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A Relationship Study Among Academic Procrastination, Self-Efficacy And Locus Of Control: A Narrative Review

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ABSTRACT

Procrastination as a widespread phenomenon that experiencing negative results due to unnecessarily avoiding task. It is a serious issue in the educational environment which involves voluntarily delaying the unpleasant task for another time, where learner experiences short term benefits and long-term costs. This paper includes thirty-five studies of the researchers from India and abroad, with the intent to ascertain the relationship among academic procrastination, self-efficacy and locus of control. In first phase the focus was established on the relationship between academic procrastination and self-efficacy and in second phase focus was on the relationship between academic procrastination and locus of control. From detailed analysis of reviews, earlier studies depicted mixed and contradictory results on the relationship among these variables. some studies found significant relationship among the variables and some did not. To address some limitations, future research should expand the understanding of relationship among these variables. This paper would provide a direction to the future researcher in order to understand the nature and predictors of academic procrastination.

Key Words: Academic Procrastination, Self-efficacy, Locus of control

INTRODUCTION

They may say "I can't think about that right now, if I do, I'll crazy. I'll think about that tomorrow." (Margaret Mitchell 1936). Procrastination is generally understood as the practice of irrationally putting activities or task off to a later time (Nabelkova & Ratkovska 2015). Laeus (2015) explains that it is avoidance of doing task that needs to be accomplished, it is the instance of postponement of the works and tasks that are better to be done until the following day (Dryden 2000). People postponement of their duties and responsibilities are most typical and frequent incidents of procrastination. Academic procrastination is a type of procrastination that can be understood as voluntary or purposeful delay of the completion of an academic task. It is one of the

leading factors that makes students dropping out from the academic and personal endeavour as well as withdrawing midway of academic persuade. Generally, students often say that particular subject is boring and they will do it later. So, procrastination behaviour can be defined into two ways;

- 1. Purposeful Delay
- 2. Voluntary Delay

Academic procrastination is a special form of procrastination that occurs in the academic setting. It involves knowing that one needs to carry out an academic task or undertake an academic activity such as writing a term paper, studying for examination, finishing a school related project or undertaking the weekly reading assignments but for one reason or another, failing to motivate oneself to do so within the accepted time frame (Ackerman & Gross, 2005). Therefore, several negative factors have shown within the child such as lower academic performance (Klassen et al., 2010;), increased stress and anxiety (Singh, 2018; Saini, 2020), and poor mental health (Stead et al., 2010). Many research studies highlighted a number of psychological traits are related to academic procrastination out of which self-efficacy and locus of control plays an important role.

Self-efficacy refers "an individuals' belief regarding his/her own ability in exhibiting certain behaviours successfully" (Bandura, 1997). It doesn't refer to how much a person likes themselves or how much they may enjoy the task rather it is concerned with how well a person believes that they will be able to reach a desired outcome in a designated area (Bandura, 1977). Therefore, we can say self-efficacy is a key contributing factor to learners' success as it influences the choices learners make, courses of action they pursue in order to produce a specific performance. Individuals who have high self-efficacy are more eager to learn activities, redouble their efforts towards activities and may develop more effective strategies against difficulties they encounter (Eggen and Kauchak, 1999). Bandura was the first researcher who put forward the relationship between academic procrastination and self-efficacy in 1986.

On the other side the concept 'Locus of Control' was developed by Julian B. Rotter in 1954. According to Rotter, the individual acts in a certain way with an expectation from that behaviour. It is a tendency to which a person can control over the situations in difficulty in all walks of life. According to Julian B. Rotter (1990), Locus of Control can be divided into two separate sources of control: Internal locus of control refers to the degree to which the individual believes that his/her behaviour is guided by his/her own decisions and efforts. External locus of control refers to the degree to which persons expect that the reinforcement or outcome is a function of different factors out of one's control such as chance, luck, fate and randomness. From the theoretical understanding we can find the predictors of academic procrastination and have a brief insight of relationship among these three variables. Hence, it is required to gather more insights into these key contributing factors.

