MEDIATING EFFECT OF SELF-COMPASSION ON THE RELATIONSHIP BETWEEN ACADEMIC PROCRASTINATION & ACADEMIC BURNOUT AMONG UNDERGRADUATES IN A MALAYSIAN PUBLIC UNIVERSITY IN KLANG VALLEY

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ABSTRACT

The direct relationship between self-handicapping behavior and negative mental health outcomes had been demonstrated in past study. Researchers had suggested a further investigation into the mechanism by which the direct effect is established. On the other hand, the role of self-compassion act as a protective factor (i.e. as a mediator) against negative mental health outcomes had also been demonstrated among tertiary students in other countries. However, it is not known whether these relationships hold true in the Malaysia educational context. The purpose of this quantitative study was to examine the relationship among academic procrastination (an example of self-handicapping behavior), academic burnout (a negative mental health outcome) and self-compassion. Also, to investigate the mediating role of self-compassion in the relationship between academic procrastination and academic burnout among undergraduates in a Malaysian public university, particularly in Klang Valley area. Hence, the study was driven using a cross-sectional research approach. The mediation analysis was made based on the total 400 students' responses that revealed from the questionnaire instruments, which includes SCS, APS, and UBI. The data analysis performs using SPSS and AMOS program in examining the correlation and mediation effect of self-compassion on the variables. The findings revealed all variables are statistically significant correlated to each other, except there is no significant relationship between academic procrastination and positive component of self-compassion. Furthermore, the results showed that only negative component of self-compassion partially mediates in the relationship between academic procrastination and academic burnout. The implication and recommendation for future studies are discussed as well.

Keywords: Self-compassion, Academic Procrastination, Academic Burnout

(255 words)

KESAN PERANTARAAN IHSAN KENDIRI DALAM HUBUNGAN ANTARA PELENGAHAN AKADEMIK DAN LESU UPAYA AKADEMIK DALAM KALANGAN PELAJAR SARJANA MUDA DI UNIVERSITI AWAM MALAYSIA DI LEMBAH KLANG

ABSTRAK

Hubungan langsung antara tingkah laku membataskan diri dan hasil kesihatan mental yang negatif telah ditunjukkan dalam kajian lepas. Para penyelidik telah mencadangkan penyelidikan lebih lanjut mengenai mekanisme yang menunjukkan kesan seterusnya. Sebaliknya, peranan swa-rahmah bertindak sebagai faktor pelindung (iaitu sebagai mediator) terhadap hasil kesihatan mental yang negatif juga telah ditunjukkan dalam kalangan pelajar pengajian tinggi di negara-negara lain. Namun, tidak diketahui sama ada hubungan ini berlaku dalam konteks pendidikan di Malaysia. Tujuan kajian kuantitatif ini adalah untuk mengkaji hubungan antara pelengahan akademik (contoh tingkah laku membataskan diri), lesu upaya akademik (hasil kesihatan mental yang negatif) dan swa-rahmah. Kajian ini juga menyiasat peranan swa-rahmah sebagai mediator dalam hubungan antara pelengahan akademik dan lesu upaya akademik di kalangan pelajar sarjana muda di sebuah universiti awam di Malaysia di kawasan Lembah Klang. Kajian ini menggunakan kaedah penyelidikan keratan rentas. Analisis mediasi dibuat berdasarkan jumlah respon 400 orang pelajar yang diterima dari instrumen soal selidik, yang merangkumi Skala Swa-Rahmah (SCS), Skala Pelengahan Akademik (APS), dan Inventori Lesu Upaya Universiti (UBI). Analisis data dilakukan dengan menggunakan program SPSS dan AMOS dalam memeriksa korelasi dan pengaruh mediasi swa-rahmah terhadap variabel-variabel. Hasil kajian menunjukkan bahawa semua variabel mempunyai kaitan yang

signifikan secara statistik antara satu sama lain, kecuali tidak ada hubungan yang signifikan antara pelengahan akademik dan komponen positif dari swa-rahmah. Selanjutnya, hasil kajian menunjukkan bahawa hanya komponen negatif swa-rahmah yang menjadi mediator pada hubungan antara pelengahan akademik dan lesu upaya akademik. Implikasi dan cadangan untuk kajian masa depan juga telah dibincangkan .

Kata kunci: Swa-Rahmah, Pelengahan Akademik, Lesu Upaya Akademik

(246 perkataan)

ACKNOWLEDGEMENT

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LIST OF ABBREVIATIONS

AMOS   Analysis of a Moment Structures

APS   Academic Procrastination Scale

B40   Bottom 40%

COR   Conservation of Resources

HSBC   Hongkong and Shanghai Banking Corporation

MI   Modification Indices

SBI   School Burnout Inventory

SCS   Self-Compassion Scale

SEM   Structural Equation Modeling

STPM   Sijil Tinggi Persekolahan Malaysia

UBI   University Burnout Inventory

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CHAPTER 1

INTRODUCTION

1.1 Introduction

In the following section, researcher discusses a very common issue faced by university students: procrastination. Students should have effective coping strategies and available resources to support themselves. Without strong internal resources, students will be overwhelmed by academic responsibilities and utilize self-handicapping behavior. Such behavior in the long-term will result in the stress cycle trap which causes unnecessary stress, burnout or negative mental health outcomes. In this study, the researcher intends to focus on studying self-compassion, which is a potential internal resource that could help students overcome academic adversity.

1.2 Research Background

The transition stage of students from secondary to tertiary school is an important life change for most young adults and it can be quite and depressing for students. The transition involves going from being a dependent learner to an independent learner; from restricted educational environment with rules and regulation to more freedom based learning. Time management, personal organizing and decision-making is much more compared to secondary school life, and dealing with challenges often result in stress. The consequences of inexperience in managing the stressors during this transition could lead to many self-handicapping behaviors (e.g., isolation, academic procrastination), negative mental health (e.g., stress, academic burnout), or self-condemnation, which often act as warning signals that the student may end up choosing suicide as a way out of their stress. Based on past research, the plausible

effects of students' burnout are having a great intention to change their studies' major (Atalayin, Balkis, Tezel, Onal, & Kayrak, 2015), high dropout rates from schools (Bask & Salmela-Aro, 2012), and lower motivation to achieve academically (Kuittinen & Meriläinen, 2011).

College students often have more complicated issues and might lead to severe consequences today compared to a decade ago (Benton, Robertson, Tseng, Newton, & Benton, 2003; Pedrelli, Nyer, Yeung, Zulauf, & Wilens, 2015), comprising the typical college student problems such as relationship issues, online addictions that lead to severe procrastination, burnout in most aspects of life and developmental issues, as well as mental health issues, depression, complex stress, sexual harassment and having suicidal thoughts. It is a gradual progression of severity in behaviors like absenteeism from lectures and exams, sleeping disorders, self-harm and suicidal intention, which are becoming more common at university (Sani, 2018). The main concern people have is for students' mental health and the effectiveness of their coping strategies. There is a necessity to explore possible interventions in order to detect and resolve negative mental health outcomes, in order to prevent the tragedy of suicide among students. Daily life stresses are certainly unavoidable (Beiter et al., 2015), and it all depends on how students see their own life adversity that leads to how effective they can be at coping. Having a negative perception greatly reduce the likelihood of students treating themselves kindly when dealing with educational challenges.

Procrastination is a well-known and familiar phenomenon in the community today. Procrastination functions as a self-handicapping strategies (Barutçu Yıldırım & Demir, 2019; Ferrari & Tice, 2000). For example, giving excuses to cover one's weaknesses or failures in order to protect self-esteem or to minimize poor self-efficacy (Duru, & Balkis, 2014; Lay, Knish, & Zanatta, 1992). All of the university students

participated in the local study had engaged in procrastination during their university life (Kok, 2016). Throughout the education process, students have to cope with tests during mid-term, do tutorials, study for final examinations and complete the allocated assignments, which are the areas that students procrastinate (Kok, 2016). Therefore, the consequences of academic procrastination often result to burnout academically (Akin, 2012; Cakir, Akca, Firinci Kodaz, & Tulgarer, 2014; Cerino, 2014; Katz, Eilot, & Nevo, 2014), psychological distress, and well-being (Balkis & Duru, 2007, 2009; Sahranç, 2011; Steel & Ferrari, 2013). Procrastination is commonly observed during the transition period among university students. Even though there are much work has been done by past research on procrastination habits (Steel, 2007), but the issue still remains unresolved in the society, especially among students at universities level.

According to O'Brien (2002) and Steel (2007), approximately 95% of the American university students procrastinate when given a task. A local study by Kosnin and Khan (2016) found that among 200 students from a Malaysian and a Pakistan University experience different levels of severity in their procrastination, the results showed that 12% of the Malaysian participants and 11% of the Pakistani participants were in the severe procrastination category. Additionally, 67% of the Malaysia participants and 70% of the Pakistan participants were found to have moderate procrastination, while the remaining participants were in the mild procrastination category. In other words, nearly 8 out of 10 Malaysian students are procrastinators at some point in their studies (Kosnin & Khan, 2016). The issue of procrastination is indeed valid and statistically showed majority of the Malaysian students ever experience it. The negative consequences of procrastination involve poor academic performance (Tani, 2017; Tice & Baumeister, 1997), triggers negative feelings and affect well-being (Balkis & Duru, 2007, 2009; Steel & Ferrari, 2013). However, the

perception of those procrastinators toward themselves are briefly explain in past studies. Sirois (2014) mentioned that individual who tends to procrastinate had low self-compassion and high stress level. Further analysis showed that groups of individuals who had low self-compassion would experience higher levels of stress from procrastination (Sirois, 2014). Hence, if students are poor in coping during these stressful situations, the prolonged stress would likely result in academic burnout.

Based on behavioral perception, the rushing behavior to complete the important tasks at the very last minute is causing the stress and panic, which in turn break the deadline rule and couldn't submit the quality work on time. In addition to that, past studies have shown that procrastination stress can increases internal negative self-judgments, especially when facing difficult responsibilities or delaying essential tasks (Flett, Stainton, Hewitt, Sherry, & Lay, 2012; Sirois & Stout, 2011; Sirois & Tosti, 2012). For examples, the procrastinators will self-criticism or self-perpetuating downhill negative spiral. The current study focuses on understanding the various self-issues that procrastinators are struggling with. Hence, the researcher intends to study if a new approach of being kind to one's self could be a feasible solution for procrastinators.

A new concept "Self-compassion" by the author Neff (2003a) who derives it from the Buddhism philosophy which is a relatively new concept and interest for discussion in understanding the self-issues or self-attitudes among the procrastinators. Self-compassion is Neff (2003b, p. 87) defined it "involves being touched by and open to one's own suffering, not avoiding or disconnecting from it, generating the desire to alleviate one's suffering and to heal oneself with kindness. Self-compassion also involves offering nonjudgmental understanding to one's pain, inadequacies and failures, so that one's experience is seen as part of the larger human experience". Thus,

in self-compassion, instead of feeling compassionate towards others, the individual shows compassion towards themselves. According to Neff (2003b), self-compassion is treating oneself with kind and understanding in the presence of failure or pain, instead of harsh self-criticism. It is an adaptive attribute that can facilitate successful self-regulation, reduce self-blame tension and provide a buffer against negative reactions to self-issuing events. (Leary, Tate, Adams, Allen, & Hancock, 2007; Terry & Leary, 2011).

Therefore, this study aims to investigate the mediation effect of self-compassion as a protective factor in the relationship between academic procrastination and academic burnout among students in Malaysian public university. The researcher specifically conducted the study among the public university students only instead of private university students because public university students are facing more financial challenges (Ruxyn, 2016) that indirectly adding extra burdens on top of their academic adversity (Mouza, 2015). In addition to that, Malaysian public universities usually encourage students be more engaged with extra-curricular activities, which leads to a higher tendency in academic procrastination as well as other non-academic factors and responsibilities (e.g., part-time work). University students are also the future pillars and leaders who will contribute to the improvement and development of the nation, which procrastination issues need to be examined first in order to enhance the quality of the students to deal effectively on future challenges. Thus, these are the reasons that highlight the importance of investigating self-compassion among public university students, especially in their challenging academic transition journey.

1.3 Mental Health among Students in Malaysia

A local study by Shamsuddin et al. (2013), focused on examining the correlation and prevalence of anxiety, stress and depression among tertiary students. In the study, total of 506 tertiary students were recruited from four Klang Valley universities and the age range of the sample was between 18 and 24 years old. Based on the results from Depression, Anxiety and Stress Scale (DASS-21) that 23.7% had moderate to severe stress; 37.2% had moderate to severe depression; and 63% had moderate to severe anxiety. The results also revealed that anxiety and depression scores were significantly lower among younger students who were below 20 years old compared to older students. It is also revealed that those born in urban regions were having higher anxiety and depression. Moreover, the study concluded that stress scores were also significantly higher in among older students who were above 20 years old. In addition to that, the study also highlighted that Malay females experience more stress than the others. The family incomes fall in the non-middle category also quoted as higher stress scores than the family incomes in the low and high categories. Therefore, the occurrence of anxiety, stress and depression among tertiary students are real and need to be treated seriously.

According to Pillay (2017), the second leading of death among Malaysian youths between the ages of 15 to 29 is suicide; most tertiary education students fall into this age range. Pillay (2017) reported that on daily basis that nearly 1 out of 3 callers seek help via contacting the Befrienders Kuala Lumpur hotline having suicidal thoughts. The statistic showed it has increased 16% of the number of people calling for help. It is from the year 2015 has 21,256 to the year 2016 has 24,821 (Pillay, 2017). Moreover, based on the publicity director of Befriender's KL – Ardy Ayadali, mentioned that the number of callers had suicidal intentions in 2016 increased nearly

30% from 5,739 cases in 2015 to 7,446 cases in 2016 (Pillay, 2017). The director further reported that 21% of callers were aged 21 to 30; 15% were below 20; and 36% were of unknown ages. In the 2018 statistic, the top three reasons of the calls are due to relationship issue, studies or financial problem and mental health concerns (Shah, 2018). There are 1 out of 5 callers discussed about studies or financial problem are affecting their well-being. Therefore, the data reflects that tertiary students experience more than just academic challenges, which other stressors also contributes to the suicidal intentions. The worse scenario is success attempted of suicides, which this matter should be paying high attention especially on tertiary students' well-being and have the ability to use effective coping strategies.

In recent years, the news has highlighted suicide cases among tertiary students in Malaysia due to academic stress, burnout and many more reasons. According to online news from World of Buzz (Kwan, 2017), a 20-year-old female Chinese TARUC student committed suicide due to stress and depression that she experienced from work and studies. The never-ending workload from her work and studies was the main factor that affected her hope in life, she even declared herself to be a 'loser', and the optimal solution at that point of time for her was to choose to 'leave' instead of prolonging the stress. Her housemates who knew about her negative thinking were too late to rescue her, as the victim has made a clear and firm decision to commit suicide. This above incidence shows the urgency to tackle students' academic burnout and to empower them have the ability to cope before too late.

1.4 The Financial Norms of Malaysian Students

A majority of the university students in Malaysia work while studying. A report from HSBC (2018) entitled "The value of education, the price of success" indicated that 89% of Malaysian students from more than 1,500 students across the 15 countries are working for the purpose of needing financial resources to fund their education expenses, living expenditures, and other costs. In the above research HSBC (2018), showed the students spent more time at work (3.4 hours) compared to studies at home (2.3 hours) on a daily basis. The results also revealed that students who are working more than 20 hours a week have lower grades, while students working between 10 and 19 hours had better grades. In other words, proper working hours, the nature of the work and time management might affect the academic performances for students. Therefore, it generates unnecessary stress to students who struggle to cope between work and academic challenges (Mouza, 2015).

According to Ruxyn (2016) who cited the Muslim Volunteer Malaysia Association did a survey to investigate the economic burdens among 25,000 public university students who responded from 6 institutions, which reported that 74% of them are struggling to buy meals, more than 50% could only have a budget RM5 a day on meal, and 96% responded worried about the economic condition. Moreover, students who are from family income that is bottom 40% (B40) group they are just surviving with one meal and fasting throughout the day during their university life (Abdullah & Sarabatin, 2019; Sani, 2019). Even though the median income of the B40 has increased to RM 3,000 last year (Richard, 2018), in actual fact, fighting against inflation and the high cost of living in the urban area is challenging for the B40 family as well as students. Hence, the lack of financial support, dealing with financial hardship or inexperience in managing cash flow might contribute to the stress on

students on top of their academic challenges and cause them to consider quitting their studies (Mouza, 2015). Therefore, current study is focusing on public university students only because they are facing more financial challenges (Ruxyn, 2016) compared to private university students.

1.5 Problem Statements

The direct association between self-handicapping behavior and negative consequences of mental health was demonstrated by Sahranç (2011). Researchers have suggested a further investigation into the mechanism by which the direct effect is established. Besides, the function of self-compassion which acts as a protective factor (i.e. as a mediator) against negative mental health outcomes has also been demonstrated among tertiary students in China (Zhang, Luo, Che, & Duan, 2016) and Australia (Fong & Loi, 2016). However, the findings of these limited studies from China and Australia may not generalize to other countries. It is not known whether these relationships hold true in the Malaysia educational context. Thus, the researcher proposes a study to investigate the mediating role of self-compassion in the relationship between academic procrastination (an example of self-handicapping behavior) and academic burnout (a negative mental health outcome).

In fact, life stress is unescapable which everyone would encounters from time to time in life. It is important to resolve life stresses in order to improve mental health outcomes. In past studies, research outcomes indicated that life stress is significantly correlated with learning burnout (Huang & Lin, 2010; Lin & Huang, 2013). Therefore, the mental health condition among students are getting common which a protective factor like self-compassion would help with the students to cope with academic challenges effectively. Indeed, past studies has shown that self-compassion diminished

mental health problems majority in Western countries. However, it is uncertain outcome of the self-compassion responds on mental health in Malaysia context.

Past researchers have indicated that self-compassion has a positive correlation with happiness, life satisfaction, self-efficacy (Neff, 2003a) and positive psychological well-being (Neff, Hsieh, & Dejitterat, 2005; Neff, Pisitsungkagarn, & Hsieh, 2008; Neff, Rude, & Kirkpatrick, 2007). Additionally, self-compassion is negatively correlated with correlate with poor coping, depression, stress and anxiety (Allen & Leary, 2010; Krieger, Altenstein, Baettig, Doerig, & Holtforth, 2013; Özyeşil & Akbağ, 2013). According to Sirois (2014), people with higher levels of self-compassion were involved in fewer self-handicapping behaviors (e.g., procrastination) and have lesser motivational anxiety compared to those with lower levels (Williams, Stark, & Foster, 2008). Most importantly, the study from Rabon, Sirois, and Hirsch (2018) have identified that self-compassion is able to decrease depressive symptoms and to enhance involvement in prosocial wellness behaviors. Furthermore, it may also protect against suicidal behavior. Therefore, self-compassion can be seen as a mediator in the relationship between self-handicapping behaviors and mental health outcomes.

