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Relationship between Academic Procrastination, Locus of Control and Creative Self-Efficacy



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Abstract: Past literature has shown that academic procrastination shares a negative association with an internal locus of control and self-variables, including self-esteem, self-regulation and self-efficacy. These self-variables may even have a negative effect on students' academic performance. The aim of the current study is to explore whether students who have higher creative self-efficacy are less likely to experience academic procrastination. A correlational research design is used. Hence, the current research determines the relationship between academic procrastination, locus of control, and creative self-efficacy in Pakistani undergraduate students. Pearson's Product Moment Coefficient of Correlation is calculated. There are significant correlations between the three variables. Regression analysis indicates that both variables make a significant contribution towards academic procrastination. Results are discussed in light of the literature review.

Key Words: Academic Procrastination, Internal Locus of Control, Creative Self-efficacy, Pakistan, Undergraduate Students, Correlational Research

Introduction

Academic procrastination has been defined as a deliberate delay in academic tasks until extreme stress and pressure are experienced (Senecal, Koestnar & Vallerand, 1995).

Researchers have observed the possible personality traits that may be present in people, who tend to procrastinate. Carden et. al. (2004) have reported an association between locus of control and academic achievement.

According to Rotter (1966), an individual's attribution of an event's occurrence towards factors related to self refers to an internal locus of control. However, the attribution of an event's

occurrence towards external factors refers to an external locus of control (as cited in Atibuni et. al., 2017).

Beck (2000)'s findings on the relationship between locus of control and academic procrastination indicate that an internal locus of control could be related to a lower tendency to procrastinate, and vice versa. It is, therefore, important to study self-related variables that may be associated with academic procrastination. These self-related variables may include conscientiousness, self-efficacy (Hen & Goroshit, 2014), academic self-efficacy (Batoool, Khursheed, & Jahangir, 2017), emotional intelligence (Steel, 2007), self-regulation (Balkis & Duru, 2015;

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Batool, et. al., 2017), and self-esteem (Duru & Balkis, 2017). An individual's perceived ability to construct creative solutions, and an internal locus of control, both could be associated with academic procrastination. This may indicate that creative self-efficacy shares a positive relationship with an internal locus of control while having a negative correlation with academic procrastination.

Creative self-efficacy refers to an individual's belief in having the ability to construct creative solutions, think and function creatively (Karwowski, 2012).

Purpose of the Study

The purpose of the study was to determine whether having greater creative self-efficacy reduces the chances of experiencing academic procrastination in students. This would indicate that students who hold an internal locus of control, indulge lesser in procrastination. The study intended to fill the gap in the literature, given the development of a self-variable i.e. creative self-efficacy and its possible association with both, academic procrastination and locus of control, respectively. It is important to explore the relationships between these variables, as this may further allow formulating and devising strategies which can help lower the chances of students facing academic procrastination.

Literature Review

Academic procrastination, as observed in educational settings, may often affect students' learning and academic achievement (Karatas, 2015). It has been described as an interconnection of behavioural, cognitive, and affective components, which lead to delays in academic tasks (Sulaiman, Syahniar, and Daharnis, 2018). Academic procrastination has been contended to have negative consequences, such as a likelihood of students earning lower grades, withdrawing from courses, becoming more distracted or impulsive, poorer organization skills and lesser motivation to become successful (Tice and Baumeister, 1997; Steel, 2007; Bennett & Bacon, 2019; Karatas, 2015).

Behaviours and personality traits including laziness, feeling a lack of energy, passivity, setting idealistic standards, rationalization, carrying out tasks imposed by others, stubbornness and defiance, fear of failure, and fear of rejection were

also noted in these students. Clinically significant symptoms, such as social anxiety, depression, stress, being dissatisfied with life, fatigue, and lack the energy to carry out everyday tasks may also be associated with academic procrastination (Karatas, 2015; Afzal and Jami, 2018; Prihadi et. al., 2018; Arias-Chávez et.al., 2020).

Moreover, factors affecting academic procrastination may be categorized into internal or external locus of control. An internal locus of control may be described as a sense of having greater control over how an individual performs academically (Atibuni et. al., 2017).

