 26) procrastinators (n = 139) were separated from non-procrastinators (n = 84) and then in second step procrastinators were further categorized into active and passive procrastinators on the basis of median split on NAPS (*Mdn* = 70). This resulted the whole sample of 223 participants in three different groups; non procrastinators (n = 84), active procrastinators (n = 75), and passive procrastinators (n = 64). As all the participants responded on both the measures of procrastination so a closer examination of scores revealed that nonprocrastinators were those who were low on both the scales, meaning below the median (i.e., NAPS & PPS), passive procrastinators were those who were high on PPS and low on NAPS, whereas active procrastinators were those who scored low on PPS and high on NAPS (see Table 3 for mean and SD of three groups). This produced three comparable groups.

Table 3

Mean, Standard Deviation, F values, and Hochberg's GT2 test for Nonprocrastinators, Active Procrastinators, and Passive Procrastinators on Depression, Anxiety, Stress, and Life Satisfaction (N = 223)

Scales	NP (n = 84)		AP (n = 75)		PP (n = 64)		F	i-j	95% CI		η^2
	M	SD	M	SD	M	SD			LB	UB	
Depression	7.81	5.00	6.8	4.50	10.22	4.61	6.93**	AP-PP	1.16	5.49	.06
Anxiety	6.15	4.72	6.00	4.55	8.50	5.23	4.56**	AP-PP	0.48	4.81	.04
Stress	6.22	5.35	5.42	5.40	8.55	5.31	5.42**	AP-PP	0.85	5.66	.05
Life Satisfaction	16.48	4.78	17.82	3.61	13.07	5.09	18.71**	NP-PP	0.97	4.92	.18
								AP-PP	3.11	7.15	

Note. NP = Nonprocrastinator (NAPS: $M = 64.21$, $SD = 17.71$; PPS: $M = 15.74$, $SD = 5.76$); AP = Active Procrastinator (NAPS: $M = 75.21$, $SD = 9.66$; PPS: $M = 21.28$, $SD = 4.27$); PP = Passive Procrastinator (NAPS: $M = 52.10$, $SD = 11.04$; PPS: $M = 32.04$, $SD = 4.42$). *MD* = mean difference; *CI* = confidence interval; *LL* = lower limit; *UL* = upper limit. $df = (2, 220)$.

** $p < .01$.

Power analysis was run to compute power of the test with predetermined sample size ($N = 223$). Post hoc compute power test revealed that with medium effect size and alpha .05, power of the test was found to be .93. Moreover checking out the Box's M test findings showed that the test is nonsignificant which means that assumptions of homogeneity of variance are met. A one-way MANOVA revealed a significant multivariate main effect for procrastination category, Wilks' $\lambda = .812$, $F(8, 390) = 5.33$, $p < .001$, partial eta squared = .097 and power to detect the effect was .99. Since the F test was significant so one way ANOVA was carried out. As the experiment-wise alpha protection provided by the overall or omnibus F test does not extend to the univariate tests so there is a need to divide confidence levels by the number of tests intended to perform. The Levene's statistics for the four DVs (i.e., depression, anxiety, stress & life satisfaction) that had significant univariate ANOVAs are all non-significant, meaning that the group variances were equal indicating further use of post hoc tests for comparing pair-wise group means. Significant univariate main effects for procrastination category were obtained for depression, $F(2, 198) = 6.931$, $p < .012$, partial eta square = .065, power = .92; anxiety, $F(2, 198) = 4.56$, $p < .012$, partial eta square = .04, power = .77; stress, $F(2, 198) = 5.42$, $p < .012$, partial eta square = .05, power = .82; and life

satisfaction $F(2, 198) = 18.71$, $p < .012$, partial eta square = .18, power = .97.

Table 3 shows the result on one way analysis of variance (ANOVA) for the DASS subscales and SWLS with respect to nonprocrastinators, active procrastinators, and passive procrastinators. As the group sizes were unequal so Hochberg's GT2 and Games-Howell procedure were used for Post hoc multiple comparisons. Levenes' Statistics indicated that assumption of homogeneity of variance was met. Findings of Table 3 revealed significant differences on all subscales of DASS in terms of depression, anxiety, stress, and life satisfaction across three groups. Analysis of mean scores indicates that passive procrastinators experience more depression, anxiety, and stress as compared to nonprocrastinators and active procrastinators. To explore further, Post hoc comparisons were run which illuminated the significant difference between nonprocrastinators, active procrastinators, and passive procrastinators. Findings signify that on all the subscales of DASS (i.e., depression, anxiety, and stress) significant difference lies only between active and passive procrastinators. Regarding level of life satisfaction experienced by nonprocrastinators, active procrastinators and passive procrastinators it was observed that there is a significant difference among groups. In addition results showed that difference was significant between nonprocrastinators and passive procrastinators and between active and passive procrastinators. Analyses of mean scores demonstrate that nonprocrastinators and active procrastinators were more satisfied with their life than their comparison group of passive procrastinators.