However, the effect of self-compassion on the relationship between academic procrastination and academic burnout has not yet been examined in past research. Thus, this study will investigate the role of self-compassion as a mediator in the relationship between academic procrastination and academic burnout.

1.6 Research Significance

A Majority of Malaysian students undergo extreme and unnecessary stress. One of the reasons to explain the suffering is due to cultural pressure. The cultural norms indicate that having good grades on graduate-certificates are equivalent to receiving a better career opportunity ("Malaysia Sunway university student tragically commits suicide", 2015). Based on Balkis (2013), academic achievement is negatively associated with academic procrastination and all three elements in the burnout of students. The results also revealed that academic procrastination and one element of burnout which is reduced academic efficacy predict academic achievement significantly. Moreover, the additional work pressure could also add on to the students' stress in managing their academic and other responsibilities in life, which will lead to further will lead to further procrastination, burnout or other severe consequences. Hence in general, this study is likely to contribute in extending the body of research literature on the mediation effect of self-compassion on the relationship between academic procrastination and academic burnout.

The findings from this study provide insight and information for future researchers to expand the study regarding this topic. Self-compassion has more benefits than drawbacks in terms of overall well-being of the person. In current contribution of study, researcher investigates the effects of self-compassion as mediator of academic procrastination and academic burnout. In short, the findings of this study expand the knowledge of the mediating impact of self-compassion. Especially, in facing academic adversity in relating to the self-handicapping behavior and negative mental health outcome. This research will demonstrate that self-compassion mediating effect in an educational setting, which it is really important in students' life to improve their coping skills to deal with academic challenges. In fact,

it is also important to everyone's life. Moreover, it will provide an extra understanding for further exploration to be taken by other researchers who has the similar interests of topic. For instances, to further investigation on the casual relationship through experimental research design and to play around with other hypothetical variables. Moreover, this study is also adding a further evidence of convergent validity on the variables.

1.7 Research Objectives

O_1 To examine the significant relationship between academic procrastination and academic burnout among undergraduate students in a Malaysian public university.

O_2 To examine the significant relationship between academic procrastination and self-compassion among undergraduate students in a Malaysian public university.

O_3 To examine the significant relationship between self-compassion and academic burnout among undergraduate students in a Malaysian public university.

O_4 To investigate the significant mediation effect of self-compassion in the relationship between academic procrastination and academic burnout among undergraduate students in a Malaysian public university.

1.8 Research Questions

Research question 4 below is the main research question in this study, and the research questions from 1 to 3 are the sub-research questions.

RQ_1 Is there any significant relationship between academic procrastination and academic burnout among undergraduate students in a Malaysian public university?

RQ$_2$ Is there any significant relationship between academic procrastination and self-compassion among undergraduate students in a Malaysian public university?

RQ$_3$ Is there any significant relationship between self-compassion and academic burnout among undergraduate students in a Malaysian public university?

RQ$_4$ Does self-compassion significantly mediate the relationship between academic procrastination and academic burnout among undergraduate students in a Malaysian public university?

1.9 Hypotheses

H$_{A1}$ There is a significant relationship between academic procrastination and academic burnout among undergraduate students in a Malaysian public university.

H$_{A2}$ There is a significant relationship between academic procrastination and self-compassion among undergraduate students in a Malaysian public university.

H$_{A3}$ There is a significant relationship between self-compassion and academic burnout among undergraduate students in a Malaysian public university.

H$_{A4}$ There is a significant mediation effect of self-compassion on the relationship between academic procrastination and academic burnout among undergraduate students in a Malaysian public university.

1.10 Delimitation

The researcher has decided and set few boundaries in this study. The sample population that current study would only draw from the public universities instead of private universities, because the campus compound of public universities are much larger than private institutions which able to cover the targeted large sample size easily. The program courses that offered by public universities are more varieties which able to diversify and randomize the participants' traits and background. In addition, the

coverage area of research population only limited to students who are studying in a public university in Klang Valley area.

In this study, researcher is interested to examine the relationship between academic procrastination, self-compassion and academic burnout. As well as, to assess the mediator, self-compassion on the academic procrastination-academic burnout relationship. The methodology of this research is only focusing on correlational method to draw prediction among variables and to testify the mediation effect of the self-compassion towards the relationship between academic procrastination and academic burnout, whereby this research will not be used to draw conclusion on the causal effect among the variables. In this study, the researcher used cross-sectional survey method to test the hypotheses instead of experimental method, thus the participants fill up the survey questionnaires on the confidential and voluntarily basis.

1.11 Operational Definitions

There are three variables that were measured in this study, academic procrastination, academic burnout and self-compassion. Each of the scales were operationally defined below.

1.11.1 Academic Procrastination

General procrastination was extended to be expressed in educational context that specifying academic duties as the procrastination target which is called academic procrastination, and usually accompanied by poor academic performance (Ellis & Knaus, 1977; Solomon & Rothblum, 1984). Academic procrastination generally was defined as delaying or postponing of academic duties, responsibilities, or decision-making, which claimed as having difficulties in completing and fulfilling tasks on time (Ellis & Knaus, 1977; Janis & Mann, 1977; Milgram, Mey-Tal, & Levison, 1998). Also, academic procrastination is outlined as the action of students who intentionally

deferring the academic duties that must be done in their studies (Schraw, Wadkins, & Olafson, 2007), in the current study, academic procrastination is defined by the Academic Procrastination Scale (APS) (McCloskey & Scielzo, 2015), which comprise 6 components that included laziness, personal initiative, time management, social factors, distractions and psychological beliefs regarding abilities. The higher the score, the higher is the level of academic procrastination.

1.11.2 Academic Burnout

According to Maslach, Schaufeli and Leiter (2001), burnout is another extent of poor mental health caused by work-related stress which is the prolonged response to the severe interpersonal and emotional stressors on the job. Total three core elements of this prolonged response are irresistible exhaustion, cynicism feelings, and inefficacy senses that affecting personal accomplishment or productivity in the job. In current study, academic burnout is similar with conventional burnout but measure in academic settings among students. The syndromes of burnout which engage in depersonalization, emotional exhaustion and reduced personal accomplishment reach a point in reduces the effectiveness at educational outcome. It is defined by the School Burnout Inventory (SBI) (Salmela-Aro, & Näätänen, 2005) that comprises 3 element exhaustion, cynicism and inadequacy. The higher the score, the higher is the level of academic burnout.

1.11.3 Self-Compassion

Self-compassion is similar to the concept of compassion to others, but it is just simply oneself having compassion directed inwardly and to self. According to Goetz, Keltner, and Simon-Thomas (2010), compassion consists of awareness to the experience of pain, which connected with strong desire to alleviate that pain suffering. Self-compassion involves being open, aware and accept to personal's suffering, not to

escape or detach from it, then generate the deep desire to be healed by self-kindness, nonjudgmental understanding to deal with failures, and treat it by seeing as a part of larger human experience. In the current study, self-compassion is defined as the mean score from the 26-items of the Self-Compassion Scale (Neff, 2003a). SCS is operationalized with three main components, which are self-kindness, sense of common humanity and mindfulness. The higher the score, the higher is the level of self-compassion.

1.11.4 Students

In this study, "students" is referring to any students from undergraduate programs as their first degree in the Malaysian public university, which can be international students or Malaysian. For undergraduate level, students are after completed their preliminary course such as A-level, Matriculation, Sijil Tinggi Persekolahan Malaysia (STPM) which is a pre-university formal examination taken by students in Malaysia, or other equivalent examination for those international students. In the current study, students that researcher about to sample are tertiary students who presently studying in the selected Malaysian public university in the age range from 18 onwards, and not restricted with any particular study program.

1.11.5 Malaysian Public University

Malaysian Public University is signifying the universities are ruled and self-managed under the Universities and University Colleges Act 1971 and the institutions are fully funded by the Malaysia Government (Norzaini, 2012). There are total 18 public universities in the entire Malaysia (including East and West Malaysia), but in current scope of study, only one University was selected from Klang Valley area for data collection purpose. The medium of instruction in lecturing undergraduate or postgraduate programs are usually teach in Bahasa Malaysia (National language in

Malaysia) or English Language, but it's often depends on the University and most programs are usually conduct in English.

1.12 Summary

Procrastination are the nature habits for everyone, there are no exceptional for the students as well, research shown that every students experience procrastination in some point of their studies which depending on how much there is bringing negative effects to the students. Students with poor coping strategies will eventually lead to burnout, unexpected stress, worries or other psychological distress. Especially, mental health issues are getting more common and serious nowadays in the fast trend technology society. In fact, the awareness of self-compassion is vital and the practices should be encouraged among students in this 21st century to enable them to deal with various challenges in their daily lives especially in term of academic and future work challenges.

Therefore, early detection and intervention of psychological distress through the understanding of students' self-compassion level act as the protective factor to cope well in academic adversity, preparation for future difficulties and to protect them from suicidal thoughts and suicide tendencies. Upon reaching to more serious issues in term of psychological distress, in this study, researcher focuses on academic procrastination and academic burnout in assessing the self-handicapping behavior that lead to potential risks that relating to negative mental health problems. According to past researches, self-compassion act as the internal resources that bring more psychological benefits than disadvantages to well-being, hence in this study, researcher focuses to examine the mediation effect of self-compassion in the relationship between academic procrastination and academic burnout.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Self-compassion has been getting more popular in western countries and many researchers have done relevant studies on the positive and negative variables that are connected with self-compassion. However, in Malaysia, there is a lack of research that looks into self-compassion been a possible protective factor in the relationship between self-handicapping behavior and negative mental health outcomes. Therefore, this literature review covers the essential areas of the three variables related to this study. The first section of this literature review discusses three concepts which provide the theoretical framework for the study, namely, Multidimensional Theory of Burnout and the Conservation of Resources (COR) Theory. The second part presents the issues of both procrastination and burnout, and its' consequences that are linked to mental health problems in an academic context. The third part discusses the previous reviews on the protecting role of self-compassion, the general benefits and its ability to improve mental health issues.

2.2 Multidimensional Theory of Burnout

There are three components of Multidimensional Theory of Burnout which are, depersonalization, emotional exhaustion and reduced personal accomplishment (Maslach, 1993; Maslach & Goldberg, 1998; Maslach & Jackson, 1986) as described in Figure 1. Based on this theory, individuals experience burnout due to complicated social relationships that created stress and caused an individual to have negative perceptions towards oneself, like having suicidal thoughts (Maslach & Leiter, 2016). Each component was elaborated below in more details.

Firstly, emotional exhaustion refers to an emotional state that is overwhelmed by stress. This can be caused by major issues such as being overloaded with work responsibilities or conflict with others at work (Maslach, 1993). In a situation like this, an individual feels drained, emotionally fatigued and lacks the mental resources to face the challenges of the next day. Therefore, the component of emotional exhaustion embodies a feature of stress at the individual level.

Depersonalization refers to negativity, uncaring feelings, cynical or overly disconnected responses to other individuals (Maslach, 1993). An individual who has experienced extreme emotional exhaustion will resort to depersonalization as a method of protecting themselves from complete mental collapse, i.e. suicide. Therefore, the component of depersonalization embodies a feature of stress at the interpersonal level.

Reduced personal accomplishment refers to the deterioration of productivity, efficiency and competency due to stress (Maslach, 1993). This in turn, affects an individual's level of self-efficacy that might lead to depression. The individual's situation becomes worse when they feel like they lack the capability to cope with job demands and responsibilities, leading to their self-impose perception of themselves as a failure. Therefore, the component of reduced personal accomplishment embodies a feature of stress at the self-evaluation level.
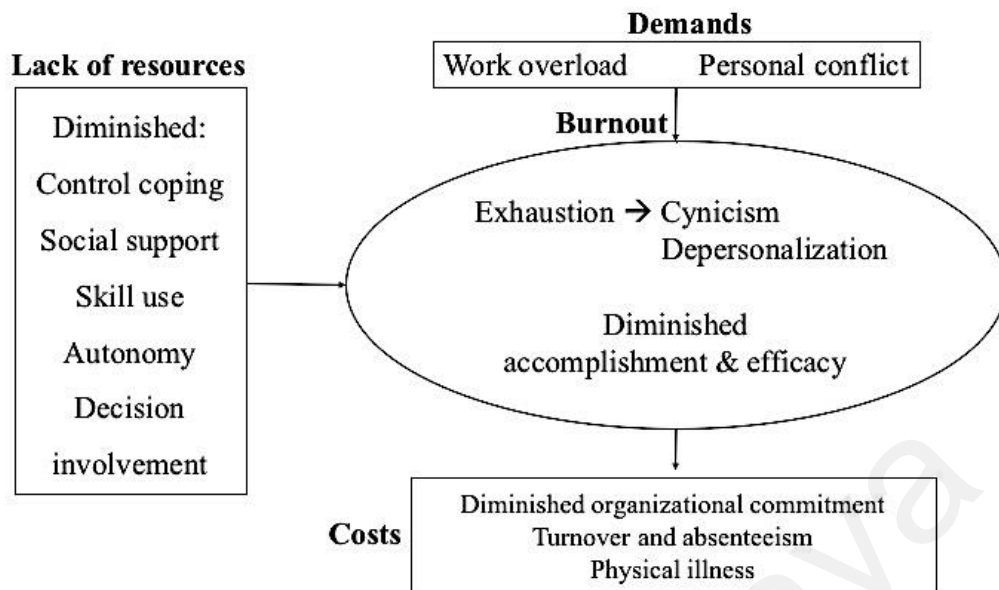
Figure 1. Multidimensional Theory of Burnout (Maslach, 1993)

This Multidimensional Theory of Burnout is relevant to the current study by applying it to a student's academic life. Firstly, emotional exhaustion in students which indicate the overwhelming academic responsibilities (Schaufeli, Martinez, Pinto, Salanova, & Bakker, 2002) or conflicting with assignment group mates. As a result, the students experience emotionally draining to face the following school day. Secondly, depersonalization is caused by emotional exhaustion that students will feel cynicism and disconnect with others or ones' study (Schaufeli et al., 2002), just to protect themselves from stressful education environment or mental breakdown. Thirdly, reduced personal accomplishment in students which indicate their poor academic-efficacy or incompetency to complete important assignments (Schaufeli et al., 2002). Students who are lack of coping skill but pressure to succeed have tendency to take shortcut to complete their assignments, which in turn high plagiarism rate (Hosny & Fatima, 2014).

2.3 Conservation of Resources Theory

The Conservation of Resources (COR) Theory is a suggested theoretical model to understand and describe how stress causes burnout (Alarcon, Edwards, & Menke, 2011; Buchwald, & Hobfoll, 2004; Hobfoll, 1989; Yang, 2004). According to this theory, an individual tries to acquire, maintain, and protect resources to cope with stress, however in a very stressful situation the individual may perceive a loss in resources, leading to an inability to cope. The meaning of resources in the COR theory involves four categories, which are, object, personal, condition and energy resources. For example, shelter, a good sense of self-esteem, a stable marriage, and having enough time, respectively.

The COR theory deals with the gaining and losing of resources. As studies have shown, losing resources is a painful experience that can lead to psychological distress. That is why preventing the loss of resources is often given a higher priority compared to gaining resources. However, it is also important to focus on gaining resources even though it is a secondary-priority. In fact, the gaining of resources give an individual the ability to fight against stress and minimize the effect of losing resources.

One of the internal resources that an individual can consider gaining is self-compassion. According to Neff et al. (2007), self-compassion is a widely used and recognized coping resource for individuals who experience challenging life circumstances. When confronted with such life adversity, individuals who have greater self-compassion have been shown to have lesser negative feelings, are more accepting towards themselves, and have an improved capacity for creativity in problem solving (Leary et al., 2007). Hence, self-compassion is under the personal resource in COR

Theory, because self-compassion is the internal trait that comes from "within" an individual. As an individual's self-compassion wanes, psychological distress rises.

2.4 The Idea of Self-Compassion

According to Neff (2003a) who received the idea of self-compassion was depending on the Buddhism perspective, compassion is given to other's suffering and also to oneself. Based on Goetz et al. (2010), having "compassion to others" consist of the sensitivity and notice that others are suffering, which cause to have the desire to ease the suffering. In other words, acknowledging and realizing of the pain existence is the first step, in order to be compassionated on that situation.

For example, instead of rushing towards an emergency meeting which you are already late, but you would consider to stop by and concern about how difficult the life of the homeless man that you had bumped into a few times. The actual moment of feeling the "suffering" together with the homeless man is reassembling the action of having compassion to him, because the urge from the heart wanted to help him and ease the burden of sufferings.

In the moving heart, you realized that all human being has their own sufferings and the compassion values are much needed among humanity, which will have linked to your feeling and reflection of "how fortunate I am". Hence, Neff (2003a) explains that self-compassion has the similar meaning as described above, but having the compassion inwardly, which our self is the main object to be taken care and concern of during the difficult time (Neff, 2003a). There are three components that Neff (2003a, 2003b) has derived from the Buddhism concepts to explain in self-compassion which consists of self-kindness, common humanity and mindfulness.

2.4.1 Self-Kindness

Treating oneself with harsh and judging is the nature of human being in the face of failure, mistake or negativity, as taking up the self-blame is always an easy way out (Neff, 2003a) However, self-compassion involves in warm, kind and loving towards oneself to understand and recognize that experiencing life challenges is unavoidable. Hence when confronted with difficult time, people with self-kindness will tend to be gentle, sympathy, supportive and caring towards oneself instead of getting frustrated when out of the life ideal expectation. People with self-kindness will self-soothe and nurture in order to deal and bear with the life circumstances. In short, our heart moved by our life adversity that caused distress which then generated warm feelings and the desire alleviate our suffering.

2.4.2 Common Humanity

Everyone has weaknesses, flaws, vulnerable and nobody is perfect in this world. Seeing our self as the only person who suffering on the tough situation always accompanied with irrational isolation, that no one can understands the deep feeling and struggles. In actual fact, every human being in this world suffers, no special exceptions despite of poor or rich, being educated or none. Hence, imperfection is part of the shared experience of everybody, which we are not alone when making mistakes or failures (Neff, 2003a). People with self-compassion able to recognize and understand that it is a normal development of every human, which in turn broaden the perspective and feeling less isolated when dealing with difficult time. In short, we all acknowledge everyone suffers and thus adopt a mentality that "I am not alone".

2.4.3 Mindfulness

The mindfulness component in self-compassion basically is the awareness state of ones through the observation of feelings and thoughts as they are without being judgmental, suppress it, avoid it, or refuse it during the time of sufferings (Neff, 2003a). As when individual being mindful, usually are easily be willing and acceptable to the challenging reality at that present moment without much repression (Bishop et al., 2004). The balancing of pain and being compassionate on oneself need to be happened at the same time, which individual has to acknowledge and experience the negatives emotion or thoughts, but not be overly exaggerated and identified by it, in order to comfort ourselves with compassion. People without such mindfulness will get caught by the complicated emotions and thoughts that affects their problem-solving skills. In short, a mindful of inner feelings and thoughts embrace us to deal with challenging situation effectively instead of over-identified by it which in turn to a severe consequence.