REVIEW OF RELATED LITERATURE

From above discussion it is clear that many researchers have come forward with a number of research studies to explore the different personality traits of academic procrastination and investigate its relationship with self-efficacy and locus of control. This paper has been elaborated on the following dimensions.

- I. Studies related to Academic Procrastination
- II. Studies related to Self-efficacy and Academic Procrastination
- III. Studies related to Locus of Control and Academic Procrastination

STUDIES RELATED TO ACADEMIC PROCRASTINATION

Valderen (2021) studied the relationship between individual character traits, academic procrastination and goal setting. The objective of the study was to investigate the relationship of academic procrastination and influencing factors. It was revealed that both intrinsic motivation and goal setting showed a moderate strong positive correlation to each other and both are the strongest influencing factors on reducing academic procrastination. There is neither self-efficacy nor self-critical perfectionism showed any relationship towards academic procrastination. Hailikari, Katajavuori and Asikainen (2021) explored how students' psychological flexibility, time and effort management skills and academic self-efficacy are connected to procrastination and combine different ways to explain procrastination. The sample comprised of 135 students studying arts and humanities at a Finnish university. The findings showed that student's ability to organize their time and effort has the strongest association with procrastination along with psychological flexibility also has a strong individual role in explaining procrastination. But academic self-efficacy did not have a direct association with procrastination.

From the descriptive analysis of data collected by Gadatia and Bera (2021) it was observed that no significant difference found in academic procrastination of pupil-teachers with respect to their gender and location but science students display more academic procrastination as compared to arts pupil-teachers. Similarly, Erdemir (2019) studied on determining the effect of reducing procrastination tendency on academic achievement in physics course. This research was carried out with 70 participants, quasi-experimental research design containing experimental and control group was used. The study result revealed that the academic achievement of pre-service science teachers in experimental group was found to be higher than the candidates in control group. It means special strategies related to reducing procrastination tendency in experimental group have a positive effect on achievement. Roslen and Sabouripour (2016) has disclosed a study aims to investigate the relationship between the components of motivation in self-regulated learning as well as the components of learning strategies in self-regulated learning and academic procrastination. It was suggested in order to help undergraduates to improve on the components of self-regulated learning that they lack, strategy can be planned by educators to deal with academic procrastination and to increase academic performance. Academic procrastination and personality traits are regarded as important factors affecting learning and achievement of university students. Based on the correlation analysis the study findings showed a significant positive correlation of GPA with conscientiousness and agreeableness and negative association between academic

procrastination with conscientiousness and extraversion. The study found that gender causes significant differences only in GPA and the extraversion dimension of the big five personality traits in favour of female students (Karatas, 2015).

Khan and et al. (2014) indicated significant difference on demographic variable of age, gender and education. Specifically, a significant difference is found among males and females on academic procrastination. Male students tend to be found more procrastination than female students. The study further showed that college students tend to procrastinate more than university students. Also, there is a significant difference found on academic procrastination between students of age below and above 20 years. From a cross-sectional survey research conducted by Laxminarayan and et al. (2013) it proved a negative correlation of -0.63 with a significant level of P< 0.01 (two tailed test) indicating that students who showed high procrastination scores performed below average in their academics. Further Mann-Whitney U test found significant difference in procrastination scores between the two gender groups (P<0.05). Therefore, among the Indian undergraduate dental students evaluated in this study it appeared that individuals with above average and average academic performance had lower scores of procrastinations and vice versa. Ozer and Sackes (2011) examined the effect of procrastination on students' life satisfaction among a group of college students. 38 % (119) of the students claimed to be frequent procrastinators with male students found more frequent procrastination than female students do. The result of descriptive statistics showed that the overall mean of the sample was 37.8. A total of 118 out of 314 participants (38%) scored high on procrastination based on the median split criteria. So, 38% of the participants were found to be frequent procrastinator. Yong (2010) worked on a study on the assertiveness and academic procrastination of English and communication students at a private university in Malaysia. The result of the study indicated 1. business students procrastinated more than engineering students on writing term papers. 2. Male students and older students showed more procrastinate behaviour.