Discussion

Present research was aimed to explore procrastination tendencies and its outcomes among educated Pakistani adolescents. As this was an online study so initially the measures of procrastination and related outcome variables such as depression, anxiety, stress, and life satisfaction were uploaded on website with the domain name of www.procrastination-research.edu.pk. Before making the website public a final round of testing was carried out to check whether all the content is transferred successfully, is accessible to respondents and functioning properly. Overall 223 respondents from all over the Pakistan participated in the study Preliminary analysis showed means, standard deviations, and score ranges. Alpha reliability coefficient of the scales that ranged from .79 to .88 indicated that all the measures are internally consistent.

Pearson Product-Moment correlation was calculated to investigate the pattern of relationship among variables. Findings revealed that active and passive procrastination were entirely distinct to each other which confirm the distinctive nature of the construct of active procrastination. These findings were in accord to findings of Chu and Choi (2005) and Choi and Moran (2009) who also found the constructs distinctive of each other (Seo, 2013). Significant negative correlation between NAPS scores and DASS subscales indicated that those who are high on active procrastination experience less depression, anxiety, and stress as compared to those who score low. Significant positive correlation was observed between active procrastination and satisfaction with life which shows that those participants who are high on active procrastination are more satisfied with their life. Regarding passive procrastination which was found as significantly positively related to DASS subscales indicating that passive procrastinators experience more depression, anxiety and stress. These findings confirm the previous findings of Beutal et al. (2016) and Stead et al. (2012) in which similar pattern of relationship between procrastination and anxiety was observed. A significant negative correlation was observed between passive procrastination and life satisfaction showing that passive procrastinators are less satisfied with their life. Moreover significant positive correlation was found between all subscales of DASS which shows that depression, anxiety and stress are related to each other and the likelihood is greater for one who is experiencing depression may also experience anxiety and stress or vice versa. All the subscales of DASS were significantly negatively correlated with life satisfaction which is an indication that one who is experiencing depression, anxiety, or stress is less likely to be satisfied with his/her life. No such relationship was observed between active and passive procrastination which shows the distinctiveness of the constructs. Regarding demographic variables of age and gender no significant differences emerged which may be due to mode of data collection as due to anonymity factor there is a likelihood of not revealing true demographic characteristic by the respondent.

To observe the differences among active, passive, and non procrastinators one-way MANOVA was conducted. For running one-way MANOVA participants had to be categorized as active, passive, and non procrastinators on the basis of their scores on NAPS and PPS. For this purpose initially procrastinators were separated from non procrastinators on the basis of median split which was considered as arbitrary cut off

point. Later on procrastinators were further categorized into active and passive on the basis of median score on NAPS. Those falling above the median score were categorized as active procrastinators and those falling below the mean were considered as passive procrastinators. In this way three groups were formed and the differences among these groups regarding their level of depression, anxiety, stress, and life satisfaction was investigated. Results of one-way ANOVA showed significant differences across groups in their level of depression, anxiety, stress, and life satisfaction. Findings indicated that non procrastinators and active procrastinators experience less depression, anxiety, and stress. These findings led to the confirmation of Hypothesis no. 1 which presumed that non procrastinators and active procrastinators will experience low level of depression, anxiety, and stress. Post-Hoc comparisons revealed that on depression, anxiety, and stress the difference was significant between active and passive procrastinators. Moreover, results showed significant difference between groups of procrastinators in their level of life satisfaction which confirmed hypothesis no. 2. Post-Hoc tests further illuminated that difference was significant between non procrastinators and passive procrastinators and between active and passive procrastinators. Findings of the study highlighted that active procrastinators experience almost similar outcomes as non procrastinators, though they procrastinate in their routine life but this distinct type of procrastination does not lead to negative outcomes. Due to being capable of managing the tasks efficiently and timely active procrastinators do multi tasking that save their time and energy and as a result they experience positive outcomes. These findings are in accord to a previously carried out study by Aziz and Tariq (2019b) on adolescent college population in which it was observed as the category of respondent changes from nonprocrastinator to active procrastinator his/her level of depression and stress lessens and level of life satisfaction rises whereas reverse pattern was noted in case of category change from nonprocrastinator to passive procrastinator. Findings of Bui (2007) and Choi and Moran (2009) that advocate active procrastination as a unique type of construct that has positive consequences and is requirement of today's world where everyone has to manage number of chores simultaneously.

