



EXAMINING THE ROLE OF EMOTIONAL REACTIVITY, LEARNED HELPLESSNESS
AND PERSISTENCE IN DISTRESS TOLERANCE AMONG
UNIVERSITY STUDENTS IN MALAYSIA

CHAI LIANG YING

LEE JIA JUN

SIM KAH SOON

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INDIVIDUAL DIFFERENCES IN DISTRESS TOLERANCE

Examining the Role of Emotional Reactivity, Learned Helplessness
and Persistence in Distress Tolerance among
University Students in Malaysia

Chai Liang Ying, Lee Jia Jun and Sim Kah Soon

Universiti Tunku Abdul Rahman

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INDIVIDUAL DIFFERENCES IN DISTRESS TOLERANCE

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Chai Liang Ying

Lee Jia Jun

Sim Kah Soon

INDIVIDUAL DIFFERENCES IN DISTRESS TOLERANCE

APPROVAL FORM

This research paper attached hereto, entitled Examining the Role of Emotional Reactivity, Learned Helplessness and Persistence in Distress Tolerance Among University Students in Malaysia prepared and submitted by Chai Liang Ying, Lee Jia Jun, Sim Kah Soon in partial fulfillment of the requirements for the Bachelor of Social Science (Hons) Psychology is hereby accepted.

Supervisor

(Mr. Ho Khee Hoong)

Date: _____

Abstract

Distress tolerance is termed as the perceived ability to withstand the distressing states. It is commonly related to various psychopathologies like depression and anxiety; and unwanted behaviours like self-mutilation and suicide. However, relatively less studies had focused on the modifying factors of distress tolerance. Therefore, this is a cross-sectional, correlational and quantitative study which aims to investigate the role of emotional reactivity, learned helplessness and persistence in predicting distress tolerance. The data was collected in two universities located in Perak using Distress Tolerance Scale, Emotional Reactivity Scale, Learned Helplessness Scale and Motivational Persistent Scale by paper-and-pencil method. A total number of 444 university students were included in this study using purposive sampling method. Multiple Linear Regression (MLR) and Pearson's Product Moment Correlation (PPMC) were used to test the relationship between all the predictors and with the outcome variable. The PPMC results showed that all the hypothesized relationship were significant at $p < .01$ except for persistence and distress tolerance. Besides, the MLR model was also statistically significant, $F(3, 440) = 61.226, p = .000$, and all the predictors significantly contribute to the variance in distress tolerance. This study has filled the research gap about the factors that contribute to distress tolerance. Apart from that, the pros and cons of the measurements for distress tolerance were discussed.

Keywords: Distress tolerance, individual difference factors, Multiple Linear Regression.

DECLARATION

We declare that the material contained in this paper is the end result of our own work and that due acknowledgement has been given in the bibliography and references to ALL sources be they printed, electronic or personal.

Name: Chai Liang Ying

Student ID: 16AAB03883

Signed:



Date: 1st April 2020

Name: Lee Jia Jun

Student ID: 16AAB02141

Signed:



Date: 1st April 2020

Name: Sim Kah Soon

Student ID: 16AAB03024

Signed:



Date: 1st April 2020

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List of Abbreviations

DTS	Distress Tolerance Scale
ERS	Emotional Reactivity Scale
LHS	Learned Helplessness Scale
MLR	Multiple Linear Regression
MPS	Motivational Persistence Scale
PPMC	Pearson's Product Moment Correlation
SPSS	Statistical Package for the Social Science
UTAR	Universiti Tunku Abdul Rahman
UTP	Universiti Teknologi Petronas

Chapter I

Introduction

Background of study

Distress tolerance is generally defined as the ability to experience and withstand the aversive internal states (Simons & Gaher, 2005; Zvolensky et al., 2010). It can either be the perceived capacity or the behavioural act of an individual in tolerating with the experiential distress, be it emotionally (e.g., negative emotions) or physically (e.g., physical discomfort) (Zvolensky et al., 2010). Therefore, the existing literature of distress tolerance were divided into two branches, one using self-report measure while another using behavioural measure in gauging the construct.

The development of self-report measure of distress tolerance is considered a newborn as compared to the behavioural measure as there are a few varying conceptualizations for the construct. Some researchers operationalized distress tolerance as the tolerance of aversive emotional states (Simons & Gaher, 2005), while some others stated it as the tolerance of bodily discomfort (Schmidt & Cook, 1999). There are also other perspectives including tolerance of ambiguous situations (Furnham & Ribchester, 1995), or the uncertainties in life (Dugas et al., 1998). Eventually, Leyro and colleagues (2010) suggested that distress tolerance is a broader construct which consists of five domain-specific dimensions namely tolerance of uncertainty, tolerance of ambiguity, tolerance of frustration, tolerance of negative emotions and tolerance of physical discomfort.

On the other hand, Simons and Gaher (2005) considered distress tolerance as a meta-emotion construct related to an individual's evaluation and expectation of the experiential distress in terms of tolerance (ability to withstand distress), appraisal (subjective evaluation of acceptability of aversive situation), absorption (the extent to which an individual is affected by distress) and regulation (the way an individual reacts cognitively, emotionally and

behaviourally to the distress). Thus, the most widely used self-report measurement of distress tolerance (Distress Tolerance Scale; Simons & Gaher, 2005) was developed based on the four factors mentioned above.

Conceptually, people with lower distress tolerance are prone to cope or react in a more maladaptive manner while they encounter distress-eliciting situations (Leyro et al., 2010). This is because they perceive the negative emotional states as unbearable, hence they tend to resort to the short-term method for relief from distress, for instance, avoiding the situation instead of attenuating the emotion or using other problem-focused solutions (Simons & Gaher, 2005). Although low distress tolerance is always regarded as maladaptive and is one of the contributing factors to psychopathology, Lynch and Mizon (2011) stated that overly high or rigid tolerance of distress across different contexts are also considered as “unhealthy” and detrimental to the individual in the long term. This is due to the incongruence of personal interest while a person constantly tolerates with the highly distressing situation, as that will lead to an adverse consequence after a long period of time.

Recently, distress tolerance has been gaining increased attention and interest from clinical practitioners and researchers since the past two decades as more studies started to discover association between distress tolerance with various kinds of psychopathology such as anxiety (Laposa et al., 2015), depression (Ellis et al., 2012), panic disorders (Schmidt & Cook, 1999), Obsessive Compulsive Disorder (Laposa et al., 2015), Borderline Personality Disorder (Iverson et al., 2012); maladaptive behaviours like substance use (Kaiser et al., 2012), self-damaging behaviours (Sommers, 2017); relapses from smoke cessation (Perkins et al., 2010), substance abstinence (Winward et al., 2014), and many more undesirable conditions. The proliferation of research showed that researchers are interested to understand the role of distress tolerance in those issues during the treatment process. Also, understanding

the underlying mechanisms and modifying the factors of distress tolerance become an important treatment target and outcome in the clinical settings.

Other than that, some other psychological constructs like emotional reactivity, emotion regulation, experiential avoidance, anxiety sensitivity and persistence were said to be theoretically linked with distress tolerance (Brandon et al., 2003; Hayes et al., 1999; Iverson et al., 2012; Lynch & Mizon, 2011). These constructs were always argued as being overlapped with distress tolerance but some studies contended that they are distinct from each other (Carver et al., 1996; Cloninger et al., 1991; Hayes et al., 1996).

Emotional reactivity is defined as an individual difference in experiencing emotion terms of the range of stimuli one responds to (sensitivity), the intensity of the emotion (intensity), and the duration of the particular emotion before returning to the emotion baseline (persistence) (Nock et al., 2008). Hayes and colleagues (1996) reported that many behavioural problems and psychopathology are associated with strong emotional reactivity as an attempt to escape or avoid aversive experiences. This construct is also related to the genesis and maintenance of distress tolerance because Leyro and colleagues (2010) suggested that people with higher emotional reactivity need more distress tolerance skills and resources to handle the intense and frequent difficult emotions. Nonetheless, they also suggested that individual may alternatively become more habituated with the distressing states and develop higher tolerance. That is the reason why the direction of relationship between distress tolerance and emotional reactivity should be further investigated.

Learned helplessness was initially found in the form of animals' failure to escape from aversive situations after a series of exposure to unchangeable adversity even when the chance of escape is available later (Maier & Seligman, 2016; Seligman & Maier, 1967). It refers to the individual's belief that one's effort or action has no impact on the outcome of events (Eisenberger et al., 1976; Quinless & Nelson, 1988). Also, the "unlearning" of ability

to control over the situation is caused by the perceived non-contingency in one's response and outcome (Quinless & Nelson, 1988). Posited by Sommers (2017), learned helplessness is related to the positive punishment following the tolerance or intolerance to distress and emotions, as well as the reinforcement of low efforts or avoidance of distress. Thus, that is how people start to learn the fact that suppressing or avoiding emotional distress is more compatible with their belief that personal agency is pointless while encountering distress.

Apart from emotional reactivity and learned helplessness, persistence is another construct related to distress tolerance. It is the tendency to sustain one's effort in a goal-directed activity despite adversity, mostly influenced by the learning history about effort and reinforcement and is seen as a standard outcome of learned industriousness (as opposed to learned helplessness) (Lynch & Mizon, 2011). Those who were rewarded for high effort in the past will be more likely to expend more effort in the present or future endeavours even though expending effort is seen as "aversive" or might induce negative psychological state. Persistence is sometimes interchangeably used with distress tolerance (Brandon et al., 2003) because both constructs are referring to the willingness to put effort in one's pursuit in spite of frustration or fatigue. However, Lynch and Mizon (2011) stated that the distinction between these two is that people who persist in one thing does not necessarily bring distress to him or her, therefore it cannot be considered as tolerance to distress. Besides, persistence can be reward contingent while distress tolerance not necessarily is (Cloninger et al., 1991; Lynch & Mizon, 2011). So, more studies on the distinctiveness of persistence and distress tolerance need to be conducted.