2.5 The Benefits of Self-Compassion in General and Clinical Perspective

In the past researches, individual with high self-compassion level commonly linked with stronger psychological health functioning in term of well-being, motivated on self-improvement, positive emotion, emotional intelligence, emotional resilience, optimism, happiness, life satisfaction, social connectedness and many more (Barnard & Curry, 2011; Breines & Chen, 2012; Neff et al., 2007; Neff, 2003b, 2012). Moreover, Conway (2007) reported that students who are in persistence poverty state has more self-compassion and greater academic achievement at university. Based on Gilbert and Irons (2005) who claimed that self-compassion has the power to swift off the threat system in order to promotes the well-being, such as the strong defending behavior, self-criticizing, and feeling insecurity. As well as, self-compassion capable to swift on

the self-encouraging system, such as sense of security and safety, interconnected with others, and lessen the isolated feelings. In short, self-compassion fosters and develops greater balance on emotion and adversity. It is also applicable to Malaysian undergraduate students that self-compassion showed the strongest prediction to mental health across other variables such as well-being, engagement and amotivation (Kotera & Ting, 2019). All these four positive psychological constructs were comprises of 47% prediction to mental health in the Malaysian undergraduate students (Kotera & Ting, 2019).

In fact, the popularity in promoting the benefits of self-compassion and higher awareness is spreading rapidly in therapeutic or treatments towards psychological distress (Barnard & Curry, 2011). For instances, the compassion focused therapy (Gilbert, 2010a), compassionate mind training (Gilbert, 2010b), the mindful self-compassion program (Neff & Germer, 2013) and etc. Mindfulness is part of the components in self-compassion, both of them have similar and overlap in the conceptual ideas, which mindfulness includes awareness and acceptance, where self-compassion includes balancing the awareness when encountering with challenges. In other words, mindfulness focuses on current feeling and thoughts without being judgmental (Greco, Baer, & Smith, 2011), where in comparison, self-compassion focuses on the responding action that inclusive of self-soothing behavior when confronting with difficulties (Germer, 2009; Neff & Pommier, 2013). However, researchers (Van Dam, Sheppard, Forsyth, & Earleywine, 2011) has indicated that anxiety, quality of life, depression, and worry are predicted strongly by self-compassion rather than mindfulness among adult samples in the community. Therefore, researcher hypothesizes that low self-compassion students might predict high level of burnout, because burnout is closely related to the depression symptoms.

According to Maslach and Goldberg (1998) who has discussed two prevention methods to overcome burnout which are to target job-related burnout or to strengthen the internal resources. For instances, by changing the working styles or by empowering the employee with resilience and effective coping skills to deal with stressors. In the current study, researcher would only focus on individual's role in preventing academic burnout, which by changing how students respond to procrastination (via self-compassion) is to reduce the impact of academic burdens towards mental health outcomes or suicide intentions. As past study also showed that self-compassion was strongly associate with improved mental health (Muris, Meesters, Pierik, & de Kock, 2016) and also a strong predictor of good mental health in Malaysian undergraduate students (Kotera & Ting, 2019).

2.5.1 The Mediation Effect of Self-Compassion in among Tertiary Students.

Fong and Loi (2016) studied the mediation effect of self-compassion role in psychological health among the tertiary students from University of New England. In the study, researchers recruited total of 306 tertiary students that covered 239 females and 66 males participants who are from first-year undergraduate to doctoral study level. The mean age of the sample was 25.17 years and the ethnicity composition of the sample was 37.3% Australian, 15.7% American, 13.1% British, 11.1% Asian, 7.8% Canadian, 7.2% New Zealander, 4.9% European, and 2.9% Other. The participants were requested to fill up the online survey that contained of total 123 questions. On top of SCS, the questionnaire consisted 7 instruments that assess different aspects of psychological health such as life satisfaction, flourishing, negative and positive affect, stress, depression, social desirability, and burnout. For data analysis, Person correlation coefficients were used to examine the correlations between variables,

which the findings showed that greater self-compassion was correlated with greater well-being and less distress. For mediation analyses, multiple regressions were used to investigate whether the relationship between distress factors and depression was mediated by self-compassion, and PROCESS macro were used to generate the bootstrap 5,000 replications to assess the indirect effect. The outcomes revealed that self-compassion as a mediation successfully reduced the relationships between distress factors (burnout, negative emotion, and stress) and depression, and overall distress and overall students' well-being. Therefore, it was indicated that self-compassion protected and provided support to the students in terms of their psychological health, and attenuated the seriousness of burnout towards depression (the negative mental health).

Sirois (2014) studied the mediation role of self-compassion in procrastination and stress among the four samples which consists of majority of undergraduate students from the same university, and community adults. In the study, researchers accumulated from a larger research of four different sample sizes to be participated where total of 768 participants are collected from the time span of 4 years from 2006 to 2010 (Sirois, 2014). Sample 1, 2, and 3 are undergraduate students and sample 4 is community adults. The mean age of the samples are 21.27 years, 21.68 years, 22.41 years and 34.28 years respectively. The percentage of non-Caucasian is 40.7%, 21.4%, 26.8% and 19.5% respectively. The participants were requested to complete the surveys of total 71 items from 4 different questionnaire scales. The questionnaire included instruments such as SCS, Lay's General Procrastination scale (GPS), the revised Adult Inventory of Procrastination (AIP-R), and the Perceived Stress Scale (PSS). Only undergraduate samples are under reviewed. For data analysis, the results showed of all samples that self-compassion were significant negatively associated with

procrastination (GPS), while self-compassion was negatively and GPS positively correlated with stress which indicates it is appropriate to test the indirect effect of procrastination on stress via self-compassion on the following step. For mediation analysis, each samples were following the basic principles of Baron and Kenny (1986) and indirect effects were tested through Sobel (1982) test which also using bootstrap of 5,000 resampling. The results indicated of all variables were significant to each other, from the direction of procrastination to stress, and self-compassion, also from self-compassion to stress. As well as the indirect effect also significant in all the three undergraduate samples. However, results only showed partial mediation as the direct effect of procrastination on stress stayed significant after controlling of self-compassion effects. Thus, it could also be explained by the mediation role of self-compassion, which researcher postulate students who procrastinating in academic responsibilities might eventually lead to burnout if prolonged in the stress situation, especially those who have chronical procrastination behavior.

2.5.2 The Mediation Effect of Self-Compassion by linking Procrastination and Burnout.

The study conducted by Barnett and Flores (2016) showed that self-compassion mediates the relationship between narcissism and school burnout. Especially, the study highlighted that two negative components of the self-compassion, namely isolation and over-identification were significant mediators in the relationship between narcissism and school burnout. According to Jahani, Ehsanikenari and Sharif (2018), it's explainable that narcissism has been linked to procrastination, that correlated and consisted in 10% procrastination variance. Individuals with strong narcissistic characteristics have an inflated sense of self-importance which hinders their judgment and leads them to overestimate their competency (Brown, Budzek, &

Tamborski, 2009). Such behavior portraited the extreme confidence of an individual that misjudge of their ability to complete the academic tasks within a restricted deadline (Shah, 2017). This narcissistic traits of over confidence are often significant with undergraduates students (Aderanti, Williams, Oyinloye, & Uwanna, 2013).

The better understanding of academic procrastination results in particular negative mental health outcomes, different factors have been studied and established as possible mediators in the relationship between procrastination and burnout. The factors include proactive coping strategy among high-school teachers in measuring the job's burnout and procrastination (Ashkzari, Piryaei, & Largani, 2015), self-efficacy among China University students between academic procrastination and academic burnout (Zhi-Gang, 2010), and poor mindfulness for undergraduate psychology students in the relationship between procrastination and stress (Sirois & Tosti, 2012). In the theories of this study, the concepts of burnout and stress are similarly interchangeable. Thus, one factor that has not been studied in the existing research on undergraduates student academic procrastination and academic burnout is self-compassion, which is the focus of this study.

2.6 Procrastination as Part of the Self-Handicapping Behaviors

Brown and Kimble (2009) also mentioned that self-handicapping behaviors have the tendency to cover up the failures instead of revealing the true self – inability or poor self-efficacy. Narcissistic individual applies similar strategy as a preference to be self-handicap for self-protection from negative outcomes – completely failure . The coping mechanisms of self-handicappers are commonly refuse to accept the factual reality, disengage socially, and overly focus on ones' negative rumination which caused negative affections. In other words, it is similar to the low self-compassion scenario where an individual will be isolated from the community, overly thinking about ones'

issues and harshly self-judged. In academic perspective, using less effective studying methods, spending less time to prepare for examination, expressing more stress before examination, poor academic performances are commonly reported by the high self-handicappers (McCrea & Hirt, 2001). Past studies also noticed that procrastinators have the tendency to escape completing tasks on time, and to study last minute for exams within a limited time frame (Jackson, Weiss, Lundquist, & Hooper, 2001; Lay, 1986; Lay & Burns, 1991). Thus, it is common for procrastinators feel stress due to time constraints in completing tasks.

Based on Ferrari (1991), procrastinators reduce their negative self-evaluation by simply delaying a task to feel better due to the excuse of time inadequately. In another words, based on self-handicapping viewpoint explained that procrastinators cover their incompetency or inability by postponing to start or finish a given task, which served as the similar motive as self-handicapping to protect their self-esteem (Lay et al., 1992). In some studies, procrastination predicts self-handicapping while another study was self-handicapping predicts procrastination, it can be two ways. Based on Beck, Koons and Milgrim (2000), the construct of both procrastination and self-handicapping are overlaps to each other. In fact, procrastination is one of the self-handicapping strategies (Lay et al., 1992) which the concept of self-handicapping is broader than procrastination (Ferrari & Tice, 2000). According to the study by Sahranç (2011), results showed that self-handicapping is significant positively associated with mental distress – stress, anxiety and depression. Therefore, in this study, researcher assume that procrastination will significant positively associated with negative mental distress (in term of academic burnout).

2.6.1 The Relationship between Academic Procrastination and Self-Compassion

Based on the perspective from meta-cognitive awareness theory (Teasdale, Segal, & Williams, 1995), procrastinators who are not being compassionate towards themselves might contribute to the over identification of negative emotions and blaming oneself which might in turn stimulate the ruminative thoughts that focus on unachievable goal rather than on solutions to achieve the academic goals. As the negative thoughts on self-assessments or self-blame could then stimulate the unending procrastination cycle (Sirois & Stout, 2011). Past study also showed of strong association of procrastination on self-compassion (Sirois, 2014). According to Neff et al. (2005), lack of self-compassion implies the fear of failure which possibly explains one of the reasons of procrastination are due to the sense of fearing to fail (Steel, 2007). Based on Evans, Baer, and Segerstrom (2009), studies showed that negative self-assessments have caused distraction towards the level of persistency on tasks. It means the low level of self-compassion could also be affecting the procrastination level to become more chronic as well as towards tendency of academic burnout.

Based on the qualitative interview research, Kosnin and Khan (2016) has explained a several perspective themes of the postgraduate students from a Malaysian local university. The selected participants are experienced severe procrastination in completing their dissertation upon their graduation. First of all, the procrastinator feels stressful at the beginning of starting the research because having no idea how to start and where to start, but choose to run away from the reality to something more pleasurable instead. Academic procrastination can serve as double-edged sword consequences, it's bring temporary pleasure but in return is a long term stress (Tice & Baumeister, 1997). Secondly, it was a repeated behavior that procrastinators unable to

focus and sitting long before the research, also choose to left the study desk and every time will start from zero again which becomes a challenge to finish it. Thirdly, as the procrastinators keep running away from the real tasks, which causes guilty and misery. Then, these feelings which in turn of overwhelming negative self-evaluation, feeling low self-efficacy to complete it and feeling more stressed out. Hence, the escaping habits repeats. Furthermore, the distraction from social media, internet usage, phone usage, unsupportive supervisor, and, friends or family members who need the attention from the procrastinators will prolong the goals of finishing the important tasks (Kosnin & Khan, 2016). Therefore, the procrastinating behaviors has the tendency to affect ones' self-compassion level that individual will self-doubt their ability, feel negative rumination, distress and the most common coping mechanism is to isolated from all the stress or reality eventually exposed to burnout.

2.7 The General Factors and Consequences of Burnout

The topic of burnout has been popularly discussed among psychologists in the past three decades. Conventionally, burnout was examined in the work place, particularly among human-service professionals, such as nurses, doctors and so on. According to Maslach and Leiter (1997), the major causes of burnout among professionals who deal with client-based services are, extremely high work-loads, poor self-management, a poor effort-reward scale, fairness issues, lack of rest and conflict of values. The obvious consequences of burnout are, mental distress in terms of depression, anxiety, fear or frustration (McLean & Clouse, 1991). Based on past research, burnout can also cause high turnover in the market place, lower commitment and efficiency, absenteeism, lower job morale, and lesser consideration towards others (Maslach, 1978; Maslach & Pines, 1977).

Mental distress is similarly applicable towards college students who suffer from burnout (Meier & Schmeck, 1985; Pines, Aronson, & Kafry, 1981). The type of burnout that affect students is more specifically is called academic burnout, as it affects the effectiveness of students' learning, motivation and educational outcomes (Kuittinen & Meriläinen, 2011). Academic burnout is due to external factors such as, course stress, heavy course load, and internal factors, such as, poor self-efficacy (Yang, 2004; Zhang, Gan, & Cham, 2007). Consequently, students who suffer from burnout have a high dropout rate from schools (Bask & Salmela-Aro, 2012), lower motivation to complete required assignments, and absenteeism problems (Meier & Schmeck, 1985). Therefore, considering the severe negative effects of academic burnout, the researcher intends to find a solution that can help students cope with these negative effects.

A secondary cause of burnout is when individual lack effective coping skills (Guglielmi & Tatrow, 1998; Vandenberghe & Huberman, 1999). When someone experiences stress, they might use coping skills such as problem-focused strategies to reduce the effect of stress and prevent burnout (Shin et al., 2014). However, stressed-out individuals who have ineffective coping skills, such as, disengagement, over a long duration of time will experience burnout (Shin et al., 2014). Therefore, the feeling of burnout is not only the direct effect of repeated exposures to stressful situations, but rather, burnout is mediated through various active and passive coping skills as mentioned above. Therefore, the severity of burnout depends on the effectiveness of coping skills that were developed within oneself. Without good coping skills an individual will be affected by the negative thoughts that come from stress, and this may result in burnout (Chang et al., 2017).

2.7.1 The Relationship between Self-Compassion and Academic Burnout

According to the previous study by Cheraghian, Faskhodi, Heidari, and Sharifi (2016), self-compassion successfully moderated the effects in the relationship between academic burnout and mental health. Self-compassion also negatively associated with academic burnout among the 200 tertiary students. In other words, academic burnout was predicted by self-compassion and self-compassion capable to moderate the effect of academic burnout on mental health. Self-compassion also negatively associates and predicts academic burnout in other context among students from technical college in Korea (Kyeong, 2013). Moreover, self-compassion also predicts burnout among pediatric residents in a longitudinal study done by Kemper et al. (2018). The results also showed that self-compassion and mindfulness were associated with decreased stress and burnout in the period of 12 months study.

According to the study by Neff (2012), results has indicated that self-compassion is significantly correlated with positive mental health outcomes, such as less depression and anxiety and greater life satisfaction. At the meantime, looking at the association of higher self-compassion with other negative mental health constructs by a meta-analysis of 14 studies that conducted with adult samples consisted students and participants who from the community, it is also shown of lesser psychopathology condition – depressive, stress and anxiety symptoms (MacBeth & Gumley, 2012). In other words, self-compassion might protect against the psychological distress. For example, Neff et al. (2007) had done a Gestalt two-chair clinical intervention on both samples (reports from participants and clinicians) which results shown that the increases of self-compassion level were associated with decreases of depressive symptoms.

2.8 Academic Procrastination and Academic Burnout in causing Mental Health

Based on the perspective of academic procrastination, the reasons of leading to academic burnout because of the stress cycles. McCown and Roberts (1994) highlighted that a majority of tertiary students perceived academic procrastination as a critical source that leads to personal stress. The process of procrastination which usually reported by students are leading to increases of stress and illness (Tice & Baumeister, 1997). Indeed, procrastination can cause high anxiety, stress, and illness (Haycock, McCharty, & Skay, 1998; Onwuegbuzie, 2004). Similarly, the study by Solomon and Rothblum (1984) shown among the 342 tertiary students who were taking the psychology course, found to have significant relationship of academic procrastination to depression, experience anxiety, have irrational thoughts, decreases in study behavior, and low self-esteem. In fact, the factors and consequences of procrastination are comparable to burnout. Once the procrastination behavior become a habit, more stress will be gathered which the prolonged school stress symptoms might lead to school burnout (Salmela-Aro, Muotka, Alho, Hakkarainen, & Lonka, 2016). The typical burnout signs are reflecting in some distress symptoms, such as, depression feeling, physically, mentally or emotionally fatigue (Cherniss, 1980). Moreover, study also shown that depression and burnout are associated in mutual direction, such as burnout can cause depression and vice versa (Glass & McKnight, 1996; Glass, McKnight, & Valdimarsdottir, 1993). Hence, past studies have shown both academic procrastination and academic burnout are related to mental health, which this study is interested to address the relationship of these two variables.

Based on Özer and Saçkes (2011) mentioned that 1 out of 3 college students are frequent academic procrastinators, and the results showed that high procrastination will have poorer life satisfaction scores than non-procrastinators. According to Beutel

et al. (2016), the study examined the association between procrastination and the broad spectrum of variables of distress and satisfaction in life among the large group of participant who are from the age of 14 to 95 in representing the entire life span of the German-community population. The representation results showed that procrastination was negatively associated with overall life satisfaction, and most strongly associated with perceived stress followed by fatigue, depression, and anxiety. The study also indicated the procrastination was higher among students, among the singles category, and without employment. In relating to current study, procrastination is high among the students compared to those individual in their adulthood, and will lead to fatigue which also part of the components in burnout – emotional exhaustion that explains the emotional fatigue. In other words, students' procrastination could be the tendency of prone to burnout.

2.8.1 The Relationship between Academic Procrastination and Academic Burnout

Recent researchers have done similar research on investigating the relationship between academic procrastination and burnout among students in Western Turkey. The results revealed that the three dimension of students' burnout, cynicism, emotional exhaustion, and reduced academic efficacy were positive significantly related to academic procrastination. Besides, the regression results showed that academic procrastination can also significantly predicts the three dimension of students' burnout. However, the limitation on the study only focuses students from a university in Western Turkey, which the researcher suggested to use other educational settings to measure the relationship and how the relationship affects each other (Balkis, 2013). Another study was done to examine the relationship between burnout levels and academic procrastination among 406 students from sport sciences faculty. The results

showed significant negative relationship between the burnout and academic procrastination (Demir, Halıcı, & Ötkan, 2017). Therefore, past research provides a basis for the current researcher to further understand the association between academic procrastination and academic burnout, in a Malaysian education context.