STUDIES RELATED TO SELF-EFFICACY AND ACADEMIC PROCRASTINATION

The research carried out by Rajapakshe (2021) to identify relationship between academic procrastination with students' personality traits such as self-efficacy and motivation to determine the impact of academic performance among undergraduates. The findings revealed that academic procrastination is a mediator between self-efficacy, motivation and have direct negative impact on academic performance. Besides the result also revealed academic self-efficacy and motivation do not have direct impact on academic performance.

Uma and et al. (2020) evaluated the level of procrastination and self-efficacy and its related factors among dental undergraduate students. In order to assess the relationship among self-efficacy, academic procrastination, genders and academic years, independent sample 't' test and ANOVA were used. Further Pearson correlation of coefficient was used to determine the association between self-efficacy and procrastination. To determine different related factors to academic procrastination, multiple linear regression analysis was performed. The result revealed that high procrastination (score ≥62) was seen among 28.5% of students. The mean self-efficacy score was 29.5. Moreover, there was no significant difference between genders for procrastination scores (P=0.835) and between academic years (p=0.226). Male showed

significantly more self-efficacy (P<0.001) and self-efficacy did not show any significant difference (P=0.204) between academic years though a tendency for year 5 students to have lower self-efficacy score was observed. Academic procrastination was negatively correlated with self-efficacy (r=-0.238 and P<0.001).

Liu, Cheng, Hu, Pan & Zhao (2020) explored the influencing mechanism of postgraduate academic procrastination. Results indicated significant differences in academic self-efficacy between females and males. Academic self-efficacy was positively correlated with academic self-control and negatively correlated with academic procrastination; academic self-control was negatively correlated with academic procrastination. Similarly, Academic self-control had a completely mediating effect in the influence of academic self-efficacy on academic procrastination.

Mostafa (2018) contributed a correlational study to examine the relationship between academic procrastination, self-efficacy beliefs and academic achievement, to investigate the relative contribution of academic procrastination, self-efficacy beliefs to academic achievement among middle school first year students with learning disabilities. The study revealed that there is significant negative correlation between self-efficacy beliefs and academic procrastination (r= -.232), academic procrastination and academic achievement (r= -.154) while the correlation coefficient was positive between self-efficacy beliefs and academic achievement (r= .278). Besides multiple linear regression analysis proposed that self-efficacy beliefs and academic procrastination accounted for 20% of total academic procrastination variance (f (2,340) =32.75, P<.001). Further it showed as there is positive significant relationship between self-efficacy beliefs and academic achievement, so those students who had high level self-efficacy belief did achieve higher grades.

Similarly, a study was conducted by Malkoc and Mutlu (2018) to explore the mediational role of academic motivation to see the relationship between self-efficacy and academic procrastination. The study result showed a positive relationship between academic self-efficacy with academic motivation (r=.407) and both have negative relationship with academic procrastination i.e.(r= -.312 and r= -.482). Further the study revealed academic self-efficacy and academic motivation are predictors of academic procrastination and academic motivation partially mediate the relationship between academic self-efficacy and academic procrastination.

Academic procrastination as a product of low self-esteem and it can be directly or indirectly related with academic procrastination through academic self-efficacy, among university graduate students. Path analysis through structural equation modelling revealed that academic self-efficacy fully mediated the relationship between self-esteem and academic procrastination and 18 percent of variance was accounted for by the indirect of effect of self-esteem via self-efficacy. Further the independent sample 't' test result revealed that male students scored significantly higher as compared to female students on academic procrastination (Batool, Khursheed and Jahangir, 2017).