Positive academic attitudes, self-esteem, self-efficacy, and intrinsic motivation, have been reported to be related to an internal locus of control. Both academic procrastination and academic achievement, have been associated with various dimensions of personality. Personality traits such as conscientiousness, and agreeableness share a positive relationship with academic achievement. Whereas, academic procrastination was negatively correlated with conscientiousness and extraversion (Prihadi et. al., 2018; Karatas, 2015). This depicts an association between internal locus of control and academic procrastination. Similarly, self-efficacy, self-esteem, and academic self-efficacy are reported to share a negative correlation with academic procrastination (Sagone and De Caroli, 2014; Afzal & Jami, 2018).

Various researchers have reported self-efficacy and academic procrastination to be related. Wäschle, Allgaier, Lachner, Fink, and Nückles (2014) have reported lower self-efficacy associated with greater academic procrastination. Goal orientation has been noted to be positively related to self-efficacy, and negatively with academic procrastination. This demonstrates that greater self-efficacy was associated with increased goal-directedness, and lower procrastination (Ariani and Susilo, 2018). Additionally, depicts that academic procrastination may be inversely correlated with self-efficacy, across other cultures (AlQudah, Alsubhien, & Heilat, 2014). Moreover, Strunk and Steele (2011) found that self-efficacy and self-regulation predicted lower academic procrastination while self-handicapping academic behaviours had higher chances of resulting in academic procrastination. Likewise, self-efficacy was reported to be negatively correlated with maladaptive perfectionism, an external locus of

control, and self-handicapping, respectively (Stewart & George-Walker, 2014).

Furthermore, motivation has been studied in relation to academic procrastination. It has repeatedly been reported to be negatively correlated with academic procrastination. Motivational factors and learning strategies such as self-efficacy and self-regulated learning, were predictors of better expectations regarding course grades (Tan et. al., 2008). Similar results were found in studies across cultures (Vij and Lomash, 2014). This suggests that when students are intrinsically motivated, there may be reduced delay in carrying out an academic task, due to the satisfaction and pleasure experienced by taking part in it (Malkoc & Mutlu, 2018). Similarly, personal idealistic standards, self-reliance and autonomy, led to fewer chances of academic procrastination (Burnam, Komarraju, Hamel, & Nadler, 2014).

Moreover, ascribing academic failures to outer or non-personal factors is called an external locus of control (Akca, 2012). This includes negative evaluation from others, peer influence, the perception that academic tasks are too difficult, negative past experiences regarding academic performance etc. Stewart and George-Walker (2014) noted positive correlations between maladaptive perfectionism, external locus of control and self-handicapping. Moreover, maladaptive perfectionism was noted to predict low self-efficacy, further leading to self-handicapping. In addition, maladaptive perfectionism was reported to be a factor leading towards academic procrastination (Kurtovic, Vrdoljak, & Idzanovic, 2019). Furthermore, self-efficacy was noted as being a mediator between adaptive procrastination and academic procrastination. Lower academic achievement led to lower self-efficacy. This further led to increased maladaptive perfectionism and hence, greater academic procrastination. Moreover, risk-taking behaviours, task-aversion, and decision-making problems were the leading predictors of academic procrastination in students from a Pakistani public university (Afzal & Jami, 2018).

Furthermore, locus of control was studied as a mediating factor between learned helplessness and academic procrastination among students. Learned helplessness is negatively correlated with an internal locus of control, leading to greater academic procrastination. Academic

procrastination positively correlated with self-handicapping, a lack of adequate self-regulation and external locus of control, and an inability to manage time and external locus of control (Park and Sperling, 2012; Prihadi et. al., 2018; Akca, 2012; Sulaiman et. al., 2018). External locus of control predicted academic procrastination as well (Albayrak & Reisoglu, 2019).

A vast amount of past research, therefore indicates, that an internal locus of control shares a significant relationship with lower academic procrastination across cultures.