Since the past few decades, studies have found that some interventions (e.g., Mindfulness-Based Intervention, Group Dialectical Behavior Therapy, Rational-Emotive Behavior Therapy) are effective in modifying individuals' level of distress tolerance as well as improving their psychological wellness or symptoms (Jamilian et al., 2014; Muhomba et

al., 2017; Rodman et al., 2009). Unfortunately, distress tolerance and its factors are surprisingly understudied in Malaysia as there are very limited number of relevant studies, plus they were only addressing the issues related but not pertaining to distress tolerance.

For example, a study was conducted by Keng and colleagues (2015) in Malaysia to evaluate the effectiveness of Brief Mindfulness-Based Intervention Program in enhancing the medical students' psychological well-being and reducing their psychological distress by teaching them mindfulness skills and awareness of present moments. The intervention has significantly improved the participants' psychiatric symptoms, perceived stress and life satisfaction. Another study conducted by Lee and colleagues (2019) had examined the effect of one-day Mindfulness-based intervention on parents of children with speech-language pathology. Significant improvements in stress, anxiety and depression measures were shown after the participants were imparted with the mindfulness knowledge and mindful parenting skills which are suggested to be helpful in cherishing the present and lowering their reactivity to challenges.

Besides that, Baqutayan and colleagues (2017) did mention about the students' vulnerable reactions and intolerance to obstruction caused by the feeling of distress due to constant exposure to stressors. They also stated the possibility of poor decision-making or other psychological conditions when the distress become intolerable. The aforementioned examples illustrate that researchers in Malaysia were concerned and aware about the importance of mental wellness and sources related to one's distress. However, they have not discovered or started investing resources to investigate distress tolerance and its factors in the Malaysia context. Therefore, further exploration in this construct should be carried out in Malaysia in order to generate and provide the context or cultural-specific data which will be beneficial to the clinical and non-clinical populations no matter for the sake of treatment or prevention.

Although the study of concepts regarding distress tolerance and its possible risk and protective processes are expanding globally, they are still underexplored in the Malaysia context generally. Hence, in the present study, in order to understand the role of individual factors in different levels of distress tolerance specifically in the Malaysia context, the existing model developed by Lynch and Mizon (2011) will be examined using emotional reactivity, learned helplessness and persistence as the predicting variables among the Malaysia university students.

Statements of Problem

The underlying factors that contribute to the strength of distress tolerance is a research gap that is often overlooked by researchers. The existing studies were mainly putting the spotlight on the outcomes of distress tolerance (Leyro et al., 2010). As a result, there are lacking of empirical studies to answer the question “What factors contribute to individual differences in distress tolerance?” (Simons & Gaher, 2005; Zvolensky et al., 2010; Sommers, 2017). In Malaysia, although the related studies were conducted, they are not pertaining to distress tolerance. Therefore, some results generated in overseas context may not be applicable in Malaysia context as cultural differences may influence how people perceived distress and its coping strategy. To sum up, the research gap that comprises the unexplored research direction and context should be filled to further comprehend the underlying mechanism of distress tolerance.

The lack of implication in self-report measure in distress tolerance is a methodological gap that should be filled. Past studies were using behavioral measures such as breath-holding task (Hajek et al., 1987), carbon dioxide (CO₂) inhalation task (Brown et al., 2002), computerized paced auditory serial addition task (Holdwick & Wingefeld, 1999), anagram task (Eisenberger et al., 1992), and mirror tracing task (Quinn et al., 1996). However, relatively few studies had adopted self-report measures to examine the level of

distress tolerance. This has limited the possibility to compare the results generated from both behavioral measurement and self-report measurement (Sommers, 2017; Simons & Gaher, 2005; Zvolensky et al., 2010). In conclusion, the validation of research methods in distress tolerance would be hindered as the blind spots of current measurement might not be found without comparing with other methods.

Next, the under recognition of distress tolerance as an individual difference impedes the effectiveness of action plans implemented in the society. In clinical settings, the explanation to different severity of psychopathology patients would be limited (Zvolensky et al., 2011; Sommers, 2017). As the tailored treatment could not be implemented without being conscious of individual factors in various psychopathology. On the other hand, without knowing the individual differences in distress tolerance, the educational system would not know if the “equal” academic stress given to the students is tremendous for those with low or moderate distress tolerance (Nock, et al., 2008). Those students will then be labelled as “lazy”, “incapable” or “bad tempered” while they are not necessarily indolent, unintelligent or impolite (Ang & Huan, 2006). In fact, academic stress is highly correlated to students’ suicidal ideation (Lew et al., 2019; Rosiek et al.2016; Arun et al., 2017). This indicates a need for the education related parties to take distress tolerance into consideration when increasing educational requirements. Overall, the research gap of individual differences in distress tolerance has limited the effectiveness of action plans in various sectors therefore more attention should be paid.

Significance of Study

The results obtained from this study would fill the research gap of individual differences to distress tolerance. First, the correlation between persistence and distress tolerance will be examined through self-report measure which is different from the behavioral measure adopted in past studies. This will contribute to the knowledge pool of self-report

measures of distress tolerance for future study. Also, this study will serve as a reference to those who wish to understand the concept of distress tolerance in Malaysia context. The results will be more applicable for local authorities to implement related policies. Apart from that, the focus on the individual differences in distress tolerance could spark more ideas on how we can enhance one's distress tolerance (Sommers, 2017). This could diversify the direction of studies in distress tolerance to provide a more comprehensive understanding in this area.

Currently, there are plenty of clinical implication of distress tolerance that derived from ample therapeutic approaches such as Dialectical behavior therapy (DBT), Cognitive Behavioral therapy (CBT), Acceptance and Commitment Therapy (ACT) and other specific approaches (Sommers, 2017). Nonetheless, the study of individual differences as predicting factors of distinct level of distress tolerance are still lacking (Sommers, 2017; Zvolensky et al., 2010). As a result, clinician could not explain the individual differences in the severity of psychopathology, this may limit them from identifying the root cause of the disorder. Therefore, the results generated from this study would not just be beneficial for practitioners to analyse psychopathology but also design an effective treatment tailored for an individual's condition.

The result of the research would provide more understanding towards individual differences in distress tolerance in parental teaching. According to Wat et al. (1998), parental influence would affect the way children view their experiential aversive state and adopt a particular coping style accordingly. For instance, some children are high in emotional reactivity and therefore they are getting frustrated and throwing tantrums easily as they received negative emotions. Most authoritarian parents would punish the children to "correct" children's behaviors. However, vulnerable children would only gain more negative emotions but not an adaptive coping style to the stressful event. As a result, the children still behave the

same and receive more punishments or even being abused by the parents for their vulnerability (Herman et al., 1989; Ogata et al., 1990; Zannarini et al., 1997). Hence, parents would gain some insight regarding the emotional reactivity of their children to provide a warmer than colder style in teaching the children.

Research Objectives

The present research aims to:

1. Examine the relationship between emotional reactivity with distress tolerance.
2. Examine the relationship between learned helplessness with distress tolerance.
3. Examine the relationship between persistence with distress tolerance.
4. Examine the relationship between emotional reactivity with learned helplessness.
5. Examine the relationship between learned helplessness with persistence.
6. Examine the relationship between emotional reactivity with persistence.
7. Examine the role of emotional reactivity, learned helplessness and persistence in predicting distress tolerance.

Research Questions

1. Does emotional reactivity associate negatively with distress tolerance?
2. Does learned helplessness associate negatively with distress tolerance?
3. Does persistence associate positively with distress tolerance?
4. Does emotional reactivity associate positively with learned helplessness?
5. Does learned helplessness associate negatively with persistence?
6. Does emotional reactivity associate negatively with persistence?
7. Do emotional reactivity, learned helplessness and persistence predict distress tolerance?

Research Hypotheses

H₁: Emotional reactivity associates negatively with distress tolerance.

H₂: Learned helplessness associates negatively with distress tolerance.

H₃: Persistence associates positively with distress tolerance.

H₄: Emotional reactivity associates positively with learned helplessness.

H₅: Learned helplessness associates negatively with persistence.

H₆: Emotional reactivity associates negatively with persistence.

H₇: Emotional reactivity, learned helplessness and persistence predict distress tolerance.

Definitions

Distress Tolerance

Distress tolerance refers to the capacity to endure the negative psychological states (Simons & Gaher, 2005; Zvolensky et al., 2011). It might range from tolerance of emotional distress to physical discomfort. It also encompasses the affective, cognitive and behavioural components of an individual in the face of threat or distress (Zvolensky et al., 2011). It will be measured using the 15-items Distress Tolerance Scale (DTS) developed by Simons and Gaher (2005), which is divided into four factors including tolerance, appraisal, absorption and regulation. The higher total score indicates the higher degree of distress an individual can tolerate.

Emotional reactivity

Emotional reactivity refers to (a) the spread of stimuli one responds to emotionally, (b) the intensity of emotion experienced, and (c) the persistence, or duration, of emotion experienced before returning to the baseline (Nock et al., 2008). This construct will be measured using the 21-item Emotional Reactivity Scale (ERS) developed by Nock et al. (2008) which consists of three factors namely Sensitivity, Intensity and Persistence. The higher the total score, the more reactive the individual's emotion is.