The study conducted by Cerino (2014) hypothesized that there is a strong negative relationship of academic motivation, self-efficacy to academic procrastination among college students, with academic motivation having a stronger relationship than self-efficacy. The researcher found significant negative correlations of medium to large effect sizes between academic procrastination and academic motivation and self-efficacy. In

a hierarchical regression model, academic motivation reported significant contribution to academic procrastination R^2 change=.33, F(7.93) =6.54, P<.001, but self-efficacy did not contribute to variance in procrastination beyond the variance accounted for by academic motivation, R^2 change=.022, F(1.92) =3.09, P=.082.

Kandemir (2014) tried to determine, how the variables of self-regulation, self-efficacy. Life satisfaction, hope and descriptive variables about academic procrastination explain academic procrastination behaviour in the regression model. Descriptive survey model with 619 participants (450 female and 169 male students) sampling model are used in order to reach the goal. Correlation and hierarchical regression analysis are used to analyse obtained data. The study finding revealed that the variables make the highest contribution to the model respectively; academic success mean, self-regulation and life satisfaction. Besides that, academic success mean variable predicts academic procrastination negatively and meaningfully.

Azar (2013) conducted a study with an objective to determine the relationship between academic self-efficacy, achievement motivation, and academic procrastination with academic performance and investigate the predictive validity of them and interaction of them with gender to academic performance. The findings of the study showed that academic self-efficacy and achievement motivation had significant positive effect on academic achievement of students. Academic procrastination inversely is a significant predictor of academic performance. Also, extra result of t -test revealed that there is no significant difference between the mean score of girls and boys in academic procrastination (T=0.47, P=0.640) and academic self-efficacy (T=0.29, P=0.730). Besides there is also significant difference between boys and girls in terms of the level of achievement motivation (T=2.06, P=0.040) and academic performance (T=2.66, P=0.009). Female students significantly shower higher mean scores of achievement motivation and academic performance in comparison to male.

The study conducted by Sirin (2011) was revealed that academic procrastination and general procrastination found a significant positive correlation between them while no significant relationship was found between academic procrastination, academic motivation and academic self-efficacy. Further general procrastination was determined to be a significant predictor of academic procrastination. The result also revealed significant difference in academic procrastination in grades of the students however no difference was found between male and female students in terms of gender.

Klassen, Krawchuk and Rajani (2008) proposed two vignette studies exploring the predictors of academic procrastination of 456 undergraduates. Based on the findings result revealed although other self-variables are related to procrastination, self-efficacy for self-regulation is most predictive of procrastination tendencies. The study concludes with a discussion of the importance that self-efficacy for self-regulation holds for procrastination research and with suggestions for practitioners who work with the students who are adversely affected by procrastination.

Ferrari, Parker and Ware (1992) studied to examine the relationship of personality traits such as Myers-Briggs, self-efficacy and academic locus of control with academic procrastination and the result concluded procrastination not significantly related to typologies nor locus of control, but were negatively related to general self-efficacy (-.25 and -.22). Task aversiveness also negatively related to general self-efficacy (-.25). Result suggested that among traditional age, academically disadvantaged college student procrastination tendencies may not be identified using locus of control but general self-efficacy was a predictor of procrastination frequency (R^2 =.06), procrastination reasons (R^2 =.04) and task aversiveness (R^2 =.06).

STUDIES RELATED TO LOC AND ACADEMIC PROCRASTINATION

Manichander (2021) experimented a survey to determine the differences in academic procrastination and locus of control of graduate students based on the course of study and found that there is significant relationship between (i) academic procrastination and internal locus of control of graduate students and (ii) academic procrastination and external locus of control of graduate students.