Previous research has associated self-efficacy with both academic procrastination and an internal locus of control. However, creative self-efficacy, in relation to academic procrastination and an internal locus of control, remains relatively unexplored. According to Bandura (1997), self-efficacy is an important indicator of task initiation and persistence that follows in order for its completion (as cited in Ariani & Susilo, 2018). Creative self-efficacy is derived from the integration of self-efficacy and creative performance, as presented by Bandura (Mathisen & Bronnick, 2009). Higher creative self-efficacy was also associated with a higher socio-economic status. Females, for example, were noticed to underestimate their creative abilities in comparison to males, who overestimated and hence reported higher creative self-efficacy.

Creative self-efficacy may be enhanced. However, this impact was reported to last longer among the working population (Mathisen and Bronnick, 2009). Similarly, Tierney and Farmer (2011) explored creative self-efficacy in employees and noted that employees' creative self-efficacy and their creative performance improved together, over time. This is important in predicting creative self-efficacy's ability to be learned and developed over time.

However, fewer works of literature focusing on creative self-efficacy in student populations are available. In Pakistan, Ghafoor, Qureshi, Azeemi, and Hijazi (2011) have studied creative self-efficacy and employee creativity, across public and private banking sectors of Pakistan. Results demonstrated that employees' creative self-efficacy does play a role in, and increases the amount of creativity and originality that is displayed in their performance.

Chong and Ma (2010) looked at creative self-efficacy in the work environment and noticed differences in employees' creative self-efficacy levels, based on belonging to individualistic or collectivistic cultures. Supportive supervision and creative self-efficacy were positively related. Similarly, Slatten (2014) found that job autonomy was most strongly related to creative self-efficacy.

Moreover, Tierney and Farmer (2002) predicted that since creative self-efficacy is related to self-image, it may reflect people's self-regulation, and intrinsic motivation (hinting towards an internal locus of control) and how this impacts creative performance. Based on previous research by Bandura (1997), which has reported greater self-efficacy to positively affect certain aspects of people's cognition, leading to creative performance (as cited in Tierney & Farmer, 2002), it may therefore be suggested that creative self-efficacy, is significant for creative efforts to occur (Tierney & Farmer, 2002). Nevertheless, according to Gilson and Madjar (2011), a positive relationship has been noted between both intrinsic and extrinsic motivation and creative abilities, respectively (as cited in Karwowski, 2012), which may as well indicate that a relationship between internal or external locus of control and creative self-efficacy may exist.

Little research has been carried out regarding creative self-efficacy in student populations. However, past literature does indicate that creative self-efficacy yields positive effects on creative performance in work environments. Therefore, studying creative self-efficacy in student populations may help us understand its association with both, academic procrastination and locus of control.

In the light of the above literature, the research question and hypotheses are as follows:

Hypotheses

1. There will be a negative correlation between academic procrastination and an internal locus of control.
2. There will be a positive correlation between an internal locus of control and creative self-efficacy.
3. There will be a negative correlation between academic procrastination and creative self-efficacy.

4. An internal locus of control will predict academic procrastination.
5. Creative self-efficacy will predict academic procrastination.

Methodology

Research Design

This study used a correlational research design, which explored relationships among academic procrastination, internal locus of control, and creative self-efficacy (Gravetter & Wallnau, 2013, p. 510).

Participants

A sample of 333 baccalaureate students from a private university in Lahore, Pakistan were included. Convenience sampling was used. Participants ranged from ages eighteen to twenty-five. Both male and female students were included. Each participant had to fill out the same questionnaire, sent to them via Google Forms.

Material and Measures

The Google Form stated the purpose of the research and said that students' participation in the research was voluntary. It stated that filling out the form would indicate participants' consent to be part of the research. They were given the right to withdraw from the research at any point. Confidentiality was maintained, and the data about the participants was stored in password-protected computers.

Demographic information included the participants' gender, age, current year at university and major. The measuring scales consisted of three self-report questionnaires, which were all freely available on the Internet.

Academic Procrastination Scale

The academic Procrastination Scale (McCloskey, 2011) was used. It was a 25-item, 5-point Likert scale, where 1 stood for "Disagree", and 5 stood for "Agree". The scale included some reversed-keyed items. The scale's scoring ranged from 25 to 125. The scale's reliability was reported as 0.94 (McCloskey & Scielzo, 2015).