Learned helplessness

Learned helplessness refers to the degree to which one believes that the results (or reinforcements) are not influenced by their actions and responses (Eisenberger et al., 1976). It is learned through a lack of control towards aversive situations, especially if the stressors are erratic, and the individuals exposed to uncontrollable results will become acquiescent (Wortman & Brehm, 1975). It will be measured using the measurement named Learned Helplessness Scale developed by Quinless and Nelson (1988), which contains 20 items, with five distinct factors. These factors are Internality-Externality, Globality-Specificity, Stability-Instability, inherent ability-inability and choice of situations individuals intentionally participate. The higher total score signifies the higher likelihood an individual perceives his or her actions and effort as futile.

Persistence

Persistence refers to the tendency to sustain one's focus and energy on the goal-related activities, in spite of challenges, fatigue, frustration or even low perceived attainability (Constantin et al., 2011). It is also operationalized as an individual temperamental trait related to the tendency to remain on a course of reward-contingent behaviors (Cloninger et al., 1991). This construct will be measured using the 13-item Motivational Persistence Scale developed by Constantin and colleagues (2011). This scale comprises three factors, which are the “long-term purposes pursuing” assessing the tendency to maintain long-term actions and resist the temptation to give up despite failure; “current purposes pursuing” assessing the ability to persist in the short-term tasks in the face of obstacles; and “recurrence of unattained purposes” assessing the propensity to continue prior important goals (Constantin et al., 2011). The higher the total score, the more willing an individual to persist.

Chapter II

Literature Review

Emotional Reactivity

Cougle and colleagues (2013) limited the definition of emotional reactivity to “the magnitude of one’s reaction towards a prompt that is emotionally important to them”. In contrast, Nock et al. (2008) termed emotional reactivity (also known as emotional vulnerability) as one’s degree of undergoing both positive and negative emotions (a) when reacting to vast disposition of stimuli (termed emotion sensitivity), (b) vehemently (coined emotion intensity), besides (c) for an extensive period of time before the heightened or plummeted emotions return to homeostasis level of arousal (named emotion persistence). For instance, if an individual reacts strongly (eg. furious, screaming) to a stimuli (eg. friend showing up late for a date) for a few days before forgiving the friend, the person is considered to be of high emotional reactivity. Meanwhile, there is a fourth element in emotional reactivity, that is the threshold of activation, which essentially means the level of intensity of an emotional stimulus needed to activate an emotional response.

Emotional reactivity is usually conceptualised as an element of emotion regulation (Becerra & Campitelli, 2013). Before researchers pinpointed this term, emotional reactivity was first studied as the specific emotions experienced by individuals with psychopathology. Until more recently, researchers have discovered that difficulties in regulating emotions are a contributing factor resulting in various psychological disorders (Nock et al., 2008). Emotional reactivity is considered one of the starting points of how an individual experiences emotion and thus causally influences one’s capability of emotion regulation after the person has had an emotional experience (Becerra & Campitelli, 2013).

Emotional regulation involves both internal and external processes which purposes are to monitor, evaluate, and change emotional responses. Emotional regulatory strategies

like higher expressive concealment and lower cognitive re-evaluation may be linked to heightened psychopathology (Gross & John, 2003). Eftekhari and colleagues have found that people can be divided into four emotional regulatory groups: high regulators; high reappraisers/low suppressors; moderate re-evaluators/low suppressors; and low regulators. Low regulators (high emotional reactivity) are those that have difficulties managing their emotions effectively and are more prone to psychopathology such as depression, anxiety, and posttraumatic stress disorder (PTSD). Meanwhile, those with recurrent and effective use of reappraisal as well as lower level of suppression were found to have the lowest levels of psychopathological symptoms, indicating that high reappraisal and low suppression may be the most adaptive combination for emotional regulation (Eftekhari et al., 2009).

In short, emotional reactivity is a set of concise states that facilitates survival which helps prepare humans to act (Tooby & Cosmides, 1990), allowing them to distinguish between favourable and unfavourable prompts, resulting in them exhibiting behavior responses to react to the prompt (Becerra & Campitelli, 2013).

Learned Helplessness

Learned helplessness is first discovered in animals when they fail to escape from aversive situation even the chance is available after a series of unescapable or uncontrollable distressing stimulation (Seligman & Maier, 1967). The learned helplessness is caused and characterized by perceived uncontrollability of situations and independence of personal response and outcome (Maier & Seligman, 1976; Seligman & Maier, 1967). Other than that. Maier and Seligman (1976) stated that uncontrollability of situations is ensued by three deficits, which are motivational, cognitive, and emotional deficits. When an individual is consistently exposed to uncontrollable events, the subsequent motivation of response to other aversive events will decline. Cognitively, uncontrollability of events will cause an individual to learn the non-contingency in the action and outcome, thus the individual will fail to learn

the effectiveness of his or her action even if it successfully produces reinforcement later on. Emotional wise, individuals exposed to uncontrollable events are constantly disrupted emotionally, therefore those with higher learned helplessness are more prone to develop anxiety and depression (Maier & Seligman, 1976; Miller & Seligman, 1976).

Ferrandiz and Pardo's (1990) research study on learned helplessness also discovered that unpredictability and uncontrollability of the aversive situation bring different impacts on the subject. They concluded that unpredictable negative stimuli lead to generalized associative deficits while uncontrollable negative stimuli induce motivational deficits. However, only the presence of both will lead to learned helplessness, where an individual perceives the adversity is stable (generalized) and unchangeable (motivational deficit). Besides, some researchers had studied the learned industriousness and learned helplessness as the perception of personal agency resulted from learning history. For instance, Amsel (1990) stated that frustration over reward anticipation is aversive but it can either motivate individual's avoidance or continuous persistence to achieve a goal. Supported by Eisenberger (1992), they asserted that if persistence is reinforced, even effort is discomforting, the perceived distress will alleviate, and the tolerance to frustration or distress will increase. This is due to the reason that reinforcement on high performance can reduce the averseness of effort (Eisenberger, 1992). The above were termed as learned industriousness and seen as a concept mirroring another concept called "learned helplessness" (Maier & Seligman, 1976).

Persistence

Persistence is defined as the quality of working on a difficult problem to reach the goal (Christensen & Knezek, 2014). Persistence was widely used as the concept to predict certain behavior such as school dropout (Vallerand et al., 1997; Hardre & Reeve, 2003), smoking (Steinberg et al., 2007) and distress tolerance (Daughters et al., 2005; Ellis et al., 2012; Cogle et al., 2013).

Self-determination theory was often used in the study investigating the correlation between factors that contribute to persistence. Study conducted by Vallerand and colleagues (1997) was investigating the role of motivation in high school dropout. The results show that students with lower autonomy, poor relations with teachers and parents, and low self-competence correlate with lower persistence, therefore leads to school dropout. A similar topic was further explored by Hardre and Reeve (2003) by examining the correlation of motivational and persistence among students from rural areas. Based on self-determination theory, found that although rural students' have limited external resources, their perceived teacher autonomy support and perceived competence would predict their school performance and hence act as an intrinsic motivation to persist academically. In short, the perceived motivational factors that will contribute to higher persistence is distinct among individuals.

On the other hand, the study regarding the role of pride in predicting the persistent behavior was initiated by Williams & Desteno (2008). They found that people are more likely to persist longer on tedious and effortful tasks when their initial source of pride is threatened. However, they have distinguished the concept of pride from self-esteem and general positivity and concluded these two qualities are not associated with increased perseverance. Based on the proven relationship between motivation and persistence, Woolley and Fishbach (2016) has carried out a study to compare the effect of immediate rewards and delayed rewards. The studies were conducted in three different settings, which were healthy diet, school assignment and workout. Within all the settings, the effect of immediate rewards in boosting the persistence of the participants were higher than the delayed rewards.

Emotional Reactivity and Distress Tolerance

Individuals with higher emotional reactivity are bound with higher tendency to have difficulties regulating emotions, which in turn may lead to various types of psychopathology, including mood disorders, anxiety disorders, eating disorders, personality disorders, and self-

mutilating thoughts and actions (Nock et al., 2008). These psychological disorders are also found to be linked to the impairment of distress tolerance (Leyro et al., 2010), whereby distress tolerance is a risk or maintenance factor contributing among individuals having, or at-risk for, various psychological disorders. Earlier studies have also pointed out the positive relationship between heightened emotional reactivity with behavioural inhibition as well as certain affective aspects such as fear, frustration, and aggression; yet has negative relationship with inhibitory control (Eisenberg et al., 2000; Eisenberg et al., 1995; Fabes et al., 1999; Kagan, 1994).

According to Coombes et al. (2011), behavioral inhibition is a regulating factor of feelings and actions which is triggered when an individual is exposed to aversive stimuli or receives messages related to punishment, non-reward, and unusual prompts. This in turn would result in intense emotional responses (high emotional reactivity) including increased arousal and attention, alleviated anxiety, submissive avoidance, and impediment of actions that may lead to unfavourable outcomes, which are characteristics that can also be found among individuals with low distress tolerance when exposed to aversiveness or stressors.

The statement by Coombes et al. (2011) is in line with Hayes et al. (1996) that suggested that individuals presented with serious behavioural issues may be attempting to escape or steer clear of the unpleasant, aversive state of intense, intolerable emotional reactivity. For instance, mood, anxiety, and eating disorders as well as non-suicidal self-mutilating behaviours and suicide attempts have all been suggested as attempts to stay away from strong, aversive, intolerable cognitive or emotional states or experiences (Nock et al., 2008). According to Zvolensky et al. (2011), all the aforementioned disorders, non-suicidal self-injury behaviour, suicidal tendencies, as well as substance use disorders have all been proposed to be related to low distress tolerance and high emotional reactivity, indicating there is a negative association between the two constructs, as Bruns and colleagues (2019) stated

that those who react more intensely to their emotions (higher emotional reactivity) have lower distress tolerance.

