



DARK TRIAD AND COPING STRATEGIES AS PREDICTORS OF SOCIAL MEDIA  
ADDICTION AMONG UNDERGRADUATES IN UNIVERSITI TUNKU ABDUL RAHMAN

BERNIE WONG ZI RU

GOH SIN JIE

HUE JIE YENG

A RESEARCH PROJECT SUBMITTED IN  
PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR  
THE BACHELOR OF SOCIAL SCIENCE (HONS) PSYCHOLOGY  
FACULTY OF ARTS AND SOCIAL SCIENCE  
UNIVERSITI TUNKU ABDUL RAHMAN

APRIL 2020

Dark Triad and Coping Strategies as Predictors of Social Media Addiction among  
Undergraduates in Universiti Tunku Abdul Rahman

Bernie Wong Zi Ru, Goh Sin Jie and Hue Jie Yeng

Universiti Tunku Abdul Rahman

This research project is submitted in partial fulfilment of the requirements for the Bachelor of Social Science (Hons) Psychology, Faculty of Arts and Social Science, Universiti Tunku Abdul Rahman. Submitted on April 2020.

# SOCIAL MEDIA ADDICTION AMONG UTAR UNDERGRADUATES

## ACKNOWLEDGEMENTS

The completion of the Final Year Project report would not have been possible without the assistance and guidance of some during this journey. We would like to show our gratitude by acknowledging these few individuals that has supported us in this endeavor.

First and foremost, we would like to extend our heartfelt thanks to our supervisor, Dr Siah Poh Chua for his consistent guidance and professional advices that has carried us throughout the process of completing the Final Year Project despite his busy schedule. With his patience, professionalism and encouragements in clarifying our doubts, we are able to complete our Final Year Project smoothly on behalf of his constant support.

We would like to dedicate our sincere thankfulness to our family and friends who has made this journey remarkable with their mental, emotional and physical support. We would also like to take this opportunity to extend our sincerest thanks to our course mates and seniors, Chong Hoi Yan and See Chee Hong for giving us immeasurable moral support.

BERNIE WONG ZI RU

GOH SIN JIE

HUE JIE YENG

# SOCIAL MEDIA ADDICTION AMONG UTAR UNDERGRADUATES

## APPROVAL FORM

This research paper attached hereto, entitled “Dark Triad and Coping Strategies as Predictors of Social Media Addiction among Undergraduates in Universiti Tunku Abdul Rahman” prepared and submitted by Bernie Wong Zi Ru, Goh Sin Jie and Hue Jie Yeng in partial fulfillment of the requirements for the Bachelor of Social Science (Hons) Psychology is hereby accepted.

\_\_\_\_\_

Supervisor

Dr Siah Poh Chua

Date: \_\_\_\_\_

**ABSTRACT**

The excessive use of social media will result in overall low well-being among undergraduates. DT is said to be a significant predictor of social media addiction. The limited guidance from experts in lowering social media addiction indirectly reflects the importance of adopting good coping strategies. Moreover, the correlations between the three variables are not clearly investigated in Malaysia. The current study aims to investigate how DT and coping strategies serve as a significant predictor for social media addiction among UTAR undergraduates in the multiculturalism context of Malaysia. A total 230 participants were recruited via purposive sampling in UTAR Kampar campus. Data was collected through paper-and-pen survey. However, only 219 participants have completed the survey and fulfilled the criteria of (i) studying as undergraduate at UTAR Kampar campus; (ii) have at least one social media account. Short DT scale (SD3), Brief Coping Orientation to Problems Experienced Inventory (COPE), and Bergen Social Networking Addiction Scale (BSNAS) were used to measure desirable variables. The correlation analysis indicated that Machiavellianism, psychopathy, emotion-focused coping strategy and avoidance-focused coping strategy positively predicted social media addiction. Besides, there is no significant relationship between narcissism and problem-focused coping strategies towards social media addiction. The results of the current study contributed to gaining awareness among the responsible parties, implementing constructive strategies and filling in the gaps in the pool of research on findings regarding DT, coping strategies and social media addiction among Malaysian undergraduates.


*Keywords:* undergraduates, social media addiction, Dark Triad, coping strategies

## DECLARATION

Hereby, we declare that this project entitled “Dark Triad and Coping Strategies as Predictors of Social Media Addiction among Undergraduates in Universiti Tunku Abdul Rahman” is a record of original work done by us under the guidance of Dr Siah Poh Chua, submitted to Universiti Tunku Abdul Rahman in the partial fulfilment of the requirements for Bachelor Degree of Social Science (HONS) Psychology. The due acknowledgement has been given in the bibliography and references to ALL sources, be it printed, electronic or personal.

Name: BERNIE WONG ZI RU


Student ID: 16AAB02361

Signed: 

Date: 1<sup>st</sup> Apr 2020

Name: GOH SIN JIE


Student ID: 16AAB03430

Signed: 

Date: 1<sup>st</sup> Apr 2020

Name: HUE JIE YENG

Student ID: 16AAB03424

Signed: 

Date: 1<sup>st</sup> Apr 2020

# SOCIAL MEDIA ADDICTION AMONG UTAR UNDERGRADUATES

## Table of Contents

	Page
Abstract	i
Declaration	ii
List of Tables	iii
List of Figures	iv
List of Abbreviations	v
Chapters	
I    Introduction	1
Background of Study	1
Problem Statement	2
Research Objectives	4
Significance of Study	4
Research Questions	5
Hypotheses	5
Conceptual Definitions	6
Operational Definitions	7

# SOCIAL MEDIA ADDICTION AMONG UTAR UNDERGRADUATES

II	Literature Review	8
	Dark Triad	8
	Coping Strategies	10
	Social Media Addiction	11
	Dark Triad and Social Media Addiction	13
	Coping Strategies and Social Media Addiction	15
	Dark Triad, Coping Strategies and Social Media Addiction	16
	Theoretical Framework	17
	Conceptual Framework	18
III	Methodology	19
	Research Design	19
	Research Sample	19
	Sample Size	19
	Participants	20
	Sampling Method	20
	Sample Location	21
	Pilot Study	21



## SOCIAL MEDIA ADDICTION AMONG UTAR UNDERGRADUATES

	Procedure	21
	Instrumentation	22
	Data analysis	23
IV	Results	25
	Descriptive Statistics	25
	Test of Normality	26
	Inferential Statistics	27
	Findings Summary	32
V	Discussion & Conclusion	33
	Discussion	33
	Correlation among Dark Triad, Coping Strategies and Social Media Addiction	33
	Dark Triad is a Significant Predictor for Social Media Addiction	35
	Coping strategies are Significant Predictors for Social Media Addiction	37
	Coping strategies is a more Significant Predictor for Social Media Addiction compared to Dark Triad	40

## SOCIAL MEDIA ADDICTION AMONG UTAR UNDERGRADUATES

	Conclusion	41
	Implications	42
	Theoretical Implications	42
	Practical Implications	43
	Limitations of Study	44
	Recommendations of Study	45
References		47
Appendices		
Appendix A	Questionnaire	69
Appendix B	Turnitin Originality Report	75
Appendix C	Sample Size Calculation	81
Appendix D	Boxplot	82
Appendix E	Scatterplot	86

## List of Tables

Tables		Page
4.1	Descriptive Statistics of Gender and Race	25
4.2	Descriptive Statistics for Participants' Faculty	26
4.3	Skewness and Kurtosis	26
4.4	Pearson's Correlation Coefficients between Dark Triad, coping strategies and social media addiction (n=219)	28
4.5	Multiple Regression Analysis of Dark Triad (Narcissism, Machiavellianism and Psychopathy) as predictors for Social Media Addiction (n=219)	29
4.6	Multiple Regression Analysis of coping strategies (Emotion-focused, Avoidance-focused and Problem-focused) as predictors for Social Media Addiction (n=219)	30
4.7	Multiple Regression Analysis of Dark Triad (Machiavellianism and psychopathy) and coping strategies (emotion-focused and avoidance-focused) as predictors for social media addiction (n=219)	31

## List of Figures

Figure		Page
2.1	The conceptual framework of “DT and coping strategies as predictors of social media addiction among undergraduates in Universiti Tunku Abdul Rahman	18

## List of Abbreviations

UTAR	Universiti Tunku Abdul Rahman
COPE	Coping Orientation to Problems Experienced
DT	Dark Triad
SD3	the Short Dark Triad
Brief COPE	Brief Coping Orientation to Problems Experienced
BSNAS	Bergen Social Networking Addiction Scale
BFAS	Bergen Facebook Addiction Scale
CAPs	Cognitive Affective Personality System
CAUs	Cognitive-Affective Units
SPSS	Statistical Package for the Social Sciences
PPMC	Pearson Product-Moment Correlation
MLR	Multiple Linear Regression

## **Chapter I**

### **Introduction**

#### **Background of Study**

Dark Triad (DT) was a term created to describe the three personality traits which are Narcissism, Machiavellianism and Psychopathy (Paulhus & Williams, 2002; Book et al., 2015). Narcissism is related to a person's positive beliefs with characteristics of being conceited, entitled, grandiose and manipulative (Hyatt et al., 2018). Machiavellianism is characterized to be manipulative and cynical where people who possess this personality may be regarded as cold and selfish (Christie & Geis, 1970; Gurtman, 1992; Jones & Paulhus, 2011; Wiggins & Broughton, 1985; Ináncsi et al., 2016). Psychopathy is a personality that is seen negatively as people who are psychopathic are known to be lacking the ability to feel guilt or empathy (Hare, 1998). They are also known to be antisocial and insensitive towards other people (Book et al., 2015). From one of the past studies, it shows that DT is potentially considered as a crucial individual difference factor that play a part in development and conservation of addictive actions (Chung et al., 2019).

In a study, about 28.7 million internet users log into social media and on average, users spent 6.6 hours daily which is considered to be higher than the world average (Internet users survey 2018, 2018). Social media has been defined as channels on the Internet that allows users to communicate with others online (Carr & Hayes, 2015) with sites such as Facebook, Whatsapp, Youtube or Instagram. Meanwhile, social media addiction is defined as uncontrollable motivation to be involved in social media activities (Andreassen & Pallesen, 2014). It drives the individual to feel a need to engage in social media for the sense of satisfaction regardless of the time and effort spent (Andreassen & Pallesen, 2014). In Malaysia, the over usage of social media

is desperately influencing the students in their lives by deteriorating academic performance, reducing interpersonal skills, threatening real life relationships and also reducing self-esteem (Sriwilai & Charoensukmongkol, 2016).

Coping strategies are habitual endeavors in managing stress both internally or externally (Lazarus & Folkman, 1984; Al-Gamal et al., 2016). Hence, this research aims to investigate coping strategies to provide a profound prediction for social media addiction. There are three main types of coping strategies which are emotion-focused coping strategy, the tendency to reduce the intensity of emotional anxiety; problem-focused coping strategy, the tendency to alter behaviors for eliminating the source of stress; and avoidance-focused coping strategy, the tendency to avoid the stressful circumstances (Birkás et al., 2016).

For now, past researchers have not studied the relationship between DT, coping strategies and social media addiction, but with the significant linkage between the variables based on the literature reviews, it is crucial that their relationships should be further examined.

### **Problem Statement**

The excessive use of social media by undergraduates is pathological, resulting in low academic performance, unhealthy lifestyles and extreme mental occupation (Andreassen et al., 2012). Social media addiction may be due to the limited excess for positive guidance from experts to diminish the addiction (Mahamid & Berte, 2019) that is aimed for satisfactory outcome while ignoring the possibilities of negative impact offered by the convenience of using social media (Thompson & Loughheed, 2012). Thus, social media addiction is a problem that can affect a student's physical and mental health as well as their social life.

Personality is considered one of the predictors of social media addiction (Demircioğlu & Köse, 2018). Individuals with higher DT personality traits are more likely to pursue social media use that can fulfill their short-term instant desires (Jin et al., 2019). Hence, DT may positively strengthen social media addiction which it provides the gratification that is not easily gained in real life (Demircioğlu & Köse, 2018).

A study indicated that young adults who have not fully developed their problem solving skills are more likely to engage in addictive behaviors to cope with their stressors (Agbaria et al., 2017). Young adults with addictive behaviors will be more likely to develop unhealthy and negative coping skills (Agbaria et al., 2017). Dysfunctional coping strategies such as emotion-focused coping strategy will distract one's stress for a short time (Sriwilai & Charoensukmongkol, 2016) but the situation will become serious if the individual is unable to develop the appropriate coping strategies that can directly solve the problem (Brand et al., 2014).

The relationship between DT, social media addiction and coping strategies has not been clearly investigated. The issue of DT is unpopular in Malaysian context, as most of the studies are conducted in Western and Eastern countries (Kircaburun et al., 2018). Therefore, in order to fill the void, this quantitative study is to investigate how DT and coping strategies serve as a significant predictor for social media addiction among UTAR undergraduates in the multiculturalism context of Malaysia.



**Research Objectives**

1. To examine the correlation among DT, coping strategies and social media addiction.
2. To examine whether DT is a significant predictor for social media addiction.
3. To examine whether coping strategies are a significant predictor for social media addiction.
4. To examine whether coping strategies or DT is a more significant predictor for social media addiction.

**Significance of Study**

This study hopes that it would allow the responsible parties to gain awareness on the prediction of DT and coping strategies for social media addiction. In Malaysia, there is a lack of intervention programs that help lessen social media addiction. The effectiveness of intervention programs like behavior modification and counseling in certain Asian countries has helped students to enhance self-control in using social media (Ong & Tan, 2014) which has proven that Malaysia should follow suit and implement these programs that emphasized on the importance of mental health.

Besides that, coping programs had found to positively affect social media addiction among students (Bal & Metan, 2016). As mentioned, there are students who may not have developed the skills to solve problems yet, hence, the Ministry of Education can promote therapeutic workshops as a tool for students to acknowledge that there are different ways to cope with their problems besides engaging in social media. The counselor and guidance unit in schools should instill resilience in students, allowing them to engage in therapeutic activities like

art therapy (Williams, 2019) that helps to face and explore their internal emotions, enforcing adaptive coping skills.

In addition, since there is less research investigating the prediction of DT and coping strategies for social media addiction, this study aims to provide an insight for researchers in future developments in the field of counseling and psychology. The findings of this study can provide a more thorough understanding for counselors on characteristics or tendency for DT traits and the importance of coping strategies to guide them in making adjustments for social media addiction in resulting a better overall well-being.

### **Research Questions**

RQ1: Do DT, coping strategies and social media addiction correlate?

RQ2: Is DT a significant predictor of social media addiction?

RQ3: Is coping strategies a significant predictor of social media addiction?

RQ4: Is coping strategies or DT a more significant predictor for social media addiction?

### **Hypotheses**

H1a: There is a correlation between DT and social media addiction.

H1b: There is a correlation between coping strategies and social media addiction.

H2a: Narcissism positively predicts with social media addiction.

H2b: Machiavellianism positively predicts with social media addiction.

H2c: Psychopathy positively predicts with social media addiction.

H3a: Emotion-focused coping strategy positively predicts with social media addiction.

H3b: Avoidance-focused coping strategy positively predicts with social media addiction

H3c: Problem-focused coping strategy negatively predicts with social media addiction.

H4: Coping strategies is a more significant predictor for social media addiction compared to DT.

### **Conceptual Definitions**

DT is made up of three personality traits that is incorporated with norm-offending behaviors and is differentiated by the following characteristics: the inflation of a sense of their personal importance (Narcissism), the focus on self-interest and taking advantage of others to achieve their goals (Machiavellianism) and the impulsivity along with a compassion or remorse that is hidden behind a charming facade (Psychopathy) (Muris et al., 2017).

Coping Strategies are cognitive and behavioral actions that are done in order to maintain the balance of their internal and external wants (Lazarus & Folkman, 1984; Smith et al., 2016; Endler & Parker, 1990). Problem-focused coping strategy focuses on solving problems, making decisions and taking actions (Essau & Trommsdorff, 1996). Emotion-focused coping strategy focuses on getting people to cope by expressing themselves emotionally (Smith et al., 2016). Avoidance-focused coping strategy is another coping style where people will give up, forget and ignore problems or find new things to distract themselves (Majumdar & Ray, 2010; Moos, 1993).

Social media addiction is an addiction that stems from the excessive usage of social media websites like Facebook, Instagram and Twitter (Hou et al., 2019; Griffiths, 2000; Starcevic, 2013). People with this addiction will be unable to control their urge to log in to their social media accounts to feel satisfaction (Andreassen & Pallesen, 2014; Hou et al., 2019).

### **Operational Definitions**

**Dark Triad.** All 3 personality traits of DT (Narcissism, Machiavellianism and Psychopathy) will be measured. The Short DT (SD3) scale will be used where it has been shortened from 41 items to 27 items by Jones and Paulhus (2014). There are 9 items in each dimension where they should be calculated by totaling the score (Reverse the scoring for items marked R) and find the mean from each subscale (Paulhus, 2013).

**Coping Strategies.** The scale that will be used in this research is the Brief COPE which was developed by Carver (1997). Coping strategies has 14 different dimensions with 2 questions in each which will then be categorized into 3 distinctive categories which are problem-focused coping, emotion-focused coping and avoidance-focused coping. 28 items are totaled and categorized into 3 categories (problem-focused, emotion-focused and avoidance-focused) where the total scores will be compared where the highest score is the main coping strategy used.

**Social Media Addiction.** Social media addiction is measured through the Bergen Social Networking Addiction Scale (BSNAS) which was adapted from the Bergen Facebook Addiction Scale (BFAS) by Andreassen et al. (2012). The scores are totaled where the sum score will range from 6 to 30 and from the 6 items, the cut-score has been set to  $\geq 3$  (Salem et al., 2016).

## Chapter II

### Literature Review

#### Dark Triad

The DT consists of three distinctive and maladjusted personality traits, which are psychopathy, narcissism and Machiavellianism (Malesza & Ostaszewski, 2016). These three traits are often described as unpleasant (Kircaburun et al., 2018; Jonason et al., 2015) as it demonstrated characteristics like low level of arousal, the need for publicizing oneself, truculent and deceitfulness (Kowalski et al., 2016). Given that the underlying characteristic of the three members of DT is unsociable but they are able to use different strategies to achieve their wants (Kircaburun et al., 2018; Jonason & Webster, 2012).

Looking into each personality, Machiavellianism tends to manipulate and deceive others strategically (Furnham et al., 2013) as they portray a calculative behavior, advanced in the use of strategic social tactics and their high social skills provide them an additional gain among their social circle (Book et al., 2015). On the contrary, even though psychopaths tend to be as manipulative as Machiavellians, but they tend to act out more dangerously with less emotional and cognitive control (Book et al., 2015). Psychopaths have low levels of arousal, mainly for empathy and anxiety as well as enjoying thrilling and impulsive experiences (Paulhus & Williams, 2002). Narcissistic individuals, on the other hand, emphasizes on being awe-inspiring, getting full entitlement (Book et al., 2015) and are usually longing to be flattered by others (Kircaburun et al., 2018; Jonason & Webster, 2012).

The DT is often related to low empathy and has a higher tendency to cheat and manipulate when the perceived risk is low to achieve their goals, but still, this varies among the

three DT traits (Jones & Paulhus, 2017). Since the DT personalities are more likely to be less altruistic, hence, they are more efficient to engage in ruthless exploitation to maximize their own benefits (Book et al., 2015). For psychopathy, their dishonesty will either remain or continue even when the situation is risky due to their rewarding needs; Machiavellianism individuals on the contrary tends to think strategically when they are cheating but if their strategic tactics are under depletion, they might react like psychopaths (Jones & Paulhus, 2017; Christie & Geis, 1970). Being egoistic, narcissistic individuals' dishonesty stemmed from a higher inclination to defend their beliefs even though evidence refutes their intelligence (Jones & Paulhus, 2017; Paulhus et al., 2003).