Levenson Multidimensional Locus of Control Scale

Levenson Multidimensional Locus of Control Scale was used to measure locus of control. It was a 24-item scale, which measured internal and external (powerful others or chance) locus of control. It was a 6-point Likert scale, where 1 stood for "Strongly disagree", and 6 stood for "Strongly agree". The scale divided the locus of control into three dimensions i.e. I (internal), P (powerful others), and C (chance). The scale's internal consistency was reported to be moderately high (Levenson, 1973). P and C scales are slight to moderately positively correlated (.23 to .59). The P and C scales are usually unrelated to the I (Internal) scale. Scoring on each scale ranged from 0 to 48. The scores on the I (Internal) scale were used to calculate correlations with other variables.

Short Scale of the Creative Self

Creative self-efficacy was measured through the Short Scale of the Creative Self (Karwowski, 2011). It was an 11-item, 5-point Likert scale, where 1 stood for "Definitely not", and 5 stood for "Definitely yes". The scoring ranged from 11 to 55. The reliability of the scale was reported as 0.80 (Karwowski, Lebuda and Wisniewska, 2018).

Procedure

Prior to carrying out the research, approval was sought from the Institutional Review Board (IRB) of Forman Christian College (A Chartered University; IRB Approval #: IRB-213/02-2020), so that there were no ethical constraints in the proposed research. Once approved, the questionnaires were converted to Google Forms and the link was sent to undergraduate students of a private university. Students were approached through email and social media platforms i.e.

Facebook and WhatsApp. Participants were informed about the purpose of the research, and that filling out the form indicated their consent to participate in the study. The right to withdraw was given and participants' anonymity was maintained. The sample did not receive any compensation for their participation and participated in the study voluntarily. Their anonymity was also maintained.

After data collection had been completed, the data was screened. A total of 336 responses were collected. During the process of screening, 3 responses had to be discarded because the participants' ages did not fit the age range set for this study. Therefore, scoring was administered on 333 responses. Scoring was done according to the scoring instructions for each scale. A few items on the Academic Procrastination Scale (McCloskey, 2011) were reverse-scored, according to the scoring instructions of the scale. The IBM Statistical Package for the Social Sciences (SPSS) Version 21 was used for carrying out all statistical analyses.

Statistical Analyses

Pearson's Product Moment Coefficient of Correlation and Multiple Regression were carried out.

Data Analyses

Descriptive Statistical Analyses

A total number of 333 undergraduate students from a private university participated in the study. The sample was aged between 18 to 25 years ($M=21.44$, $SD=1.74$). They were enrolled in different academic years and were majoring in different subjects (see Table 1). Means and standard deviations were calculated for academic procrastination, internal locus of control, and creative self-efficacy, respectively (see Table 2).

Table 1

Demographic Characteristics of Participants

| Characteristic | n | % |
|----------------|-----|------|
| Gender | | |
| Male | 135 | 40.5 |
| Female | 198 | 59.5 |
| Academic Year | | |
| Freshmen | 57 | 17.1 |
| Sophomores | 50 | 15.0 |

| Characteristic | n | % |
|--------------------|-----|------|
| Juniors | 81 | 24.3 |
| Seniors | 145 | 43.5 |
| Major | | |
| Psychology | 83 | 24.9 |
| Economics | 33 | 9.9 |
| Mass Communication | 32 | 9.6 |
| Double Major | 15 | 4.5 |
| Others | 170 | 51 |

Note. N=333. Participants were on average 21.44 years old (SD=1.74).

Table 2

Means and Standard Deviations of Academic Procrastination, Internal Locus of Control and Creative Self-Efficacy

| Variable | M | SD |
|------------------------------|-------|-------|
| 1. Academic procrastination | 73.39 | 22.16 |
| 2. Internal locus of control | 31.72 | 8.06 |
| 3. Creative self-efficacy | 41.79 | 8.64 |

Note. N=333.