Learned Helplessness and Distress Tolerance

The relationship of learned helplessness and distress tolerance is first proposed by Sommers (2017) based on the model of individual difference factors of distress tolerance (Lynch & Mizon, 2011). Sommers believed that there is a continuum between high learned industriousness and high learned helplessness. Also, he postulated that people with high learned helplessness do not believe in personal agency more than people with low industriousness do, because low industriousness is characterized by the history of being reinforced for low effort (instead of loss of control over situations) whereas high learned helplessness is the perceived futility of one's effort in changing the outcome. Since the continuum of learned industriousness – learned helplessness is not empirically studied, the extant literature focusing on the association between learned helplessness (the opposite of learned industriousness) and distress tolerance is hardly found, or does not directly explain the associations even if it exists. Therefore, the following review will be focusing on the mixture of studies about both learned helplessness and learned industriousness and its link with distress tolerance.

One study conducted by Eisenberger et al. (1989) showed that rats that are contingently reinforced for expending higher effort compared to the rats in control group reinforced for small or no effort in the pre-treatment of experiment displayed higher immunity to subsequent non-contingent and more aversive condition in order to get a larger reward. This means, when high effort (in contrast to low effort) is reinforced, it will strengthen the learned industriousness and consequently increases the tolerance to distress or discomfort. Also, the sensation of high effort paired with reinforcement makes the individual “feel good” for the act of spending effort (instead of a particular kind of effort) and that

counteracts the “misery” of effort, thus the individual will be more likely to generalize the effort and distress tolerance in the future. This is one of the studies that explained the relationship between learned industriousness and distress tolerance.

Learned helplessness may be related to distress tolerance when an individual believes that he or she cannot predict the unpleasant situation, and even if he/she does, the situation cannot be altered, the individual will be more likely to see the unpleasant events as distressing and intolerable as compared to those who have been contingently reinforced (learned industriousness). It is reported that frustration intolerance is related to learned helplessness because students’ perception that frustrating events are unbearable is associated with the view that the adverse situations as unchangeable (Filippello et al., 2018). Citing the article of Harrington (2011), adversity does not necessarily lead to psychological disturbance, but it is the matter of individual’s belief and acceptance toward distress. For illustration, a person constantly fails his examination no matter how hard he studies may think his effort as pointless in changing the outcome, thus he will see the examination as distressing, and eventually develop intolerance toward the distress or give up on continuous effort. In sum, it is hypothesized that high learned helplessness is associated with low distress tolerance.

Persistence and Distress Tolerance

Persistence is defined as an individual trait-like dimension of temperament associated to the proneness to carry on a behavior associated with reward contingencies. (Cloninger et al., 1991; Barkley, 1997). According to the models of personality developed by Cloninger and colleagues (1991), persistence is viewed as a subtrait of higher order reward dependence construct. This perspective is parallel with the perspective in learned industriousness theory. Individuals with high persistence trait have a propensity to maintain on tasks despite irritation and dissatisfaction when related to reward contingencies (Eisenberger et al., 1976). Based on this perspective, the link between persistence and distress tolerance has established as

persistence has resembled features with distress tolerance. Nonetheless, the reward-oriented feature of persistence is distinct from distress tolerance which is not necessarily reward dependent (Zvolensky et al. 2011). Overall, persistence is an individual subtrait that correlates with distress tolerance.

Persistence trait is a newborn concept that is distinct from task persistence. Task persistence was generally used as a behavioral measurement of distress tolerance. For instance, Paced Auditory Serial Addition Task (PASAT) and Mirror Tracing Persistence Task (MTPT) were widely adopted as the measurement of task persistence (Daughters et al., 2005; Ellis et al., 2012; Cogle et al., 2013). It is different from the self-report measure persistence adopted in this study. Steinberg & Williams (2013) has conceptualized the behavioral measure of persistence as “state” persistence, which is the outcome of one’s persistence. In contrast, the self-report measure of persistence was viewed as “trait” persistence which could be used as a predictor of one’s persistence. In addition, the importance of motivational factors of persistence was emphasized by Ellis and colleagues (2012). Thus, Motivational Persistence Scale will be applied to evaluate the persistence trait in predicting one’s distress tolerance.

According to Zvolensky et al. (2011), both task persistence and subjective distress are the essential components of distress tolerance. The correlation between emotional reactivity and persistence was found among smokers (Brown et al., 2002). Another study conducted by Ellis et al. (2012) among major depressive disorder (MDD) has found a significant relationship between emotional reactivity, persistence and depression symptoms by examining all three self-report, behavioral and physiological aspects of responses. In conclusion, the results generated from past studies are the empirical support of our hypotheses.

Emotional Reactivity and Learned Helplessness

Based on the past studies, an association has been found between emotional reactivity and learned helplessness although relatively little study directly examine the relationship between these two constructs. In one study conducted by Strigo et al. (2008) among the young adults with and without Major Depressive Disorder (MDD), those participants with MDD who showed higher emotional reactivity (measured by functional magnetic resonance imaging device) were found to have higher level of perceived helplessness after being exposed to a series of painful and non-painful stimulation in an experimental setting. These researchers concluded that the heightened brain activity of people with MDD explained the association between their emotional reactivity and sense of helplessness. However, whether this association exist in the general population still needs further investigation.

Similarly, another study conducted in the population with chronic illness or disability (Gignac et al., 2000) had discovered a positive relationship between emotional reactivity and helplessness ($r(286) = .70, p < .001$). Those subjects with disability whose activities were severely limited have greater sense of dependence on others, helplessness and difficulty with their emotions. Having a higher perceived helplessness in their condition due to the increased dependence on others makes them easier to have more negative emotion arousal and difficulty in regulating their emotions.

Other than that, Davies et al. (2012) implied that high reactivity in different emotions is followed by different patterns of behaviour, while higher sadness reactivity reflects behavioural patterns such as heightened sadness, social disengagement and helplessness. Also, the feeling of helplessness (grouped under the destructive coping styles) was more prominent among individuals with temperament characterized by high emotional reactivity within the sample with cancers (Oniszczenko & Laskowska, 2014). It is also reported that low emotional reactivity serves as a protective factor from the development of internalizing

problems among children struck by poverty, which is associated with elevated sense of helplessness (Shapero & Steinberg, 2013).

Besides, Sommers (2017) found a positive correlation between both of the variables ($r=.53$) within a sample with history of self-damaging behaviours. Again, Sommers suggested the relationship to be extended in the general population as the correlation is neither directly paid attention to nor being examined in a normal population. Thus, the relationship between emotional reactivity and learned helplessness is added to one of the hypotheses in this study.

Learned Helplessness and Persistence

Based on learned helplessness theory, one's motivation to cope with aversive situations grounded on the assumption that one's reactions would bring changes to the situations (Maier & Seligman, 1976). However, individuals with high learned helplessness internalized response outcome independence through past experiences. This diminished the effort to sustain in a task as the individuals believe that extra effort would not help the situation (Smallheer et al., 2017).

The relationship between learned helplessness and persistence was found within smokers. According to Brandon and colleagues (2003), smokers who had achieved abstinence for at least 3 months in the past are more likely to persist in the persistent task longer than those who had never quit smoking. Likewise, non-smokers were found to be more persistent than smokers in the mirror tracing task. The persistent behaviors were attributed to their past experiences and sense of control. Those who had successfully quit smoking for more than 3 months were having higher sense of control and confidence in their determination. Also, non-smokers who are not addicted to smoking have higher sense of control of their bodies and more experiences to cope with negative emotions, therefore, are more capable to persist in difficult tasks.

Another study conducted among alcoholics was reporting similar results (Demarco, 2014, p.51). Participants who received substance abuse treatment that emphasized spirituality were found to be reduced in learned helplessness and increased abstinence longevity. In other words, a negative relationship was found between learned helplessness and persistence. Therefore, this study aims to further examine the relationship between two variables among university students.

Emotional reactivity and Persistence

In past studies, emotional reactivity was found to have a negative relationship with persistence (Sommers, 2017; Winward, 2014; Ellis, 2012). It was related to various psychopathologies because the individuals could not regulate the intense and prolonged emotions. According to Winward (2014), heavy drinkers had higher emotional reactivity and lower task persistence compared to non-drinker. The result was used to predict the relapse of drinking abstinence, or their ability to persist abstinence despite the presence of psychological and physiological discomforts. Similarly, Ellis (2012) reported that among the individuals with major depressive disorder (MDD), higher anger reactivity is associated with lower task persistence. Nonetheless, the non-MDD group showed an opposite result, whereby higher anger reactivity positively related to task persistence. It means that higher reactivity to negative emotions might strengthen one's capability to perform in a task instead of weakening him or her.

The questions had been studied by Coombes and colleagues (2011) by investigating the relationship of emotional reactivity and physical capability. Based on the Reinforcement Sensitivity Theory (RST), they introduced behavioural activation system (BAS) as the reactor for positive emotions, whereby behavioural inhibition system (BIS) as negative emotions reactor. The result revealed that the performance of participants with high BIS in the grip force task improved when exposed with unpleasant images. In other words, negative

emotions enhanced their physical capability among those high emotional reactivity groups. This suggested that emotional reactivity might not necessarily deteriorate the individuals, but trigger the survival instinct that allows them to achieve extraordinary performance.

The malleability of emotional reactivity was further examined by Pitzer and Skinner (2016) in a study participated by 1020 students. First, they found that emotional reactivity was negatively related to motivational resilience, the concept that consists of persistence and ability to cope with adversity. Furthermore, students who perceived themselves as having sufficient personal and interpersonal resources were less likely to be emotionally reactive. On the other hand, those who lack personal or interpersonal resources were most likely to be found as emotionally reactive. In short, the relationship between emotional reactivity and persistence should be further investigated to utilize it as preventive factors to a myriad of psychopathology.