A number of 292 participants from Texas in a study has shown that only psychopaths tend to cheat in a coin flipping task when the reward is only 25 cents (Jones & Paulhus, 2017). Machiavellianism individuals are reluctant to cheat when they perceived the gain is small but when their ego is worn out, their analysis towards consequences will be lower, causing them to act as psychopaths (Jones & Paulhus, 2017). Narcissist showed the lowest tendency to cheat as their gratification is most likely from internal rewards compared to external as they thrive for affirmation (Jones & Paulhus, 2017) which is in line with a study stating that Narcissists has a lower thirst of being greedy (Muris et al., 2017).

In short, even though members of DT have their own dark side but Machiavellianism individuals showed higher suspiciousness compared to psychopaths and narcissists (Furnham et al., 2013; Rauthmann, 2012) hence has been coined to be one of the darkest traits among the three (Furnham et al., 2013; Rauthmann & Kolar, 2012).

## **Coping Strategies**

Coping strategies is how individuals utilize their behaviors and cognitive abilities to regulate between excessive demands that is not within their personal control (Smith et al., 2016; Endler & Parker, 1990; Lazarus & Folkman, 1984). Lazarus (1986) described coping strategies as a conceptual framework because it is measured in a whole rather than unilateral, for giving solid explanations on how people counter threats in life using different coping strategies from their different phases in life.

The widely used coping strategies can be branched into three types which are problem-focused, avoidance and emotion-focused coping strategy (Smith et al., 2016; Cohan et al., 2006; Endler & Parker, 1990). Individuals who adopt the problem-focused coping strategy are more likely to focus on finding ways to resolve problems (Smith et al., 2016). Emotion-focused coping strategy explains how individuals regulate their distress by focusing on emotional support that allows them to disclose their problems (Austenfeld & Stanton, 2004). Avoidance-focused coping strategy is how individuals disconnect from distress cognitively by engaging in distracting activities (Smith et al., 2016; Endler et al., 1993).

Problem-focused coping strategy promotes the wellbeing of an individual psychologically (Smith et al., 2016) as it enhances one's decision making skills, the level of self-esteem and increases one's belief in the achievement of a certain goal (Smith et al., 2016; McWilliams et al., 2003; Sandler et al., 1997; Zeidner & Saklofske, 1996; Wills & Hirky, 1996; Parker & Endler, 1992). Emotion-focused coping strategy provides healing effect towards one's distress, regulating internal distress to positive feelings towards problems (Smith et al., 2016; Pennebaker & Chung, 2011; Stanton, 2011). Although avoidance-focused task might diminish negative feelings but it is not an effective coping strategy in the long run (Smith et al., 2016;

Parker & Endler, 1992; Suls & Fletcher, 1985). A study by Majumdar and Ray (2010) involving 150 university students stated that the problem-focused strategy, compared to emotion and avoidance-focused coping strategy, provides a more constructive way to the students in terms of facing their challenges as it enhances their decision-making skills on how to solve their problems. Hu et al. (2016) conducted with a number of 360 adults from a collectivist culture state that emotion-focused coping strategy is widely used as collectivist culture emphasize on the relationship and support provided among the social circles.

### **Social Media Addiction**

Social media addiction can be explained when an individual depends on social media psychological and the dependency intervenes with his/her personal life (Turel et al., 2011). The American Society of Addiction Medicine (2016) stated that addiction will lead to failure to identify problems in life, the dysfunctional emotion states, loss of control in one's behavior, yearn for the use of additives, tend to be avoidant when problems arise, poor interpersonal relationship as well as the decrease of cognitive functioning if a treatment plan is absent. Individual with a higher level of social media addiction is also stated to have a lower self-esteem (Hawi & Samaha, 2017).

As social media platforms evolved into a community where people can express themselves freely (Afacan & Ozbek, 2019; Vural & Bat, 2010), this may also lead to social media addiction when people feel the need to constantly check their social media accounts to avoid seclusion (Afacan & Ozbek, 2019; Andreassen & Pallesen, 2014). A list of statistics stated by Go-Gulf (2013), people spend 17 minutes a day, a minimum of two hours every day and a



need to be engaged in social media in a minimum of ten times per day. The distinctive difference between the usage of social media and the addictive effects that are accompanied is how individuals exert control on their behaviors for using social media (Demircioğlu & Köse, 2018; Andreassen, 2015). The difference between problematic social media use and social media addiction is abstract, but from a biopsychosocial perspective, underlying addictive signs is found in problematic social media use (Bányai et al., 2017).

The advancement of technology emerged when Generation Z was born, therefore, they are equipped with the literacy skills compared to other generations (Miller & Lu, 2018) and they might be more vulnerable to social media addiction with their continuance in technology exploration. Generation Zers are more vulnerable to be addicted to social media and might have a lower control on their academic studies (Afacan & Ozbek, 2019). In Hungarian, out of six thousand teenagers, four percent of teens was revealed to be addicted to social media (Mamun & Griffiths, 2019). The statistics stated is in line with a study by Mahamid and Berte (2019), stating that the reason adolescent is more inclined towards social media addiction is because they are not well developed in seeking problem-focused solutions yet when confronted with challenges.

Turkey yields the highest social media usage compared to other countries like the United States and West Europeans countries, as they have more lenient usage (Simsek et al., 2019). The high interest on Malaysians viewing videos for 159 minutes every day has been stated to be higher than the average 102 minutes worldwide (Leong et al., 2019). Another study tested on 744 Palestine university students have resulted seventy four percent of being addicted to social media (Mahamid & Berte, 2019). However, compared to high school students, university students that took science or psychology as their major experience a lower level of social media addiction (Afacan & Ozbek, 2019).

### **Dark Triad and Social Media Addiction**

One of the major contributions towards social media addiction is the type of personalities as different personalities tend to have different behavioral and cognitive thinking (Chung et al., 2019). Members of the DT put high focus on their interpersonal needs and will ensure their needs meet the ends, hence, they are more likely to be addicted to social media because social media is a community that allows people to conceal their flaws and flaunt their best side for developing relationships online as they are often antisocial (Demircioğlu & Köse, 2018; Andreassen et al., 2017). As mentioned, when members of DT tend to involve in dishonesty and tactics, social media provides them an alternative to feel more secure in a virtual environment (Casale et al., 2016).

Narcissism is said to be addicted to social media because of their high expectations for affiliation and social media can help narcissists to conceal their bad side as they can choose what they wanted to share (Demircioğlu & Köse, 2018; Carpenter, 2012; Bergman et al., 2011; Buffardi & Campbell, 2008). In a study by Casale et al. (2016), it is stated that narcissists are reluctant to accept the fact that they are lacking in real life, hence, online activities provide a better control on what people see to boost their ego which could cause addictive use of social media.

As for Machiavellianism individuals, their social media addiction is due to their need to be recognized as highly skilled individuals as social media provides them the necessary social cues to tackle into different social situations (Demircioğlu & Köse, 2018; Abell & Brewer, 2014). A study by Grossman (2017) also states that social media provides an opportunity for Machiavellianism individuals to cheat or trick people easily online because the standard of morality is subjective. Psychopaths' social media addiction stems from the need to displace their

impulsive yet reckless attitudes and social media is a widely preferred platform as disciplinary actions are less likely to be taken in compared to real life (Demircioğlu & Köse, 2018; Jonason & Webster, 2012).

A study of 118 Malaysian university students showed that only the psychopathy trait is positively associated with social media addiction as psychopaths are likely to be more impulsive compared to the other two traits (Chung et al., 2019). Kircaburun et al. (2018) conducted a study with 181 Turkey University students and resulted that narcissists tend to use social media excessively because they spend a huge amount of time plotting the perfect image so that they will receive better feedback from the public; as for Machiavellianism they spend a huge amount of effort plotting and tailoring different approach to maximize the number of peers, so, to satisfy their thrill in cunningly tricking people, it leads to social media addiction due to spending a high amount of time. Demircioğlu and Köse (2018) also conducted a study with 237 Turkey university students showed that students high on psychopathy tend to have a higher social media addiction as they are constantly displacing their impulsive traits by aggressively publicizing negative comments as well as threats. The study explains that there are no significant relationship between Machiavellianism and social media addiction as they might seek different communication channels other than social media for rewarding outcomes or to trick others.

As mentioned, all three personality traits from the DT have a tendency to be more inclined towards social media addiction.

### **Coping Strategies and Social Media Addiction**

When social media instilled a sense of relief, people are more likely to spend a higher amount of time on social media to avoid pessimistic thoughts (Brand et al., 2014). Poor coping skills will result in social media addiction that will deteriorate the wellbeing of the individual (Chou et al., 2015; Hall & Parsons, 2001). Even though problem-focused coping strategy abolished the problems faced, people still prefer the emotion and avoidance-focused coping strategy more because they lack the motivation to go seek better solutions (Sriwilai & Charoensukmongkol, 2016). Avoidance-focused coping strategy promotes social media addiction as it can avoid desertedness and problems (Wegmann & Brand, 2016; Brand et al., 2014). People who tend to use emotion-focused coping strategy have a higher proneness to be associated with social media addiction as the platform serves as distraction when problems resurface (Sriwilai & Charoensukmongkol, 2016).

A study by Sriwilai and Charoensukmongkol (2016) in Bangkok resulted in a significant relation between emotion-focused coping strategy and social media addiction when facing pressure. It is also stated that emotion and avoidance-focused coping strategy are maladaptive as it is only useful for distraction purposes but in the long run, it is better to learn how to face and resolve all problems in life (Sriwilai & Charoensukmongkol, 2016; Chang, 2012; Parker et al., 2012; Carver & Connor-Smith, 2010). A study conducted by Al-Gamal et al. (2016) with 587 students had shown that the two most widely used coping strategies are the problem-focused coping strategy and the avoidance-focused coping strategy. Through the coping behavior inventory it has been shown that students who adapt to the problem-focused strategy tend to have lesser addiction toward social media while avoidance-focused coping strategy promotes higher

social media addiction. Moreover, students that use emotion-focused coping strategy are also more likely to be involved in social media addiction (Al-Gamal et al., 2016).

### **Dark Triad, Coping Strategies and Social Media Addiction**

Based on the literature reviews, there is research regarding the two variables as stated but the relationship between the DT, coping strategies and social media addiction might have not been widely researched. By typing the keywords (DT, coping strategies and social media addiction) in Google Scholar, there are no results found on the relationship between these three variables. Besides, by using the UTAR Library Online Resources or PSYCArticles under the E-databases category, the relationship between DT, coping strategies and social media addiction is still not found.

However, since different personality determines the type of behaviors (Chung et al., 2019) and previous research revealed that people who chose maladaptive coping strategies have higher chances to be addicted to social media rather problem-focused coping strategy (Sriwilai & Charoensukmongkol, 2016), this proves that there is an indirect linkage between DT, coping strategies and social media addiction.

### **Theoretical Framework**

The theory for this study is the cognitive affective personality system (CAPs) model. This theory describes that with the activation of affective, motivational and cognitive processes, the individual will demonstrate consistent behavioral outcomes based on social environmental cues (Huprich & Nelson, 2015).

This theory highlights on how different individuals make sense of an environment and demonstrate a behavior on an “if...then” construct with the cognitive affective units (CAUs) (Ayduk & Gyurak, 2008) as this provides a richer perspective on the behavioral patterns demonstrated by people (Huprich & Nelson, 2015). The cognitive-affective units (CAUs) are the main component in the CAPs which includes values, presumptions, strategies and regulatory effect (Mischel & Ayduk, 2002; Mischel & Shoda, 1995). It provides guidance to help different individuals cope with impulsivity or distressing situations so that individuals can achieve optimum regulation (Mischel & Ayduk, 2002). According to Shoda and Smith (2004), the CAUs may be triggered based on different atmospheres or the intra and inter-individuals’ aspects.

The CAPs model has a connection system (Read & Miller, 1998; Ayduk & Gyurak, 2008) which explains how individuals perceive the environment and by triggering and expanding the CAUs, it will result in different behavioral outcomes (Ayduk & Gyurak, 2008). In short, the CAPs model explained that besides personality traits, behavioral outcomes stemmed from activation of CAUs that is equipped with self-regulatory strategies or “cooling operations” that enables individuals to cope when distress is faced (Mischel & Ayduk, 2002)

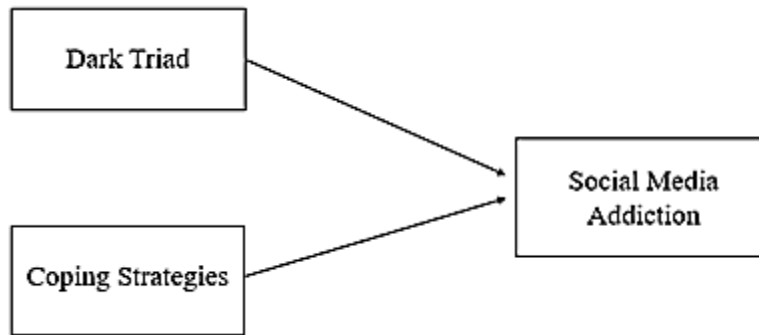
**Conceptual Framework**

Figure 2.1. *The conceptual framework of “DT and coping strategies as predictors of social media addiction among undergraduates in Universiti Tunku Abdul Rahman”.*

This research strived to gain deeper understanding on whether DT personality traits and coping strategies are significant predictors of social media addiction. As illustrated in the conceptual framework, DT and coping strategies are the independent variables (IV), while social media addiction represents the dependent variable (DV). The multiple linear regression model among DT, coping strategies and social media addiction will be further examined with the quantitative method of correlational analysis.

## Chapter 3

### Methodology

#### Research Design

The quantitative research method was used to collect data in this study. The study's data was collected by distributing questionnaires in the form of pen and paper. The cross-sectional design was used to examine the relationship of DT and coping strategies on social media addiction by collecting results through survey and find how widespread a certain effect has on the population depending on the different variables (Levin, 2006). This design is low cost and saves time which benefits this study due to lack of resources and time.

#### Research Sample

**Sample Size.** The sample size of this study was calculated through the application, G\*Power that is widely used to find effect size (Faul et al., 2009). The study's effect size was found after inserting the appropriate values which are  $f=0.15$  for effect size, 0.8 for statistical power and 0.05 for the probability level. This study has 6 predictors from the two variables, DT (Narcissism, Machiavellianism and Psychopathy) and coping strategies (problem-focused, emotion-focused and avoidance-focused). The application states that a minimum of 55 participants are required for the sample size but 230 data (30 for pilot test and 200 for the actual study) was collected instead to prevent incomplete data or not consenting to the use of the data. 219 data (with the 30 from pilot test) was used for the analysis as 11 of the data had not consented to being used or had missing data.



**Participants.** 230 participants were recruited from the UTAR campus in Kampar. Only 219 participants' data were used for the analysis after data screening. In the sample, there were 93 male participants (42.5%) and 126 female participants (57.5%) (Refer to Table 4.1). The age range of the sample was from 19 years old to 25 years old but 7 participants did not disclose their age. 7 participants answered that they were 19 years old (3.2%), 34 participants were 20 years old (15.5%), 69 participants were 21 years old (31.5%), 74 participants were 22 years old (33.8), 17 participants were 23 years old (7.8%), 7 participants were 24 years old (3.2%) and 4 participants were 25 years old (1.8%). Majority of the participants were Chinese (199, 90.9%) while Indians (15, 6.8%) were the second highest number (Refer to Table 4.1). There were only 3 Malay (1.4%) participants while 2 participants (0.9%) had identified themselves as from other races (Punjabi and Sikh) (Refer to Table 4.1). The participants had also answered on the faculty they are from where Faculty of Arts and Social Science (FAS) with 54.3% responses, Faculty of Business and Finance (FBF) with 17.4%, Faculty of Engineering and Green Technology (FEGT) with 4.6%, Faculty of Information and Communication Technology (FICT) with 7.8%, Faculty of Science (FSC) with 12.8%, and Institute of Chinese Studies (ICS) with 3.2% (Refer to Table 4.2). The amount of time one spent on social media daily were answered with Less than one hour (2.3%), Two to three hours (25.1%), Four to five hours (34.7%), Six to seven hours (20.5%) and More than eight hours (17.4%) (Refer to Table 4.2).

**Sampling Method.** The participants were recruited through the use of purposive sampling, a non-probability sampling. The reason for the choice was due to the research's objective of the study which aimed to understand social media addiction among students from UTAR Kampar so it was vital to find participants that fit the set criteria. As such, the criteria included: (i) one must be an undergraduate student who is currently pursuing their degree at the

UTAR campus; (ii) one has to have at least one social media account from applications such as Facebook or Instagram.

**Research Location.** The study was conducted in UTAR's Kampar campus. As the study targets university students, UTAR was the most accessible location with around 16,000 students (Foong, 2015) who should have at least one social media account since it is used for communicating and assignment purposes. The students provided relevant information on social media addiction's relationship with the DT personality and coping strategies.

**Pilot Study.** A pilot study was conducted after 30 participants' data was collected. The reason for running the pilot test is to check how viable the study's approach is when applied to the larger population (Leon et al., 2011). Besides that, it was recommended that the sample size of a pilot test should be 10 to 30 so 30 participants' data was used for the test (Hill, 1998).

## **Procedure**

The data for this study was collected through pen and paper method. In the first week of the semester, the first 30 data were collected for the pilot test. After confirming that the pilot test results were usable in the study, 200 more data were collected within the next two weeks. All the data were collected by approaching the students who fit the criteria of this study. Participants were recruited from places where undergraduates gathered such as Block D, Block E, Library, Block N and Block P. Sample from all six faculties in the campus of UTAR Kampar were gathered.

Students who were seen to be free or interacting with their friends were approached and asked to take part in the study by answering a questionnaire voluntarily. The first page of the

survey contained information on the study and a personal data protection form that explained how the participants' personal information will not be disclosed to other parties. The ones who have consented were then asked to fill in the demographics section and the questions from the three scales: The SD3 scale, Brief COPE and BSNAS. The participants were also told that they had the right to quit their participation in the study whenever they wanted without any repercussions. The survey questionnaire took around 10 minutes to complete. While the participants were answering the surveys, researchers would answer any questions from the participants about the questionnaire. After they had answered, the questionnaires were put into an envelope by the participants and were collected by the researchers to ensure confidentiality. The data analysis was run after data collection, using the Statistical Package for Social Science (SPSS) and written in the results within 3 weeks.

### **Instrumentation**

**Dark Triad.** All 3 personality traits of DT (Narcissism, Machiavellianism and Psychopathy) will be measured. The SD3 scale will be used where it has been shortened from 41 items to 27 items by Jones and Paulhus (2014). There are 9 items in each dimension where people will answer from a five-point Likert scale with a range from 1 (Disagree strongly) to 5 (Agree strongly). A sample item from this scale includes "Make sure your plans benefit you, not others." This scale's original alpha reliability for narcissism, Machiavellianism, and psychopathy were .71, .77, and .80 accordingly.

**Coping Strategies.** The scale that will be used in this research is the Brief COPE which was developed by Carver (1997). Coping strategies have 14 different dimensions with 2 questions in each which will then be categorized into 3 distinctive categories which are problem-

focused coping, emotion-focused coping and avoidance-focused coping. The scale consists of 28 items where they are to answer from a four-point Likert scale where 1 is “I haven’t been doing this at all” and 4 is “I’ve been doing this a lot”. A sample item is, “I’ve been taking action to try to make the situation better.” The reliability of all the 14 dimensions in the scale ranged from .70 to .97 which proves that the scale is reliable (Monzani et al., 2015).

**Social Media Addiction.** Social media addiction is measured through the BSNAS which was adapted from the BFAS by Andreassen et al. (2012). The usage of the word “Facebook” was changed to “social media”. The scale consists of only 6 items and participants are expected to answer from a five-point Likert scale where 1 is “Very rarely” and 5 is “Very often”. A sample item from this scale includes “How often during the last year have you felt an urge to use social media more and more?” The original alpha reliability of this scale is .82 which is considered reliable.