Siah and et al. (2021) conducted a study to see the effect of locus of control on procrastination among undergraduates: the coping strategy as a mediator. 150 undergraduate students were selected by using purposive sampling method. The data were collected through cross-sectional survey and analysed by SPSS and Smart PLS. The study findings showed that with problem solving coping strategy, participants with a higher internal locus of control likely to show less procrastination behaviour. Further these findings suggested programmes can be made to improve undergraduates understanding of adopting effective strategies to cope with their procrastination.

Vhora and Ghosh (2021) conducted a study on procrastination and anxiety among Indian college students: The role of perceived parenting styles, locus of control and self-efficacy. The purpose of the study (1) To test whether perceived parenting style, locus of control orientation and self-efficacy are associated with procrastination and anxiety. (2) To assess whether perceived parenting styles, locus of control orientation and self-efficacy can be integrated into a model as predictors of procrastination and anxiety. The findings revealed that procrastination has found to be significantly correlated with general (r= -0.597) and social self-efficacy (r= -0.241). Besides locus of control was also significantly correlated with academic procrastination. Multivariate regression analysis showed that general self-efficacy emerged as only significant predictor of procrastination.

The study done by Sari1 & Fakhruddiana (2019) inferred that high level of social support helps students to motivate themselves to complete their thesis so that procrastination behaviour can be diminished. There is a significant correlation between internal locus of control and social support with academic procrastination and negative correlation between internal locus of control and academic procrastination in completing a thesis. It was recommended to provide psychoeducation for their students so that they have confidence that what determines success is more than themselves.

It was found from the study the direct effect on internal locus of control on academic procrastination was no longer significant when controlling for classroom engagement. (Hui, Prihadi, Arif, Yap, Chua, Chen, Chong & Yeow, 2019). Author suggested for future studies to consider examining other factors such as parental and peer influence on academic procrastination, because learning is not limited to classroom settings only.

As a result of the correlation analysis made by Ozan Korkmaz1, Tahsin Ilhan & Salih Bardakci (2018) it can be said that academic procrastination has an important role in the academic achievement of gifted students, whereas self-efficacy, locus of control, and academic procrastination have a significant part to play in the academic achievement of non-gifted students. The comparison of self-efficacy, locus of control, and academic procrastination scores of gifted and non-gifted students indicated that the self-efficacy scores of gifted students were significantly higher than those of the non-gifted. The regression analysis indicated that locus of control seems to be an important variable in explaining academic achievement. This points out that increasing academic achievement can be ensured by individuals' shifting their locus of control tendencies towards an internal aspect.

Multivariate factor analysis done by Boysan and Kiral (2017) indicated that academic procrastination was inversely associated with personality traits and internal locus of control. The researcher found inconsistent relationship and could not find any significant association between academic procrastination and locus of control.

Certel and Kozak (2017) studied with an aim 1. to reveal the relationship among locus of academic control, academic procrastination, and academic self-efficacy 2. to examine locus of academic control, academic procrastination, and academic self-efficacy of athletes participating in university sports games in terms of academic achievement, sport branches, and gender. Findings revealed that there is a statistically significant difference between external locus of academic control and academic procrastination in terms of the gender of the athletes. Male athletes have higher scores on external locus of academic control and academic procrastination than female athletes. The academic achievement of the athletes is significantly different from their academic self-efficacy, locus of control external and internal, and academic procrastination. Significant relationships have been found among external and internal locus of academic control, academic procrastination, and academic self-efficacy. When external locus of academic control in athletes increases, academic procrastination levels within them increases. When internal locus of academic control in athletes increases, the self-efficacy level within them increases. Athletes with high academic success have better internal locus of academic control and academic self-efficacy scores. Athletes' participation on team sports has higher external locus of academic control scores than individual athletes.

Batubara (2017) investigated whether there are any contributions of locus of control on students' academic procrastination and inferred that locus of control adversely affected by procrastination. Also, author found average level of locus of control and high academic achievement among students.