Theoretical Framework

The core theory of this study is Lynch and Mizon's Proposed Individual Difference Factor in Distress Tolerance. Lynch and Mizon (2011) predicted that the individual differences in learned helplessness (may influence task persistence) and emotional reactivity (may influence subjective distress) are pivotal in deciding the emanation of distress intolerance behaviours.

Learned helplessness refers to the extent to which one believes that the results are independent of their actions and responses (Eisenberger et al., 1976). It means that they may be unable to achieve the desirable outcome despite the amount of effort put in, which ultimately results in them giving up the effort due to a sense of lack of control towards the aversive circumstances. Especially if the stressors are erratic, and the individuals exposed to uncontrollable results will become acquiescent (Wortman & Brehm, 1975).

According to Maier and Seligman (1976), when learned helplessness is acquired, it will elicit motivational, cognitive, and emotional effects of uncontrollability. (a) Motivation. The exposure to unmanageable aversive situations, one will become passive and lose their initiative. (b) Cognition. The experience of uncontrollable situations will interfere with one's likelihood to discern contingent relationship between one's behaviour and outcomes. (c) Emotion. The exposure to ungovernable aversive conditions will generate greater emotional disruption compared to manageable aversive circumstances.

While Lynch and Mizon (2011) stated that learned helplessness is a natural component, Sommers (2017) believed that it is an individual effect or effort component. This indicates that one with higher learned helplessness will need little to none effort in managing emotions and resolving problems, and vice versa. Hence, according to this statement, individuals with higher learned helplessness shall have higher distress tolerance.

Furthermore, Nock et al. (2008) termed emotional reactivity as one's degree of undergoing positive or negative emotions (a) when reacting to vast disposition of stimuli (termed emotion sensitivity), (b) vehemently (emotion intensity), besides (c) for an extensive period of time before the heightened or plummeted emotions return to homeostasis level of arousal (emotion persistence). In contrast, Cougle and colleagues (2013) limited the definition of emotional reactivity to "the magnitude of one's reaction towards an emotionally important prompt".

High emotional reactivity is predicted to be a causing factor to low distress tolerance (Lynch & Mizon, 2011). Moreover, Leyro and colleagues (2010) also remarked that the growth and preservation of distress tolerance may be affected by individual distinction in emotionality.

Persistence is frequently proposed by the models of personality as a sub-trait of a higher disposition reward reliance construct (Cloninger et al., 1991; Cloninger et al., 1993)

and has been used as a separate trait-like dimension of temperament which is linked to an individual's tendency to sustain a behaviour that may bring potential rewards (Barkley, 1997; Cloninger, 1991). Likewise, the Theory of Learned Industriousness proposed by Eisenberger and colleagues (1992) also provides corresponding viewpoints. The theory states that people with higher learned industriousness have higher tendency to persist on their works in spite of the exhaustion and frustration they undergo. Not only that, when they are expecting to receive a reward, their task-specific responses will be alleviated (Kose, 2013). Based on Leyro et al. (2010), persistence is, therefore, related to distress tolerance as it includes distress tolerance's characteristics. For instance, the tendency to persist may involve either subjective and/or genuine capability to withstand distresses. Nonetheless, since persistence, in most cases, emphasize on reward achievement (Cloninger et al., 1991), yet distress tolerance does not. Therefore, both constructs may vary from one another.

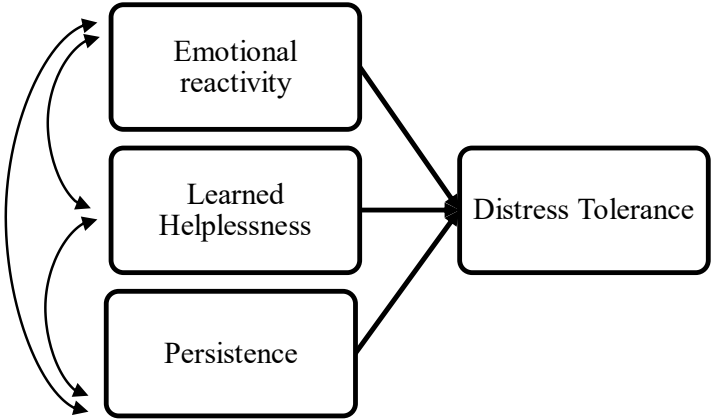
Sommers (2017) had hypothesized that high learned helplessness and high emotional reactivity will lead to low distress tolerance. Meaning that an individual with a learning history of being exposed to uncontrollable circumstances will probably be passive, less likely to engage in an endeavour or take initiative to solve problems, hence less possibly to persist in the attempt needed to endure the distress.

Conceptual Framework

Based on Lynch and Mizon's Proposed Individual Difference Factor in Distress Tolerance, this study will look into the role of individual differences which are emotional reactivity, learned helplessness, and persistence in distress tolerance. Besides, this study will also examine the association between emotional reactivity, learned helplessness, and persistence with distress tolerance; emotional reactivity with learned helplessness, learned helplessness with persistence, and emotional reactivity with persistence. The relationships between variables are illustrated by the conceptual framework shown in Figure 2.1.

Figure 2.1

Conceptual framework of emotional reactivity, learned helplessness, persistence and distress tolerance.



Chapter III

Methodology

Research Design

The present study is a cross sectional and correlational study which adopts a quantitative research design intending to understand the association between emotional reactivity, learned helplessness, persistence, and distress tolerance, as well as the relationships between the three independent variables, which are emotional reactivity, learned helplessness, and persistence. Quantitative research design is to examine theories, ascertain facts, indicate associations between variables, and predict results (Van der Merwe, 1996). By using quantitative research approach, it saves time, energy, and resources other than making generalisation more possible (Daniel, 2016). All data were gathered using self-administered test (paper and pencil method) consisting of self-reported questionnaires of four different constructs: distress tolerance, emotional reactivity, learned helplessness, and persistence. Statistical methods will be used to analyse the data (see data analysis) to produce findings.

Sampling Method

This study used a non-probability sampling technique that is a purposive sampling method, which is an approach whereby the criteria of the characteristics is determined in advance. Thus, it limited who were to be incorporated as the sample of the study. Only those who met the predefined criteria were included (Alvi, 2016). The inclusion criteria of this study were: (a) participant must be a university student; (b) aged between 18 to 29 years old; (c) studying in a university located in Malaysia at the time the data was collected from them. The exclusion criteria were: (a) non-university students; (b) not aged between 18 to 29 years old; (c) studying in a university abroad. Purposive sampling method was chosen due to its convenience, and less time and resources consuming. Paper and pencil questionnaire was used.

Participant

The target population of this study was university students in Malaysia, as they are usually susceptible to stress. And mental health issues (depression, anxiety, sleep disturbance, suicide attempts) that they are facing are getting more and more prevalent every year due to academic and environmental pressure (Lee & Syaid, 2017). The participants recruited in this study were aged between 18 and 26 ($M=21.48$; $SD=1.46$). All of them are university students currently studying in universities in Malaysia.

Sample Size

Based on the statistics provided by Malaysia Youth Data Bank System, the recorded population of university students in 2017 were approximately 119,023 people. By using the formula provided by Krejcie and Morgan (1970), the minimum required sample size of the study would be 383 people. However, this study recruited 448 respondents to ensure there is sufficient effective data after running data cleaning.

Location

The study was conducted in Malaysia by distributing the self-reported paper and pencil questionnaire to university students from two universities in Perak, namely Universiti Tunku Abdul Rahman (UTAR) and Universiti Teknologi Petronas (UTP).

Instruments***Distress tolerance***

Distress Tolerance Scale (DTS; Simons & Gaher, 2005) was used to measure distress tolerance in this study. It contains 15 items assessing one higher order factor, distress tolerance, and four lower order factors named tolerance (3 items), appraisal (6 items), absorption (3 items) and regulation (3 items). The responses were rated on a five-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree). Computation of scale score is the mean of four subscale scores, while the mean of each subscale score is calculated by

dividing the subscale score using the number of items in the subscale, possible scale score ranges from 1 to 5. Item 6 “I can tolerate being distressed or upset as well as most people” is the only reversed item. The higher total score indicates higher tolerance to distress. This scale has a good internal consistency, where the Cronbach’s alpha value is .82 during the development of scale (Simons & Gaher, 2005). It also has excellent internal consistency in the university sample (Cronbach’s $\alpha = .91$) found in a past study (Huang et al., 2009).

Emotional reactivity

Emotional Reactivity Scale (ERS) developed by Nock and colleagues (2008) was used to assess emotional reactivity in this study. It is a 21-item scale that contains three subscales indicating three aspects of emotional reactivity: Sensitivity (8 items), Arousal/Intensity (10 items), and Persistence (3 items). The items were rated on a five-point Likert scale ranging from 0 (not at all like me) to 4 (completely like me). Scale score is calculated by summing up all the item scores with the possible range from 0 to 84. The higher total score signifies a higher level of emotional reactivity in the individual. The ERS is internally consistent since it has an excellent internal consistency for the entire scale (Cronbach’s $\alpha = .92$) and each subscale, including Sensitivity (Cronbach’s $\alpha = .88$), Arousal/Intensity (Cronbach’s $\alpha = .86$) and Persistence (Cronbach’s $\alpha = .81$) (Nock et al., 2008).

Learned helplessness

Learned Helplessness Scale (LHS; Quinless & Nelson, 1988) was used to measure the learned helplessness in this study. This scale consists of 20 items, and there are five subscales: Internality-Externality, Globality-Specificity, Stability-Instability, inherent ability-inability and choice of situations individuals intentionally participate. The items were rated on a four-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree). The total score is calculated by summing up the scores of all items and the possible scale score is from 20 to 80. Item 2, 5, 6, 10, 12, 14, 15, 16, 19, 20 are reversed items. The higher total score

represents a higher degree of learned helplessness. The alpha reliability estimate for LHS is .82 and above for clinical and healthy adult samples (Quinless & Nelson, 1988).