Inferential Statistical Analyses

Results from Pearson Product-Moment Correlation are shown below (see Table 3). A negative correlation between academic procrastination and an internal locus of control [$r = .50, n = 333, p < .0005$] was found, with high levels of academic procrastination correlated with lower levels of an internal locus of control.

A positive correlation was found between an internal locus of control and creative self-efficacy

[$r = .67, n = 333, p < .0005$], with high levels of an internal locus of control correlated with higher levels of creative self-efficacy.

A negative correlation between academic procrastination and creative self-efficacy was also noted [$r = -.52, n = 333, p < .0005$], with high levels of academic procrastination correlated with lower levels of creative self-efficacy.

Table 3

Pearson Product-Moment Correlation between Academic Procrastination, Internal Locus of Control and Creative Self-Efficacy

| Variable | 1 | 2 | 3 |
|------------------------------|---|-------|------|
| 1. Academic procrastination | | | |
| 2. Internal locus of control | | -.50* | |
| 3. Creative self-efficacy | | -.52* | .67* |

* $p < .01$

Furthermore, results from regression analysis (see Table 4) indicated that both the internal locus of control and creative self-efficacy contribute substantially to predicting academic procrastination. Tolerance and VIF values indicate a correlation between the two independent variables. However, results demonstrate that multicollinearity was not a concern (Internal locus of control, Tolerance = .55, VIF = 1.81;

Creative self-efficacy, Tolerance = .55, VIF = 1.81). R square value depicts that the internal locus of control and creative self-efficacy explain 31.5% of the variance in academic procrastination. This depicted that creative self-efficacy makes a larger unique contribution towards academic procrastination. However, both variables do make a significant contribution towards academic procrastination.

Table 4

Multiple Regression Analyses Predicting Contribution of Internal Locus of Control and Creative Self-Efficacy towards Academic Procrastination

| Predictor | β | B | R2 |
|---------------------------|---------|------|------|
| Internal locus of control | | -.27 | -.74 |
| Creative self-efficacy | | -.34 | -.88 |
| | | | .31 |

Discussion

In light of the results, all five hypotheses were accepted. The results of the current study are supported by previous works of research. In addition, both the internal locus of control and creative self-efficacy make significant contributions towards academic procrastination, respectively.

Academic procrastination and internal locus of control are negatively correlated in line with previous pieces of research. Personal standards of perfectionism in connection to self-determination, intrinsic motivation, and being more goal-driven, have already been reported to be negatively correlated with academic procrastination (Burnam et. al., 2014; Sagone & De Caroli, 2014, Vij & Lomash, 2014, Bennett & Bacon, 2019). At the same time, previous researches illustrate a positive relationship between academic procrastination and external locus of control, further supporting the claim that academic procrastination and internal locus of control are inversely correlated (Jaydipsinh & Minakshi, 2017; Albayrak & Reisoglu, 2019).

A positive correlation was found between an internal locus of control and creative self-efficacy. Self-efficacy has already been listed as a motivational variable and a personality characteristic (Ariani & Susilo, 2018). Creative self-efficacy may be positively correlated with either internal or external locus of control (Karwowski, 2012). However, the positive correlation between internal locus of control and creative self-efficacy, suggests that having greater creative self-efficacy and likewise, a greater internal locus of control may be a motivational factor in displaying lesser academic procrastination. In the current research, results from Multiple Regression support this claim.

Furthermore, findings from this research demonstrate that academic procrastination and creative self-efficacy are inversely correlated. It may be contended that creativity enhancement

training increased students' creative self-efficacy when performing academically (Mathisen and Bronnick, 2009). However, this current study shows a negative correlation between academic procrastination and creative self-efficacy. Moreover, findings from this study also demonstrate that creative self-efficacy may even predict lesser academic procrastination.

Hence, the results of this current study are consistent with the findings of past research works and build on them. The current study also highlights that students experiencing less academic procrastination may also have greater levels of creative self-efficacy and internal locus of control.