### **Data analysis**

Once the data collected from the surveys were sufficient, the data was typed and analyzed with SPSS. As this study aims to research the relationship between DT and coping strategies as predictors to social media addiction, the analysis of data was run with two different tests: Pearson Product-Moment Correlation (PPMC) and Multiple Linear Regression (MLR) to answer the hypotheses. All data was converted into mean of the variables before running with the two tests. PPMC was used in order to examine the relationship between the three variables: DT, coping strategies and social media addiction. MLR, was used to establish the relationship of one dependent variable with two or more variables (Uyanık & Güler, 2013). The study aims to

determine if the two independent variables, DT traits and coping strategies, are able to predict the dependent variable, social media addiction, among undergraduates from UTAR.

From the data analysis in the pilot test, the survey questionnaire was found to be reliable as the three scales had higher than 0.7 for the Cronbach alpha tests. The scales from SD3 had Cronbach alpha coefficient of 0.755; the Brief COPE scale had Cronbach alpha coefficient of 0.810; while the BSNAS had 0.756.

In the actual study, the Cronbach alpha coefficients were different from the pilot test. For SD3 scale, the Cronbach coefficient for the three variables, narcissism, Machiavellianism, and psychopathy were 0.663, 0.713 and 0.669 respectively after the deletion of an item each from the subscales, narcissism and psychopathy. Meanwhile, the Brief COPE scale's Cronbach alpha coefficient for problem-focused coping, emotion-focused coping and avoidance-focused coping, were 0.718, 0.705 and 0.668 respectively after the avoidance-focused scale had one item deleted. The Cronbach coefficient of the BSNAS was 0.757.

A test for the 5 assumptions (linear relationship, multivariate normality, multicollinearity, auto-correlation and homoscedasticity) were also conducted with SPSS before the analysis with PPMC and MLR.

## Chapter IV

### Results

#### Descriptive Statistics

The demographic information of the participants was described with the number and the percentage of the participants. Tables 4.1 and 4.2 had been described in detail at the Methodology chapter.

Table 4.1

#### *Descriptive Statistics of Gender, Age, and Race*

		<i>n</i>	%
Gender	Male	93	42.5
	Female	126	57.5
Age	19	7	3.2
	20	34	15.5
	21	69	31.5
	22	74	33.8
	23	17	7.8
	24	7	3.2
	25	4	1.8
	Missing	7	7
Race	Malay	3	1.4
	Chinese	199	90.9
	Indian	15	6.8
	Others	2	0.9

*Note.* *n* = number of participants, % = percentage of participants.

Table 4.2

*Descriptive Statistics for Participants' Faculty and Time Spent Online*

	<i>n</i>	%
Faculty		
FAS	119	54.3
FBF	38	17.4
FEGT	10	4.6
FICT	17	7.8
FSC	28	12.8
ICS	7	3.2
Time Spent Online		
Less than one hour	5	2.3
Two to three hours	55	25.1
Four to five hours	76	34.7
Six to seven hours	45	20.5
More than eight hours	38	17.4

*Note.* *n* = number of participants, % = percentage of participants.

**Test of Normality**

**Skewness and Kurtosis test.** The skewness and kurtosis values are considered acceptable when it is within  $\pm 1.96$  (Ghasemi & Zahediasl, 2012). Based on Table 4.3, the values are deemed acceptable and have not violated the rules of normality.

Table 4.3

*Skewness and Kurtosis*

	<b>Skewness</b>	<b>Kurtosis</b>
Dark Triad		
Narcissism	-0.286	1.175
Machiavellianism	-0.219	0.799
Psychopathy	0.259	0.472

Coping Strategies			
	Emotion-focused	-0.210	0.026
	Avoidance-focused	0.595	0.338
	Problem-focused	-0.240	0.270
Social Media Addiction		0.138	-0.252

**Boxplot.** There were no outliers removed from the univariate outlier test as all the outliers were mild outliers and not extreme ones (Refer to Appendix D). Outliers may not be removed if given the choice as they are legitimate information (Parke, 2013).

**Scatterplot.** Scatterplots were made through SPSS in order to determine the relationship of two variables' significance and strength (ACT Academy, n.d.). The predictors were written onto the X-axis while Social Media Addiction was on the Y-axis (Refer to Appendix E) so that the line between the variables can be examined.

In summary, the test of normality and linear relationship have been approved due to there being no problems for the skewness, kurtosis, boxplot and scatterplot analysis.

### Inferential Statistics

RQ1: Do DT, coping strategies and social media addiction correlate?

H1a: There is a correlation between DT and social media addiction.

H1b: There is a correlation between coping strategies and social media addiction.

PPMC was used to analyze the data for the first hypothesis. According to Table 4.4, there is a correlation between DT, coping strategies and social media addiction. However, the two sub variables, narcissism and problem-focused coping strategy, from DT and coping strategies seemed to have a non-significant correlation with social media addiction. The results show that



there is significant positive correlation between Machiavellianism and psychopathy with social media addiction,  $r(219) = 0.213, p < 0.01$  and  $r(219) = 0.204, p < 0.01$  respectively. The meaning behind the results is that the higher the personality trait, the higher the chance of a person to have social media addiction. Emotion-focused and avoidance-focused coping strategy were also positively correlated with social media addiction,  $r(219) = 0.278, p < 0.01$  and  $r(219) = 0.368, p < 0.01$  respectively. Hence, the more likely a person adopts emotion-focused or avoidance-focused coping strategy, the more likely they have social media addiction. In conclusion, the sub variables that significantly correlate with social media addiction are Machiavellianism, psychopathy, emotion-focused and avoidance-focused.

Table 4.4

*Pearson's Correlation Coefficients between DT, coping strategies and social media addiction (n=219)*

		Social Media Addiction
Dark Triad		
	Narcissism	0.091
	Machiavellianism	0.213*
	Psychopathy	0.204*
Coping Strategies		
	Emotion-focused	0.278*
	Avoidance-focused	0.368*
	Problem-focused	0.063

*Note: \* $p < .01$  (two-tailed),  $n$  = number of participants*

RQ2: Is DT a significant predictor of social media addiction?

H2a: Narcissism positively predicts with social media addiction.

H2b: Machiavellianism positively predicts with social media addiction.

H2c: Psychopathy positively predicts with social media addiction.

From Table 4.5, the model had accounted for 5.5% variance between the variables, adjusted  $R^2 = 0.055$ ,  $F(3, 215) = 5.225$ ,  $p = 0.002$ . It should also be noted that among the three sub variables, Machiavellianism ( $\beta = 0.168$ ,  $t = 2.436$ ,  $p = 0.016$ ) is the strongest predictor among the other two sub variables. Psychopathy ( $\beta = 0.146$ ,  $t = 2.005$ ,  $p = 0.046$ ) is the second strongest variable but Narcissism ( $\beta = 0.028$ ,  $t = 0.398$ ,  $p = 0.691$ ) was found to be not significant to predict social media addiction. Thus, hypotheses H2b and H2c are supported.

Table 4.5

*Multiple Regression Analysis of DT (Narcissism, Machiavellianism and Psychopathy) as predictors for Social Media Addiction (n=219)*

<b>Outcome variable</b>	<b>Predictor variable</b>	<b>F</b>	<b>Adj. R<sup>2</sup></b>	<b>df</b>	<b><math>\beta</math></b>	<b><i>t</i></b>	<b><i>p</i></b>
Model		5.225	0.055	(3, 215)			0.002
Social media addiction	Narcissism				0.028	0.398	0.691
	Machiavellianism				0.168	2.436	0.016
	Psychopathy				0.146	2.005	0.046

*Note:* Adj. R<sup>2</sup> = Adjusted R<sup>2</sup>

RQ3: Is coping strategies a significant predictor of social media addiction?

H3a: Emotion-focused coping strategy positively predicts with social media addiction.

H3b: Avoidance-focused coping strategy positively predicts with social media addiction

H3c: Problem-focused coping strategy negatively predicts with social media addiction.

The regression model had accounted for 14.9% of variance between variables, adjusted  $R^2 = 0.149$ ,  $F(3, 215) = 13.722$ ,  $p < 0.01$ . The strongest predictor among the coping strategies is avoidance-focused coping ( $\beta = 0.291$ ,  $t = 4.174$ ,  $p < 0.01$ ) while the next strongest predictor is emotion-focused ( $\beta = 0.209$ ,  $t = 2.433$ ,  $p = 0.016$ ) so hypotheses H3a and H3b are supported. Problem-focused coping was not a significant predictor so hypothesis H3c is not supported ( $\beta = -0.071$ ,  $t = -0.893$ ,  $p = 0.373$ ).

Table 4.6

*Multiple Regression Analysis of coping strategies (Emotion-focused, Avoidance-focused and Problem-focused) as predictors for Social Media Addiction (n=219)*

<b>Outcome variable</b>	<b>Predictor variable</b>	<b>F</b>	<b>Adj. R<sup>2</sup></b>	<b>df</b>	<b><math>\beta</math></b>	<b><i>t</i></b>	<b><i>p</i></b>
Model		13.722	0.149	(3, 215)			0.000
Social media addiction	Emotion-focused				0.209	2.433	0.016
	Avoidance-focused				0.291	4.174	0.000
	Problem-focused				-0.071	-0.893	0.373

*Note:* Adj. R<sup>2</sup> = Adjusted R<sup>2</sup>

RQ4: Is coping strategies or Dark Triad a more significant predictor for social media addiction?

H4: Coping strategies is a more significant predictor for social media addiction compared to DT.

The hypothesis is supported. Based on Table 4.7, there were two steps involved in the analysis of which predictor is more significant. The predictors, Machiavellianism and psychopathy, were dragged into the first “Independent” block and added the predictors, emotion-focused and avoidance-focused, into the second “Independent” block using MLR. Social media addiction was put into the “Dependent” block. The first step showed that Machiavellianism ( $\beta = 0.168$ ,  $t = 2.438$ ,  $p = 0.016$ ) and psychopathy ( $\beta = 0.155$ ,  $t = 2.253$ ,  $p = 0.025$ ) were significant. However, in step 2, Machiavellianism ( $\beta = 0.128$ ,  $t = 1.948$ ,  $p = 0.053$ ) and psychopathy ( $\beta = 0.040$ ,  $t = 0.576$ ,  $p = 0.566$ ) were not significant anymore after the addition of the coping strategies, emotion-focused ( $\beta = 0.142$ ,  $t = 2.090$ ,  $p = 0.038$ ) and avoidance-focused ( $\beta = 0.277$ ,  $t = 3.875$ ,  $p = 0.00$ ) into the analysis. The initial  $R^2$  changed was 0.067 but had been increased to  $R^2$  changed = 0.110 after the addition of the coping strategies which indicates that the coping strategies are more significant predictors compared to Machiavellianism and psychopathy. The most significant predictor among the four predictors is avoidance-focused coping strategy ( $\beta = 0.277$ ).

Table 4.7

*Multiple Regression Analysis of DT (Machiavellianism and psychopathy) and coping strategies (emotion-focused and avoidance-focused) as predictors for social media addiction (n=219)*

Model	Adj. R <sup>2</sup>	R <sup>2</sup> Change	F Change	Sig. F Change	$\beta$	$t$	$p$
1	0.059	0.067	7.789	0.001			
					0.168	2.438	0.016
					0.155	2.253	0.025

2		0.161	0.110	14.249	0.000			
	Machiavellianism					0.128	1.948	0.053
	Psychopathy					0.040	0.576	0.566
	Emotion-focused					0.142	2.090	0.038
	Avoidance-focused					0.277	3.875	0.000

---

*Note:* 1 = Step one, 2 =Step two, Adj. R<sup>2</sup> = Adjusted R<sup>2</sup>

### **Findings Summary**

In conclusion, the results have described the demographic of the participants, the test of normality and the inferential statistics to answer the research questions. It is evident that Machiavellianism, psychopathy, emotion-focused and avoidance-focused have a significant relationship that correlate as well as predict social media addiction among undergraduates from UTAR Kampar.

## Chapter V

### Discussion & Conclusion

#### Discussion

##### Correlation among Dark Triad, Coping Strategies and Social Media Addiction

The first objective of the study is to examine the correlation among DT, coping strategies and social media addiction which the results are consistent with past findings (Demircioğlu & Köse, 2018; Andreassen et al., 2017; Wegmann & Brand, 2016; Brand et al., 2014; Sriwilai & Charoensukmongkol, 2016; Al-Gamal et al., 2016) as DT and coping strategies have a positive correlation on social media addiction.

Studies had proven that personality traits is a factor that correlates with social media addiction (Fox & Rooney, 2015; Ryan & Xenos, 2011; Kircaburun et al., 2018) and the DT traits can lead to inception and development of social media addiction due to their distinctive characteristics (Chung et al., 2019). Since DT is described as a group of maladaptive personality traits (Qin & Xu, 2013; Jin et al., 2019) that put high importance on self-enhancement (Book et al., 2015), therefore, there is a positive correlation between DT traits and social media addiction as social media provides a more controllable and predictable environment to satisfy their short-term and immediate interests (Jin et al., 2019). It is in-lined with a study by Paulhus and Williams (2002), stating that DT traits are more likely to utilize social media to meet their need of self-promotion and self-monitoring, hence, resulting in social media addiction as it is viewed as a more stable environment for them to take advantage of the virtual population (Kircaburun et al., 2018). The weak correlation between narcissism and social media addiction might be due to the integration of social media and daily lives, thus, social media is just a tool that people used to

update about their lives just as how older generations communicate using telephones (Davenport et al., 2014).

There is a positive correlation between coping strategies and social media addiction as coping strategies are a replication of the persistent inclination an individual desires when coping with stress or problems (Lee et al., 2011; Chou et al., 2015). According to Mechanic (1974), the basis of coping is helping individuals deal with environmental stressors, forming motivational cues to face demands and achieving psychological balance (Lazarus & Folkman, 1984). When people view social media as a stress relieving tool, they are more willing to spend more time on social media to achieve a sense of equilibrium if they adopt maladaptive coping strategies (Çevik & Yıldız, 2017) such as avoidance-focused coping (Rippetoë & Rogers, 1987) and emotion-focused coping (Sriwilai & Charoensukmongkol, 2016). Besides, when people view their current experiences are uncontrollable or overwhelming, the coping strategies chosen will result in social media addiction as it aims at avoiding problems rather than resolving them (Çevik & Yıldız, 2017). It is in-lined with past study, that when social media is used as an end decision of coping with stress to reduce negative emotions, it will result in addiction (Brand et al., 2014). Since the sampled population is Malaysians, problem-focused coping strategy is seen to have a weaker correlation and this might be due to Malaysian students' religious beliefs for God and show reluctance towards changing the situation by holding in problems to maintain group harmony (Essau & Trommsdorff, 1996).

### **Dark Triad is a Significant Predictor for Social Media Addiction**

The second objective for this study is to examine whether DT significantly predicts social media addiction. Machiavellianism and psychopathy positively predicts social media addiction whereas Narcissism has no significant relationship on social media addiction, which supports the hypothesis partially.

There is a weak correlation between narcissism and social media addiction and narcissism as a non-significant predictor towards social media addiction is in contrast with past studies (Demircioğlu & Köse, 2018; Carpenter, 2012; Bergman et al., 2011; Buffardi & Campbell, 2008) based on this study. Social media sites like Facebook serve as a platform for communication among the millennials (Davenport et al., 2014) and Generation Z shift from social media preference of Facebook to Instagram and Youtube (Viens, 2019). Even though narcissism often predicts social media addiction with the proof of spending excessive time and selfie posting (Demircioğlu & Köse, 2018; Carpenter, 2012; Bergman et al., 2011; Buffardi & Campbell, 2008), the sample of this study consists of age group between 19-25, falling into the generation of millennials and gen Z (Kasasa, 2019) where social media is a norm (Davenport et al., 2014) and selfie posting culture is common (Barry et al., 2019) among them, thus, narcissism is not a significant predictor for social media addiction.. When social media is widely used, narcissistic social media behaviors that are viewed in the past are deemed to be common nowadays (Frederick & Zhang, 2019). In-lined with that study, Davenport et al. (2014) has also proven that the urge to share about daily lives on social media is not a narcissistic act but a generational difference on how people interact.

On the other hand, Machiavellianism positively predicted social media addiction and this result is in-lined with past studies (Demircioğlu & Köse, 2018; Abell & Brewer, 2014). Both



men and women with Machiavellianism traits had reported to spend excessive time on social media sites, like Facebook, for self-monitoring (Abell & Brewer, 2014). This is because people with Machiavellianism trait are extremely careful on judging social cues that are shown by others online to create an impression that they are not calculative and tend to manipulate people (Abell & Brewer, 2014; Jones & Paulhus, 2009; Kircaburun et al., 2018). This results in social media addiction as using these efforts on choosing victims online are time wasting (Kircaburun et al., 2018). It is consistent with another study, stating that regardless of gender, people with Machiavellianism trait are more likely to put in greater efforts of self-monitoring to mask their manipulative sides on social media in order to exploit others by implying guilt, shame or embarrassment on them (Austin et al., 2007; Abell & Brewer, 2014). Besides, study had shown that higher Machiavellianism trait individuals prefer social interaction happening online as they struggle with real-life interactions due to their low agreeableness and emotional intelligence as well as high manipulateness (Austin et al., 2007; Jonason & Krause, 2013; Kircaburun & Griffiths, 2018). People with Machiavellianism trait are more inclined in developing social media addiction as social media serve as a protective factor for their terror of social rejection (Kircaburun et al., 2018; Rauthmann, 2011; Abell & Brewer, 2014; Ladanyi & Doyle-Portillo, 2017; Kircaburun & Griffiths, 2018).

Moreover, in-lined with past studies (Demircioğlu & Köse, 2018; Jonason & Webster, 2012), psychopathy positively predicted social media addiction. Social media addiction involves yearning to engage in social media (Andreassen & Pallesen, 2014; Hou et al., 2019) and based on past study, psychopathy significantly predicts social media cravings (SAVCI, 2019). The core characteristics of psychopathy are impulsivity and recklessness (Shim et al., 2007), so individuals with psychopathy trait are more susceptible in developing addiction towards social

media as it provides the environment for them to reveal their hostile acts (Chung et al., 2019). This is consistent with a study by SAVCI (2019), explaining that extraordinary characteristics of psychopathy is a risk factor of problematic social media use. Additionally, individuals with psychopathic trait are more likely to develop addictive behaviors due to their desire for high thrill seeking and risky actions (Jauk & Dieterich, 2019).

### **Coping Strategies are Significant Predictors for Social Media Addiction**

The third objective for this study is to examine whether coping strategies significantly predict social media addiction. Based on the results, emotion-focused and avoidance-focused coping strategy positively predict social media addiction whereas problem-focused coping strategy has no significant relationship on social media addiction.

As mentioned, emotion-focused coping strategy positively predicts social media addiction, which is in-lined with past study (Sriwilai & Charoensukmongkol, 2016). Emotion - focused strategies help individuals to lessen the stress built up without having the real situation influenced (Lazarus & Folkman, 1984). When individuals seek support through social media (Carr & Hayes, 2015; Hayes et al., 2016), it can diminish the emotional stressors faced (Leung & Lee, 2005; Michel et al., 2010; Lee & Cho, 2018). However, emotion-focused coping strategy aimed to remain the objective of stressful situations (Bauman et al., 2008) and behavioral strategies will be used to ignore current problems provisionally (Lazarus & Folkman, 1984), like spending excessive time on social media as it helps people to decrease negative emotions temporarily but, they will soon build up a reliance towards it that contributes to social media addiction (McNicol & Thorsteinsson, 2017). Study has also shown that people who prefer

emotion-focused coping strategy will depend on social media to diminish their negative emotions by surrounding themselves with friends (Lazarus & Folkman, 1984; Sriwilai & Charoensukmongkol, 2016). With that said, emotion-focused coping is a dysfunctional coping strategies that allows people to ignore their problems resulting in social media addiction (Sriwilai & Charoensukmongkol, 2016).