2.9 Theoretical Framework

In the current study, the theoretical framework is used as a structure to support the theories of Multidimensional Theory of Burnout and Conservation of Resources (COR) Theory, as well as to demonstrate the understanding of research topic on the three main variables – academic procrastination, self-compassion and academic burnout.

The responsibility of a student is often to prepare for lecture class, revision for examinations, and submit assignments within the given time frame, which are consider as the academic workload for each students. These are the requirements and demands from the university standards in order for the students to proceed to the next semester and graduate. The Multidimensional Theory of Burnout is explained by three core components of burnout that comprise of depersonalization, emotional exhaustion and reduced personal accomplishment (Maslach, 1993; Maslach & Jackson, 1986). In the present study, this give the big picture of how a procrastinator-student being involve in the three symptoms while dealing with stress in the educational setting. In term of emotional exhaustion, academic burnout that clarifies students who experiencing emotionally draining to face the following school day when coping with academic adversity especially the unnecessary stress added from deferring an important school task. In term of depersonalization, procrastinators tend to isolate themselves because of their cynicism belief of unable to complete tasks on time and avoid facing the reality by skipping classes to either finish it or disengage to the stressful academic atmosphere. In term of personal accomplishment, procrastinators having self-judge and low self-

efficacy to achieve their academic goals timely which might dropout from the institution. Hence, researcher make assumption that academic procrastination can affected the level of self-compassion among the students which lead to academic burnout.

In the application of COR Theory unto burnout (Alarcon et al., 2011; Buchwald, & Hobfoll, 2004), it emphasis the situation of "resources" during the burnout process is usually with low, chronic acute loss resources (see Figure 2). It was due to failure of coping with stress or heavy workload that has either threaten towards the available resources or actual loss of the resources which lead to unsuccessful adaptation. According to COR Theory, Hobfoll (1989) reasoned the purpose of our behaviors are to conserve and construct valuable emotional resources. The lack of resource gain will cause stress and burnout as well, which means the investment of resources are important for success adaptation. Hence, individual with sufficient resources and self-awareness will have effective coping styles that are long-term and sustainable to prevent them from self-defeating behavior that affects their well-being and ultimately to cause psychological breakdown. There are four types of resources in this theory, where each of the resources are potentially inter-related and will affect each other. The resource types namely object, personal, conditions and energy resources. For example, a sole breadwinner having unstable monthly income will bring stress towards his family that affects his marriage relationship and self-esteem.
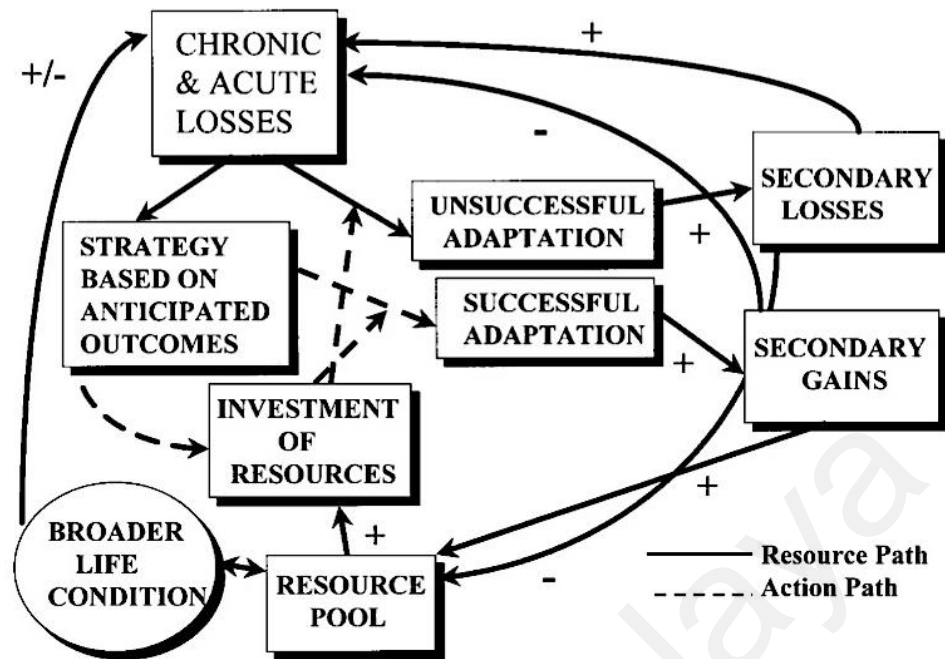
Figure 2. Conservation of Resources (COR) Theory (Hobfoll, 2001)

In the present study, researcher relates COR theory with academic burnout among university students who procrastinate in their studies. In this context, researcher replaces "stress" to "burnout". According to COR theory, the threat of loss to resources could create burnout. For example, self-handicapping behavior itself is a threat strategy to deal with stress because it might affect the student's self-efficacy (personal resource) of not knowing how to start their thesis (inadequacy) that eventually cause stress. Moreover, the actual loss of resources for student is the loss of time due to work or poor time management (energy resource) which in turn stress or burnout academically. The student evaluates finance is more important than academic which explains the cynicism perspective towards university. Furthermore, the lack of resource gain refers to students who spent too much time and energy reading journals but in the end never progress much, which in turn stress and exhaustion too.

Positive psychology has suggested that positive resources elevate the mental health state which assist in coping with life adversity. Self-compassion as part of the examples from the body of positive psychology had suggested by Thurlow (2010) especially that could increase the practitioners' positive affection, social, cognitive and physical resources. Neff (2003a) found that self-compassion able to decrease the stress which seen as the resource to everyone who practice it. Self-compassion has been identified as important source to sustained well-being and clearly associated with recovery and improves psychological adaptability (Thompson & Waltz, 2008).

According to Neff et al. (2007), individual higher in self compassion have been found to have stronger psychological health functioning, such as, positive emotion, happiness, optimism, and wisdom. Based on Leary et al. (2007), self-compassion mindset able to enhance individual's emotional well-being. In the present study, researcher makes assumption based on Neff et al. (2007) that self-compassion as an internal resource (refer to figure 3) that provide strength and encouragement towards the students to deal with academic procrastination and academic burnout. Likewise, if procrastinator-student burning out their self-compassion level that caused by the unnecessary stress from delaying tasks which in turn of generating the three symptoms of burnout that discussed earlier.

Procrastination is one of the self-handicapping strategies (Ferrari & Tice, 2000). Pro longed symptoms of school stress can also cause school burnout (Salmela-Aro et al., 2016). The confusion between the concept of burnout and depression (mental health issue) still exists today, because both of these concepts have similar features (Maslach et al., 2001; Tanaka & Huba, 1984). For example, feelings of hopelessness, distress, sudden sadness, mental exhaustion and physical fatigue are the similar mood conditions and symptoms of both depression and burnout. Hence,

burnout can be used as the similar concepts to resembling depression symptoms (refer to figure 3), which the key explanation is on the "exhaustion" component in depression states. (Papathanasiou, 2015; Toker, Shirom, Shapire, Berliner, & Melamed, 2005).

Therefore, the association relationship among the three variables are examine to understand the predictions of one another, and especially to verify the strength of self-compassion as mediator on the relationship between academic procrastination and academic burnout.
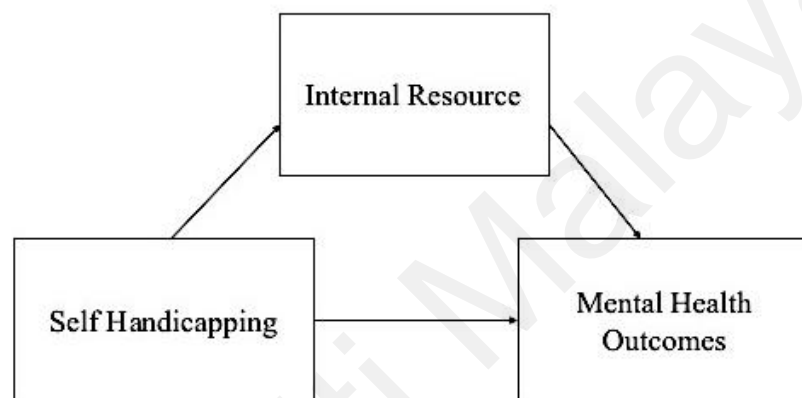
Figure 3. The Proposed Theoretical Framework

2.10 Conceptual Framework

In Figure 4, self-handicapping behaviors are seeming to be a maladaptive strategy to cope with stress. It is always happening on procrastinators who use it to avoid academic failure or poor self-efficacy. Eventually, procrastinator caught up in the stress-cycle that causes other negative mental outcomes, such as burnout or anxiety. Therefore, self-compassion is acting as the internal resource for individuals. This resource should be acquired and maintained to prevent from stress or to cope with adversity.

The conceptual framework explaining the correlation of variables and the mediation analysis in the study is shown in the Figure 4, that illustrates the model of

self-compassion as the mediator on the relationship between academic procrastination

and academic burnout.
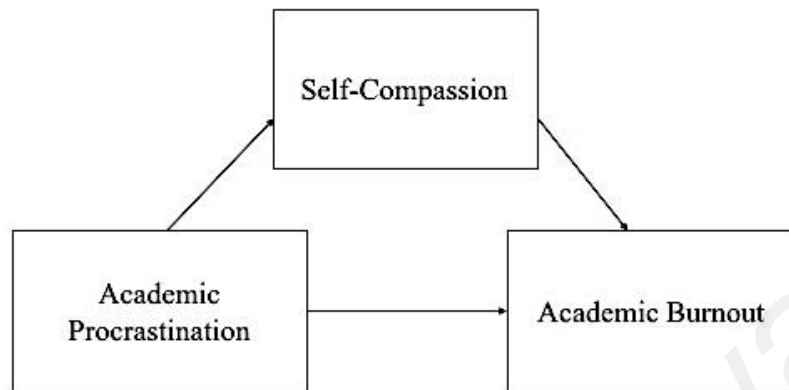
Figure 4. The Proposed Conceptual Framework

2.11 Summary

The fundamental theories as discussed above explains the relationship among the variables. Students who procrastinate as a form of temporary relief in avoiding the stress and failure as a self-handicapping strategic, but it has the tendency to cause more stress towards themselves due to negative self-perceptions and loss of resources in the event of stress. Emotional exhaustion is an emotional resource that trigger a student to procrastinate more, then to have cynicism feelings on themselves, and that will affect their academic efficacy in accomplish their necessary academic tasks. At such, these burnout complexities threaten the students' available resources especially when students perceive it as a loss which unsuccessful to adapt the academic stress and high possibility to cause other mental health issues. From the positive psychology point of view, self-compassion helps individual to understand and being acceptance on the pain existence which deal with own sufferings kindly and openly during the difficult time. In fact, self-compassion promotes individual well-beings and lighten the psychological distresses. Hence, in this study, researcher is examining the internal resource of self-compassion whether is affected by the self-handicapping behavior (academic procrastination), which in turn to cause mental health outcome in term of academic burnout.

CHAPTER 3

METHODOLOGY

3.1 Introduction

This study investigates the relationship among the variables – academic procrastination, self-compassion and academic burnout among students in a Malaysian Public University in Klang Valley. In the following section, research design explains to fulfill the requirement in achieving research objectives in this study. It is to examine the mediation effect of self-compassion on the relationship between academic procrastination and academic burnout among the targeted participants. The details of obtaining the samples describes in this chapter as well. Moreover, researcher discusses the use of the existing instruments, pilot testing, evaluating models procedure, and data analysis process in this section. Next, research follows the procedural details and delivers the ethical concerns in this section as well.

3.2 Research Design

In current study, researcher uses a cross-sectional design for mediation and correlational research design. It is to find the mediation effect and association relationship between variables – academic procrastination and self-compassion, self-compassion and academic burnout, and lastly, academic procrastination and academic burnout. In other words, this research design is not causal comparative research like experimental design. It is because the researcher does not manipulate the variables into different group settings. Hence, this study will not make causal relationship effect, but only for mediation and prediction purpose.

In present study, research emphasizes on examining the mediation effect of self-compassion on the relationship between academic procrastination and academic burnout. There are two main types of mediation effect, which is partial mediation and full mediation. The partial mediation predicts the significant direct effect and indirect effect for the variables, in this study which is from academic procrastination to predicts academic burnout. Hence, there must be significant effect between the relationship academic procrastination and self-compassion, and, self-compassion and academic burnout, which the next step is through bootstrapping to identify the partial mediation effect.

While if there is full mediation, which means with the presence of mediator, there must have non-significant effect between academic procrastination and academic burnout, but the indirect effect through self-compassion (mediator) will be significant. Most importantly, if there is non-significant effect between the relationship either academic procrastination and self-compassion, or self-compassion and academic burnout, which indicates no mediation is taking place.

Therefore, the significant effect of each relationship are needed to be examined first in order to testify the mediation effect of self-compassion by Structural Equation Modeling (SEM) analysis in AMOS and via bootstrapping. In other words, the correlation is only a pre-requisite for the mediation analysis which can be examine in AMOS by a single click.

3.3 Population

Fraenkel, Wallen and Hyun (2015) defined population as the collection of individual with certain specified characteristics which are researcher wishes to make some inferences and generalizable the results of study. The targeted population in this study is all the undergraduate students from each Malaysian public universities in Klang

Valley. As past studies had showed that tertiary students who staying in urban areas experience higher financial issues and mental health challenges that contribute to the academic stress (Mouza, 2015; Ruxyn, 2016; Shamsuddin et al., 2013). Thus, Klang Valley as the biggest urban area in Malaysia is selected as the zone for investigation. The study population is narrowed down to accessible population, where only all the undergraduate students from a Malaysian public university in the zone of Klang Valley is selected. There are total seven public universities in the zone of Klang Valley, only one Malaysian public university is selected to represent the targeted population because the researcher is not doing comparison among the universities.

3.4 Sample

The sample participants in this study is focusing and selecting from the accessible population with certain criteria that described in chapter 1. Participants must be registered as a student in the public university, who can be both part-time and full-time studies from the selected Malaysian public university. According to the table published by Israel (1992), the sample size is hugely depending to the population size. The current population of the selected Malaysian public university is approximately 15,000 undergraduate students, where the necessary sample size is in between 375 and 390 participants (Israel, 1992; Krejcie & Morgan, 1970). Hence, a rough estimation of total 400 participants (inclusive of both males and females) is a safe amount that gathered from the selected Malaysian public university. The reason of research to choose only undergraduate students is to provide purity of data analysis and have no intention to compare the results with postgraduate students.

3.5 Sampling Method

Convenience sampling is used to approach every undergraduate student that is proximity to researcher and easily available (Etikan, 2016), such as meets at the common area near lecture classes or the library. In this study, testify the mediating effect of self-compassion is the main focus, which the purpose is not to draw causal-effect relationship. Based on the nature of this study is also to examine the correlational relationship which cannot prove causal-effect relationship, this means the sample do not necessarily needed to be representative of the whole population. Only causal-effect relationship studies need to use probabilistic sampling methods. This study is not an experimental study or intervention study that request to compare among groups (Suresh, 2011) that need to achieve generalizable purpose. Thus, probabilistic sampling methods are not necessary.

3.6 Study Location

The study is conducted at a Malaysian public university located in the zone of Klang Valley, Malaysia. These institutions are chosen as the location of each quantum area of Klang Valley, and with the intension of selecting the high reputation and quality that representing the intense learning in the tertiary environment.

3.7 Instruments

A total of five section of the survey filled up by the participants (see Appendix A) which all are convey in English language only. The first section is to obtain the informed consent from participants as well as explaining the purpose of this study. The second section is demographic data to be completed, includes of gender, age, ethnicity, year of study, and faculty. The third section onwards require participants to fill up all the English version questionnaires – the Self-Compassion Scale (SCS), the Academic

Procrastination Scale (APS), and the University Burnout Inventory (UBI). The details of each scale as explain below.

3.7.1 Self-Compassion Scale (SCS)

In this study, researcher uses SCS (Neff, 2003a) to measure the self-compassion level of the students. This is a self-reported full-version scale measurement that consisted of 26-item where each is rated using 5-Likert scale, ranging from 1 (almost never) to 5 (almost always). This scale constitutes with 6 sub-scales, where each sub-scale mean scores are total up together with the reverse-score of the negative items, to generate the overall score of self-compassion (Neff, 2003a). Hence, the higher the overall scores, the higher the self-compassion level, where the score ranging from 26 to 130, and mean score ranging from 1 to 5.

This is the 6 sub-scales in SCS, such as self-kindness (five items), self-judgment (five items), common humanity (four items), isolation (four items), mindfulness (four items) and over-identification (four items). The negative phrased items are questions 1, 2, 4, 6, 8, 11, 13, 16, 18, 20, 21, 24, and 25. The reverse scoring if the scored is 5 in one of these items, the adjusted score is 1; then 4 is to 2; 3 is to 3; 2 is to 4; and 1 is to 5. The distribution of items according to subscale is showed in Table 3.1 as follow:

Table 3.1

Distribution of Items according to the Subscales in SCS

Subscales	Item No.
Self-Kindness	5, 12, 19, 23, 26
Self-Judgment	1, 8, 11, 16, 21
Common humanity	3, 7, 10, 15
Isolation	4, 13, 18, 25
Mindfulness	9, 14, 17, 22
Over-Identification	2, 6, 20, 24

3.7.2 Academic Procrastination Scale (APS)

APS is generally new scale that consisted of 25-item to measure the procrastination habits and routine of the students. This scale is responded on a using 5-Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree). This scale inclusive of 6 dimensions of academic procrastination, but generally is preferred to be measured in single underlying factor in optimal examining the level of academic procrastination (McCloskey & Scielzo, 2015). There are total 5 positive items were reverse-scored, which convert to develop the overall scale mean score. Hence, the higher the overall scores, the higher the academic procrastination level, where the score ranging from 25 to 125, and mean score ranging from 1 to 5. The negative phrased items are questions 1, 8, 12, 14, and 25. The reverse scoring if the scored is 5 in one of these items, the adjusted score is 1; then 4 is to 2; 3 is to 3; 2 is to 4; and 1 is to 5.

Previous study had done the scale adaptation to college students in Indonesia by using scale in Bahasa Language, but the details of adaptation are not mentioned (Anggunani & Purwanto, 2019). The researcher changed the word "schoolwork" in the scale to "coursework" to match and adapt to the university setting (refer to Table 3.2). A pilot test was done to validate the changes of the scale to be applicable in Malaysia context.