Persistence

Motivational Persistence Scale (Constantine et al., 2011) will be used in this study to measure the persistence trait of different individuals. This 13-item scale comprises three factors, which are the long-term purposes pursuing (4 items), current purposes pursuing (4 items), and recurrence of unattained purposes (5 items). Each item is rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The computation of total score requires summing up the scores of all items, possible scale score ranges from 13 to 65. The higher the total score, the more willing an individual to persist. According to Constantine and colleagues (2011), the scale has a range of Cronbach's alpha from .70 to .72 for its subscales and .69 for its entire scale. However, the Cronbach's alpha internal consistency measure for the scale became $\alpha = .83$ for the whole scale and $\alpha = .81$, $\alpha = .80$, and $\alpha = .82$ for Long-term Purpose Pursuing subscale, Current Purposes Pursuing subscale and Recurrence of Unattained Purposes subscale respectively in a later study with adolescents (Saricam, 2015).

Procedures

Ethical clearance was conducted by UTAR Scientific and Ethical Review Committee (SERC) before distributing the questionnaire for pilot study. A complete set of questionnaire which included a cover page, informed consent, Distress Tolerance Scale, Motivational Persistence Scale, Emotion Reactivity Scale and Learned helplessness Scale was submitted to the committee to be reviewed. The purpose of ethical clearance was to ensure the study was conducted ethically, such as protect the rights of the participants, maximize benefits to the society, and minimize possible harms (Hanekom, 2018).

Pilot study

Pilot study was conducted after the ethical clearance by recruiting 50 university students. The questionnaire was formulated and printed into paper questionnaires which were then distributed face-to-face to the participants. Research incentives were not provided. Participants were required to read the terms and conditions of informed consent and chose either agree or disagree to proceed in the study. For those who were interested to know the results of the study, they may email the researcher through the email address attached in the informed consent.

The data obtained from the pilot study were analyzed to measure the internal consistency and reliability of the questionnaire. The questionnaires were deemed reliable in Malaysia context as the obtained Cronbach's alpha for Emotional Reactivity Scale ($\alpha = .910$), Motivational Persistence Scale ($\alpha = .741$), and Distress Tolerance Scale ($\alpha = .821$) were above the value of 0.7. However, Learned Helplessness Scale has yielded a Cronbach's alpha coefficient of .679, indicating there is a need in modifying the instruction and layout of the questionnaire to improve the reliability value. Besides, based on the item-total statistic of the Learned Helplessness Scale, removal of item 15, "I feel that anyone else could be better than me at most tasks" was suggested in order to improve the scale reliability.

Actual study

In the actual study, 448 Malaysia university students were recruited through purposive sampling method. The procedure was the same as pilot study, except for the sample size. But, the numerical labels of the Likert scales throughout the questionnaires were removed due to different label directions across scales, in order to reduce possible confusion. Also, clearer verbal instructions were given to the participants before they participate in the study. For example, "If you agree to participate in the study, please sign the informed consent on the

first page” and “You need to fill up ALL the questions in the survey, and there is no right or wrong, so please fill your responses honestly”.

Next, the data cleaning was carried out to remove incomplete data or data from participants that do not fulfil the inclusion criteria of the study. Only 444 participants were included in the study for further analysis as four participants were removed as either not fulfilling the inclusion criteria or being an influential case. The reliability of all scales was found to be improved in the actual study, including Emotional Reactivity Scale ($\alpha = .930$), Learned Helplessness Scale ($\alpha = .687$) Motivational Persistence Scale ($\alpha = .820$), and Distress Tolerance Scale ($\alpha = .847$). The data were then inserted into SPSS for data analyses to be presented in the result section. As the reliability of Learned Helplessness Scale is still below the Cronbach’s alpha of 0.7 in the actual study, the result should be analysed with more caution.

Data Analyses

SPSS version 23 was used as the data analysis software for the study. Descriptive analysis of the demographic data was carried out through analyzing the central tendency (e.g. mean, median and mode) and variability (e.g. standard deviation, variance, minimum and maximum variable, skewness and kurtosis). The descriptive statistics of the participants’ demographic and variables are to aid the understanding towards the features and measures of the current sample.

Data screening and cleaning were carried out to eliminate invalid or unusable data. Unengaged responses were screened using Microsoft Excel to remove responses that are given without regard to the content of questions. None of the responses in this study was removed during this step. Missing data were also replaced using linear trend at point method in order to retain more usable cases. Moreover, the assumptions of the statistical tests were explored before proceeding to hypothesis testing to ensure the data meet the assumptions.

Pearson's Product Moment Correlation (PPMC) was adopted to examine the correlation between emotion reactivity, persistence, learned helplessness and distress tolerance. Pearson's correlation coefficient (r) indicates the strength and direction of the linear relationship between two interval or ratio variables, while significance level is also obtained from the analysis.

Multiple Linear Regression (MLR) was carried out to examine the linear relationship between a dependent variable and more than one independent variable (Uyanık & Guler, 2013). Distress tolerance was the dependent variable whereas emotion reactivity, persistence and learned helplessness were the independent variables.

Chapter IV

Results

Descriptive Statistics

The participants in this study are aged between 18 and 26, most of them are around 21 years old. Majority of the participants are Malaysian, Chinese and Buddhist while Indian and Hindus as well as the “other” took relatively small fraction. Also, most of the participants are studying degree, only about 10% are in foundation. The current GPA of the participants mostly fell between 3.00 and 3.49, followed by 2.50 to 2.99 and the least was below 2.00. Lastly, there were more UTAR students participated in this study compare to UTP students.

Demographic Background of Participants

Table 4.1

Descriptive Statistic of Participants' Demographic Information (N=444)

	<i>n</i>	<i>%</i>	<i>M</i>	<i>SD</i>
Age			21.48	1.46
Gender				
Male	154	34.7		
Female	290	65.3		
Race				
Malay	71	16.0		
Chinese	340	76.6		
Indian	19	4.3		
Other	14	3.2		
Religion				
Islam	76	17.1		
Buddhism	306	68.9		

Table 4.1 (continued)*Descriptive Statistic of Participants' Demographic Information (N=444)*

	<i>n</i>	<i>%</i>	<i>M</i>	<i>SD</i>
Christianity	36	8.1		
Hinduism	13	2.9		
Other	13	2.9		
Nationality				
Malaysian	442	99.5		
Non-Malaysian	2	0.5		
Educational level				
Foundation	55	12.4		
Bachelor's degree	389	87.6		
University				
UTAR	340	76.6		
UTP	104	23.4		
Current GPA				
Below 2.00	5	1.1		
2.00 to 2.49	44	9.9		
2.50 to 2.99	131	29.5		
3.00 to 3.49	176	39.6		
Above 3.50	88	19.8		

Note. *n*=Number of participants. *M*= Mean. *SD*= Standard deviation. UTAR= Universiti

Tunku Abdul Rahman. UTP= Universiti Teknologi Petronas. GPA= Grade point average.

Descriptive Statistics of Variables

Table 4.2 shows the minimum and maximum total score of each variable obtained by all the participants in this study. The average and dispersion of data (standard deviation) for each variable are also shown below.

Table 4.2

Descriptive Statistic of Emotional Reactivity, Learned Helplessness, Persistence and Distress Tolerance

Variable	<i>n</i>	Minimum	Maximum	<i>M</i>	<i>SD</i>
Emotional Reactivity	444	1.00	79.00	34.12	15.07
Learned Helplessness	444	25.00	62.00	44.30	5.35
Persistence	444	26.00	65.00	45.09	6.37
Distress Tolerance	444	1.17	4.58	2.95	0.62

Note. *n*= Number of participants. *M*= Mean. *SD*= Standard deviation.

Table 4.3 shows the average and standard deviation of data for each variable collected from the participants in this study according to different demographic categories.

In this study, gender differences were small for all variables except emotional reactivity (slightly greater). Female were found to be more emotionally reactive as compared to male participants. Among all the races and religions, Malays and Muslims averagely scored highest in emotional reactivity while Indians and Hindus scored the lowest. Malaysians were also found to score much higher than non-Malaysians in this variable. Besides, degree students have lower emotional reactivity in average as compared to those in foundation. Interestingly, participants with lower GPA also scored much lower in this variable as compared to those with higher GPA.

For learned helplessness, Indians and Hindus were found to obtain the lowest scores among all races and religions. Also, compare with non-Malaysians, Malaysians generally

perceived less control and more helplessness in their life. The mean scores for this variable were quite similar between groups in other demographic categories. However, participants with GPA below 2.00 showed notably higher learned helplessness as compared with the counterparts. In addition, this group of participants showed much lower level of persistence and distress tolerance than the counterparts within and across the demographic categories.

Last but not least, Indians and Hindus scored highest in persistence, followed by Malays and Muslims. Other than that, non-Malaysians were also found to be more persistent than Malaysian, based on the difference in mean score of the motivational persistence scale. For distress tolerance, except for the group with GPA below 2.00 and the non-Malaysians, the mean score of different groups within all the demographic categories are quite homogeneous.