Dervishaliaj and Xhelili (Lepuri) (2014) conducted a study on academic procrastination and locus of control in graduate students. The objective of the study was to examine academic procrastination and its possible correlation to the personality trait of locus of control among graduate students. The researcher used convience

sample comprised of 45 graduates from two department (13 students from education department and 32 students from the department of Albanian language and literature) in university of Vlora Ismail Qemali. The findings revealed significant positive correlation between locus of control and academic procrastination.

Prochazka et al. (2014) surveyed over the relationship amid L-O-C (locus of control) & academic-procrastination. It was found that "correlation analysis did not reveal a statistically significant relationship between the variables investigated (r = -0, 15, p = 0, 15)". According to this theory it was not confirmed the theory that there can be a relation between internality/externality locus of control and academic procrastination.

Ogunmakin and Akomolafe (2013) investigated a study to examine the influence of some psychological factors i.e., self-efficacy and locus of control on students' academic performance. Descriptive research design of ex-post type was used for the study. A sample size of 364 secondary school students randomly selected by adopting stratified random sampling technique. Two standardized instruments were used to measure their academic performance. Multiple regression analysis showed that two independent variables both academic self-efficacy and locus of control jointly predicted academic performance. Further study revealed that academic self-efficacy found to be more significant with academic performance while locus of control was not a good predictor.

Deniz, Tras & Aydoğan (2009) investigated on eff effects of emotional intelligence on the academic procrastination and locus of control tendencies of a group of university students. Emotional Intelligence, adaptability and coping with stress, are highly correlated with the students' academic procrastination tendency scores (p < .05). A negative correlation was found between emotional intelligence skills and both academic procrastination (p < .05) and locus of control (p < .01). Further it was revealed anxiety is a predictive factor in procrastination as anxiety increases the tendency of procrastination also increases.

Janssen and Carton (1999) proved that locus of control on students' procrastination did not depend on the difficulty level of assignment as there is non-significant interaction between locus of control and task difficulty. Besides the analysis revealed that students with internal locus of control tended to begin working on the assignment sooner than students with external locus of control expectancies. students with internal locus of control completed and returned the assignment sooner than students with external locus of control.

CRITICAL ANALYSIS OF THE LITERATURE

Academic procrastination is a special form of procrastination that occurs in the academic setting. It involves knowing that one needs to carry out an academic task or undertake an academic activity such as writing a term paper, studying for examination, finishing a school related project or undertaking the weekly reading assignments but for one reason or another, failing to motivate oneself to do so within the accepted time frame (Ackerman & Gross,2005). Academic procrastination is a serious problem among present day students which is negatively affecting the present and future of our youth (Kumar, 2020). Several negative factors have shown within the child such as lower academic performance (Klassen et al.,2010;), increased stress and anxiety

(Singh, 2018; Saini, 2020), and poor mental health (Stead et al., 2010). Review of literature revealed that academic procrastination has been correlated with number of variables such as self-efficacy, locus of control, perfectionism, achievement motivation, academic achievement, life satisfaction, self-regulation etc. (Rajapakshe, 2021; Mostafa, 2018; Cerino, 2014; Kandemir, 2014; Sirin, 2011). Here researcher tried to explore and analyse the relationship of academic procrastination with self-efficacy, locus of control and other demographic variables.

Self -efficacy has remained a very popular variable extensively studied its relation with academic procrastination by various researchers (Rajapakshe, 2021; Uma & et al., 2020; Mostafa, 2018; Cerino, 2014; Azar, 2013; Sirin, 2011). The studies done by (Uma & et al., 2020; Mostafa, 2018; Klassen & et al., 2010) showed procrastination negatively correlated with academic self-efficacy, whereas Valderen, 2021; Sirin, 2011) concluded there is no significant relationship found between self-efficacy and academic procrastination. Only self-efficacy for self-regulation and self-esteem had a significant relationship with procrastination. Besides other study results found that self-efficacy did not have a direct association with procrastination (Hailikari, Katajavuori and Asikainen (2021)).