Table 3.2

Adapted Version of APS

Items	Statements	New Statements
4	I know I should work on school work, but I just don't do it.	I know I should work on *coursework*, but I just don't do it.
5	When working on schoolwork, I usually get distracted by other things.	When working on *coursework* , I usually get distracted by other things.
7	I get distracted by other, more fun, things when I am supposed to work on schoolwork.	I get distracted by other, more fun, things when I am supposed to work on *coursework* .
8*	I concentrate on school work instead of other distractions.	I concentrate on *coursework* instead of other distractions.
9	I can't focus on school work or projects for more than an hour until I get distracted.	I can't focus on *coursework* or projects for more than an hour until I get distracted.
10	My attention span for schoolwork is very short.	My attention span for *coursework* is very short.
16	If an assignment is due at midnight, I will work on it until 11:59.	If an assignment is due at midnight, I will work on it until 11:59*pm*
18	Friends usually distract me from schoolwork.	Friends usually distract me from *coursework*.
19	I find myself talking to friends or family instead of working on school work.	I find myself talking to friends or family instead of working on *coursework*.
20	On the weekends, I make plans to do homework and projects, but I get distracted and hang out with friends.	On the weekends, I make plans to do *coursework* and projects, but I get distracted and hang out with friends.
22	I don't spend much time studying school material until the end of the semester.	I don't spend much time studying *course* material until the end of the semester.
25*	I read the textbook and look over notes before coming to class and listening to a lecture or teacher.	I read the textbook and look over notes before coming to class and listening to a lecture.(deleted *or teacher*)

3.7.3 University Burnout Inventory (UBI)

The third scale to test the students' burnout level is UBI that is adapted and based on UBI which has total of 9 items focus only on students' academic burnout scenario. The items in this scale is rated on a 6-point Likert scale from 1 (completely disagree) to 6 (completely agree). UBI consists of 3 sub-scales, there are no specific items are needed to reverse the score in order to generate the overall burnout score. The score ranging from 9 to 54, and mean score ranging from 1 to 6. Therefore, the higher the overall scores, the greater the academic burnout.

There is the 3 sub-scales in UBI, such as exhaustion at the work of university (four items), cynicism on the meaning of university (three items), and sense of inadequacy at university (two items). All items in the scales are negatively worded. Hence, no reverse scoring is needed to be adjusted. The distribution of items according to subscale is showed in Table 3.3 as follow:

Table 3.3

Distribution of Items according to the Subscales in UBI

Subscales	Item No.
Exhaustion	1, 4, 7, 9
Cynicism	2, 5, 6
Sense of Inadequate	3, 8

The researcher changed the word "schoolwork" in the scale to "academic work" to match with the university students (refer Table 3.4), which is now called UBI. Previous study had done the scale adaptation to university students (Boada-Grau, Merino-Tejedor, Sánchez-García, Prizmic-Kuzmica, & Vigil-Colet, 2015). Researcher also amended item 6, from "brood over" to "worry about" to simplify the

word meaning. A pilot test was done to validate the changes of the scale to be applicable in Malaysia context.

Table 3.4

Adapted Version of UBI

Items.	Statements	New Statements
1	I feel overwhelmed by my schoolwork	I feel overwhelmed by my *academic work*
2	I feel a lack of motivation in my schoolwork and often think of giving up	I feel a lack of motivation in my *academic work* and often think of giving up
3	I often have feelings of inadequacy in my schoolwork	I often have feelings of inadequacy in my *academic work*
4	I often sleep badly because of matters related to my schoolwork.	I often sleep badly because of matters related to my *academic work*
5	I feel that I am losing interest in my schoolwork	I feel that I am losing interest in my *academic work*
6	I'm continually wondering whether my schoolwork has any meaning	I'm continually wondering whether my *academic work* has any meaning
7	I brood over matters related to my schoolwork a lot during my free time	I *worry about* matters related to my *academic work* a lot during my free time
8	I used to have higher expectations of my schoolwork than I do now	I used to have higher expectations of my *academic work* than I do now
9	The pressure of my schoolwork causes me problems in my close relationships with others	The pressure of my *academic work* causes me problems in my close relationships with others

3.8 Validity and Reliability of Instruments

The section below discusses the psychometric properties of the three instruments that used in this study.

3.8.1 Self-Compassion Scale (SCS)

The SCS has been adapted to multiple cultural contexts and languages (Arimitsu, 2014; Benda & Reichová, 2016; Castilho & Pinto-Gouveia, 2011; Chen, Yan, & Zhou, 2011; Deniz, Kesici, & Sumer, 2008). These several studies have demonstrated a steady internal reliability globally of Cronbach's coefficient alpha values at more than 0.90 as an overall SCS and ranging from 0.81 to 0.88 among the 6 sub-scales, which SCS also has been used and validated among general population in non-Western countries such as Taiwan (α = .86), Thailand (α = .86), and Turkey (α = .83) (Deniz et al., 2008; Neff et al., 2008). Meanwhile, the SCS long form (α=0.79) and revised (α=0.805) were valid when tested among Malaysian undergraduates (Ying & Mohd Hashim, 2016). According to Neff (2003a), SCS shows good divergent validity which the scale is not significantly associated with social desirability. Another study (López et al., 2015) also showed the similar results that SCS demonstrates good discriminant validity of the total SCS scores are negatively related to negative affect (r= -.47), perceived stress (r= -.53), neuroticism (r= -.69), depressive symptoms (r= -.53) and rumination (r= -.57).

3.8.2 Academic Procrastination Scale (APS)

The scale development and validation study by McCloskey and Scielzo (2015) had identified the overall internal reliability of the APS was high level at 0.94 Cronbach's coefficient alpha with total 681of participants. This is consistent with all other procrastination scales out there scored an acceptable reliability at the ranges from α = 0.81 to α = 0.92, such as the Tuckman (1991) scale. There are over 70% of the variance between the APS and Tuckman (1991) scale (r = .85), which is highly correlated in sharing the similar content, hence, proven the convergent validity. Furthermore, APS also significantly positively correlated with the validated

procrastination scales such as, Solomon and Rothblum (1984) and Lay (1986) scales. An independence study (He, 2017) was generated the reliability at α = 0.81 in UK, on the 201 both undergraduate and postgraduate students. According to McCloskey and Scielzo (2015), APS also demonstrates an incremental validity to predicts academic performance based on grades while controlling the conscientiousness, $\Delta F(1, 501)$ = 14.32, $p < .001$, $\Delta R2 = .03$.

3.8.3 University Burnout Inventory (UBI)

The validation study done by Salmela-Aro, Kiuru, Leskinen and Nurmi (2009) had revealed SBI-S a good reliable scale where the Cronbach's coefficient alpha of each subscales are more than 0.67 on the sample sizes of 1,418 participants who are European high school students from median age of 16. The Cronbach's coefficient alpha of overall scale is 0.88. Salmela-Aro et al. (2009) also suggested future researcher to use the scale in university context. Another study was adapted the scale for university students and translated to Spanish language (Boada-Grau et al., 2015). The reliability of the Spanish version among the three subscales are above 0.70. The study also highlighted the convergent validity of the subscale with depression, at the correlational values between 0.29 and 0.41 (Boada-Grau et al., 2015). Moreover, the contents of the subscales are similar with Maslach Burnout Inventory Student Survey (Schaufeli et al., 2002).

3.9 Pilot Tests

There were two pilot tests done to examine the reliability of APS and UBI scales separately. The tests were done separately to shorten the questionnaire sets and simplify the answering process, which would increase the participants' likelihood of answering the questionnaires. The purpose of these pilot tests were to measure the

internal consistency of both scales in Malaysia context by looking at the values of Cronbach's coefficient alpha.

A pilot test was done by researcher to examine the reliability of APS scale. As researcher had amended the APS items for adaptation purpose to be applicable to examine the university students' academic procrastination levels. Researcher had collected a total 110 responses (61 females and 49 males). The value of Cronbach's coefficient alpha is 0.921. In this pilot test, the result showed that APS has a high internal consistency which is suitable to be further used with university students.

Another pilot test was done by researcher to examine the UBI scale reliability. As researcher had amended the UBI items for adaptation purpose to be applicable to examine the university students' burnout levels. Researcher had collected a total 129 responses (96 females and 33 males). The value of Cronbach's coefficient alpha is 0.863. In this pilot test, the result indicated that UBI has a high internal consistency which is suitable to be further used with university students.

3.10 Data Collection Techniques / Methods

Information that researcher gathered are based on questionnaires technique via administering online (internet surveys) where respondents self-reported at convenient time and personal pace in answering the questions from three instruments. In fact, researcher used Google Form to create web-based questionnaires to collect survey data due to high confidentiality, lower costs and to reduce data entry human errors.

According to Ward, Clark, Zabriskie and Morris (2014), participants will tend to fill up surveys in a socially more desirable manner when using paper-and-pencil method, compared to online data collection method, because the participants feel their anonymity is more secured when doing it online. As explained, the questionnaires are highly sensitive and personal in examining the students' procrastination level, burnout

level, as well as self-compassion level, whereby anonymity is highly advisable. Additionally, the participants in this research are students in a Malaysian public university which they are mostly in the millennial generation who very internet-savvy and comfortable in using computer in daily life (Ward et al., 2014).

3.11 Procedure of the Study

Before conducting the study, researcher had contact with relevant faculty in the university, in order to get the letter of student status acknowledgement for research endorsement. Another letter is prepared by researcher to get approval for research purpose from the Institute of Postgraduate Studies and Research in the targeted Malaysian public university. These approval letters allowed researcher to collect data in the selected Malaysian public university's premises.

Researcher distributed of the online questionnaires via face-to-face recruitment at the campus premises. Researcher requested informed consents about the participation of the study, explained the purpose of the study, invited the participants to response as honest as possible, and also provided counseling information if participants felt emotionally unease after completing the questionnaires.

Researcher shared short description about the online questionnaires and the estimate time for completing it. The online questionnaires consisted four parts to fill up, which are demographic information, APS, SCS, and UBI. In total, participants would take about 20 minutes to respond to the scales but depending on individual responding and comprehending speed. The responses on all scales were analyzed once researcher left the targeted university of research.

3.12 Ethical Concern

The present study, researcher obtained the informed consent (see Appendix B) from the respondents before completing the questionnaires. One of the key ethical concerns for performing a study is to get a proper informed consent from the participants. According to Armiger (1997), informed consent was defined as a person knowingly and willingly in a clear and obvious way to agree to do anything.

Researcher described any possibility on emotional discomfort or physical harm that may or may not experience by the respondents, any privacy assault and any dignity-threatened feeling, and also any kind of compensation to be received. Unfortunately, respondents were informed there is no expected benefits or compensation from involving in this study. However, researcher provided the helpline and encouraged respondents to approach professional help, such as counseling, if respondents experience any emotional distress after completing the questionnaires.

Moreover, the participants' identity and privacy of the responses were protected, kept in anonymity and confidentiality way, where the individual data strictly will not be disclosed. Researcher notified the participants that everyone has the right to withdraw from the participation whenever if feeling uncomfortable, with or without any reasons. It clarified that participation is entirely voluntary and there are no consequences for refusing to participate. Therefore, these helped in obtaining accurate data from the participants who feel secured and protected.

3.13 Evaluating Models Procedure

Before making any data analyses, all the three scales were assessed to find the measurement models accordingly from a priori model of each scales. It was because measurement model is the first and foremost step to be examined in SEM framework.

Modification of measurement model were needed to mold for the better model fit in this study.

The "model fit" measures plugins from AMOS system (Gaskin & Lim, 2016) performed model fit indices analyses, such as, Root Mean Square Error of Approximation (RMSEA), Comparative fit index (CFI), and Standardized Root Mean Square Residual (SRMR). The rule of thumb guidelines is that RMSEA less than or equal to .06, CFI more than or equal to .95 and SRMR less than .08 represent a good fit model (Gaskin & Lim, 2016; Hu & Bentler, 1999).

Furthermore, the modifications were made based on the suggestions from "model fit" measures plugins for the better and acceptable model fit indices (Gaskin & Lim, 2016). For example, by inspecting the modification indices (MI) but can't fully depending on it, removing the weak loading items ($r < 0.20$) that affecting the construct, or correlating the errors in within-factor (Hooper, Coughlan, & Mullen, 2008).

According to Widaman and Reise (1997), there are four steps for testing measurement invariances, namely Configural Invariance, Metric Invariance, Scalar Invariance and Residual Invariance. In the present study, Configural Invariance was used to meaningfully examine the equivalence of model form across gender group, other invariances were not assessed because this study has no intention to examine group analysis or perform groups comparison. Gender group has well-defined ratio in this study compared to other groups, such as, ethnicity or age. Therefore, the measurement models were examined further by using only Configural invariance analysis to assess psychometric equivalences of each conducts in gender group. In other words, all the three scales were tested model fit in both male and female groups with unconstraint factor loading to ensure data was meaningfully tested in this study

within SEM framework (Putnick & Bornstein, 2016). The analyses are necessary as different gender could respond contrarily in the same scale.

3.14 Data Analysis Procedure

The descriptive statistic of the demographic data analyzes and summarizes into different categories which included mean, standard deviation, percentage and so forth. While the inferential statistic of variables was analyzed, especially through the process of correlation analyses by using SPSS and mediation analysis by using IBM AMOS Statistics.

Next, correlation analyses evaluate the relationship among variables that answers RQ_1 to RQ_3. The usage of SEM analysis is to examine the mediation effect of self-compassion which to answer RQ_4. The interpretation of correlation coefficient is recorded in findings and generally agreed that correlation coefficients above .35 show a better relationship between variables and if below .35 often defined as no value in any predictive sense (Fraenkel et al., 2015). The author also noted that a correlation of at least .50 may have theoretical value and must be obtained before making any rough predictions about individual. A reasonably accurate individual predictions are correlation that value on .65 or above.

First of all, before examining the mediation effect, researcher need to ensure the significant relationship among the variables based on the Baron and Kenny (1986) guideline. Researcher interprets the data by generating the correlation analyses that look at the values of Pearson's coefficient to describe and understand of all the relationship between variables – academic procrastination and self-compassion, academic procrastination and academic burnout, and then, self-compassion and academic burnout. For example, students who has higher level of academic procrastination will predict to have lower self-compassion level. Hence, academic

procrastination and self-compassion are associated with each other, and which academic procrastination predicts poor self-compassion. However, this conclusion doesn't necessarily indicate that one variable causing to another, for instances, having less self-compassion doesn't cause people to develop severe academic procrastination. According to Gunzler, Chen, Wu, and Zhang (2013), in fact, SEM is designed to test a more complex models of mediation in a single analysis which is more effective than follows the Baron and Kenny (1986) guideline for mediation analysis through the standard regression equations as discussed.

Therefore, SEM analysis is to examine for each conditions stated below through AMOS by bootstrapping application. The researcher examined the mediation effect of self-compassion through the direct, indirect and total effects on the variables. Even though, SEM is perform in a single analysis, research is still following the testing guidelines from Baron and Kenny (1986), which under three checking steps to double verify and ensure the mediating effect. The first check, academic procrastination must be associated with self-compassion and then with academic burnout. Second check, self-compassion must also be related to academic burnout. Third check is to control the self-compassion, and there must be a statistically significant reduction in the effect of academic procrastination on academic burnout.

Full mediation is established only if the relation is reduced to a non-significant level. Otherwise, partial mediation develops when the correlation between academic procrastination and academic burnout remains significant yet reduced in the effect size. To highlight that, if there is non-significant effect between the relationship either academic procrastination and self-compassion, or self-compassion and academic burnout, which indicates no mediation is taking place.

3.15 Summary

All administrative processes were followed in the guidance and procedure of research from the public university. Data collection from the participants as planned based on to the targeted population from a Malaysian public university mentioned in the zone of Klang Valley was implemented. The mediation effect of self-compassion was based on the Baron and Kenny (1986) guideline and was testified through SEM analysis in AMOS and via bootstrapping. The pre-requisite for the mediation analysis was through the significant of each relationship by SPSS correlation analyses and the strengths are based on the values of Cronbach's alpha coefficient. The following chapter of research finding presents the analysis of data collected and reporting the research results.

CHAPTER 4

RESULTS

4.1 Introduction

In the first section below, the descriptive findings were reported based on participants' demographic data. Next, the measurement models, their modifications and final models of each scales were reported. The structural model was also formed. Moreover, the outcomes from this study, investigating the relationship among academic procrastination, self-compassion, and academic burnout in university students through correlation and SEM were described in the following section. The mediating analysis of self-compassion on the relationship between academic procrastination and academic burnout was reported in the final section.

4.2 Profile of Respondents

The participants are belonging to the age between 19 to 27 years old (M = 20.68, SD = 1.38). Skewness and kurtosis results showed that their ages were normally distributed, where the criteria of acceptable normal distribution is having both skewness and kurtosis in between -2 and +2 (Gravetter & Wallnau, 2014). Among the students, more than two-thirds are female participants (73%) and less than one-third are male (27%). The gender ratio of students who study in university are usually 3 females:2 males (Hirshmann, 2020) which the males and females in this current study follow this expected gender ratio. Majority of the participants are Malay (51.5%), Chinese occupied one-third (31.5%) of the total participants, 8.8% are Indian and other ethnicities only consist of 8.3%, which including Dusun, Melanau, Bidayuh, Kadazan, Bumiputra Sabah, Japanese, Arabian, Siamese, Indonesian, Sino Native and Bosnian. As for the year of study, there are 176 (44%) students studying in their first year, 76

(19%) students in their second year, 96 (24%) students in their third year, 49 (12.3%)

students each in their fourth year and the remaining 3 (0.8%) students are in their fifth

and sixth year. A detailed distribution of the participants' demographic data is shown

below, in Table 4.1:

Table 4.1

Participants' Demographic Data (N=400)

Demographic Data	Frequency (n)	Percentage (%)
Age		
19	94	23.5
20	106	26.5
21	90	22.5
22	73	18.3
23	25	6.3
24	9	2.3
25	2	0.5
27	1	0.3
Gender		
Male	108	27.0
Female	292	73.0
Ethnicity		
Malay	206	51.5
Chinese	126	31.5
Indian	35	8.8
Others	33	8.3
Year of Study		
Year 1	176	44.0
Year 2	76	19.0
Year 3	96	24.0
Year 4	49	12.3
Year 5	2	0.5
Year 6	1	0.3

4.3 Measurement Models

Measurement model is important to be examined and quantified in SEM, to find out the association of relationships between construct items. The second part of this section presented measurement invariance analysis of the scales namely, Configural Invariance. The Configural Invariance is tested based on gender group.

4.3.1 Measurement Model for APS

The a priori model of APS was tested. The full version of the 25-items APS measurement model with standardized estimates, namely APS Model 1 was used in this study (Appendix D).

However, modifications were made because of poor fitting indices in the first model (see Table 4.2), as there is more than one-third (41 out of 115) of the modification indices (MI) falling between 10.302 and 91.345. Therefore, a few items are removed from the APS to re-examine the best fit model. Three items were removed based on the three lowest Standardized Regression Weights, which included Item 1, Item 12 and Item 25 that the estimate values are .299, .291 and .231 respectively. The second measurement model with standardized estimates, namely APS Model 2 (Appendix D).