Present study introduced a new and latest mode of data collection which is not very common in developing countries where traditional method of data collection is still preferred over online data collection.

With reference to psychological researches conducted in Pakistan there only few researches available that are conducted online. Keeping in view the advancement in technology, the impact of globalization, rapidly growing interest of Pakistani population in use of internet within all age groups, it is the demand of time to introduce new and advance methods of data collection to researchers and also to familiarize respondents with this mode of responding and participation in research which not only assures anonymity on their part, but also save their time, and allow more self-deliberation. Moreover, via this website they can do self-assessment and ask for online counseling services if they carry procrastination tendencies, are in habit of putting things off, making unnecessary delays, and want to curb this menace which has not only rotten their potentials but also led to the wastage of time and money. Since adolescents are the frequent users of internet so it would facilitate them to avail online counseling services as in Pakistan still people do not want to disclose their identity while seeking psychological services due to fear of being stigmatized and want to remain anonymous while asking for some psychological help, no matter how trivial is the concern in nature. In future this website can offer online psychological help to overcome the procrastination tendencies and to manage their time efficiently in today's world where everyone has to meet number of deadlines in a shortest span. In addition as the content of the website is in both languages i.e. Urdu and English so it facilitates the respondents to comprehend the content accurately depending on their command of language. With futuristic perspective after determining a personality profile of Pakistani procrastinator, other measures of related constructs can be added on the website for assessment and their respective online counseling services may also be offered.

Limitations

Though online studies have certain advantages but still have certain limitations that may affect the quality of data such as multiple entries and multiple submissions. These types of issues can be handled by recording the IP addresses of the respondents and by deleting multiple data originated from the same address. Another easier way to handle this problem is to use password systems where participants are allocated unique identifiers used as passwords (Miller, Johnston, McElwee, Noble, 2007; Rodgers et al., 2001). noted a similar type of responses between n online survey and an identical survey in paper form. It was noted that in a

classroom-administered questionnaire, there is no assurance of respondents' true willingness to participate as at times they have to be considerate due to presence of researcher or some time administration of institution is also involved so they have to forego their right to withdraw whereas in web survey respondents have the liberty to participate as per their convenience and decision regarding when and where to complete the survey. The only constraint is the availability of a computer to respondents.

Future Recommendations and Implications

Despite certain limitations, web-based surveys offer researchers a unique opportunities of data collection through Internet. For future researches Cantrell and Lupinacci (2007) suggested that while conducting web-based researches a review of traditional approaches and relevant adaptation to online environments must be made before hand. Considerations must be given to advertising the study, nature of data fields either optional or not, and the total number of questions to be answered. Support from a website administrator to advertize the study to increase the response rate. Moreover it is important to pay attention to the methods of encouraging response rate in online data collection. Lavoie and Pychyl (2001) indicated that keeping in view the nature of these limitations, future research should adopt a more active approach to collecting data to reduce sampling bias. To obtain a more random sample e-mail addresses from the general population can be sought through several free-access, commercial e-mail directories available on the Internet (i.e., Yahoo or Switchboard) whereas other populations like students of different colleges and universities, employees, and members of specific organizations can be contacted through available central e-mail list. Nonetheless several issues need to be considered when using an existing e-mail list such as the quality of the list which is affected by the frequent change of e-mail addresses by the users or having more than one e-mail address, and the frequency of updating (Litvin & Kar, 2001). The findings of the present research will prove beneficial for understanding the construct of active and passive procrastination in indigenous context. specifically with reference to adolescents. It provides an insight to indepth understanding of correlates and outcomes of procrastination in terms of mental health. Counselors, psychologists and educationists can benefit from these findings in designing and developing proper intervention programs for passive procrastinators. Moreover active procrastination being a positive trait can be fostered in alliance to multi

tasking ability, as in today's world adolescents and students have to meet number of deadlines pertaining to their academics and routine life that put them under a great deal of pressure. In this scenario a trait like active procrastination may be helpful in deterring their preferences. setting goals and priorities and then managing the urgent and necessary ones to meet the challenges.

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