Regarding Locus of control, Studies done by (Manichander, 2021; Siah & et al., 2021) show that there is significant relationship between academic procrastination with internal and external locus of control. Participants having internal locus of control completed and returned assignment sooner than students with external locus of control. From collected reviews correlation analysis has showed a positive relationship between external locus of control and academic procrastination in line with negative relationship between internal locus of control and academic procrastination (Dervishaliaj &Xhelili, 2014; Janssen and Carton, 1999). In such contrast, other researcher argued that there is inconsistent relationship between academic procrastination and locus of control (Boysan & Kiral, 2017) Further studies conducted by Vhora & Ghosh (2021), Ogunmakin & Akomolafe (2013) comparing the two psychological variable concluded academic self-efficacy found to be more significant and good predictor of academic procrastination and academic performance where locus of control associated with self-efficacy but didn't predict procrastination.

A number of studies reveals that gender makes difference in the Academic procrastination and academic performance (Khan & et al., 2014; Laxminarayan, 2012; Ozer & Sackes, 2011; Yong, 2010, Balkies & Duru, 2017). The studies done by (Batool, 2017; Laxminarayan, 2012; Ozer & Sackes, 2011; Khan & et al., 2014) concluded that there is a gender wise significant difference in academic procrastination, as males show more procrastination than the females whereas (Uma & et al., 2020; Azar, 2013) found no significant difference between gender for procrastination score. Besides gender, also significant difference found on academic procrastination in relation to age, grade, stream and education type (Gadatia & Bera, 2021; Khan & et al., 2014; Arif, Noor & Muneer, 2014). Regarding academic performance researcher found female students show high performance in comparison to male students (Azar, 2013; Balkies & Duru, 2017) whare as (Qaisar, Akhter, Masood & Rashid, 2017) found high academic performance in male students as compare to female students.

RESEARCH LIMITATIONS AND FUTURE STUDIES DIRECTION

Here investigator has tried to peep into the results of the studies elaborately and found limitations on the basis of variables, findings, participants and design. From above review, researcher found most of work are based on international studies and few on national context. Keeping in view with above literature, investigator felt that there is need to explore relationship of different personality traits such as self-efficacy, locus of control with academic procrastination. Earlier study has been emphasized either on psychological, social or educational variables so, future study needs to focus a jointly venture related to dependent variable and independent variables. Moreover, researcher should study on different demographic variables related to academic procrastination as previous studies contradict to each other. There is also gap in sample of the study and area of study because not more studies have been conducted on academic procrastination and its related variable in India other than the foreign countries. As plenty of studies done on college or University students, unfortunately there has been little reported research on procrastination on professional field (Gadatia & Bera,2021; Laxminarayan et al.,2013) and few studies done among youngers for instance elementary and secondary students (Mostafa, 2018 & Azar, 2013). Hence, it is necessary to carry the research at senior secondary students. Different choices of research methodologies and tools lead to inconsistence results. Most of the existing literature investigated the construct of procrastination using quantitative paradigms followed by correlational survey research design (Vhora & Ghosh, 2021; Mostafa, 2018; Roslen & Sabouripour, 2016; Karatas, 2015; Cerino, 2014; Laxminarayan & et al., 2013; Sirin, 2011; Yong, 2010;). There are few studies that followed cross-sectional approach (Siah & et al., 2021; Vladeren, 2021; Uma & et al., 2020). Two studies found by researcher on mixed method (Akpur and Yurtseven, 2018; Dami, Tameon & Saudale, 2020). Only one study found based on quasi-experimental method. However, it is suggested to carry more research work by using both quantitative and qualitative methods as well. As earlier study findings (regarding the relationship among academic procrastination, self-efficacy and locus of control) contradict to each other and give inconsistence results future research should be based on different methods and analyse data from multiple dimensions so, that results can be more generalizable and reliable.

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