Unfortunately, the second measurement model of APS still observed as poor fitting indices (see Table 4.2), where there is one-third (32 out of 94) of MI falling between 10.372 and 88.957. Thus, the researcher decided to use the short form version of the APS which consists of 5-items instead of deleting too many items from the full version of the APS. The APS short form (APS SF) comprises item 2, item 4, item 7, item 17 and item 23. Further analysis was done and the final model was selected to be used in this study, which is a good fit that shown in Table 4.2. The final measurement

model of APS with standardized estimates, namely APS SF Model 3 is shown in Figure 7:
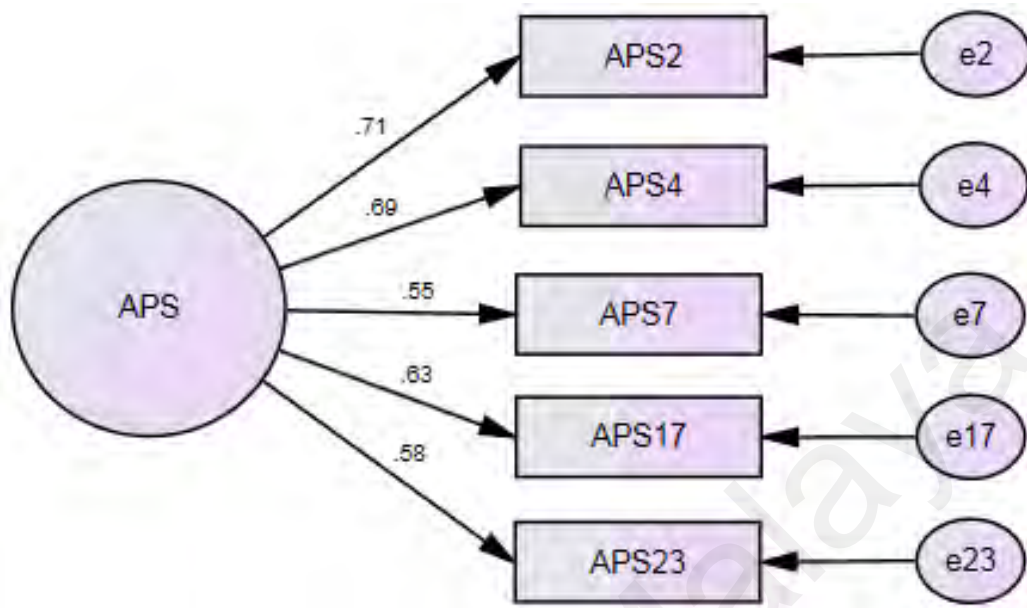
Figure 7. APS SF Model 3

4.3.1.1 Configural Invariance of APS-SF

Configural Invariances of APS short form (SF) was achieved for both genders, with unconstrained factor loadings, X^2 (10, $N = 400$) = 20.1, $p < .05$; RMSEA = 0.05; CFI = 0.978; and SRMR = 0.088.

Table 4.2

Measurement Models for APS

	X^2	df	RMSEA Estimate	RMSEA 90% C.I.	CFI	SRMR	Decision
APS Model 1	1321.0	275	0.098	[.09, .10]	0.692	0.087	Rejected
APS Model 2	1082.7	209	0.102	[.10, .11]	0.722	0.086	Rejected
APS SF Model 3	15.3	5	0.072	[.03, .11]	0.977	0.039	Accepted

4.3.2 Measurement Model for UBI

Next, a priori model of UBI was tested which is Figure 8 without the covariance between e2 and e3. The model with 9-items of UBI did not show misfits. Figure 8 is the first attempt on measurement model of UBI and additional modifications were done to find the best fitting UBI measurement model. The model has been improved by having a covariance between e2 and e3 that are under the same construct. The final measurement model with standardized estimates of UBI based on their modification indices showed better fit and is presented in Figure 8.
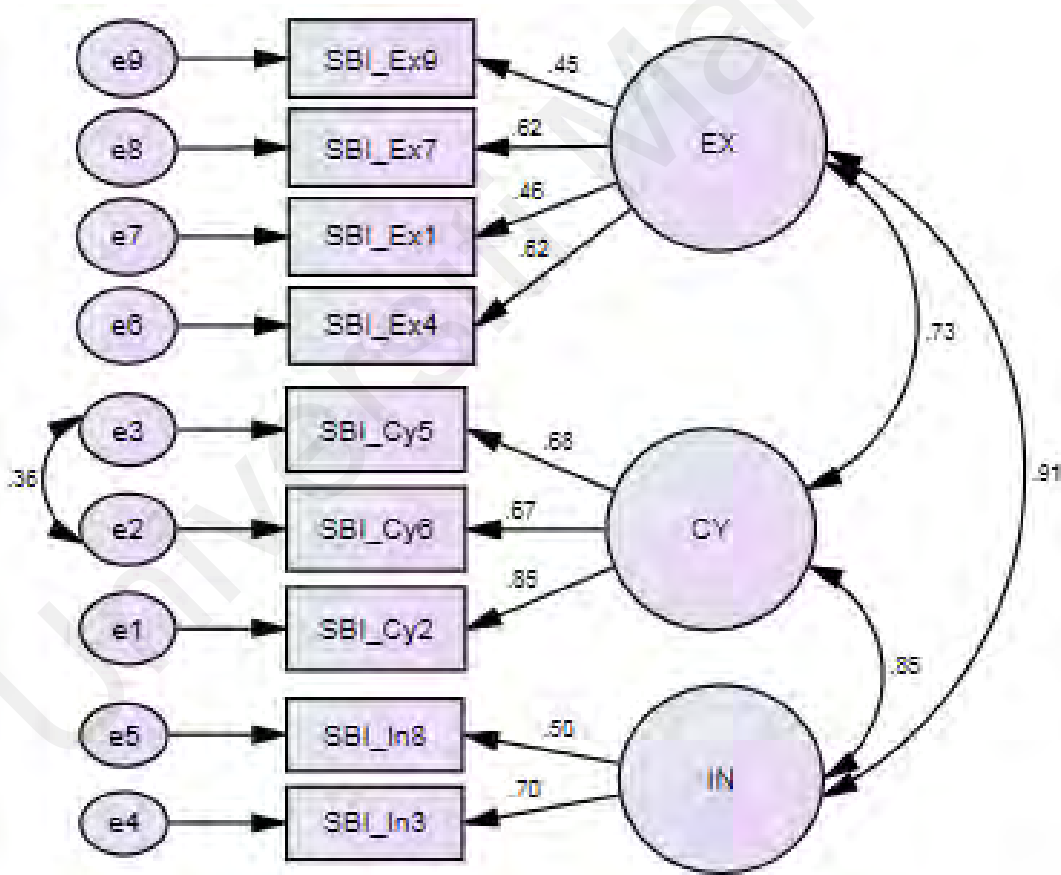
Figure 8. Final Measurement Model of UBI

4.3.2.1 Configural Invariance Results of UBI

The overall model fit of UBI 9 items is highly acceptable. The Configural Invariances of UBI in both males and females are accomplished with unconstraint factor loadings, X^2 (46, $N = 400$) = 108.2, p = .000; RMSEA = 0.070; CFI = 0.956; and SRMR = 0.044.

4.3.3 Measurement Model for SCS

The a priori model of SCS was tested. No modification needed as the measurement model had good fit for the first analysis. The full version of the 26-items SCS measurement model with standardized estimates is shown in Figure 9:
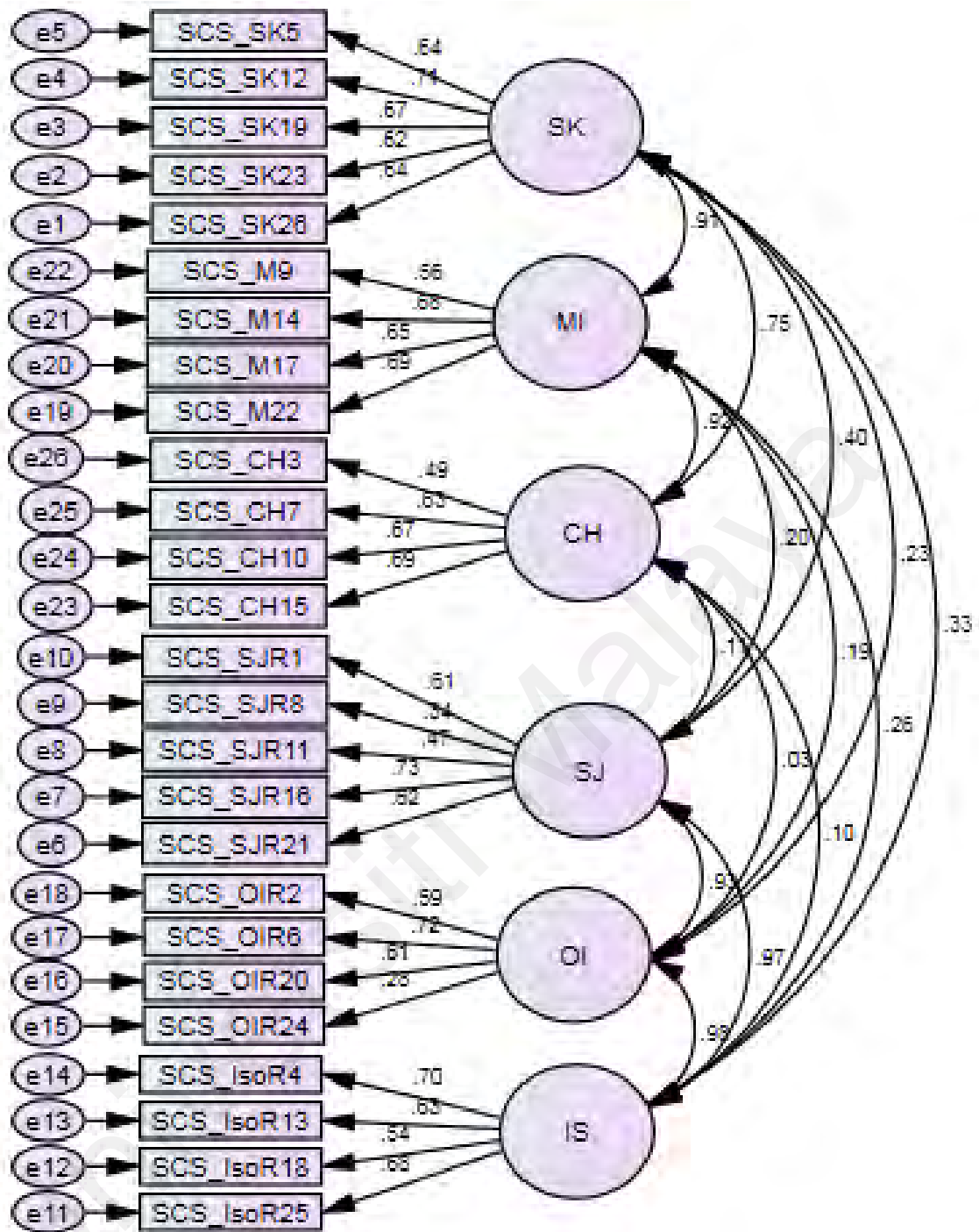
Figure 9. Final Measurement Model of SCS

4.3.3.1 Configural Invariance Results of SCS

The full version of SCS consists of 26 items, and acceptable model fit was achieved. Configural Invariances of SCS achieved in both genders, with unconstrained factor loadings, X^2 (568, $N = 400$) = 1005.9, $p = .000$; RMSEA = 0.054; CFI = 0.904; and SRMR = 0.054.

4.3.4 Measurement Model for Whole Variables

Combination of all the three best fit measurement models of APS SF, UBI and SCS to form the good fitting of full measurement model for this study. Four different models were examined, which are (i) the non-composite score of all the variables, (ii) the composite score of all the 3 variables, (iii) the composite score of 4 variables which SCS is in two-factor model (positive and negative components), and (iv) the composite score of APS SF, UBI and the non-composite scores of the six-factor model of SCS. The above was named Full Measurement Model 1, Model 2, Model 3 and Model 4 respectively.

4.3.4.1 Configural Invariance Results of Whole Variables

The model fit of full measurement models were measured by Configural Invariance analysis for both males and females. The Full Measurement Model 3 and Model 4 had acceptable fit while Model 1 and Model 2 were rejected. The detailed results of each models are shown in Table 4.3

Table 4.3

Fit Indices for Full Measurement Models

	X^2	df	RMSEA		CFI	SRMR	Decision
			Estimate	90% C.I.			
Full Measurement Model 1: *the non-composite score of all the variables*	1237.7	694	0.044	[.04, .05]	0.896	0.054	Rejected
Full Measurement Model 2: *the composite score of all the 3 variables*	780.2	74	0.155	[.15, .16]	0.659	0.177	Rejected
Full Measurement Model 3: *the composite score of 4 variables which SCS is in two-factor model*	160.4	71	0.056	[.05, .06]	0.957	0.060	Accepted
Full Measurement Model 4: *the composite score of APS SF, UBI and the non-composite scores of the six-factor model of SCS.*	936.1	499	0.047	[.04, .05]	0.902	0.056	Accepted

4.4 Structural Model

Skewness and kurtosis results showed that all the variables were normally distributed (refer to Table 4.4), where the criteria of acceptable normal distribution is both skewness and kurtosis in between -2 and +2 (Gravetter & Wallnau, 2014). In addition to that, all the critical ratio values (c.r.) are in acceptable range as well, which is below five (Bentler, 2006). All the data is retained as the Mahalanobis distance are closed to each another, which means there are no specific outliers. Byrne (2010) also states that the Mahalanobis d-squared value of the multivariate outlier appears to be significantly different from the others in the dataset. Kline's (2011) example use significance testing,

p1<0.05, as a strategy for identifying potential multivariate outliers in dataset. This study there is no big gap was found from the Mahalonobis d-squared values among the significance datasets (Appendix E), which is only gradual decrease in values from the first observation 360 onwards. Therefore, all the data is normally distributed in this study.

Table 4.4

Normality Multivariate of All the Variables

Variable	min	max	skew	c.r.	kurtosis	c.r.
APS	1.000	5.000	-.028	-.225	-.361	-1.474
SCS_IS	1.000	4.750	-.223	-1.817	-.215	-.877
SCS_CH	1.750	5.000	.308	2.513	-.276	-1.129
SCS_OI	1.000	4.750	-.348	-2.843	.043	.177
SCS_MI	1.250	5.000	.089	.726	.031	.125
SCS_SJ	1.000	4.600	-.336	-2.744	.112	.459
SCS_SK	1.200	5.000	-.185	-1.507	.243	.994
UBI_IN	1.000	6.000	-.557	-4.546	.090	.366
UBI_CY	1.000	6.000	-.339	-2.765	-.367	-1.499
UBI_EX	1.500	6.000	-.381	-3.109	.379	1.548
Multivariate					19.462	12.562

4.4.1 Structural Equation Modeling (SEM)

Structural Equation Modeling (SEM) is a powerful technique for examining multivariate analysis. In this study, SEM is used to examine the correlation among the three variables, as well as to assess the mediation effect of self-compassion. The researcher combined the measurement models of all three variables to form the first attempt of a full structural model with standardized estimates in this study, namely Full Structural Model 1 (Appendix D).

The first full structural model showed poor fit to the data. A modification based on the suggestion from measurement model plugins in AMOS was to remove APS SF Item 23. After removing APS SF Item 23, a second model was run with standardized

estimates. This model was called Model 1a (Refer to Appendix D). However, this model also showed a poor fit to the data.

The AMOS model plugins now suggested to remove APS SF Item 17. Therefore, another model was run with standardized estimation after removing Item 17. This model was called Model 1b (Refer to Appendix D). However, this model also showed a poor fit to the data.

The AMOS model plugins suggested to remove APS SF Item 7 after running Model 1b. However, the researcher did not proceed with this suggestion because the consequence of this action will leave APS SF with only two items remaining for the academic procrastination variable. As based on Costello and Osborne (2005), a construct which only has two individual items is not presentable as a solid factor. A minimum 3 items per factor is recommended for a factor to be stable. Thus, the researcher decided to use composite models based on the average score of each sub-scale in the SCS and UBI for the fourth attempt with standardized estimates, namely Model 2 (Appendix D).

The fourth attempt (Model 2) in running the full model demonstrated a slight improvement in the model fit among the variables. The only issue was MI errors mainly between the negative composite items of the SCS. Previous researchers have highly encouraged the measurement SCS as a unidimensional factor or six-factor model (Cleare, Gumley, Cleare, & O'Connor, 2017; Neff et al., 2018). Therefore, the fifth attempt was measured according to the SCS six-factor model since it has already shown to be an acceptable measurement model in this study. This fifth attempt is called Model 3 (Appendix D).

The fifth attempt (Model 3) full model still showed poor fit to the data. Another alternative is to separate self-compassion into a two-factor model, which also showed

an acceptable fit in this study. It was also proposed by previous researchers that self-compassion can be measured as a two-factor model (López et al., 2015; Muris, 2016). According to the exploratory factor analyses, the first model that termed as "self-compassion" was drawn from the positive components of self-compassion which inclusive of self-kindness, mindfulness and common humanity. While the other factor termed as "self-criticism" was compiled from the remaining three subscales of self-compassion which are self-judgement, over-identification and isolation (López et al., 2015). It is also recommended by previous study (Kumlander, Lahtinen, Turunen, & Salmivalli, 2018) that two-factor model revealed acceptable fit indices.

Neff et al. (2018) also shared that SCS consists of both "compassionate" and "reduced uncompassionate" component that represents both positive and negative component in SCS. Neff et al. (2018) further justified that "reduced uncompassionate" were represented by the SCS negative items which explains the absence of the compassionate behavior. Self-compassion that contains two models which are drawn from the positively and negatively-worded items, which also named self-warmth (self-kindness, mindfulness and common humanity) and self-coldness (self-judgement, over-identification and isolation) in the past study from Yip, Mak, Chio, and Law (2016). Therefore, further modifications of the model were made by separating SCS into two-model structure based on the previous study, which named positively (SCS_Pos) and negatively-worded items (SCS_Neg) in this study.

Therefore, Model 4, which was the sixth attempt was run using the composite models with two-model structure arrangement. In Model 4, no further modification was needed as the structural model has good fit. In this final model, the factor loadings are in the expected positive direction and are all greater than .71 among constructs. According to Hair, Black, Babin and Anderson (2009), it means that each factor

obtains adequate variance from the variables. None of the factors are required to be removed, as all the factor loadings are above the minimum of .50 (Costello & Osborne, 2005; Hair et al., 2009). Thus, this is the final attempt with standardized estimates, namely Final Full Structural Model 4 (refer to Figure 15). Fit indices of all the models are summarized in Table 4.6.