Avoidance-focused coping strategy positively predicts social media addiction, which is consistent with past studies (Wegmann & Brand, 2016; Brand et al., 2014). Avoidance-focused coping strategy has been viewed as a dysfunctional coping strategy (Snyder & Pulvers, 2001; Hsieh et al., 2016) that strived to disconnect people from distress (Endler et al., 1993; Smith et al., 2016) and will progress into addiction when highly relied on (Hsieh et al., 2016). With a majority sample of Chinese students from present study, past studies had proven that Chinese students tend to employ avoidance-focused coping strategy (Cheng et al., 2015). Furthermore, over 16 percent of participants reported that social media is a good platform to provide them a chance to escape from stress faced in reality (Whiting & Williams, 2013). In addition, avoidance-focused coping strategy contributes to social media addiction that fills in the gap for individuals who are prone to avoid distress (McNicol & Thorsteinsson, 2017). Avoidance-focused coping strategy promote learned helplessness, causing individuals to have a higher likelihood in viewing themselves as incapable in solving stressful situations, resulting in social media addiction that provides distractions from real-world challenges (Cheng et al., 2015). People who feel a sense of dissatisfaction towards their lives or view reality as uncontrollable will adopt the avoidance-focused coping strategy and devote themselves to social media that will lead to addiction (Cheng et al., 2015).

Based on the results, problem-focused coping strategy is a non-significant predictor of social media addiction. Even though it contrasts with past study (Al-Gamal et al., 2016), but a study by Sriwilai and Charoensukmongkol (2016) with employees in Bangkok, Thailand from thirteen companies had the same findings with this study, stating that there is no relationship between problem-focused coping and social media addiction. Problem-focused coping involves developing strategies and skills that are targeted at solving problems (Lazarus & Folkman, 1984). Malaysian students could be lacking in problem solving skills and are seen to be unready to enter the working world even after they graduated (Kuldass et al., 2015; Shakir, 2009; Jamari et al., n.d.). This is due to the habitual traditional teaching and learning experience during previous school years which problem-solving skills are still not properly enforced when students enrolled in tertiary education (Kuldass et al., 2015; Shakir, 2009; Jamari et al., n.d.). Even though it is stated previously that ill development of problem solving skills will result in addictive behaviors (Agbaria et al., 2017) but in this context, it is arguable that the amount of time spent on social media does not serve as a concrete evidence that has a direct impact (Salvation & Adzharuddin, 2014; Jamari et al., n.d.). For example, students who utilize social media such as Facebook as a mean of educational or problem solving purpose will not result in addiction but in fact it will improve the academic performance as social media encourages discussion among teachers or peers (Salvation & Adzharuddin, 2014; Jamari et al., n.d.). With that said, as problem-focused coping needs problem solving skills (Lazarus & Folkman, 1984) that is not well-developed yet in Malaysian context (Kuldass et al., 2015; Shakir, 2009; Jamari et al., n.d.) and the time spent on social media to solve problems is not directly impacted on social media addiction (Salvation & Adzharuddin, 2014; Jamari et al., n.d.) hence, justifying the non-significant prediction between problem-focused coping strategy and social media addiction.

### **Coping Strategies is a more Significant Predictor for Social Media Addiction compared to Dark Triad**

Up to date, various studies had proven that DT traits plays a role in shaping people's addiction towards social media (Brand et al., 2016; Kircaburun et al., 2018; Chung et al., 2019). Past study had also stated that maladaptive coping strategies such as avoidance-focused coping strategy (Snyder & Pulvers, 2001; Hsieh et al., 2016) and emotion-focused coping strategy (Sriwilai & Charoensukmongkol, 2016) will result in social media addiction as people tend to favor coping styles that allow them to ignore problems (Sriwilai & Charoensukmongkol, 2016). Based on the result from this study, however, it showed that coping strategies is a more significant predictor for social media addiction as compared to the DT.

Coping is more significant than the DT traits in predicting social media addiction as it is stated to be more process-oriented than trait-oriented because it controls the thoughts and behaviors of people across various stress encounters (Lazarus & Folkman, 1984). In-lined with the theoretical framework that works in a connection system (Read & Miller, 1998; Ayduk & Gyurak, 2008) and a process of "if...then" construct, cognitive affective units are the main network that controls the interpretation, reaction and behaviors of an individual towards the stimuli (Ayduk & Gyurak, 2008) to enhance the understanding of people's behaviors (Huprich & Nelson, 2015). Besides, coping strategies is a form of defensive or problem-solving strategy that people will depend on during difficult times (Lazarus & Folkman, 1984). When social media is viewed as a platform for users in providing a more controllable environment to temporarily avoid distress (Snyder & Pulvers, 2001; Hsieh et al., 2016) and if maladaptive coping strategies are chosen, then coping strategies will be a more significant predictor for social media addiction

(Sriwilai & Charoensukmongkol, 2016) since they determine what individuals truly think and act based on a stress encounters (Lazarus & Folkman, 1984).

## **Conclusion**

To summarize, the research objectives in this research are attained. DT and coping strategies both have a positive correlation on social media addiction. The weak correlation between narcissism and social media addiction is due to the widely spread usage of social media as a life updating tool for generation nowadays; while the weak correlation between problem-focused coping and social media addiction stemmed from the religious beliefs and norms of Malaysian students' in viewing problems. Both Machiavellianism and psychopathy significantly predicted social media addiction as the former spent excessive time in masking their manipulative sides online while the later view social media as a safe platform to release their impulsiveness. Narcissism is not a significant predictor towards social media addiction as generational difference is taken into account, proving that the views towards social media behaviors are different now. Emotion-focused coping strategy significantly predicted social media addiction as people will spend time on social media seeking support or ignoring problems temporarily. Avoidance-focused coping strategy significantly predicted social media addiction for people who adopt the coping style will depend on social media to avoid problems. The non-significance between problem-focused coping and social media addiction is due to the poor problem-solving skills among Malaysian students as well as the excessive time spent on social media to solve problems has no strong impact on the result of addiction. Lastly, coping strategies is a more significant predictor compared to DT due to the process-oriented control of people's

behaviors that is in-lined with the theoretical framework that determines the actions of individuals when stress is faced.

Social media addiction can be further researched based on the factors (DT and coping strategies) in this current research to contribute and provide a more fruitful understanding in the field of research. The theoretical and practical implications of this study can be employed by the education sectors, mental health professionals as well as undergraduates for educational or research purposes.

### **Implications**

**Theoretical implication.** The theory used in this study is the Cognitive Affective Personality System (CAPs) model that works on the “if...then” construct generated by the network of cognitive affective units that determines one’s behavior (Ayduk & Gyurak, 2008) which involved self-regulatory strategies (Mischel & Ayduk, 2002) that provide a deeper understanding on people’s behavior based on situational interpretations (Huprich & Nelson, 2015). Based on the findings from this study, it highlighted that, as compared, coping strategies is a stronger predictor towards social media addiction than DT among UTAR undergraduates. It supported the CAUs in CAPs model as coping strategies involving cognitive and behavioral efforts including attempts that guide an individual in regulating stressors when the individual’s resources are depleting (Lazarus & Folkman, 1984).

From the study, narcissism on the other hand is a non-significant predictor of social media addiction. With the consideration of generational difference (Davenport et al., 2014), there is a need to further examine narcissism and social media addiction with different age cohort

taken into account in the Malaysian context to obtain a more significant result among UTAR undergraduates. The findings further supported that maladaptive coping strategies (Snyder & Pulvers, 2001; Hsieh et al., 2016; Sriwilai & Charoensukmongkol, 2016) is indeed a contributory factor in predicting social media addiction in Malaysian undergraduates. The insignificance prediction between problem-focused coping and social media addiction in this current study had highlighted on the importance of developing problem-solving skills among Malaysian students (Kuldas et al., 2015; Shakir, 2009; Jamari et al., n.d.) and social media addiction should be defined more precisely by considering other influencing factors that contribute to excessive time spent to obtain a more significant result.

**Practical Implications.** For the present study, the findings on DT and coping strategies as a predictor for social media addiction aims to raise awareness among the undergraduates in Malaysian context. As people with DT personality traits has a higher tendency in engaging in social media addiction (Demircioğlu & Köse, 2018; Andreassen et al., 2017), it will shed light on the other possible addictive habits that are correlated with DT if the findings are replicated and further researched. By doing so, mental health professionals could implement effective strategies in helping people with DT personality traits to better regulate their dispositions of emotions, resulting in a more resilience lifestyle.

From the findings in this current research, coping strategies is deemed to be a more significant predictor for social media addiction compared to DT. It has also proven that Malaysia students are lacking in problem solving skills that is a crucial component for work life (Kuldas et al., 2015; Shakir, 2009; Jamari et al., n.d.). Hence, this research reinforced the need to sharpen problem-focused coping strategy among Malaysian undergraduates to avoid the instillation of dependence towards social media. The Ministry of Education should encourage the use of



problem-solving skills by involving peer-to-peer discussions that facilitate the learning environment. When students are used to solving their problems in innovative ways, they will no longer avoid or ignore problems, whereas building up new solutions to resolve them. By then, even though social media will still be integrated into their lives, with the right mindset and problem-solving abilities, the use of social media will be better regulated with the right motives.

Overall, the implications of this study provided a fourfold knowledge on the significant prediction of DT and coping strategies for social media addiction as well as acknowledging coping strategies as a more significant predictor for social media addiction among UTAR undergraduates with the support of the CAPs model. Findings and data for this research can aid future researchers that are interested in the same field of study.

### **Limitations of Study**

Few limitations found in this study should be addressed for future improvements. The first limitation is the study had only collected participants from the Kampar campus in UTAR instead of obtaining participants from both Kampar and Sungai Long campuses due to the lack of time and funds. This could have caused overgeneralization to happen as the study states that it has been done among undergraduates from UTAR. Overgeneralization is not advantageous in research as the result could be different when applied to the population (Simundić, 2013).

Another limitation is the sample's race. From the sample, it can be seen that the majority of the participants are Chinese (90.9%) (Refer to Table 4.1). The gender of the sample should also be equal as in this study, the females outweigh the males' responses. This could have

affected the analysis and result in bias in data. Bias can result in inaccurate conclusions to be made after the publication has been read (Simundić, 2013).

Lastly, the responses from a self-reported survey could have influenced the data's reliability and validity. Sometimes participants could lead the direction of the data to please the researchers (Marczyk et al., 2005) or to pick answers that could be socially desirable especially in personality assessments (Bäckström & Björklund, 2012). Hence, self-reported data could be inaccurate due to the over-reporting of their own real behaviors (Araujo et al., 2017). There is no option to re-verify the answers provided by the participants as it is a type of data collection that only relies on their responses so inaccuracy could happen.

### **Recommendations of Study**

There are a few recommendations that can be suggested to improve the limitations stated in future studies. The first recommendation is to ensure that participants should be recruited from both campuses of UTAR, Kampar and Sungai Long. However, to decrease the chances of overgeneralization, future studies should consider taking samples from universities of different states in Malaysia. By including different people from different states, there could be varying opinions and views that could contribute to the data collection. Thus, this could help improve the reliability and accuracy of data when applied to the population.

To solve the problem of bias in data collection, future studies could apply stratified sampling method. Stratified sampling method is a type of random sampling method that separates the initial population into different characteristics and participants will be picked

equally from each characteristic (Shi, 2015). This could solve the bias and inconsistency in race and gender samples as well as ensure that it is able to represent the population.

The last recommendation is to neutralize the questions to prevent social desirability and self-reporting bias. Neutralization of questions can be done through rephrasing the questions to make it less obvious on what the answers would be associated with (Bäckström & Björklund, 2012). It has been proven that the neutralization can decrease the likelihood of social desirability especially in personality inventories as participants could not differentiate the items from what is and what is not socially desirable anymore (Bäckström & Björklund, 2012).

## References

- Abell, L., & Brewer, G. (2014). Machiavellianism, self-monitoring, self-promotion and relational aggression on Facebook. *Computers in Human Behavior, 36*, 258-262.  
<https://doi.org/10.1016/j.chb.2014.03.076>
- ACT Academy. (n.d.). *Quality, service improvement and redesign tools: scatter diagram (correlation)*. <https://improvement.nhs.uk/documents/2163/scatter-diagram.pdf>
- Afacan, O. & Ozbek, N. (2019). Investigation of social media addiction of high school students. *International Journal of Educational Methodology, 5*(2), 235-245.  
<https://doi.org/10.12973/ijem.5.2.235>
- Agbaria, Q., Berte, D. Z., & Mahamid, F. A. (2017). Social support, self-control, religiousness and engagement in high risk-behaviors among adolescents. *The International Journal of Indian Psychology, 4*, 13-33. <https://doi.org/10.25215/0404.142>
- Al-Gamal, E., Alzayyat, A., & Ahmad, M. M. (2016). Prevalence of internet addiction and its association with psychological distress and coping strategies among university students in Jordan. *Perspectives in Psychiatric Care, 52*(1), 49–61.  
<https://doi.org/10.1111/ppc.12102>
- American Society of Addiction Medicine (2016). *Public policy statement: definition of Addiction*.  
[https://www.asam.org/docs/default-source/public-policy-statements/1definition\\_of\\_addiction\\_short\\_4-11.pdf?sfvrsn=6e36cc2\\_0](https://www.asam.org/docs/default-source/public-policy-statements/1definition_of_addiction_short_4-11.pdf?sfvrsn=6e36cc2_0)

- Andreassen, C. S. (2015). Online social network site addiction: A comprehensive review. *Current Addiction Reports*, 2(2), 175-184. <https://doi.org/10.1007/s40429-015-0056-9>
- Andreassen, C. S., & Pallesen, S. (2014). Social network site addiction-an overview. *Current Pharmaceutical Design*, 20(25), 4053-4061. <https://doi.org/10.2174/13816128113199990616>
- Andreassen, C. S., Pallesen, S., & Griffiths, M. D. (2017). The relationship between addictive use of social media, narcissism, and self-esteem: Findings from a large national survey. *Addictive Behaviors*, 64, 287-293. <https://doi.org/10.1016/j.addbeh.2016.03.006>
- Andreassen, C. S., Torsheim, T., Brunborg, G. S., & Pallesen, S. (2012). Development of a Facebook addiction scale. *Psychological Reports*, 110(2), 501-517. <https://doi.org/10.2466/02.09.18.pr0.110.2.501-517>
- Araujo, T., Wonneberger, A., Neijens, P., & de Vreese, C. (2017). How much time do you spend online? Understanding and improving the accuracy of self-reported measures of internet use. *Communication Methods and Measures*, 11(3), 173-190. <https://doi.org/10.1080/19312458.2017.1317337>
- Austenfeld, J. L., & Stanton, A. L. (2004). Coping through emotional approach: A new look at emotion, coping, and health-related outcomes. *Journal of Personality*, 72(6), 1335-1364. <https://doi.org/10.1111/j.1467-6494.2004.00299.x>

- Austin, E. J., Farrelly, D., Black, C., & Moore, H. (2007). Emotional intelligence, Machiavellianism and emotional manipulation: Does EI have a dark side? *Personality and Individual Differences*, 43(1), 179-189. <https://doi.org/10.1016/j.paid.2006.11.019>
- Ayduk, Ö., & Gyurak, A. (2008). Applying the cognitive-affective processing systems approach to conceptualizing rejection sensitivity. *Social and Personality Psychology Compass*, 2(5), 2016-2033. <https://doi.org/10.1111/j.1751-9004.2008.00143.x>
- Bäckström, M., & Björklund, F. (2012). Social desirability in personality inventories: Symptoms, diagnosis and prescribed cure. *Scandinavian Journal of Psychology*, 54(2), 152-159. <https://doi.org/10.1111/sjop.12015>
- Bal, P. N., & Metan, H. (2016). The effect of computer addiction management psychotraining program on 9th grade students. *Abant İzzet Baysal University Journal of Faculty of Education*, 16(1), 62-74.
- Bányai, F., Zsila, Á., Király, O., Maraz, A., Elekes, Z., Griffiths, M. D., Andreassen, C. S., & Demetrovics, Z. (2017). Problematic social media use: Results from a large-scale nationally representative adolescent sample. *PLOS ONE*, 12(1), e0169839. <https://doi.org/10.1371/journal.pone.0169839>
- Barry, C. T., Reiter, S. R., Anderson, A. C., Schoessler, M. L., & Sidoti, C. L. (2019). "Let me take another selfie": Further examination of the relation between narcissism, self-perception, and instagram posts. *Psychology of Popular Media Culture*, 8(1), 22-33. <https://doi.org/10.1037/ppm0000155>

- Bauman, E. M., Haaga, D. A. F., & Dutton, M. A. (2008). Coping with intimate partner violence: Battered women's use and perceived helpfulness of emotion-focused coping strategies. *Journal of Aggression, Maltreatment & Trauma, 17*(1), 23-41.  
<https://doi.org/10.1080/10926770802250942>
- Bergman, S. M., Ferrington, M. E., Davenport, S. W., & Bergman, J. Z. (2011). Millennials, narcissism, and social networking: What narcissists do on social networking sites and why. *Personality and Individual Differences, 50*(5), 706-711.  
<https://doi.org/10.1016/j.paid.2010.12.022>
- Birkás, B., Gács, B., & Csathó, Á. (2016). Keep calm and don't worry: Different DT traits predict distinct coping preferences. *Personality and Individual Differences, 88*, 134-138.  
<http://dx.doi.org/10.1016/j.paid.2015.09.007>
- Book, A., Visser, B. A., & Volk, A. A. (2015). Unpacking "evil": Claiming the core of the DT. *Personality and Individual Differences, 73*, 29-38.  
<https://doi.org/10.1016/j.paid.2014.09.016>
- Brand, M., Laier, C., & Young, K. S. (2014). Internet addiction: Coping styles, expectancies, and treatment implications. *Frontiers in psychology, 5*, 1256.  
<https://doi.org/10.3389/fpsyg.2014.01256>
- Brand, M., Young, K. S., Laier, C., Wölfling, K., & Potenza, M. N. (2016). Integrating psychological and neurobiological considerations regarding the development and maintenance of specific internet-use disorders: An interaction of Person-Affect-Cognition-Execution (I-PACE) model. *Neuroscience & Biobehavioral Reviews, 71*, 252-266. <https://doi.org/10.1016/j.neubiorev.2016.08.033>

- Buffardi, L. E., & Campbell, W. K. (2008). Narcissism and Social Networking Web sites. *Personality and Social Psychology Bulletin, 34*(10), 1303-1314.  
<https://doi.org/10.1177/0146167208320061>
- Carpenter, C. J. (2012). Narcissism on Facebook: Self-promotional and anti-social behavior. *Personality and Individual Differences, 52*(4), 482-486.  
<https://doi.org/10.1016/j.paid.2011.11.011>
- Carr, C. T., & Hayes, R. A. (2015). Social media: Defining, developing, and divining. *Atlantic Journal of Communication, 23*(1), 46–65. <https://doi.org/10.1080/15456870.2015.972282>
- Carver, C. S. (1997). You want to measure coping but your protocol' too long: Consider the brief cope. *International Journal of Behavioral Medicine, 4*(1), 92-100.  
[https://doi.org/10.1207/s15327558ijbm0401\\_6](https://doi.org/10.1207/s15327558ijbm0401_6)
- Carver, C. S., & Connor-Smith, J. (2010). Personality and coping. *Annual review of psychology, 61*, 679-704. <https://doi.org/10.1146/annurev.psych.093008.100352>
- Casale, S., Fioravanti, G., & Rugai, L. (2016). Grandiose and vulnerable narcissists: Who is at higher risk for social networking addiction? *Cyberpsychology, Behavior, and Social Networking, 19*(8), 510-515. <https://doi.org/10.1089/cyber.2016.0189>
- Çevik, G. B., & Yildiz, M. A. (2017). The role of perceived social support and coping styles in predicting adolescents' positivity. *Universal Journal of Educational Research, 5*(5), 723-732. <https://doi.org/10.13189/ujer.2017.050504>



- Chang, Y. (2012). The relationship between maladaptive perfectionism with burnout: Testing mediating effect of emotion-focused coping. *Personality and Individual Differences, 53*(5), 635–639. <https://doi.org/10.1016/j.paid.2012.05.002>
- Cheng, C., Sun, P., & Mak, K.-K. (2015). Internet addiction and psychosocial maladjustment: Avoidant coping and coping inflexibility as psychological mechanisms. *Cyberpsychology, Behavior, and Social Networking, 18*(9), 539-546. <https://doi.org/10.1089/cyber.2015.0121>
- Chou, W.-P., Ko, C.-H., Kaufman, E. A., Crowell, S. E., Hsiao, R. C., Wang, P.-W., Lin, J.-J., & Yen, C.-F. (2015). Association of stress coping strategies with internet addiction in college students: The moderating effect of depression. *Comprehensive Psychiatry, 62*, 27-33. <https://doi.org/10.1016/j.comppsy.2015.06.004>
- Christie, R., & Geis, F. L. (1970). *Studies in Machiavellianism*. Academic press.
- Chung, K. L., Morshidi, I., Yoong, L. C., & Thian, K. N. (2019). The role of the Dark Tetrad and impulsivity in social media addiction: Findings from Malaysia. *Personality and Individual Differences, 143*, 62-67. <https://doi.org/10.1016/j.paid.2019.02.016>
- Cohan, S. L., Jang, K. L., & Stein, M. B. (2006). Confirmatory factor analysis of a short form of the coping inventory for stressful situations. *Journal of Clinical Psychology, 62*(3), 273-283. <https://doi.org/10.1002/jclp.20211>
- Davenport, S. W., Bergman, S. M., Bergman, J. Z., & Ferrington, M. E. (2014). Twitter versus Facebook: Exploring the role of narcissism in the motives and usage of different social

media platforms. *Computers in Human Behavior*, 32, 212-220.