Implications

Procrastination is often experienced by students, affecting their grades, motivation to study, and perception and insight regarding their achievements. The current study shows that significant negative correlations are present between academic procrastination, and both, internal locus of control and creative self-efficacy. Therefore, vigilance and determination of academic institutions may be one of the ways in which academic procrastination may be dealt with. Students and academic institutions coming together, and becoming more proactive may also be beneficial in tackling academic procrastination. As it may be contended from past literature and findings from the current research, that an external locus of control may be present in individuals who regularly experience academic procrastination, it is evident that working on the external locus of control will yield benefits. This may require working on the maladaptive patterns reflecting an external locus of control. For example, reaching out to the university counselling centre to seek help in developing a stronger internal locus of control and self-image, may aid in reducing the experience of academic procrastination in students. Furthermore, students, educationists, and instructors may come

together and formulate techniques which will student populations can be provided with a motivational push in the face of academic hassles. This fresher perspective may shift their outlook towards academic situations. This may allow them to feel more encouraged to start off with academic assignments and be more effective in managing their time.

As described in the past literature, academic procrastination may be described as an amalgamation of behavioural, intellectual, and emotional aspects of an individual. The current research supports this claim while building on it. Individuals' thoughts and feelings about themselves, may be categorized as cognitive and affective components. Whereas, delaying academic tasks until it is too late, poor self-regulation, ineffective time management, and the delay in beginning and completing academic tasks, may be attributed to the behavioural aspect. Therefore, a positive change in the cognitive and affective components is likely to decrease academic procrastination.

Results on the Levenson Multidimensional Locus of Control Scale indicate that students with an external locus of control (Chance and Powerful Others) scored higher on academic procrastination, suggesting that learned helplessness was associated with greater academic procrastination. These students may continuously attribute their indulgence in academic procrastination to external factors, such as fear of rejection, fear of failure etc. While not taking enough responsibility in academic situations, they may be more likely to cycle in self-handicapping behaviours, instead of making conscious efforts to make a positive change in their attitude, and hence behaviour.

Moreover, the current research adds to the list of self-variables studied in relation to both academic procrastination and locus of control, respectively. By exploring creative self-efficacy's relationship to academic procrastination, the current research demonstrates that perception of an individual's creative abilities is relevant to performance, not only in work environments but in academic settings as well.

This may, additionally, encourage educationists in a culture where creative abilities are often shunned, both academically and otherwise, to design curriculums and academic tasks, in ways that require students to depend

more on and express their creativity. As this is closely associated with being able to feel more internally motivated, and may be reflected in academic performance, as suggested in the previous literature (Vij & Lomash, 2014).

In addition, since previous research suggests a link between creative self-efficacy and creative performance, encouraging creative efforts may be beneficial. In the context of Pakistan, this may be an important step in improving educational practices, student learning, and originality in academic work. Once trained to think independently in academic settings, this may later be reflected in their professional lives too.

Limitations

However, as the data collection for this research was carried out during the COVID-19 pandemic, research has indicated that students reported higher than usual depression and anxiety levels during the pandemic, as well as fear regarding the consequences of the pandemic (Pragholapati, 2020; Acharya, 2020; Arslan, Yildirim, & Aytac, 2020). Similar patterns have been observed in Pakistani students (Aqeel et. al., 2020).

The sample of the study has the greatest percentage of Seniors, who may have a greater likelihood to experience academic procrastination and demotivation to get academic tasks done, as a result of additional anxiety regarding finishing their degree, the possible transition from student life into the working population etc.

Additionally, the sample is unevenly divided as far as majors are concerned. This makes it difficult to clearly distinguish if the choice of major is associated with higher or lower levels of any of the variables under study.

Furthermore, this research involved self-report measures to calculate academic procrastination, internal locus of control, and creative self-efficacy.

Conclusion

This research studied academic procrastination among undergraduate students in Pakistan. It brings into account students' personality factors such as their locus of control, and perception of their creative abilities. Studying these variables together can help determine ways to increase internal locus of control and creative self-efficacy

in students, in order to decrease their experiences of academic procrastination.

Recommendation for future research

Future researchers may be interested in looking at the relationship between these variables through

an experimental method. This may involve looking at creativity or creative performance, instead of creative self-efficacy.

Moreover, it is suggested that future researches in this area look at academic procrastination in students of other age groups.

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