Table 4.6

Fit Indices for Full Structural Models

	X^2	df	RMSEA		CFI	SRMR
			Estimate	90% C.I.		
First attempt Full Structural Model 1: *None removed.*	1990.2	727	0.066	[.06, .07]	0.759	0.128
Second attempt Model 1a: *removed APS item 23*	1916.9	689	0.067	[.06, .07]	0.759	0.130
Third attempt Model 1b: *removed APS item 7*	1854.4	652	0.068	[.06, .07]	0.757	0.133
Fourth attempt Model 2: *using composite models of each scales.*	707.5	33	0.226	[.21, .24]	0.580	0.234
Fifth attempt Model 3: *using composite models of APS and UBI scales, and SCS six-factor model non-composite score*	1841.2	393	0.096	[.09, .10]	0.632	0.191
Sixth attempt Final Full Structural Model 4: *Structural changed by splitting SCS.*	100.4	31	0.075	[.06, .09]	0.957	0.082

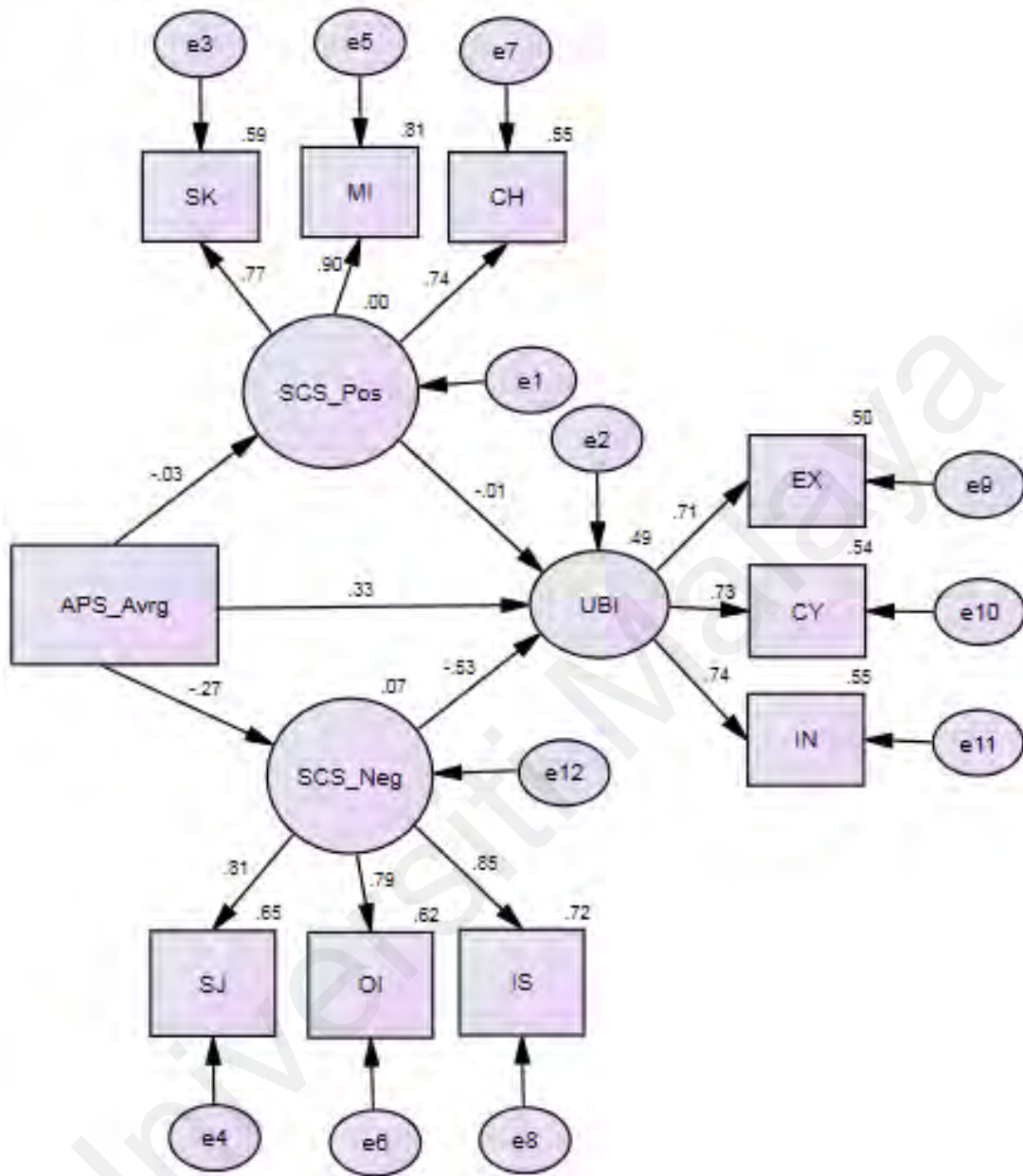*Figure 15*. Final Full Structural Model 4

4.5 Correlation Results

All the scales had gone through a series of analyses to obtain the best model fit for this study. It was began with the a priori model of each scale that underwent modifications and model fit indices analyses, which produced a measurement model with acceptable model fit for each of the scales. The combination of the three acceptable model fit

measurement models (APS SF Model 3, final measurement model of UBI and final measurement model of SCS) forms a full structural model for the SEM framework.

Modifications were also done to obtain the full structural model that is the acceptable model fit for this study, which is called Final Full Structural Model 4. Thus, Final Full Structural Model 4 was used for correlation and mediation analysis in this section. Hence, the process of refinement which was to identify and remove the weaknesses of a priori models, in order to acquire a revised model (Final Full Structural Model 4) that accurately represents the relationship among variables. The below section showed the results on the final full SEM based on the final measurement model.

4.5.1 Hypothesis 1

The first section analyses research question 1 to discover the correlation between academic procrastination and academic burnout (refer to Figure 16). Pearson correlation coefficient was used to answer this question. Table 4.7 shows the correlation matrix between academic procrastination (APS) and academic burnout (UBI) as well as each of their respective sub-scales. The total score of academic procrastination short form (APS SF) was significantly correlated with the score of academic burnout (UBI), where $r = 0.411$, n = 400, $p < 0.001$.

Furthermore, the findings also indicated that academic procrastination is moderately correlated with the scores of every sub-scales of academic burnout. The findings show that academic procrastination is significant-positively correlated with exhaustion (UBI_Ex), $r(398) = .264$, cynicism (UBI_Cy), $r(398) = .412$, and sense of inadequacy (UBI_In), $r(398) = .353$, which are all significant at $p < 0.05$. In other words, the higher the academic procrastination scores, the higher the exhaustion, cynicism and sense of inadequacy levels. Therefore, hypotheses 1 is supported.
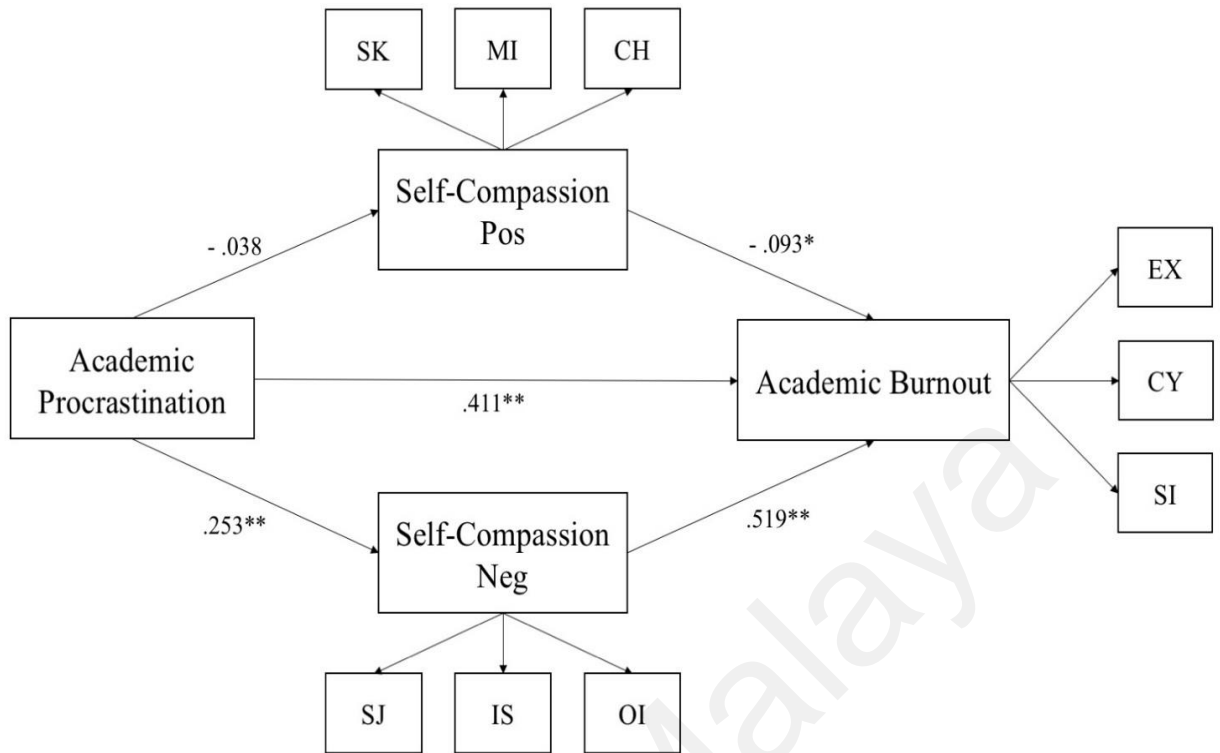
Figure 16. The Pearson Correlation Values in the Final Full Structural Model 4

Table 4.7

Summary of Pearson's Correlations Coefficient among All Scales

	Means (SD)	1	2	3	4	5	6	7
1. APS_SF	2.92 (.76)							
2. UBI	4.05 (.80)	.411**						
3. UBI_Ex	4.07 (.84)	.264**	.846**					
4. UBI_Cy	3.83 (1.15)	.412**	.852**	.504**				
5. UBI_In	4.38 (.93)	.353**	.765**	.535**	.539**			
6. SCS	3.06 (.47)	-.189**	-.392**	-.334**	-.337**	-.288**		
7. SCS_Pos	3.40 (.63)	-.038	-.093	-.058	-.120**	-.034	.769**	
8. SCS_Neg	2.70 (.62)	.253**	.519**	.461**	.409**	.419**	-.764**	-.181**

Note. *. p < 0.05 level
       **. p < 0.001 level

4.5.2 Hypothesis 2

The second section analyses research question 2 to assess the correlation between academic procrastination and self-compassion. According to the Pearson correlation coefficient analysis findings (refer to Table 4.7), the total score of academic procrastination short form (APS SF) is weakly and negatively correlated with the scores of overall self-compassion (SCS), $r(398) = -0.189$, $p < 0.001$. Thus, hypotheses 2 is also supported.

Unfortunately, there is no significant relationship between academic procrastination (APS_SF) and self-compassion positively-worded items (SCS_Pos), $r = -0.038$, $p > 0.05$. On the other hand, academic procrastination (APS SF) showed a statistical significant positive relationship with self-compassion negatively-worded items (SCS_Neg), ($r = 0.253$, n = 400, $p < 0.001$). The significant positive correlation indicated that total score of academic procrastination increases together with the total score of self-compassion negatively-worded items.

4.5.3 Hypothesis 3

The third section analyses research question 3 to find out the correlation between self-compassion and academic burnout. Pearson correlation coefficient was used to examine this question. Table 4.7 shows the Pearson correlation coefficient between self-compassion (SCS) and academic burnout (UBI) as well as their respective sub-scales. The total scores of overall self-compassion (SCS) was moderately and negatively correlated with the score of academic burnout (UBI), where $r = -0.392$, n = 400, $p < 0.001$. Thus, hypotheses 3 is also supported in this study.

Unfortunately, there is no significant relationship between self-compassion positively-worded items (SCS_Pos) and academic burnout (UBI), $r = -0.093$, $p > 0.05$. The self-compassion positively-worded items is weakly correlated with the scores of

cynicism (UBI_Cy), ($r = -0.120$, $p < 0.001$), one of the sub-scales of academic burnout. While, self-compassion negatively-worded items (SCS_Neg) showed strong statistical significant positive relationship with academic burnout (UBI), ($r = 0.519$, n = 400, $p < 0.001$). Furthermore, the findings also indicated that self-compassion negatively-worded items is moderately correlated with the scores of every sub-scale of academic burnout. The findings show that self-compassion negatively-worded items (SCS_Neg) is significant-positively correlated with exhaustion (UBI_Ex), $r(398) = 0.461$, cynicism (UBI_Cy), $r(398) = 0.409$, and sense of inadequacy (UBI_In), $r(398) = 0.419$, which are all significant at $p < 0.001$.

4.6 Mediation Results – SEM

The path diagram of Figure 17 is the mediation model consisting of both causal paths of the direct and indirect effects with standardized estimates. The estimate of the direct effect from academic procrastination and academic burnout was still significant with decrease in value. All the estimated paths for the indirect effects from academic procrastination to self-compassion, and from self-compassion to the academic burnout are significant. However, there is no significant mediation for self-compassion positively-worded items between academic procrastination and academic burnout. Therefore, results only showed partial mediation of self-compassion negatively-worded items that had an indirect effect between academic procrastination and academic burnout ($\beta = 0.145$, $p < 0.001$).
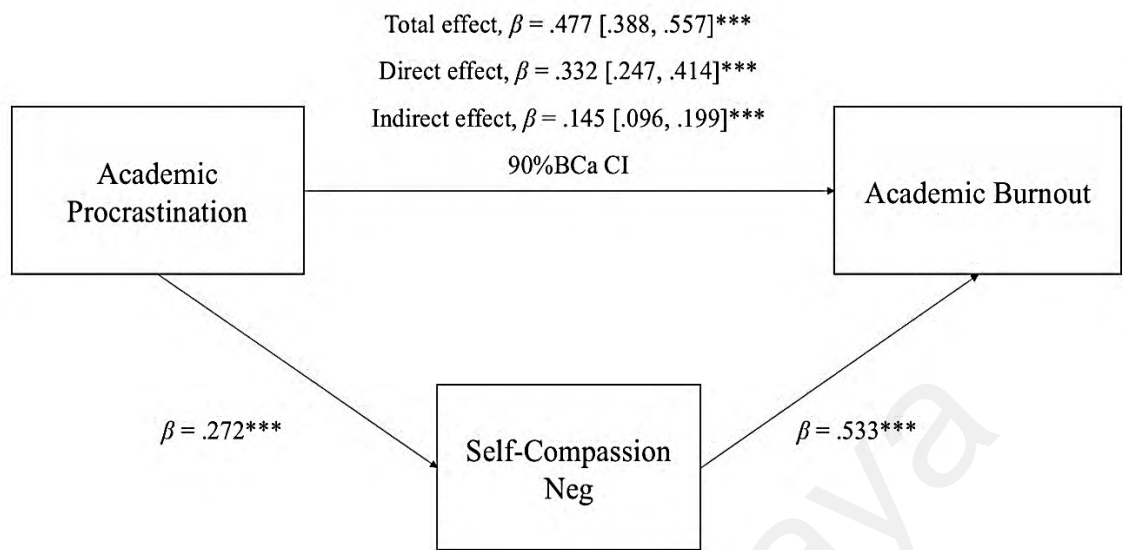
Figure 17. The Path Diagram

     The mediation analyses results confirmed that self-compassion negatively-worded items partially mediates the relationship between academic procrastination to academic burnout, with the condition on the presence of self-compassion positively-worded items in the model (acting non-significantly). In other words, academic procrastination was positively related to self-compassion negatively-worded items (direct effect, β = 0.272), which was positively related to burnout (direct effect, β = 0.533). In addition, results indicated that the direct effect of academic procrastination on academic burnout still remains significant (β = 0.332, p < 0.001) when controlling for self-compassion negatively-worded items and self-compassion positively-worded items. This indicated that self-compassion negatively-worded items only partially mediated the relationship between academic procrastination and academic burnout, while self-compassion positively-worded items did not mediate in the relationship.

4.7 Summary

Research findings have indicated that there is a significant positive relationship between academic procrastination and academic burnout among undergraduate students. Similarly, there is significant positive relationships between academic procrastination and self-compassion negatively-worded items, as well as, self-compassion negatively-worded items and academic burnout. Research results also identified that self-compassion negatively-worded items partially mediate the relationship between academic procrastination and academic burnout. There may be other potential factors that mediate the relationship between academic procrastination and academic burnout which will be discussed in the next chapter.

CHAPTER 5

DISCUSSION

5.1 Introduction

This chapter presents the summaries of research findings, discussions, implications, suggestions and recommendations for research on the relationship among the three main variables of this study. The discussion will focus on interpreting the findings of this study which examined the relationship among the three variables. The mediation effect of self-compassion on the relationship between academic procrastination and academic burnout among undergraduate students was also discussed.

5.2 Summary of findings

The current research was conducted by using questionnaires to examine the relationship among academic procrastination, academic burnout and self-compassion of undergraduate students. The second purpose of the research is to investigate the mediation effect of self-compassion on the relationship between academic procrastination and academic burnout. In the process of arriving at the final full structure model 4 in this study, the researcher had to change the measurement model of the SCS from a single factor to two-factors. Although this change was not expected, it allowed for a more in-depth analysis. For example, to examine the relationship between academic procrastination and self-compassion positively-worded items, and, between academic procrastination and self-compassion negatively-worded items. Also, to examine the relationship between self-compassion positively-worded items and academic burnout, and, between self-compassion negatively-worded items and academic burnout. Therefore 4 additional research objectives and 4 research questions are added as follow,

O$_{2a}$ To examine the significant relationship between academic procrastination and self-compassion positively-worded items among undergraduate students in a Malaysian public university.

O$_{2b}$ To examine the significant relationship between academic procrastination and self-compassion negatively-worded items among undergraduate students in a Malaysian public university.

O$_{3a}$ To examine the significant relationship between self-compassion positively-worded items and academic burnout among undergraduate students in a Malaysian public university.

O$_{3b}$ To examine the significant relationship between self-compassion negatively-worded items and academic burnout among undergraduate students in a Malaysian public university.

RQ$_{2a}$ Is there any significant relationship between academic procrastination and self-compassion positively-worded items among undergraduate students in a Malaysian public university?

RQ$_{2b}$ Is there any significant relationship between academic procrastination and self-compassion negatively-worded items among undergraduate students in a Malaysian public university?

RQ$_{3a}$ Is there any significant relationship between self-compassion positively-worded items and academic burnout among undergraduate students in a Malaysian public university?

RQ$_{3b}$ Is there any significant relationship between self-compassion negatively-worded items and academic burnout among undergraduate students in a Malaysian public university?

The results of this study from the previous chapter are summarized as follows:

- The first three hypotheses (O_1, O_2 and O_3) in the current study were supported.