<https://doi.org/10.1016/j.chb.2013.12.011>

Demircioğlu, Z. I., & Köse, A. G. (2018). Effects of attachment styles, DT, rejection sensitivity, and relationship satisfaction on social media addiction: A mediated model. *Current Psychology*, 1-15. <https://doi.org/10.1007/s12144-018-9956-x>

Endler, N. S., & Parker, J. D. (1990). Multidimensional assessment of coping: A critical evaluation. *Journal of Personality and Social Psychology*, 58(5), 844-854.

<https://doi.org/10.1037/0022-3514.58.5.844>

Endler, N. S., Parker, J. D. A., & Butcher, J. N. (1993). A factor analytic study of coping styles and the MMPI-2 content scales. *Journal of Clinical Psychology*, 49(4), 523-527.

[https://doi.org/10.1002/1097-4679\(199307\)49:4<523::aid-jclp2270490409>3.0.co;2-m](https://doi.org/10.1002/1097-4679(199307)49:4<523::aid-jclp2270490409>3.0.co;2-m)

Endler, N. S., Parker, J. D. A., & Butcher, J. N. (1993). A factor analytic study of coping styles and the MMPI-2 content scales. *Journal of Clinical Psychology*, 49(4), 523-527.

[https://doi.org/10.1002/1097-4679\(199307\)49:4<523::aid-jclp2270490409>3.0.co;2-m](https://doi.org/10.1002/1097-4679(199307)49:4<523::aid-jclp2270490409>3.0.co;2-m)

Essau, C. A., & Trommsdorff, G. (1996). Coping with university-related problems: A cross-cultural comparison. *Journal of Cross-Cultural Psychology*, 27(3), 315-328.

<https://doi.org/10.1177/0022022196273004>

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G\*Power 3.1: Tests for correlation and regression analyses. *Behavior Research Methods*, 41(4), 1149-1160. <https://doi.org/10.3758/brm.41.4.1149>

- Foong, P. Y. (2015). *Kampar now a bustling education hub. The Star Online.*  
<https://www.thestar.com.my/metro/community/2015/05/06/town-comes-alive-kampar-now-a-bustling-education-hub/>
- Fox, J., & Rooney, M. C. (2015). The Dark Triad and trait self-objectification as predictors of men's use and self-presentation behaviors on social networking sites. *Personality and Individual Differences, 76*, 161-165. <https://doi.org/10.1016/j.paid.2014.12.017>
- Frederick, C. M., & Zhang, T. (2019). Narcissism and social media usage: Is there no longer a relationship?. *Journal of Articles in Support of the Null Hypothesis, 16*(1), 23.
- Furnham, A., Richards, S. C., & Paulhus, D. L. (2013). The DT of personality: A 10 year review. *Social and Personality Psychology Compass, 7*(3), 199-216.  
<https://doi.org/10.1111/spc3.12018>
- Ghasemi, A., & Zahediasl, S. (2012). Normality tests for statistical analysis: A guide for non-statisticians. *International Journal of Endocrinology and Metabolism, 10*(2), 486-489.  
<https://doi.org/10.5812/ijem.3505>
- Go-Gulf. (2013). *Social Media Advertising - Spending Statistics and Trends.* <https://www.go-gulf.com/social-media-advertising/>
- Griffiths, M. (2000). Internet addiction - Time to be taken seriously? *Addiction Research, 8*(5), 413-418. <https://doi.org/10.3109/16066350009005587>
- Grossman, M. (2017). *Study of social media users: The relationship between online deception, machiavellian personality, self-esteem, and social desirability* (Doctoral dissertation, Alliant International University).

- Gurtman, M. B. (1992). Trust, distrust, and interpersonal problems: A circumplex analysis. *Journal of Personality and Social Psychology*, 62(6), 989–1002.  
<https://doi.org/10.1037/0022-3514.62.6.989>
- Hall, A. S., & Parsons, J. (2001). Internet addiction: College student case study using best practices in cognitive behavior therapy. *Journal of mental health counseling*, 23(4), 312-327.
- Hare, R. D. (1998). Psychopathy, affect and behavior. *Psychopathy: Theory, Research and Implications for Society*, 105–137. [https://doi.org/10.1007/978-94-011-3965-6\\_6](https://doi.org/10.1007/978-94-011-3965-6_6)
- Hawi, N. S., & Samaha, M. (2017). Relationships among smartphone addiction, anxiety, and family relations. *Behaviour & Information Technology*, 36(10), 1046-1052.  
<https://doi.org/10.1080/0144929x.2017.1336254>
- Hayes, R. A., Carr, C. T., & Wohn, D. Y. (2016). It's the audience: Differences in social support across social media. *Social Media + Society*, 2(4), 205630511667889.  
<https://doi.org/10.1177/2056305116678894>
- Hill, R. (1998). What sample size is “enough” in internet survey research? *Interpersonal Computing and Technology: An electronic journal for the 21st century*, 6(3-4), 1-12.
- Hou, Y., Xiong, D., Jiang, T., Song, L., & Wang, Q. (2019). Social media addiction: Its impact, mediation, and intervention. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, 13(1). <https://doi.org/10.5817/cp2019-1-4>
- Hsieh, Y.-P., Shen, A. C.-T., Wei, H.-S., Feng, J.-Y., Huang, S. C.-Y., & Hwa, H.-L. (2016). Associations between child maltreatment, PTSD, and internet addiction among

- Taiwanese students. *Computers in Human Behavior*, 56, 209-214.  
<https://doi.org/10.1016/j.chb.2015.11.048>
- Hu, Q., Bernardo, A. B. I., Lam, S. W., & Cheang, P. K. (2016). Individualism-Collectivism Orientations and Coping Styles of Cyberbullying Victims in Chinese Culture. *Current Psychology*, 37(1), 65-72. <https://doi.org/10.1007/s12144-016-9490-7>
- Huprich, S. K., & Nelson, S. M. (2015). Advancing the assessment of personality pathology with the cognitive-affective processing system. *Journal of Personality Assessment*, 97(5), 467-477. <https://doi.org/10.1080/00223891.2015.1058806>
- Hyatt, C. S., Sleep, C. E., Lamkin, J., Maples-Keller, J. L., Sedikides, C., Campbell, W. K., & Miller, J. D. (2018). Narcissism and self-esteem: A nomological network analysis. *PLoS one*, 13(8), e0201088. <https://doi.org/10.1371/journal.pone.0201088>
- Ináncsi, T., Láng, A., & Bereczkei, T. (2016). A darker shade of love: Machiavellianism and positive assortative mating based on romantic ideals. *Europe's Journal of Psychology*, 12(1), 137–152. <https://doi.org/10.5964/ejop.v12i1.1007>
- Internet users survey 2018. (2018). *Malaysian Communications and Multimedia Commission*.  
<https://www.mcmc.gov.my/skmmgovmy/media/General/pdf/Internet-Users-Survey-2018.pdf>.
- Jamari, D., Zaid, N. M., Mohammed, H., Abdullah, Z., & Aris, B. (n.d.). The overview of problem solving skill through online social networking platform.  
[http://eprints.utm.my/id/eprint/63549/1/ZalehaAbdullah2015\\_TheOverviewofProblemSolvingSkillThroughOnlineSocialNetworkingPlatform.pdf](http://eprints.utm.my/id/eprint/63549/1/ZalehaAbdullah2015_TheOverviewofProblemSolvingSkillThroughOnlineSocialNetworkingPlatform.pdf)

- Jauk, E., & Dieterich, R. (2019). Addiction and the Dark Triad of personality. *Frontiers in Psychiatry, 10*. <https://doi.org/10.3389/fpsyt.2019.00662>
- Jin, C. C., Wang, B. C., & Ji, A. T. (2019). The relationship between the DT and internet adaptation among adolescents in China: Internet use preference as a mediator. *Frontiers in Psychology, 10*. <https://doi.org/10.3389/fpsyg.2019.02023>
- Jonason, P. K., & Krause, L. (2013). The emotional deficits associated with the Dark Triad traits: Cognitive empathy, affective empathy, and alexithymia. *Personality and Individual Differences, 55*(5), 532–537. <https://doi.org/10.1016/j.paid.2013.04.027>
- Jonason, P. K., & Webster, G. D. (2012). A protean approach to social influence: DT personalities and social influence tactics. *Personality and Individual Differences, 52*(4), 521-526. <https://doi.org/10.1016/j.paid.2011.11.023>
- Jonason, P. K., Lyons, M., & Blanchard, A. (2015). Birds of a “bad” feather flock together: The DT and mate choice. *Personality and Individual Differences, 78*, 34-38. <https://doi.org/10.1016/j.paid.2015.01.018>
- Jones, D. N., & Paulhus, D. L. (2009). Machiavellianism. In M. R. Leary & R. H. Hoyle (Eds.), *Handbook of individual differences in social behavior* (p. 93-108). The Guilford Press.
- Jones, D. N., & Paulhus, D. L. (2011). The role of impulsivity in the DT of personality. *Personality and Individual Differences, 51*(5), 679–682. <https://doi.org/10.1016/j.paid.2011.04.011>

- Jones, D. N., & Paulhus, D. L. (2014). Introducing the short DT (SD3): A brief measure of dark personality traits. *Assessment, 21*(1), 28-41. <https://doi.org/10.1177/1073191113514105>
- Jones, D. N., & Paulhus, D. L. (2017). Duplicity among the DT: Three faces of deceit. *Journal of Personality and Social Psychology, 113*(2), 329-342.  
<https://doi.org/10.1037/pspp0000139>
- Kasasa. (2019). *Boomers, Gen X, Gen Y, and Gen Z Explained*.  
<https://www.kasasa.com/articles/generations/gen-x-gen-y-gen-z>
- Kircaburun, K., & Griffiths, M. D. (2018). The dark side of internet: Preliminary evidence for the associations of dark personality traits with specific online activities and problematic internet use. *Journal of Behavioral Addictions, 7*(4), 993-1003.  
<https://doi.org/10.1556/2006.7.2018.109>
- Kircaburun, K., Demetrovics, Z., & Tosuntaş, Ş. B. (2018). Analyzing the links between problematic social media use, DT traits, and self-esteem. *International Journal of Mental Health and Addiction, 17*(6), 1496-1507. <https://doi.org/10.1007/s11469-018-9900-1>
- Kowalski, C. M., Vernon, P. A., & Schermer, J. A. (2016). The general factor of personality: The relationship between the Big One and the DT. *Personality and Individual Differences, 88*, 256-260. <https://doi.org/10.1016/j.paid.2015.09.028>
- Kuldass, S., Hashim, S., Ismail, H. N., & Samsudin, M. A. (2015). The need for an academic resilience approach to cognitive task performance of Malaysian students in secondary schools and higher education. *Pertanika Journal of Social Sciences and Humanities, 23*(3), 553-566.

- Ladanyi, J., & Doyle-Portillo, S. (2017). The development and validation of the Grief Play Scale (GPS) in MMORPGs. *Personality and Individual Differences, 114*, 125-133.  
<https://doi.org/10.1016/j.paid.2017.03.062>
- Lazarus, R. (1986). Coping strategies. In *Illness Behavior* (pp. 303-308). Springer.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer publishing company.
- Lee, H. E., & Cho, J. (2018). Social media use and well-being in people with physical disabilities: Influence of SNS and online community uses on social support, depression, and psychological disposition. *Health Communication, 34*(9), 1043-1052.  
<https://doi.org/10.1080/10410236.2018.1455138>
- Lee, Y. S. C., Suchday, S., & Wylie-Rosett, J. (2011). Perceived social support, coping styles, and Chinese immigrants' cardiovascular responses to stress. *International Journal of Behavioral Medicine, 19*(2), 174-185. <https://doi.org/10.1007/s12529-011-9156-7>
- Leon, A. C., Davis, L. L., & Kraemer, H. C. (2011). The role and interpretation of pilot studies in clinical research. *Journal of Psychiatric Research, 45*(5), 626-629.  
<https://doi.org/10.1016/j.jpsychires.2010.10.008>
- Leong, L.-Y., Hew, T.-S., Ooi, K.-B., Lee, V.-H., & Hew, J.-J. (2019). A hybrid SEM-neural network analysis of social media addiction. *Expert Systems with Applications, 133*, 296-316. <https://doi.org/10.1016/j.eswa.2019.05.024>



- Leung, L., & Lee, P. S. N. (2005). Multiple determinants of life quality: The roles of internet activities, use of new media, social support, and leisure activities. *Telematics and Informatics*, 22(3), 161-180. <https://doi.org/10.1016/j.tele.2004.04.003>
- Levin, K. A. (2006). Study design III: Cross-sectional studies. *Evidence-Based Dentistry*, 7(1), 24-25. <https://doi.org/10.1038/sj.ebd.6400375>
- Mahamid, F. A., & Berte, D. Z. (2019). Social media addiction in geopolitically at-risk youth. *International Journal of Mental Health and Addiction*, 17(1), 102-111. <https://doi.org/10.1007/s11469-017-9870-8>
- Majumdar, B., & Ray, A. (2010). Stress and coping strategies among university students: A phenomenological study. *Indian Journal of Social Science Research*, 7(2), 100-111.
- Malesza, M., & Ostaszewski, P. (2016). Dark side of impulsivity — Associations between the DT, self-report and behavioral measures of impulsivity. *Personality and Individual Differences*, 88, 197-201. <https://doi.org/10.1016/j.paid.2015.09.016>
- Mamun, M. A. A., & Griffiths, M. D. (2019). The association between Facebook addiction and depression: A pilot survey study among Bangladeshi students. *Psychiatry Research*, 271, 628-633. <https://doi.org/10.1016/j.psychres.2018.12.039>
- Marczyk, G. R., Dematteo, D., & Festinger, D. (2005). *Essentials of research design and methodology*. John Wiley & Sons.
- McNicol, M. L., & Thorsteinsson, E. B. (2017). Internet addiction, psychological distress, and coping responses among adolescents and adults. *Cyberpsychology, Behavior, and Social Networking*, 20(5), 296-304. <https://doi.org/10.1089/cyber.2016.0669>

- McWilliams, L. A., Cox, B. J., & Enns, M. W. (2003). Use of the coping inventory for stressful situations in a clinically depressed sample: Factor structure, personality correlates, and prediction of distress. *Journal of Clinical Psychology, 59*(12), 1371-1385.  
<https://doi.org/10.1002/jclp.10228>
- Mechanic, D. (1974). Discussion of research programs on relations between stressful life events and episodes of physical illness. In B. S. Dohrenwend & B. P. Dohrenwend (Eds.), *Stressful life events: Their nature and effects*. John Wiley & Sons.
- Michel, J. S., Mitchelson, J. K., Pichler, S., & Cullen, K. L. (2010). Clarifying relationships among work and family social support, stressors, and work-family conflict. *Journal of Vocational Behavior, 76*(1), 91-104. <https://doi.org/10.1016/j.jvb.2009.05.007>
- Miller, L. J., & Lu, W. (2018). Gen Z is set to outnumber millennials within a year. *Bloomberg*.  
<https://www.bloomberg.com/news/articles/2018-08-20/gen-z-to-outnumber-millennials-within-a-year-demographic-trends>
- Mischel, W., & Ayduk, O. (2002). Self-regulation in a cognitive--affective personality system: Attentional control in the service of the self. *Self and Identity, 1*(2), 113-120.  
<https://doi.org/10.1080/152988602317319285>
- Mischel, W., & Shoda, Y. (1995). A cognitive-affective system theory of personality: Reconceptualizing situations, dispositions, dynamics, and invariance in personality structure. *Psychological Review, 102*(2), 246-268. <https://doi.org/10.1037/0033-295x.102.2.246>

- Monzani, D., Steca, P., Greco, A., D'Addario, M., Cappelletti, E., & Pancani, L. (2015). The situational version of the brief cope: Dimensionality and relationships with goal-related variables. *Europe's Journal of Psychology*, *11*(2), 295-310.  
<https://doi.org/10.5964/ejop.v11i2.935>
- Moos, R. H. (1993). *Coping responses inventory youth form : Professional manual*. Psychological Assessment Resources.
- Muris, P., Merckelbach, H., Otgaar, H., & Meijer, E. (2017). The malevolent side of human nature: A meta-analysis and critical review of the literature on the DT (narcissism, Machiavellianism, and psychopathy). *Perspectives on Psychological Science*, *12*(2), 183-204. <https://doi.org/10.1177%2F1745691616666070>
- Ong, S. H., & Tan, Y. R. (2014). Internet addiction in young people. *ResearchGate*. *43*(7), 378-82.
- Parke, C. (2013). *Essential first steps to data analysis: Scenario-based examples using SPSS*.  
<https://doi.org/10.4135/9781506335148>
- Parker, J. D. A., & Endler, N. S. (1992). Coping with coping assessment: A critical review. *European Journal of Personality*, *6*(5), 321-344.  
<https://doi.org/10.1002/per.2410060502>
- Parker, P. D., Martin, A. J., Colmar, S., & Liem, G. A. (2012). Teachers' workplace well-being: Exploring a process model of goal orientation, coping behavior, engagement, and burnout. *Teaching and Teacher Education*, *28*(4), 503-513.  
<https://doi.org/10.1016/j.tate.2012.01.001>

- Paulhus, D. L. (2013). DT of personality (D3-short). *Measurement instrument database for the social sciences*.
- Paulhus, D. L., & Williams, K. M. (2002). The DT of personality: Narcissism, Machiavellianism, and psychopathy. *Journal of research in personality*, 36(6), 556-563.  
[https://doi.org/10.1016/s0092-6566\(02\)00505-6](https://doi.org/10.1016/s0092-6566(02)00505-6)
- Paulhus, D. L., Harms, P. D., Bruce, M. N., & Lysy, D. C. (2003). The over-claiming technique: Measuring self-enhancement independent of ability. *Journal of Personality and Social Psychology*, 84(4), 890-904. <https://doi.org/10.1037/0022-3514.84.4.890>
- Pennebaker, J., & Chung, C. (2011). Expressive writing, emotional upheavals, and health. In H. S. Friedman & R. C. Silver (Eds.), *The Oxford handbook of health psychology* (pp. 417-437). Oxford University Press.
- Qin, F., & Xu, F. (2013). Review on the studies of the Dark Triad. *Advances in Psychological Science*, 21(7), 1248-1261. <https://doi.org/10.3724/sp.j.1042.2013.01248>
- Rauthmann, J. F. (2011). Acquisitive or protective self-presentation of dark personalities? Associations among the Dark Triad and self-monitoring. *Personality and Individual Differences*, 51(4), 502-508. <https://doi.org/10.1016/j.paid.2011.05.008>
- Rauthmann, J. F. (2012). The DT and interpersonal perception: Similarities and differences in the social consequences of narcissism, Machiavellianism, and psychopathy. *Social Psychological and Personality Science*, 3(4), 487-496.  
<https://doi.org/10.1177/1948550611427608>