Table 4.3

Descriptive Statistic of Emotional Reactivity, Learned Helplessness, Persistence and Distress Tolerance Based on Different Demographic Backgrounds (N=444)

	ERS		LHS		MPS		DTS	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Gender								
Male	32.02	15.99	44.06	5.59	45.57	6.65	3.07	0.68
Female	35.27	14.48	44.43	5.23	44.81	6.22	2.90	0.58
Race								
Malay	36.63	13.61	43.47	5.46	47.58	6.55	2.84	0.60
Chinese	33.78	13.61	44.76	5.10	44.24	6.08	2.98	0.58
Indian	29.63	15.14	39.11	6.27	50.58	6.61	2.98	0.99
Other	36.29	18.45	45.06	5.73	45.21	5.78	3.09	0.91

Table 4.3 (continued)

Descriptive Statistic of Emotional Reactivity, Learned Helplessness, Persistence and Distress Tolerance Based on Different Demographic Categories (N=444)

	ERS		LHS		MPS		DTS	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Religion								
Islam	36.45	13.80	43.32	5.35	47.83	6.52	2.85	0.65
Buddhism	33.72	15.03	44.87	5.03	44.19	6.13	2.97	0.58
Christianity	35.05	16.87	44.33	6.10	45.03	5.66	3.02	0.67
Hinduism	25.61	15.18	38.92	5.38	50.00	7.39	3.16	1.07
Other	36.38	16.73	41.92	6.75	44.85	6.14	2.88	0.68
Nationality								
Malaysian	34.17	15.11	44.32	5.36	45.05	6.38	2.95	0.62
Non-Malaysian	26.50	2.12	39.50	0.71	50.00	4.24	4.21	0.53
Educational level								
Foundation	38.48	14.60	45.53	4.79	43.18	6.00	2.85	0.49
Bachelor's degree	33.50	15.06	44.13	5.41	45.36	6.38	2.97	0.64
University								
UTAR	33.48	15.00	44.66	5.20	44.42	6.30	2.98	0.60
UTP	36.21	15.19	43.13	5.67	47.28	6.13	2.88	0.68
Current GPA								
Below 2.00	28.80	24.30	47.20	5.26	42.40	5.94	2.58	0.85
2.00 to 2.49	33.00	16.16	45.85	5.23	44.14	6.15	2.91	0.63

Table 4.3 (continued)

Descriptive Statistic of Emotional Reactivity, Learned Helplessness, Persistence and Distress Tolerance Based on Different Demographic Categories (N=444)

	ERS		LHS		MPS		DTS	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
2.50 to 2.99	33.37	15.72	45.31	4.56	44.22	6.46	2.93	0.62
3.00 to 3.49	33.44	13.74	43.49	5.67	45.71	6.51	2.99	0.61
Above 3.50	37.48	15.38	43.48	5.47	45.76	5.97	2.97	0.63

Note. *M*= Mean. *SD*= Standard deviation. UTAR= Universiti Tunku Abdul Rahman. UTP=

Universiti Teknologi Petronas. GPA= Grade point average. ERS= Emotional Reactivity Scale. LHS= Learned Helplessness Scale. MPS= Motivational Persistence Scale. DTS= Distress Tolerance Scale.

Assumptions of Normality

The purpose of testing the assumptions of normality is to ensure that the data obtained from the current group of sample is normal and not biased, so that the findings can be generalized to a larger population.

Skewness and kurtosis

Skewness is used to measure the asymmetry of the data distribution while kurtosis is used to determine the sharpness of the peak of data distribution (Kim, 2013). The skew value of 0 indicates a perfect symmetrical distribution. The greater the kurtosis value, the “fatter” the shape of the distribution due to larger standard deviations. Based on Table 4.4, all the variables have met the assumption of skewness and kurtosis because none of the values is greater than the absolute value of 2 (West et al., 1995). This may indicate that the data obtained from this study is normal.

Table 4.4

Skewness and Kurtosis of Variables

Variable	Skewness	Kurtosis
Emotional Reactivity	.165	-.355
Learned Helplessness	-.218	.625
Persistence	.077	.541
Distress Tolerance	-.022	.045

Histograms

Based on the histograms in Appendix B, the histograms for all variables show approximately symmetrical shape. This indicates that the data is not extremely skewed, therefore the data is considered normal.

P-P plots

Based on P-P Plots shown in Appendix C, the P-P plot for each variable shows that the plots on the graphs are adhering or not much deviated from the model line. This means the observed data, which is the data collected from the participants do not deviate the expected or predicted data. Achieving this assumption also signifies passing another test for data normality.

Kolmogorov-Smirnov and Shapiro-Wilk normality tests

Table 4.5 shows two tests of normality. Only two variables exceed the significance value of .05 indicating that “there is no significant difference between the sample and population” for both of these variables. The remaining variables that are significantly different from the population may not be considered normal here.

Table 4.5

Normality tests of Kolmogorov-Smirnov and Shapiro-Wilk

Variable	Kolmogorov-Smirnov		Shapiro-Wilk	
	<i>d.f.</i>	<i>Sig.</i>	<i>d.f.</i>	<i>Sig.</i>
Emotional Reactivity	444	.173	444	.022
Learned Helplessness	444	.000	444	.002
Persistence	444	.013	444	.012
Distress Tolerance	444	.002	444	.069

Note. *d.f.* = Degree of freedom. *Sig.* = Significance value.

Significant at $p < .05$

Among the five tests for assumption of normality, namely skewness, kurtosis, histogram, P-P plot and Kolmogorov-Smirnov or Shapiro-Wilk normality tests, meeting three out of five assumptions signifies normality of data and that may allow the data to be

proceeded. However, the data (learned helplessness and persistence) that do not pass the normality tests as shown in Table 4.5 should be proceeded with care.

Exploration of Assumptions for Multiple Linear Regression

The purpose of exploring all the assumptions of MLR before running the statistical test is to make sure that most of the basic assumptions of this particular statistical technique are met or not violated before the further data analysis. This step is essential before the findings are declared as generalizable.

Types of variable

The first assumption of MLR, which is the level of measurement for independent variables need to be quantitative or with at least two categories, and dependent variable needs to be interval or ratio (numerical) is met. All of the variables in this study were measured using Likert-scales therefore the obtained data are not in categorical but a continuous fashion.

Independence

This assumption means the values of the outcome variable are independent from each other, one observed outcome value is not dependent on another observed outcome value. The assumption is met because all the participants gave their responses on their own.

Multicollinearity

This assumption is to ensure that there is no high correlation between the predictors. High multicollinearity symbolizes the occurrence of this issue. The VIF values needs to be smaller than 10 while tolerance values need to be greater than .10 so the assumption is not violated (Shieh, 2010). Although the result in this study shows significant relationships between the predictors (see table 4.8), Table 4.6 shows no violation of this assumption for all independent variables because none of the VIF or tolerance value is out of the exemplary cutoff points.

Table 4.6*Collinearity Statistics for Emotional Reactivity, Learned Helplessness and Persistence*

Variable	Collinearity Statistics	
	Tolerance	VIF
Emotional reactivity	.867	1.153
Learned helplessness	.696	1.437
Persistence	.733	1.363

Independence of error

This assumption examine whether the residual terms of each observed data is independent from each other, which means the error in one data is not related to the error in another data. Table 4.7 shows that the value of Durbin Watson fell between 1.5 and 2.5 (Gan & Ahmad, 2011), indicating the assumption is met.

Table 4.7*Durbin-Watson from MLR Model Summary of Emotional Reactivity, Learned Helplessness, Persistence and Distress Tolerance*

Model	Durbin-Watson
1	2.068

Multivariate outliers

To ensure the findings are not contaminated by influential cases, Mahalanobis, Cook's and Leverage distance were used to detect the possible multivariate outliers outside two standard deviations in this study. For number of cases more than 100 with 3 predictors and significance value of .05, the cutoff value for Mahalanobis distance is 16.45 (Barnett & Lewis, 1994). While for Centered Leverage distance, the cutoff value is two times of $k+1/n$,

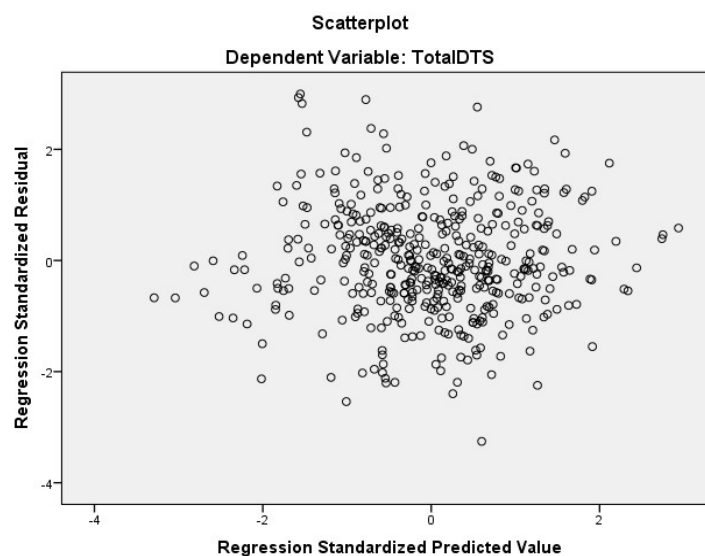
where k is the number of predictor and n is the number of cases (Hoaglin & Welsch, 1978). The cutoff value for Leverage distance in this study is 0.0179. Also, Cook and Weisberg (1982) suggested that cases with Cook's distance value greater than 1 is highly influential and may need to be excluded. Three out of 447 cases were removed from this study because the Mahalanobis and Centered Leverage distances were greater than the cutoff value of 16.45 and 0.0179 respectively. After the removal of cases, although some cases still exceed the Centered Leverage's cutoff, these cases were still be retained because they do not exceed the other two distances.

Normality, Homoscedasticity and Linearity of Residuals

These three assumptions are used to check whether the errors in the data are normally distributed, homogeneous and in linear relationship. Based on Figure 4.1, the scatter plot of standard predicted values against standard residuals shows the achievement of all three assumptions because the plots are evenly distributed across the graph, not in a curved shape and vertically symmetric.