- There is a significant positive relationship between academic procrastination and academic burnout. The positive correlation of the two variables is consider fairly moderate, where $r = 0.411$, n = 400, $p < 0.001$.

- There is also significant positive relationship between academic procrastination and the sub-scales of academic burnout. The correlation coefficients of academic procrastination with exhaustion, cynicism and sense of inadequacy are .264, .412 and .353 respectively which are all significant at $p<0.001$. The correlations of all the three sub-scales are weak.

- There is no significant relationship between academic procrastination and self-compassion positively-worded items. But, there is a significant negative relationship between self-compassion positively-worded items and academic burnout, where $r = -0.093$, n = 400, $p < 0.05$.

- There is a significant positive relationship between academic procrastination and self-compassion negatively-worded items. The positive correlation of the two variables is consider rather weak, where $r = 0.253$, n = 400, $p < 0.001$.

- There is a significant positive relationship between self-compassion negatively-worded items and academic burnout. The positive correlation of the two variables is consider moderate, where $r = 0.519$, n = 400, $p < 0.001$.

- There is also a significant positive relationship among self-compassion negatively-worded items, exhaustion, cynicism and sense of inadequacy are .461, .409 and .419 respectively which are all significant at $p<0.001$.

- The mediation hypothesis (O_4) shows only partial mediation found in self-compassion negatively-worded items between academic procrastination and

academic burnout. There is no mediation effect in self-compassion positively-worded items.

Furthermore, the conceptual framework of this study was also adjusted and modified according to the separation of the SCS into positive and negative for the structural model. In reflecting the findings of this study, the Figure 18 shows the revised conceptual framework.
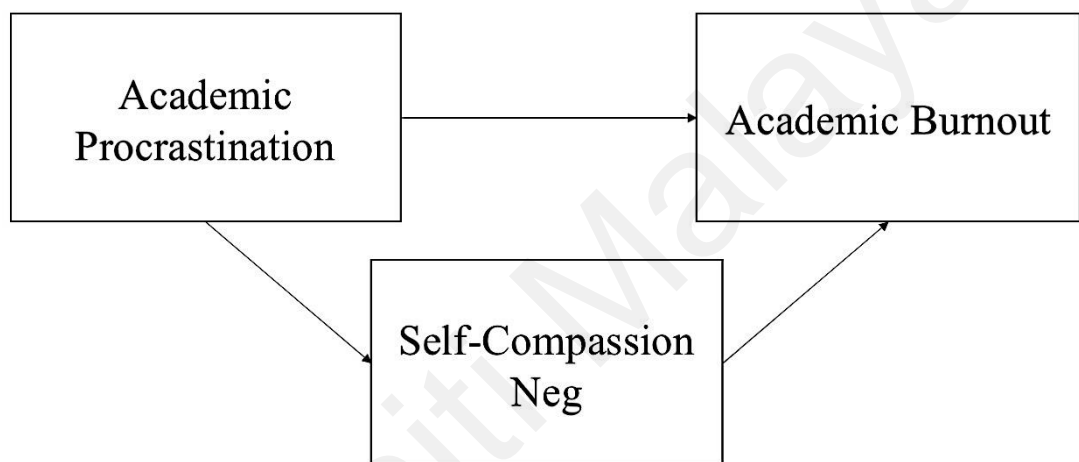
Figure 18. The Revised Conceptual Framework

5.3 Relationship between Academic Procrastination and Academic Burnout

As referring to the first hypothesis, academic procrastination was positively related to academic burnout. These findings extend Balkis' (2013) findings that increased academic procrastination is associated with increase of academic burnout among tertiary students in Turkey. The explanation of such relationships heavily depends on the fact that students who tend to procrastinate, and complete the required assignment late, will have a limited time to study for examination (Balkis, 2013), which in turn makes students want to escape from their academic environment (Schaufeli et al., 2002). In other words, the academic burnout level is affected by the academic procrastination attitude of students who are reluctant to complete their academic

related activities on time. The tendency of completing academic responsibilities late can trigger high stress, illness and anxiety (Haycock et al., 1998; Onwuegbuzie, 2004). It could be explained that the habitual procrastination behavior will have gathered more stress that prolonged the stressful situation of the students which leads to school burnout (Salmela-Aro et al., 2016). In additional to that, Balkis (2013) claims that students who procrastinate tend to show stress completing academic responsibilities under time pressure. This may lead deprivation of energy and impairment in academic performance (Balkis & Duru, 2009). This possibly explain the above significant relationship.

Past studies also showed that academic burnout will predict academic procrastination (Ocal, 2016), with 32.3% of the variance explained by academic procrastination compared to other variables, such as, academic success and academic self-efficacy. It means that, both academic procrastination are acting like double-edged swords. Procrastination seems to provide an attractive benefit at the beginning for short period of time, but in the long run, it will bring more harm than initial advantages because the stress borne by the procrastinators is way much (Tice & Baumeister, 1997). Hence, the findings from this study were similar to past studies which have shown both academic procrastination and academic burnout are related to mental health, specifically stress, depression, as well as physically, mentally or emotionally fatigue (Cherniss, 1980; Onwuegbuzie, 2004). Therefore, students who function well in managing academic procrastination at any point of time during the academic challenges, will be more likely to cope well or prevent from academic burnout.

5.4 Relationship between Academic Procrastination and Self-Compassion

Correlation analysis was done on academic procrastination and self-compassion (both positively and negatively-worded items). The results indicated that academic

procrastination has no significant relationship with SCS positively-worded items. This finding is inconsistent with most of the literature discussed. The initial investigation hypothesized that academic procrastination would be related to self-compassion, but due to the poor fitting model in a single factor of self-compassion, a further analysis was needed to examine the differences between positively and negatively-worded items, unfortunately, the data showed contrasting outcomes. Although the results SCS positively-worded items was not consistent with past research, the SCS negatively-worded items were consistent with findings from past studies (Einabad, Dorban, & Nainian, 2017). It can be explained that academic procrastination is a failure of self-control (Sirois, 2014) that leads to self-blame (Terry & Leary, 2011) and over-identification with negative emotions, such as shame and guilt (Blunt & Pychyl, 2005; Fee & Tangney, 2000). In other words, when students procrastinate academically is because they fail to manage their time which tend to isolate and judge themselves negatively that immerse in both negative thoughts and emotions.

Moreover, based on Neff et al. (2005), a lack of self-compassion implies the fear of failure which possibly explains one of the reasons of procrastination which may be due to the sense of fearing to fail (Steel, 2007). This fear of failure can be explained on how students perceive their control over their academic situation (Martin, Marsh, & Debus, 2001a, 2001b). For example, when students perceive that they have less control, they tend to engage in poor coping strategies (e.g., self-handicapping behavior, learned helplessness) that lead to low productivity. Therefore, procrastinators fall into the traps of self-judgement, isolation and over-identification with negative emotions whenever delaying the academic responsibilities which explains the cognitive and behavior engaged with fear of failure (Martin & Marsh, 2003).

5.5 Relationship between Self-Compassion and Academic Burnout

Correlation analysis was performed again to examine the relationship between self-compassion and academic burnout, again only SCS negatively-worded items are significantly associated with academic burnout. The results showed a moderate association in the relationship. Past studies have proven that self-coldness (self-compassion negatively-worded items) is significantly related to distress and disturbed well-being among undergraduate students from a Midwestern university (Brenner et al., 2018). The relationship between psychological well-being and burnout also correlated on students (Ríos-Risquez, García-Izquierdo, Emiliana de los Ángeles, César, & Solano-Ruiz, 2018). Thus, based on the findings, this means that when students tend to be isolated, self-judged and being over-identified on academic issues, they tend to have higher level of academic burnout that can be explained by the poor well-being which is feeling distressed and unsettled.

Neff et al. (2008) also found a moderately-strong negative association between self-compassion and depression (r values in the range from -.53 to -.61, p <.01), after controlling for gender, among undergraduate students from Taiwan, US and Thailand. Student burnout also similarly indicated moderate correlation to student depression (r= .61, p < .001) among undergraduate students (Aliyeva, Ro, Pawlow, & Segrist, 2018). Therefore, this study outcome do support Neff et al. (2008) in viewing that self-compassion correlates with academic burnout. Indeed, this study showed consistent results which mean self-compassion is an important indicator to mental health outcomes, where academic burnout is the example in this study.

Schonfeld and Bianchi (2016) provides proof that the overlap of burnout-depression has been underrated by previous studies. It is possible that the condition of burnout would be a form of depression. There is 86% of the burnout participants rated

and met the criteria of depression diagnosis. Therefore, the lower the self-compassion level, the more the psychopathology condition – depressive, stress and anxiety symptoms (MacBeth & Gumley, 2012), which means also the higher the academic burnout level. Moreover, Neff et al. (2005) also expects that self-compassion would help students to face and accept their feelings when perceive on academic failure situation by the coping strategy called adaptive emotion-focused coping skill. Simply where Neff et al. (2005) sees self-compassion as a whole unidimensional concept in explaining the effective of adaptive emotion-focused coping skill.

5.6 Mediating Effect of Self-Compassion on the Relationship between Academic Procrastination and Academic Burnout

As for the mediation analysis, the findings showed there is only partial mediating effect of self-compassion negatively-worded items on academic procrastination and academic burnout. This research result is similar with previous research by López, Sanderman, and Schroevers (2018), as self-compassion negatively-worded items served as stronger predictors to depressive symptoms (one of the mental health outcomes) where isolation is the strongest predictor to the depressive symptoms, as compared to self-compassion positively-worded items. In addition to that, another study shows is that over-identification and self-judgement fully mediated on the relationship between procrastination and anxiety (Salehzadeh, Dorban, & Nainian, 2017). It explains that students who competing with each other in academic performance tends to generate anxious feeling which eventually self-judging and immerse with negative feelings, then procrastinate. Indeed, procrastinators who have a higher academic burnout level (one of the mental health outcomes) are more prone to experience self-coldness (self-compassion negatively-worded items). In another words, this means students are likely to be over-identified with their emotions and

thoughts, isolating themselves from such experiences or place judgement to themselves when dealing with stressful academic challenges.

It is proven that this study shows congruence mediating result of self-compassion as compared to the study that measuring self-efficacy as the mediator between academic procrastination and academic burnout in China context (Zhi-Gang, 2010). Self-compassion and self-efficacy showed mediational paths that able to predict positive and negative mental health outcomes (Neff, 2003a; Neff et al., 2007; Schönfeld, Brailovskaia, Zhang, & Margraf, 2019). The three negative components of self-compassion are negatively correlated to self-efficacy (Iskender, 2009). For example, students will be isolated when judging their own capabilities and overwhelmed by their negative emotions in the process of delaying their academic responsibilities and facing the burnout tendency. While indeed, self-efficacy has been revealed to be negatively correlated with maladaptive variables such as psychological stress (Grøtan, Sund, & Bjerkeset, 2019), burnout and procrastination (Hall, Lee, & Rahimi, 2019). Our study supports and indicates that self-judgement, isolation and over-identification are playing a part in intervening undergraduate students by the way one's capabilities in dealing with academic adversity.

Interestingly, our results did not show any relationship of self-compassion positively-worded items with both of the variables. It could be explained by another study that suggested not to use SCS as single factor because the positive constructs of SCS were less related to psychopathology than the negative constructs (Muris & Petrocchi, 2016). Moreover, Neff et al. (2018) claimed that negative components of self-compassion are indeed better and more solid in explaining the relationship between psychopathology and self-compassion. Indeed, procrastinators fall into the traps of self-judgement, isolation and over-identification with negative affections

whenever delaying the academic responsibilities (Teasdale et al., 1995). Therefore, the negative constructs of SCS are more appropriate in predicting the negative mental health outcomes of students (e.g., academic burnout, stress) when they procrastinate academically.

5.7 Implications for Theory and Research

Two theories were included in chapter 2, which is Multidimensional Theory of Burnout and Conservation of Resources Theory. How the mediation effect of self-compassion negatively-worded items discovered in this study fit with these theories is discussed in the following section.

Maslach stated that burnout in the job is a prolonged response to chronic interpersonal stressors on the job. This response are conversed in three main dimensions, which include sense of ineffectiveness to preform job tasks, overwhelming exhaustion and cynicism feeling. In this study, three negative components of self-compassion (self-judgement, isolation and overidentification) are most likely to linked to the three responses of Maslach job burnout. The results of this study aligned with Maslach's Multidimensional Theory of Burnout that is consistent and applicable in students' academic life and adversity. For example, students burnout academically also feel inadequate to complete assignments due to tight deadlines (self-judgement), respond in emotional exhaustion and draining (overidentification), and likely to disconnect with others (isolation).

Conservation of Resources Theory stated the loss of resources define stress. It has much greater impact in psychological distress than gaining resources. When relating the theory to this study, the essential resources for students are "energy resource" (time), and "personal resource" (self-compassion). Losing of these essential resources are crucial. For instances, students who procrastinate has lesser time to

complete their academic tasks which created stress and burnout in the long term. However, being aware of self-compassion negatively-worded items might able to aid the stressful situation among students. Thus, more implication for practices are discussed in the following section.

5.8 Implications for Practice

This study examined the relationship among the three variables, which are academic procrastination, academic burnout and self-compassion among undergraduate students in a Malaysian public university in Klang Valley. Also, the study inspected the mediation effect of self-compassion in the relationship between academic procrastination and academic burnout.

The university environment should be a place for students to enhance their intellect, but there are also many challenges that students encounter in university life which contribute to stress (Pariat, Rynjah, Joplin, & Kharjana, 2014). Moreover, the inability of these students to overcome the challenges in university life could be one of the most common reasons for students to withdraw from their tertiary education (Abdullah, Elias, Mahyuddin, & Uli, 2009). One of the findings of this study was that undergraduate students reported a moderate relationship between academic procrastination and academic burnout. Therefore, lecturers should also from time to time check on the students' well-beings or challenges (stressors) in term of academic and other aspects. For example, lecturers can ask and check whether students are burnout, if the class responds negative feedback, which lecturers can consider to extend the assignment deadlines or reduce the difficulties of assignments to prevent the students feeling burdensome.

The process of completing academic responsibilities is stressful and will be reflected in behavior, such as, being late to class, asking for extending deadlines, being

isolating, self-judging or overly identify in terms of negative emotions. These behaviors indirectly reflecting students' procrastination levels and the possibility of academic burnout. Moreover, as previous researches found self-compassion was closely correlated with better mental wellbeing (Muris et al., 2016) and was also a strong indicator of good mental health in Malaysian undergraduate students (Kotera & Ting, 2019). Since the negatively-worded items predict burnout better, which the counsellors can focus on assessing students using the negatively worded items in the SCS in order to better understand their academic burnout and procrastination. Thus, implementing a relevant self-compassion program or workshop to help enhance student's self-compassion. While, for group counseling session also be able to support students on their academic adversity, which the students able to experience more positive well-being or lesser distress (Fong & Loi, 2016).

5.9 Limitations

The first obvious limitation of this study is APS short form was used instead of the full version of APS. Indeed, using the short form of a scale may not be as accurate in describing and measuring the construct. However, based on research by Ziegler, Kemper, and Kruyen (2014), it is suggested that short-form scales are suitable to be used in the context of clinical settings, such as to measure the mental disorders. Although the used of short-form scale in this study may not serve the same purpose with long version scale, it is still somewhat useful for the study.

Moreover, the unequal distribution of participants in terms of year of study might be affecting the research outcomes. There are more respondents who are younger students (year 1) compared to older students (year 4). It seems that younger students are more approachable and higher possibly to give more desirable responses as they just entered undergraduate life journey. Another explanation is that older

students be more aware of their procrastination habits for many years (Aziz et al., 2017), which older students may not likely to reveal the full information about their procrastination because it may make them look weak in public (Aziz et al., 2017).

This study was constrained to a Malaysian Public University in the Klang Valley which has limitation to observe and examine the relationship among three variables in the general education population. In other words, because the sample is limited and might have bias, therefore the findings of this study are not as generalizable to the larger population.

5.10 Recommendations for Future Research

This study focused on the relationship among academic procrastination, academic burnout and self-compassion among the undergraduate students. Future studies should also focus and explore on other dimensions that might contribute to the academic burnout. There are also other mediator variables that might influencing the relationship other than self-compassion. For instance, self-regulation (Duru, Duru & Balkis, 2014). Based on their findings, self-regulation fully mediated the relationship between academic achievement and academic efficacy, and these variables are highly related with academic procrastination (Hall et al., 2019; Steel, 2007) and academic burnout (Hall et al., 2019).

Secondly, the majority of the sample was Year 1 students who are most likely not experiencing much academic procrastination yet, future studies should consider recruiting samples of participants who are at a higher risk of academic procrastination and burnout. For example postgraduates are known to be more procrastinate than undergraduate students (Onwuegbuzie, 2004).

In the present study, research could not find the significant relationship among academic procrastination, academic burnout and self-compassion positively-worded

items; therefore future studies can attempt to replicate this study in difference education contexts in Malaysia with more diverse samples to examine if there are any comparable results. For example, comparison between private and public institutions in Malaysia can be done. Furthermore, future studies can consider extending the understanding of the mediating effect of self-compassion by incorporating both qualitative and quantitative methods of analysis.

The current study is a cross-sectional study whereby the data was collected once, which means the research outcomes are quite static. The future research is recommended to conduct the similar study in a dynamic way, such as longitudinal research. The data collection process can be done in a wave strategy, such as collecting data at the beginning of the semester, during the middle of peak academic season and at the end of the semester. The data that collected from these three different period points in the academic calendar is to obtain better results and a clearer picture of students' procrastination and burnout level.

Moreover, enhancement on measurement models can also be done for future studies. For example, a lot of studies need to improve the full form of the APS so that is can be more easily applied to the Malaysia context. UBI also needs to be validated in a Malaysian context so that it can be more applicable to university students. Neff (2003a) has proven that SCS is a stable measurement and suggested to use the unidimensional factor or six-factors measure of self-compassion levels. In this study, it was better to separate the SCS into its two-model factor for the full structural model. Further exploration on such disputes needs to be explored.

5.11 Conclusion

Despite having limitations, this study examined the role of self-compassion as a mediator between academic procrastination and academic burnout. The findings of this study demonstrated that self-compassion is negatively associated with both academic procrastination and academic burnout. Moreover, the results suggest that self-compassion negatively-worded items, partially mediate undergraduate students' academic burnout. Intervention programs focusing self-compassion especially targeting to decrease self-compassion negatively-worded items may help undergraduate students to have less academic procrastination and academic burnout. Therefore, it is important for counselors to develop relevant programs to improve self-compassion (and to lessen self-compassion negatively-worded items) among undergraduate students who are dealing with difficult academic adversity, academic failure and other life stressors that are affecting their academic coping. Thus, self-compassion negatively-worded items are considered as a significant predictor in the relationship between academic procrastination and academic burnout.

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