- Rauthmann, J. F., & Kolar, G. P. (2012). How “dark” are the DT traits? Examining the perceived darkness of narcissism, Machiavellianism, and psychopathy. *Personality and Individual Differences, 53*(7), 884-889. <https://doi.org/10.1016/j.paid.2012.06.020>
- Read, S. J., & Miller, L. C. (1998). On the dynamic construction of meaning: An interactive activation and competition model of social perception. *Connectionist models of social reasoning and social behavior, 27-68*.
- Rippetoe, P. A., & Rogers, R. W. (1987). Effects of components of protection-motivation theory on adaptive and maladaptive coping with a health threat. *Journal of Personality and Social Psychology, 52*(3), 596-604. <https://doi.org/10.1037/0022-3514.52.3.596>
- Ryan, T., & Xenos, S. (2011). Who uses Facebook? An investigation into the relationship between the Big Five, shyness, narcissism, loneliness, and Facebook usage. *Computers in Human Behavior, 27*(5), 1658-1664. <https://doi.org/10.1016/j.chb.2011.02.004>
- Salem, A. A. M. S., Almenaye, N. S., & Andreassen, C. S. (2016). A psychometric evaluation of Bergen Facebook Addiction Scale (BFAS) of university students. *International Journal of Psychology and Behavioral Sciences, 6*(5), 199-205. <https://doi.org/10.5923/j.ijpbs.20160605.01>
- Salvation, M. D., & Adzharuddin, N. A. (2014). The influence of social network sites (SNS) upon academic performance of Malaysian students. *International Journal of Humanities and Social Sciences, 4*(10), 131-137.
- Sandler, I. N., Wolchik, S. A., MacKinnon, D., Ayers, T. S., & Roosa, M. W. (1997). Developing linkages between theory and intervention in stress and coping

- processes. *Issues in Clinical Child Psychology*, 3–40. [https://doi.org/10.1007/978-1-4757-2677-0\\_1](https://doi.org/10.1007/978-1-4757-2677-0_1)
- SAVCI, M. (2019). Social media craving and the amount of self-disclosure: The mediating role of the Dark Triad. *International Online Journal of Educational Sciences*, 11(4).
- Shakir, R. (2009). Soft skills at the Malaysian institutes of higher learning. *Asia Pacific Education Review*, 10(3), 309-315. <https://doi.org/10.1007/s12564-009-9038-8>
- Shi, F. (2015). Study on a stratified sampling investigation method for resident travel and the sampling rate. *Discrete Dynamics in Nature and Society*, 2015, 1-7. <https://doi.org/10.1155/2015/496179>
- Shim, J. W., Lee, S., & Paul, B. (2007). Who responds to unsolicited sexually explicit materials on the internet? The role of individual differences. *CyberPsychology & Behavior*, 10(1), 71-79. <https://doi.org/10.1089/cpb.2006.9990>
- Shoda, Y., & Smith, R. E. (2004). Conceptualizing personality as a cognitive-affective processing system: A framework for models of maladaptive behavior patterns and change. *Behavior Therapy*, 35(1), 147-165. [https://doi.org/10.1016/s0005-7894\(04\)80009-1](https://doi.org/10.1016/s0005-7894(04)80009-1)
- Simsek, A., Elciyar, K., & Kizilhan, T. (2019). A comparative study on social media addiction of high school and university students. *Contemporary Educational Technology*, 10(2), 106-119. <https://doi.org/10.30935/cet.554452>
- Simundić, A. M. (2013). Bias in research. *Biochemia medica*, 23(1), 12-15. <https://doi.org/10.11613/BM.2013.003>

Smith, M. M., Saklofske, D. H., Keefer, K. V., & Tremblay, P. F. (2016). Coping strategies and psychological outcomes: The moderating effects of personal resiliency. *The Journal of Psychology, 150*(3), 318-332. <https://doi.org/10.1080/00223980.2015.1036828>

Snyder, C. R., & Pulvers, K. M. (2001). Dr. Seuss, the coping machine, and “Oh, the places You’ll Go.” In C. R. Snyder (Ed.), *Coping with stress: Effective people and processes* (pp. 3e29). Oxford University Press.

Sriwilai, K., & Charoensukmongkol, P. (2016). Face it, don't Facebook it: Impacts of social media addiction on mindfulness, coping strategies and the consequence on emotional exhaustion. *Stress and Health, 32*(4), 427-434. <https://doi.org/10.1002/smi.2637>

Stanton, A. L. (2011). Regulating emotions during stressful experiences: The adaptive utility of coping through emotional approach. *The Oxford handbook of stress, health, and coping*, 369-386.

Starcevic, V. (2013). Is Internet addiction a useful concept? *Australian & New Zealand Journal of Psychiatry, 47*(1), 16-19. <https://doi.org/10.1177/0004867412461693>

Suls, J., & Fletcher, B. (1985). The relative efficacy of avoidant and nonavoidant coping strategies: A meta-analysis. *Health Psychology, 4*(3), 249-288. <https://doi.org/10.1037/0278-6133.4.3.249>

Thompson, S. H., & Loughheed, E. (2012). Frazzled by Facebook? An exploratory study of gender differences in social network communication among undergraduate men and women. *College student journal, 46*(1), 88-99.

- Turel, O., Serenko, A., & Giles, P. (2011). Integrating technology addiction and use: An empirical investigation of online auction users. *MIS Quarterly*, *35*(4), 1043.  
<https://doi.org/10.2307/41409972>
- Uyanık, G. K., & Güler, N. (2013). A Study on Multiple Linear Regression Analysis. *Procedia - Social and Behavioral Sciences*, *106*, 234-240.  
<https://doi.org/10.1016/j.sbspro.2013.12.027>
- Viens, A. (2019). *This graph tells us who's using social media the most*. World Economic Forum.  
<https://www.weforum.org/agenda/2019/10/social-media-use-by-generation/>
- Vural, Z. A., & Bat, M. (2010). Social media as a new communication environment: A research on Ege University faculty of communication. *Journal of Yasar University*, *20*(5), 3348-3382.
- Wegmann, E., & Brand, M. (2016). Internet-communication disorder: It's a matter of social aspects, coping, and internet-use expectancies. *Frontiers in Psychology*, *7*, 1747.  
<https://doi.org/10.3389/fpsyg.2016.01747>
- Whiting, A., & Williams, D. (2013). Why people use social media: A uses and gratifications approach. *Qualitative Market Research: An International Journal*, *16*(4), 362-369.  
<https://doi.org/10.1108/qmr-06-2013-0041>
- Wiggins, J. S., & Broughton, R. (1985). The interpersonal circle: A structural model for the integration of personality research. *Perspectives in personality*, *1*, 1-47.
- Williams, M. (2019). *Finding my superpowers: Developing a coping skills method using art therapy as an intervention for children and adolescents with mood disorders*. Retrieved



from

[https://digitalcommons.lesley.edu/cgi/viewcontent.cgi?article=1221&context=expressive\\_theses](https://digitalcommons.lesley.edu/cgi/viewcontent.cgi?article=1221&context=expressive_theses)

Wills, T. A., & Hirky, A. E. (1996). Coping and substance abuse: A theoretical model and review of the evidence. *Handbook of coping: Theory, research, applications* (pp. 279-302). Wiley.

Zeidner, M., & Saklofske, D. (1996). Adaptive and maladaptive coping. *Handbook of coping: theory, research, applications* (pp. 505-531). Wiley.

## Appendices

### Appendix A

#### Questionnaire



UNIVERSITI TUNKU ABDUL RAHMAN  
FACULTY OF ARTS AND SOCIAL SCIENCE  
BACHELOR OF SOCIAL SCIENCE (HONS) PSYCHOLOGY

UAPZ 3023 Final Year Project II  
Year 3 Trimester 3  
(201901)

### Introduction

This research study is being conducted on “**DT, Coping Strategies and Social Media Addiction: Their relationships among UTAR undergraduate students**” as a requirement for the subject UAPZ 3023 Final Year Project II. In order to collect the required information, your participation is needed for our research study.

### Procedures

You will be asked to complete the questionnaire which consists of **3 sections**. You will take approximately **5 to 10 minutes** to complete this survey.

### Confidentiality

All information provided by the students will be subjected as **private and confidential**. The information use is solely for the purpose of this research. No personal identity and information will be revealed to a third party and only our group members have the access to the information.

### Participation

You can voluntarily choose to participate or withdraw at any time without any penalty charged.

### Contact information

If you have any questions or concerns, kindly contact our group member at jieyeng98@gmail.com (Hue Jie Yeng).

### ection A: Demographic Questions

Please answer each question as accurately as possible by **SELECTING** the relevant answer or **FILLING** in the space provided.

1. Age: \_\_\_\_\_

2. What is your gender?

- Male
- Female

3. What is your race?

- Malay
- Chinese
- Indian
- Others: \_\_\_\_\_ (Please indicate)

4. Are you taking the undergraduate program in UTAR?

- Yes
- No

5. What is your faculty? (For example: Faculty of Arts and Social Science)

- FAS
- FBF
- FEGT
- FICT
- FSc
- ICS
- FAM

- LKC FES
- FCI
- FMHS

6. How long do you spend on social media daily?

- Less than 1 hour
- 2 to 3 hours
- 4 to 5 hours
- 6 to 7 hours
- More than 8 hours

**Section B What type of person are you?**

Instructions: Please read each statement and **CIRCLE** the number which indicates how much the statement applied to you. There is no right or wrong answer.

1	2	3	4	5
Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree

1.	It's not wise to tell your secrets.	1	2	3	4	5
2.	I like to use clever manipulation to get my way.	1	2	3	4	5
3.	Whatever it takes, you must get the important people on your side.	1	2	3	4	5
4.	Avoid direct conflict with others because they may be useful in the future.	1	2	3	4	5
5.	It's wise to keep track of information that you can use against people later.	1	2	3	4	5
6.	You should wait for the right time to get back at people.	1	2	3	4	5
7.	There are things you should hide from other people because they don't need to know.	1	2	3	4	5
8.	Make sure your plans benefit you, not others.	1	2	3	4	5
9.	Most people can be manipulated.	1	2	3	4	5
10.	People see me as a natural leader.	1	2	3	4	5
11.	I hate being the center of attention.	1	2	3	4	5
12.	Many group activities tend to be dull without me.	1	2	3	4	5
13.	I know that I am special because everyone keeps telling me so.	1	2	3	4	5
14.	I like to get acquainted with important people.	1	2	3	4	5
15.	I feel embarrassed if someone compliments me.	1	2	3	4	5
16.	I have been compared to famous people.	1	2	3	4	5
17.	I am an average person.	1	2	3	4	5
18.	I insist on getting the respect I deserve.	1	2	3	4	5
19.	I like to get revenge on authorities.	1	2	3	4	5
20.	I avoid dangerous situations.	1	2	3	4	5
21.	Payback needs to be quick and nasty.	1	2	3	4	5
22.	People often say I'm out of control.	1	2	3	4	5

23.	It's true that I can be mean to others.	1	2	3	4	5
24.	People who mess with me always regret it.	1	2	3	4	5
25.	I have never gotten into trouble with the law.	1	2	3	4	5
26.	I enjoy having sex with people I hardly know.	1	2	3	4	5
27.	I'll say anything to get what I want.	1	2	3	4	5

### Section C How do you cope with your problem?

Instructions: Please read each statement and **CIRCLE** the number which indicates how much the statement applied to you. There is no right or wrong answer.

1	2	3	4
I haven't been doing this at all	I've been doing this a little bit	I've been doing this a medium amount	I've been doing this at all

1.	I've been turning to work or other activities to take my mind off things.	1	2	3	4
2.	I've been concentrating my efforts on doing something about the situation I'm in.	1	2	3	4
3.	I've been saying to myself "this isn't real".	1	2	3	4
4.	I've been using alcohol or other drugs to make myself feel better.	1	2	3	4
5.	I've been getting emotional support from others.	1	2	3	4
6.	I've been giving up trying to deal with it.	1	2	3	4
7.	I've been taking action to try to make the situation better.	1	2	3	4
8.	I've been refusing to believe that it has happened.	1	2	3	4
9.	I've been saying things to let my unpleasant feelings escape.	1	2	3	4
10.	I've been getting help and advice from other people.	1	2	3	4
11.	I've been using alcohol or other drugs to help me get through it.	1	2	3	4
12.	I've been trying to see it in a different light, to make it seem more positive.	1	2	3	4
13.	I've been criticizing myself.	1	2	3	4
14.	I've been trying to come up with a strategy about what to do.	1	2	3	4
15.	I've been getting comfort and understanding from someone.	1	2	3	4
16.	I've been giving up the attempt to cope.	1	2	3	4

17.	I've been looking for something good in what is happening.	1	2	3	4
18.	I've been making jokes about it.	1	2	3	4
19.	I've been doing something to think about it less, such as going to movies, watching TV, reading, daydreaming, sleeping, or shopping.	1	2	3	4
20.	I've been accepting the reality of the fact that it has happened.	1	2	3	4
21.	I've been expressing my negative feelings.	1	2	3	4
22.	I've been trying to find comfort in my religion or spiritual beliefs.	1	2	3	4
23.	I've been trying to get advice or help from other people about what to do.	1	2	3	4
24.	I've been learning to live with it.	1	2	3	4
25.	I've been thinking hard about what steps to take.	1	2	3	4
26.	I've been blaming myself for things that happened.	1	2	3	4
27.	I've been praying or meditating.	1	2	3	4
28.	I've been making fun of the situation.	1	2	3	4

#### Section D How often do you spend on social media?

Instructions: Please read each statement and **CIRCLE** the number which indicates how much the statement applied to you. There is no right or wrong answer.

1	2	3	4	5
Very rarely	Rarely	Sometimes	Often	Very often

How often during the last year have you...

1.	..spent a lot of time thinking about social media or planned use of social media?	1	2	3	4	5
2.	..felt an urge to use social media more and more?	1	2	3	4	5
3.	..used social media in order to forget about personal problems?	1	2	3	4	5
4.	..tried to cut down on the use of social media without success?	1	2	3	4	5
5.	..become restless or troubled if you have been prohibited from using social media?	1	2	3	4	5
6.	..used social media so much that it has had a negative impact on your job/studies?	1	2	3	4	5

**Thank you for your participation!**

## Appendix B

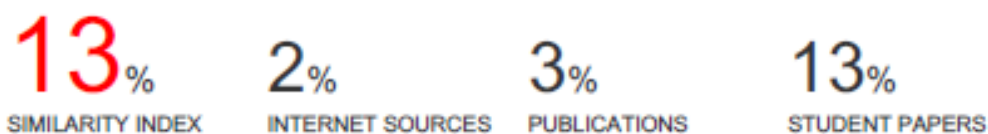
## Turnitin Originality Report

### Dark Triad and coping strategies as predictors of social media addiction among undergraduates in Universiti Tunku Abdul Rahman

---

**ORIGINALITY REPORT**


---


**PRIMARY SOURCES**


---

<b>1</b>	<b>Submitted to Nottingham Trent University</b> Student Paper	<b>1%</b>
----------	--	-----------

---

<b>2</b>	<b>Submitted to University of Nottingham</b> Student Paper	<b>1%</b>
----------	---	-----------

---

<b>3</b>	<b>Submitted to Universiti Tunku Abdul Rahman</b> Student Paper	<b>1%</b>
----------	--	-----------

---

<b>4</b>	<b>Submitted to Higher Education Commission Pakistan</b> Student Paper	<b>1%</b>
----------	---	-----------

---

<b>5</b>	<b>Submitted to University of Reading</b> Student Paper	<b>1%</b>
----------	--	-----------

---

<b>6</b>	<b>Submitted to University of Wales central institutions</b> Student Paper	<b>&lt;1%</b>
----------	---	---------------

---

<b>7</b>	<b>Submitted to De Montfort University</b> Student Paper	<b>&lt;1%</b>
----------	---	---------------

---

**Submitted to Manchester Metropolitan**



8	University Student Paper	<1%
9	Submitted to University of Sunderland Student Paper	<1%
10	Submitted to Mary Immaculate College Student Paper	<1%
11	Submitted to EDMC Student Paper	<1%
12	Hanyun Huang. "Social Media Generation in Urban China", Springer Science and Business Media LLC, 2014 Publication	<1%
13	Submitted to Universiti Teknologi MARA Student Paper	<1%
14	<a href="http://www.atmph-specialissues.org">www.atmph-specialissues.org</a> Internet Source	<1%
15	Submitted to Eiffel Corporation Student Paper	<1%
16	Submitted to University of Southampton Student Paper	<1%
17	Submitted to City University Student Paper	<1%
18	<a href="http://www.ijsrp.org">www.ijsrp.org</a> Internet Source	<1%

19	Submitted to University of Glamorgan Student Paper	<1%
20	Submitted to University of Greenwich Student Paper	<1%
21	Submitted to University of Salford Student Paper	<1%
22	Submitted to Northcentral Student Paper	<1%
23	Submitted to Bournemouth University Student Paper	<1%
24	onlinelibrary.wiley.com Internet Source	<1%
25	Submitted to HELP UNIVERSITY Student Paper	<1%
26	Submitted to University of South Alabama Student Paper	<1%
27	Submitted to CSU, San Jose State University Student Paper	<1%
28	Submitted to Sunway Education Group Student Paper	<1%
29	Submitted to University of Wales Swansea Student Paper	<1%
30	Submitted to University of East London Student Paper	<1%

---

<b>31</b>	<b>Submitted to Victoria University of Wellington</b> Student Paper	<1%
<b>32</b>	<b>www.britannica.com</b> Internet Source	<1%
<b>33</b>	<b>Submitted to University Tunku Abdul Rahman</b> Student Paper	<1%
<b>34</b>	<b>Kai Li Chung, Izzat Morshidi, Lee Chen Yoong, Kher Nin Thian. "The role of the dark tetrad and impulsivity in social media addiction: Findings from Malaysia", Personality and Individual Differences, 2019</b> Publication	<1%
<b>35</b>	<b>Submitted to University of Stirling</b> Student Paper	<1%
<b>36</b>	<b>Submitted to University of Leicester</b> Student Paper	<1%
<b>37</b>	<b>www.psf.ca</b> Internet Source	<1%
<b>38</b>	<b>www.tandfonline.com</b> Internet Source	<1%
<b>39</b>	<b>Submitted to Coventry University</b> Student Paper	<1%
<b>40</b>	<b>Shu Yu, Anise Man Sze Wu, Ivan Jacob Agaloos Pesigan. "Cognitive and Psychosocial</b>	<1%

---

Health Risk Factors of Social Networking  
Addiction", International Journal of Mental  
Health and Addiction, 2015

Publication

---

<b>41</b>	<b>Submitted to University of Hong Kong</b> Student Paper	<1%
<b>42</b>	<b>Rahmatullah Haand, Zhao Shuwang. "The relationship between social media addiction and depression: a quantitative study among university students in Khost, Afghanistan", International Journal of Adolescence and Youth, 2020</b> Publication	<1%
<b>43</b>	<b>Submitted to Tufts University</b> Student Paper	<1%
<b>44</b>	<b>Submitted to Universiteit van Amsterdam</b> Student Paper	<1%
<b>45</b>	<b>Submitted to Heriot-Watt University</b> Student Paper	<1%
<b>46</b>	<b>Luci A. Martin, Joseph W. Critelli, Joseph A. Doster, Catherine Powers, Michael Purdum, Meagen R. Doster, Paul L. Lambert. "Cardiovascular Risk: Gender Differences in Lifestyle Behaviors and Coping Strategies", International Journal of Behavioral Medicine, 2011</b> Publication	<1%

---

**47** Submitted to Curtin University of Technology **<1%**  
Student Paper

---

**48** Submitted to Nanyang Technological University, **<1%**  
Singapore  
Student Paper

---

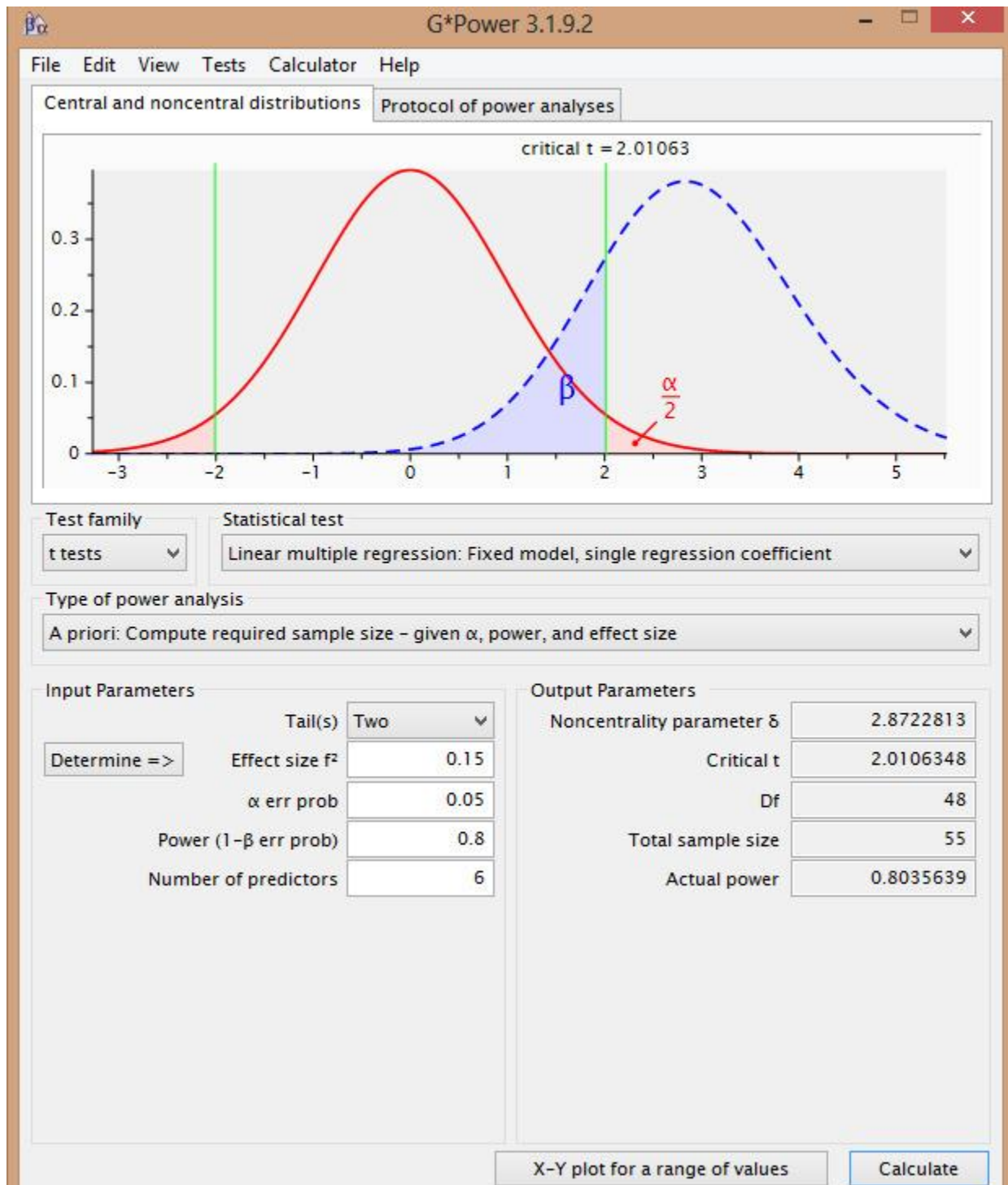
---

Exclude quotes On  
Exclude bibliography On

Exclude matches < 8 words

Appendix C

Sample Size Calculation



Appendix D

Boxplot

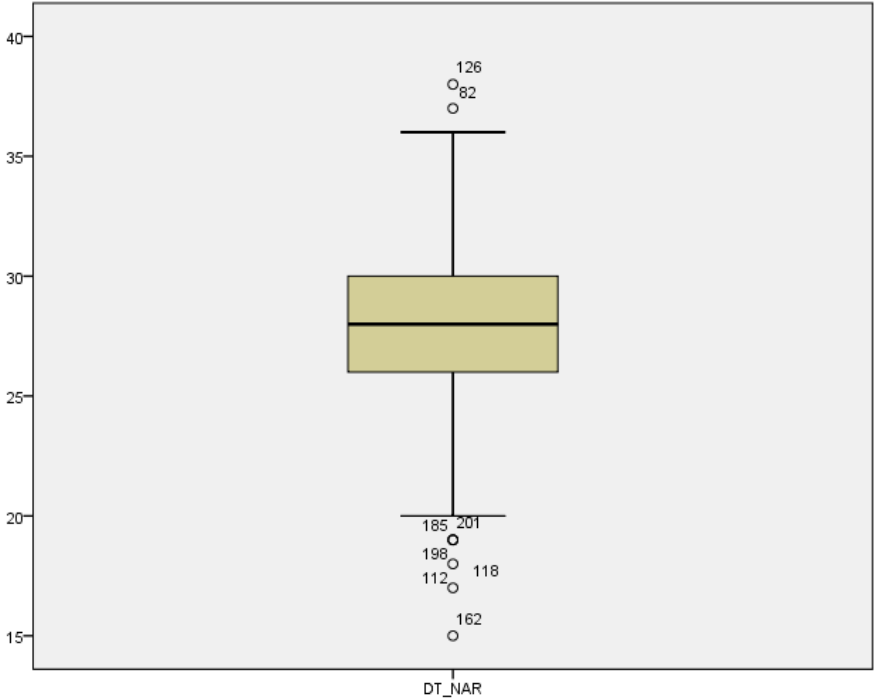


Figure 1. Boxplot of DT's Narcissism

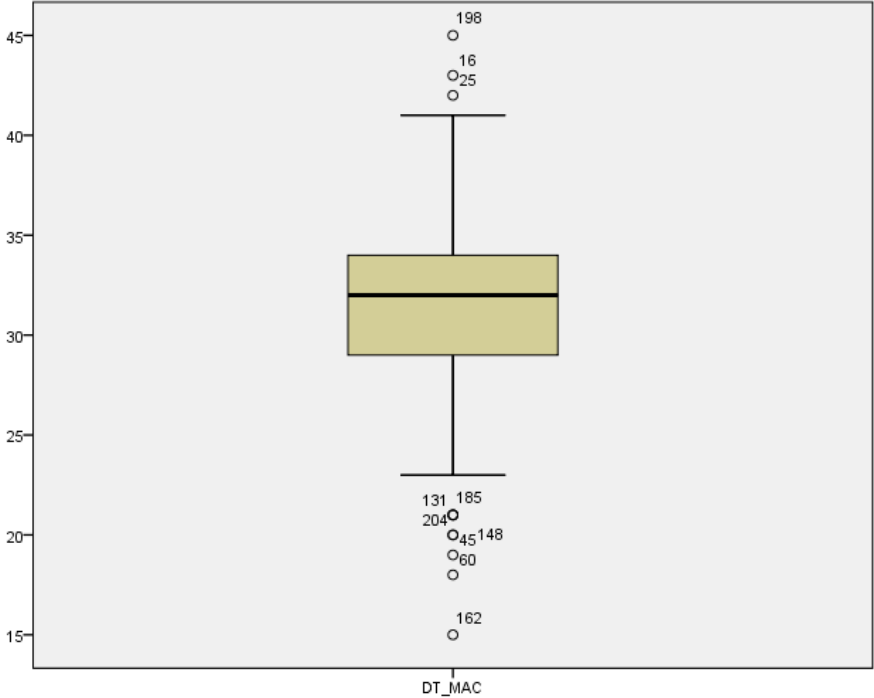


Figure 2. Boxplot of DT's Machiavellianism

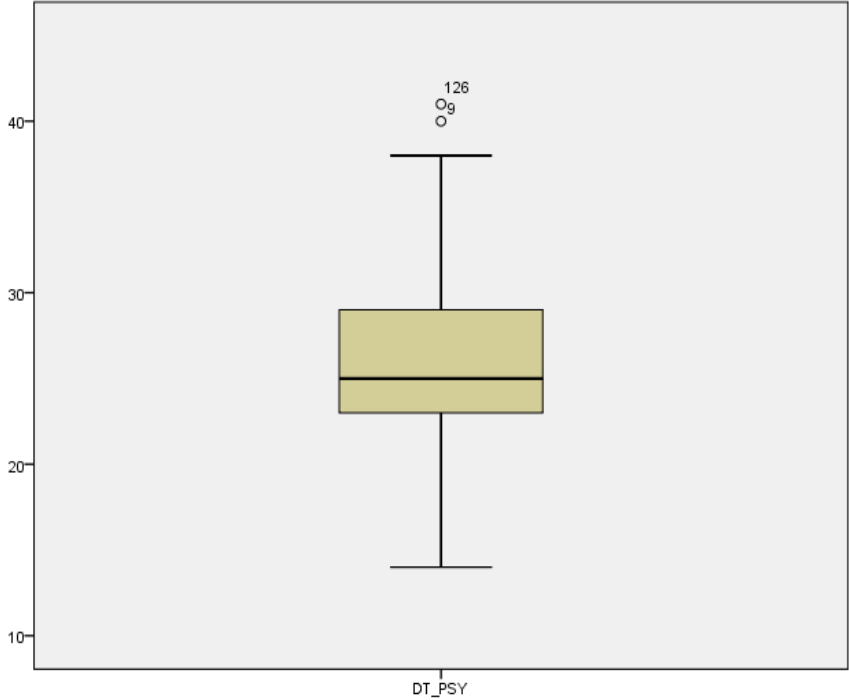


Figure 3. Boxplot of DT's Psychopathy

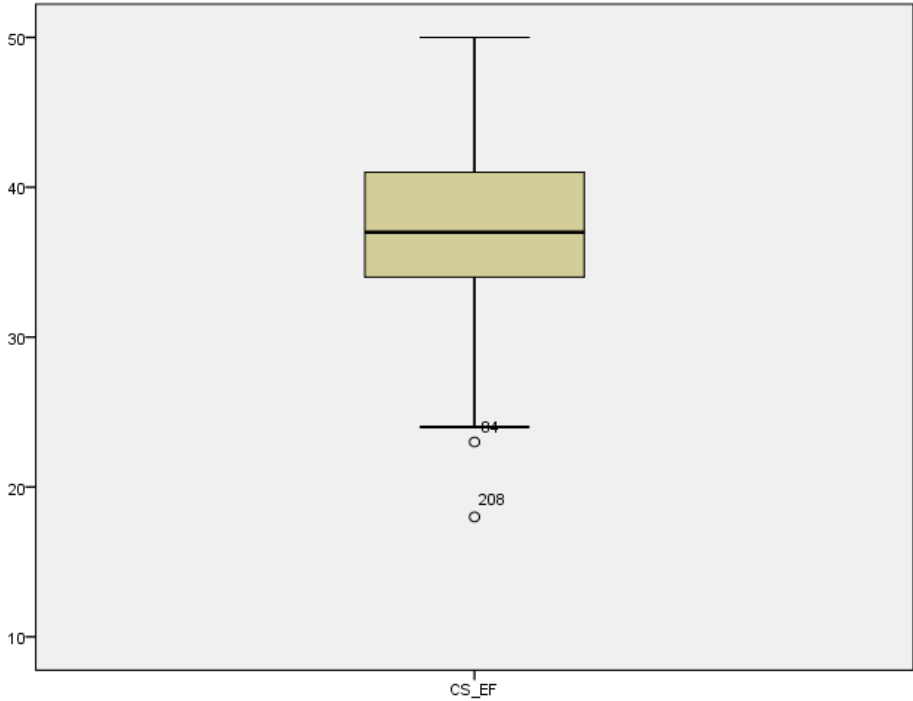


Figure 4. Boxplot of Emotion-focused coping strategy



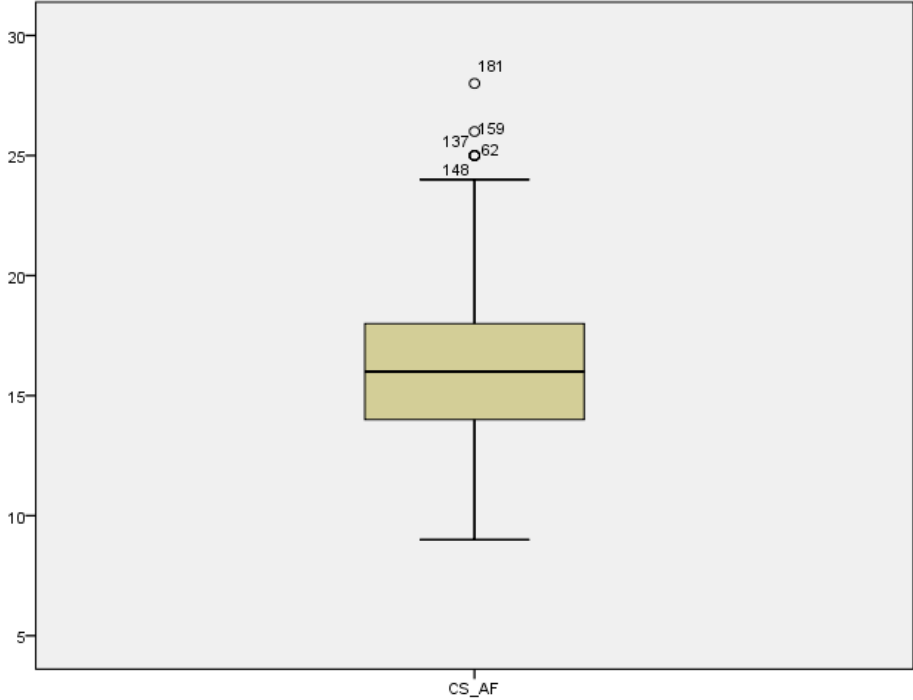


Figure 5. Boxplot of Avoidance-focused coping strategy

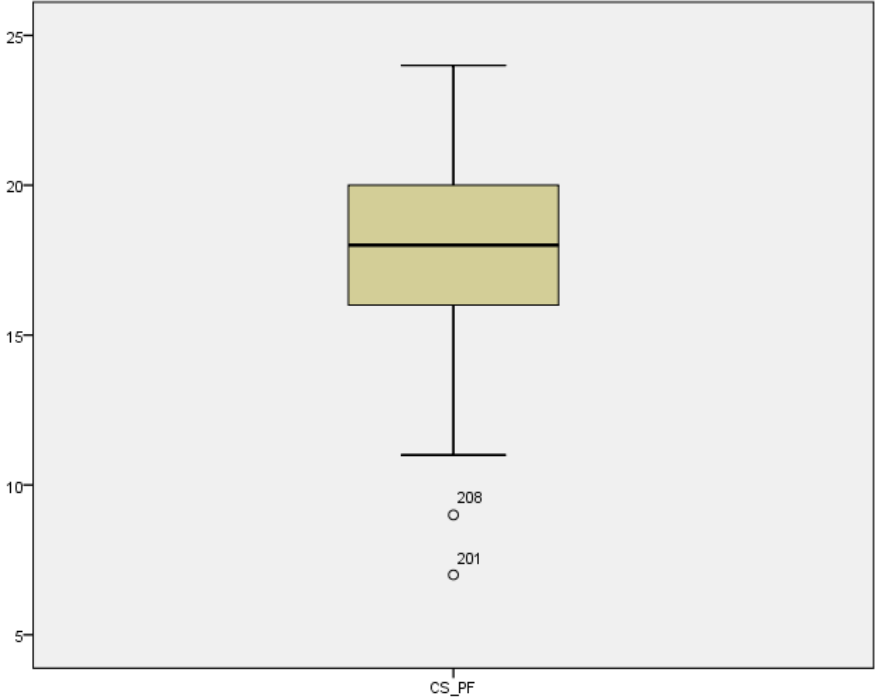


Figure 6. Boxplot of Problem-focused coping strategy

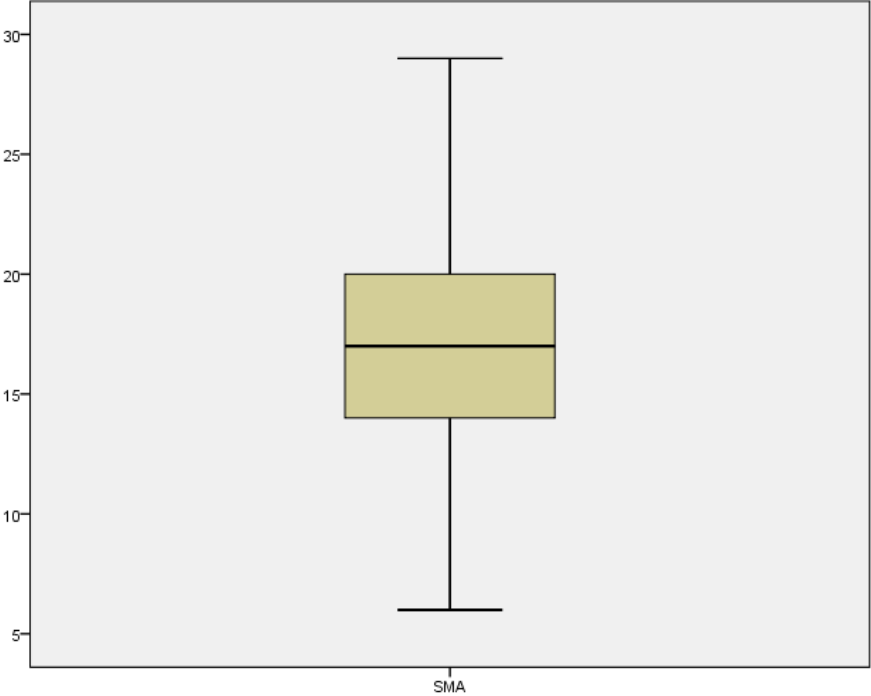


Figure 7. Boxplot of Social Media Addiction

Appendix E

Scatterplot

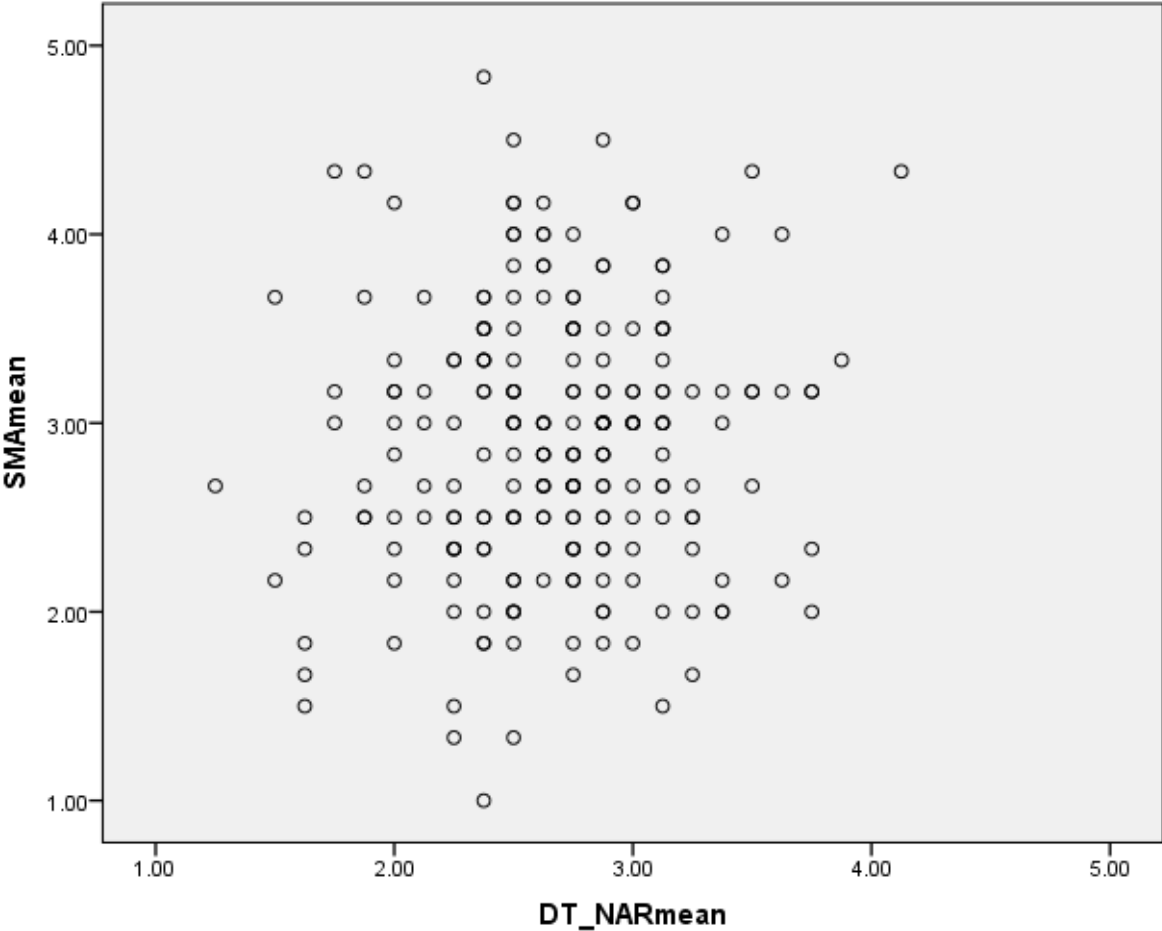


Figure 1. Scatterplot of DT's Narcissism and Social Media Addiction.

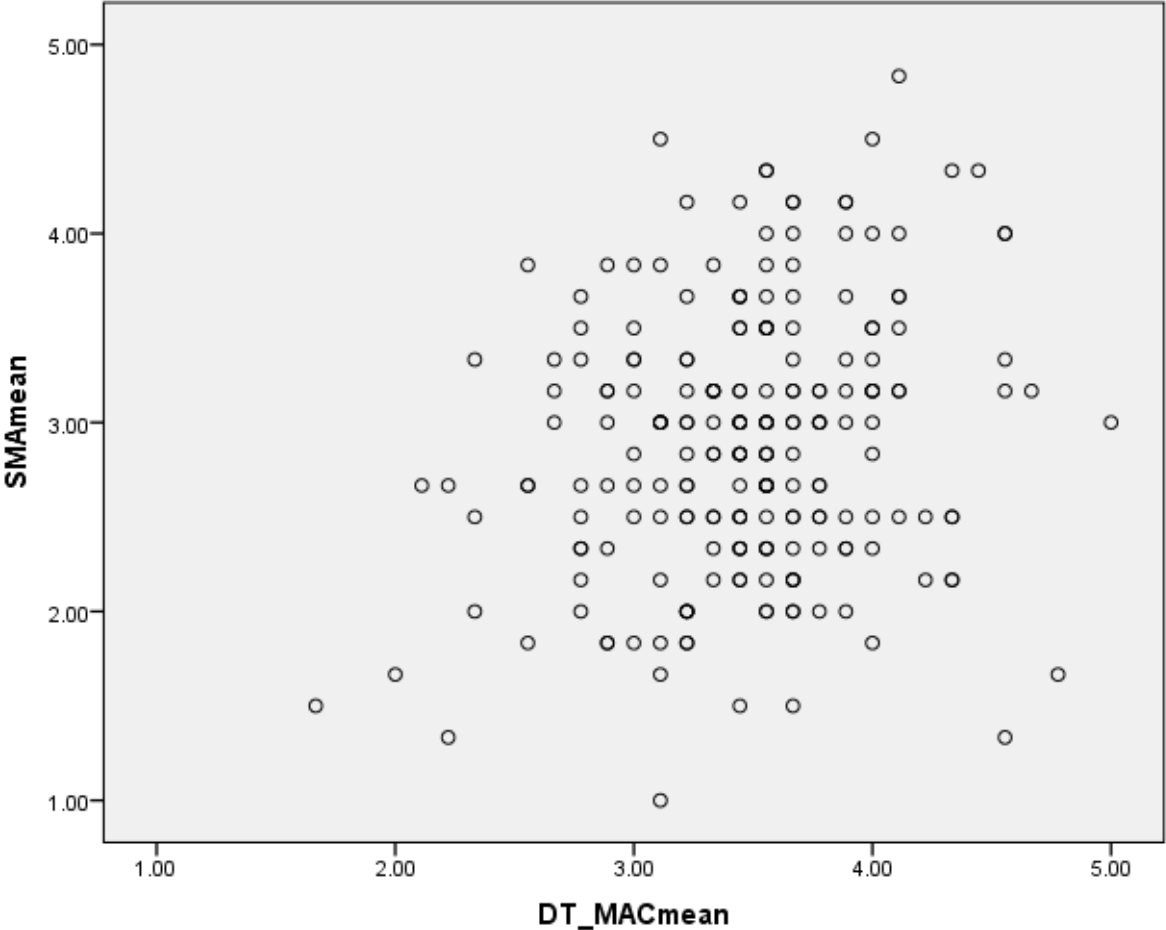


Figure 2. Scatterplot of DT's Machiavellianism and Social Media Addiction.

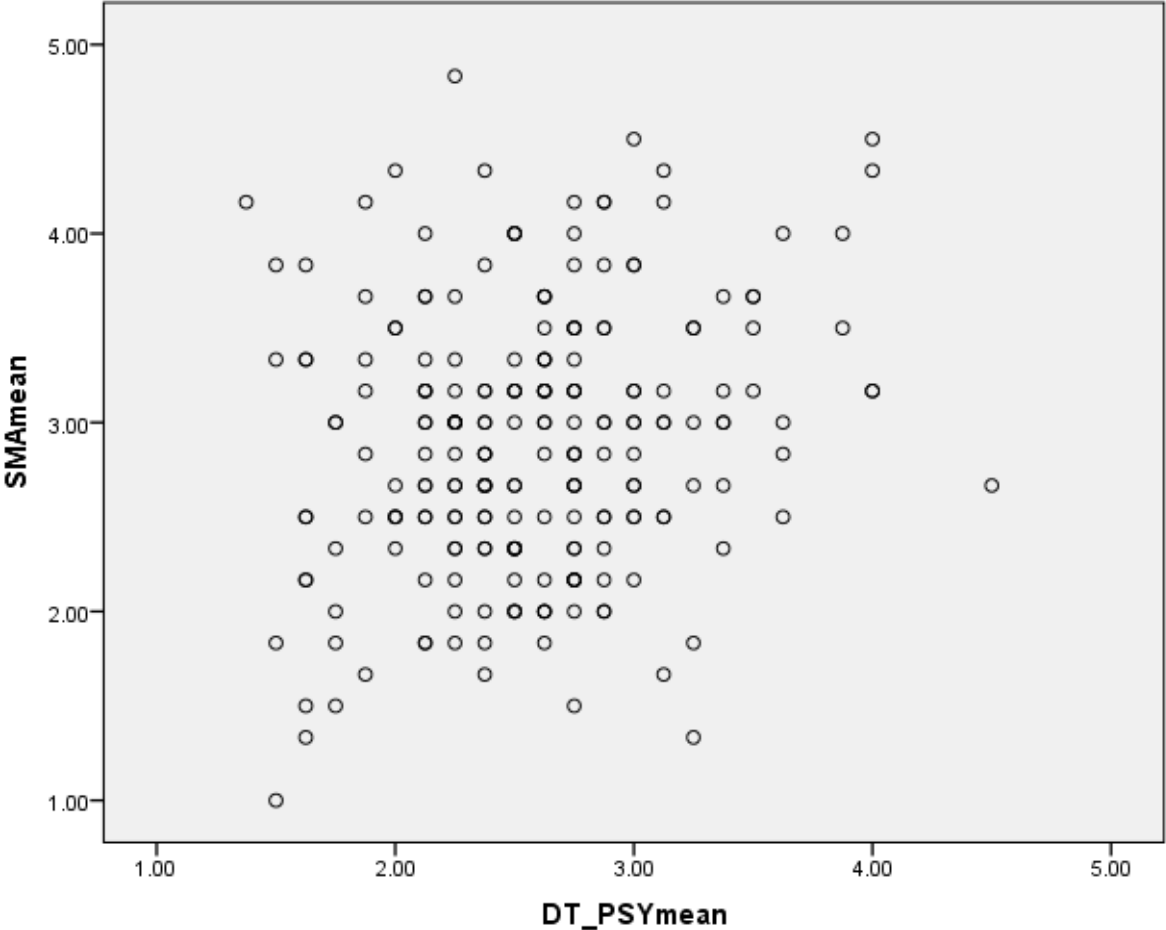


Figure 3. Scatterplot of DT's Psychopathy and Social Media Addiction.

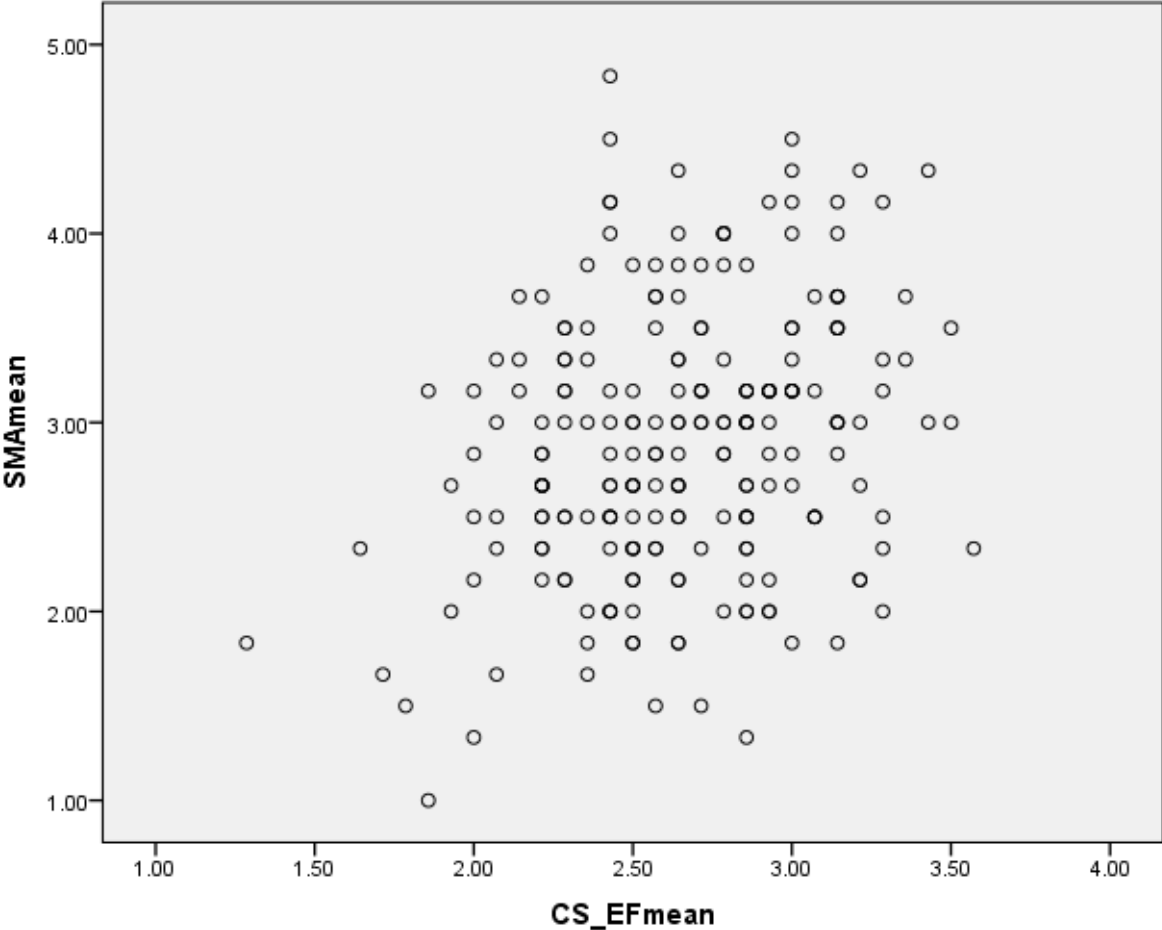


Figure 4. Scatterplot of Emotion-focused coping strategy and Social Media Addiction.

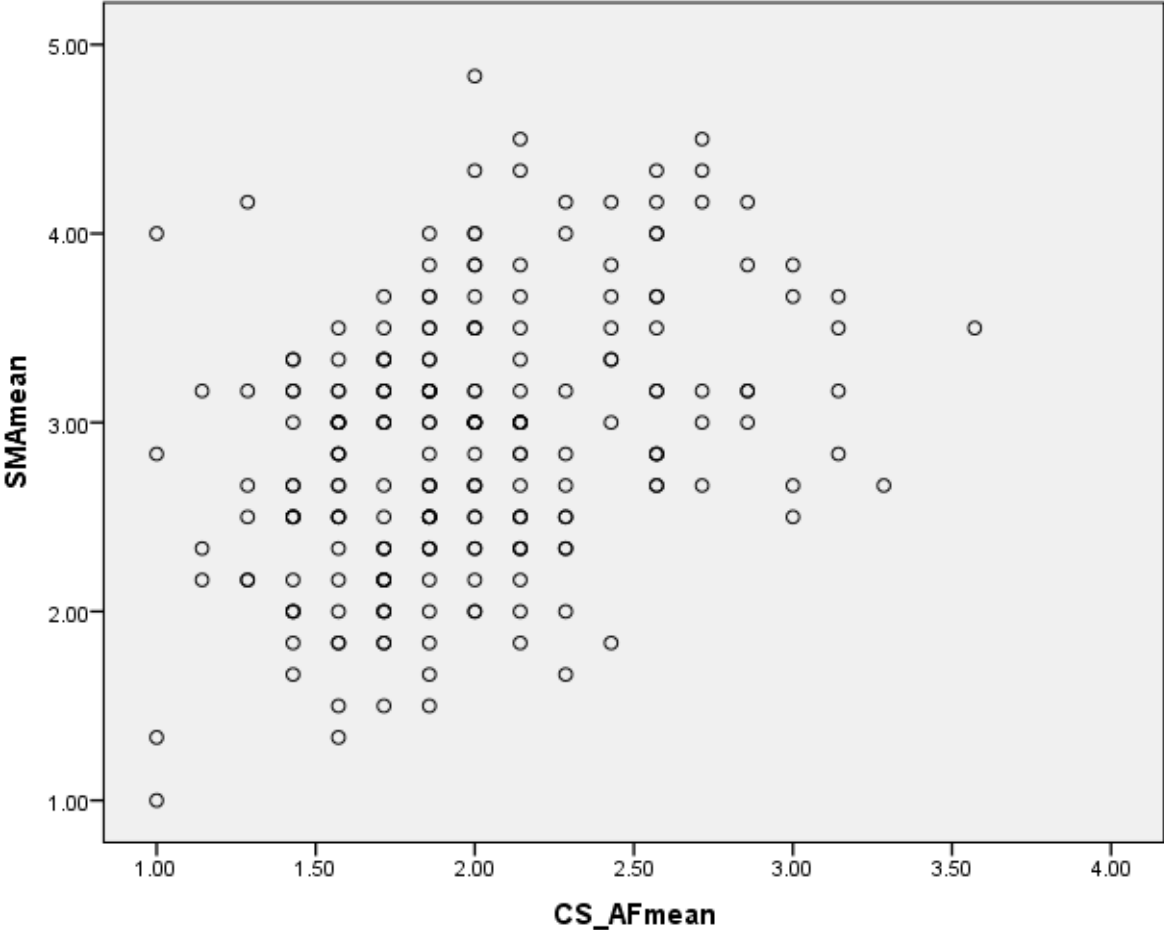


Figure 5. Scatterplot of Avoidance-focused coping strategy and Social Media Addiction.

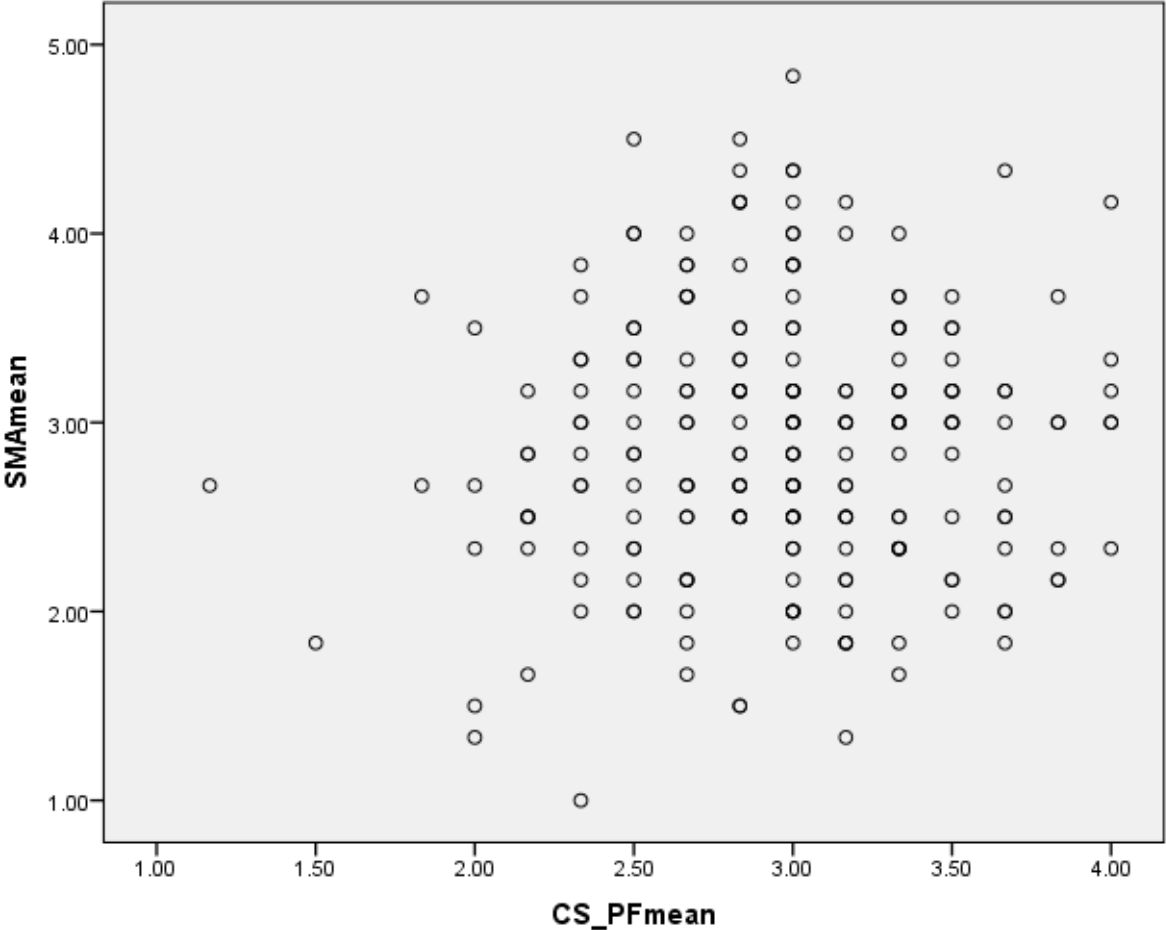


Figure 6. Scatterplot of Problem-focused coping strategy and Social Media Addiction.