Figure 4.1

Scatter Plot of Standard Predicted Value and Standard Residuals



Pearson's Product Moment Correlation (PPMC)***Hypothesis 1 to Hypothesis 6***

Pearson's Product Moment Correlation can be used to examine the bidirectional relationship between variables. Based on Table 4.8, it was used to test the hypotheses 1 to 6 in this study.

Table 4.8

Pearson's Product Moment Correlation between Emotional Reactivity, Learned Helplessness, Persistence and Distress Tolerance

Variable	<i>n</i>	Emotional Reactivity	Learned Helplessness	Persistence	Distress Tolerance
Emotional Reactivity	444				
Learned Helplessness	444	.253**			
Persistence	444	.117**	-.457**		
Distress Tolerance	444	-.482**	-.339**	-.037	

Note. *n*=Number of participants.

** $p < .01$

H₁: Emotional reactivity associates negatively with distress tolerance. Hypothesis 1 is accepted because there is a significant negative relationship between emotional reactivity and distress tolerance ($r = -.482, p < .01$). This represents that the higher the emotional reactivity, the better the tolerance towards distress.

H₂: Learned helplessness associates negatively with distress tolerance. Hypothesis 2 is accepted because there is a significant negative relationship between learned helplessness and distress tolerance ($r = -.339, p < .01$). It can be concluded that the more one perceives helplessness, the less he or she is able to tolerate distressing events or feelings.

H₃: Persistence associates positively with distress tolerance. Hypothesis 3 is failed to be accepted because the relationship between persistence and distress tolerance is found in

an opposite direction as hypothesized, which is a negative relationship. There is also no significant relationship between both of the variables since the significance value is greater than .05 ($r = -.037, p = .220$). It cannot be concluded that persistent individuals are good at tolerating distress.

H₄: Emotional reactivity associates positively with learned helplessness.

Hypothesis 4 is accepted because there is a significant positive relationship between emotional reactivity and learned helplessness ($r = .253, p < .01$). This symbolizes that the more emotionally reactive an individual is, the more helplessness and less control will be perceived.

H₅: Learned helplessness associates negatively with persistence. Hypothesis 5 is accepted because there is significant negative relationship between learned helplessness and persistence ($r = -.457, p < .01$). This indicates that the less helpless a person think he or she is, the more persistent he or she will be.

H₆: Emotional reactivity associates negatively with persistence. Hypothesis 6 is accepted because there is a weak but significant negative relationship between emotional reactivity and persistence ($r = -.117, p < .01$). Although negligible, it is still can be concluded that the more emotionally reactive a person is, the less likely he or she will be persistent.

Although most of the relationships showed by the PPMC result were significant, it is important to note that there may be a spurious relationship between learned helplessness and other variables. This is due to lack of reliability of LHS, the psychological measurement for learned helplessness, indicating the findings may not be consistently measured across all participants. Even the relationships were found significant, it may be explained by some confounding variables.

Multiple Linear Regression (MLR)

Hypothesis 7

H₇: Emotional reactivity, learned helplessness and persistence predict distress tolerance. Multiple linear regression was used to test if emotional reactivity, learned helplessness and persistence predict distress tolerance significantly. Based on Table 4.9, the model was statistically significant, $F(3, 440) = 61.226$, $p = .000$. The predictors (emotional reactivity, learned helplessness and persistence) are accounted for 29% of variance in the outcome variable (distress tolerance) (see Table 4.10). Also, it was discovered that among the three predictors in this study, all of them are significant predictors of distress tolerance (see Table 4.11). However, the direction of predictive effect for persistence on distress tolerance is opposed to the hypothesised direction.

Table 4.9

ANOVA Table of Multiple Linear Regression Analysis for Emotional Reactivity, Learned Helplessness, Persistence and Distress Tolerance

Model		Sum of squares	<i>d.f.</i>	Mean square	<i>F</i>	<i>Sig.</i>
1	Regression	50.102	3	16.701	61.226	.000
	Residual	120.019	440	.273		
	Total	170.121	443			

Note. *d.f.* = Degree of freedom.

Table 4.10*Summary of Model for Multiple Linear Regression*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.543	.295	.290	.52227

Table 4.11

Table of Coefficient of Multiple Linear Regression Analysis for Emotional Reactivity, Learned Helplessness, Persistence and Distress Tolerance

		Unstandardized		Standardized			
		Coefficients		Coefficient			
Model		B	Std. Error	Beta	<i>t</i>	<i>Sig.</i>	
1	(Constant)	5.585	.376		14.869	.000	
	Emotional Reactivity	-.016	.002	-.392	-9.127	.000	
	Learned Helplessness	-.034	.006	-.297	-6.187	.000	
	Persistence	-.012	.005	-.126	-2.699	.007	

The predictive effect of learned helplessness on distress tolerance should be interpreted with scepticism due to insufficient level of reliability of its measurement (LHS). Although learned helplessness was found as a significant predictor of distress tolerance, the predictive effect may be related to some other factors that exist during the time this study was conducted rather than its true nature that explains the variance in distress tolerance.

Chapter V

Discussion and Conclusion

This study had examined the relationships between emotional reactivity, learned helplessness, persistence and distress tolerance and the predictive role of the first three mentioned variables on distress tolerance. Generally, all the relationships are found significant in the hypothesized direction, except for persistence and distress tolerance. The findings will be discussed in detailed in the following sections.

Discussion for General Findings

In the result section, there were a few noteworthy trends being observed from the descriptive statistics of the variables. One example is that female is slightly more emotionally reactive than male in the current study. Since the independent t-test is not employed in the study, the significance of gender difference in emotional reactivity is unknown. However, the gender difference observed in this study may be explained by the difference in brain connectivity and hormones of different sexes such as estrogen and testosterone. Lungu and colleagues (2015) reported that higher estrogen is associated with greater sensitivity while higher testosterone is associated with lower sensitivity towards emotional stimulus.

Another interesting trend to notice is that participants with current GPA below 2.00 exhibits much higher level of learned helplessness compared to those with current GPA above 3.50. This is consistent with the findings of an earlier study conducted by Valas (2001). The reason why people with lower academic achievement display higher level of learned helplessness may be due to low self-esteem and belief in personal agency resulted from social comparisons or implicit social norms that place pressure just because they could not achieve what is considered to be “good”.

Other than that, people with current GPA below 2.00 were also found to be low in persistence and distress tolerance. Although it is possible that their academic achievement is

affected by these traits, it may also be explained that their effort in excelling the tests and examinations is thwarted by the previous failures. Perhaps they were used to be persistent in their study previously but some kind of obstacles had obstructed them. Similar for low distress tolerance which may be caused by the lack of reinforcement for previous effort, hence they hardly invest their energy or tolerate the distress of studying.

Non-Malaysians were found to be more tolerant to distress based on the comparison of DTS mean score with Malaysians. These non-Malaysians are expatriate students who are currently studying in universities located in Malaysia. The possible explanation for their higher level of distress tolerance is the strong adaptability to unfamiliar environment. As the construct of distress tolerance includes tolerance to uncertainty and ambiguity, while pursuing tertiary education abroad is not conventional for everyone due to high level of stress and uncertainty, it indicates that these non-Malaysians might possess a better tolerance to distress in general.

Meanwhile, some differences between races and religions in other constructs were also observed from the study. It should not be concluded that certain racial or religious groups are better or worse than the others, but the difference may be explained by the emphasis or importance of some values in certain cultures. For example, Hindus are known for their high pain tolerance as evidenced from the ritual of body piercing during Thaipusam festival. Therefore, it is justifiable that they score higher in distress tolerance construct.

Lastly, even though not much difference in variables was observed from different educational level, there is still a noticeable heterogeneity in ERS between both the levels. Lower emotional reactivity observed from degree students may be explained by the accumulation of experiences and habituation to the emotion-evoking events that happened in the university context comparing with the foundation students who are still new and curious.

Discussion for Reliability of Learned Helplessness Scale

Low of reliability of a scale may affect the confidence of researcher in concluding a finding since it signifies inconsistent measurement across participants. Even if the findings confirm the hypotheses significantly, it is still questionable.

The reliability reports the amount of measurement error in a test indirectly, which is through subtracting the square of obtained alpha from 1 (Tavakol & Dennick, 2011).

Therefore, the higher the alpha, the lower the proportion of error is attributed in the test score.

There are several possible reasons to yield a low Cronbach's alpha, one of them is the multidimensionality of the scale. LHS contains five subscales, which may result in the underestimate of Cronbach's alpha that assumes unidimensionality (Tavakol & Dennick, 2011). This study had measured learned helplessness using LHS as a whole because the use of individual subscales was not suggested during its development (Quinless & Nelson, 1988), plus many studies had used the overall LHS while measuring the same variable (Aydogan, 2016; Prihadi et al., 2019).

Meanwhile, all the other scales used in this study had showed good reliability ($\alpha > .80$) despite containing several subscales. Thus, low reliability of LHS may be explained by the reversed items. Ten out of twenty items of the scale are negatively worded, which may serve to decrease the agreement bias where test takers choose a same response throughout the test regardless of content (Devellis, 2017). However, Devellis stated that the reversed items might have caused confusion in the respondents. In addition, language of the scale may also amplifies the confusion with the items, lowering its reliability in the current sample whose first language may not be English, as compared to the samples from the past studies.

In sum, the findings obtained using LHS in this study should be interpreted carefully and not concluded definitely without further consideration of possible confounding factors such as different interpretation of scale items.

Discussion for Hypothesis 1 to Hypothesis 7***H₁: Emotional Reactivity Associates Negatively with Distress Tolerance***

Pearson's correlation showed that is a significant moderate negative relationship between emotional reactivity with distress tolerance. This finding is consistent with those of the past studies (Ellis et al., 2012; Macatee & Cougle, 2013; Winward et al., 2014).

The negative association indicates that people with higher emotional reactivity will be less tolerant to distressing events. The link between these two variables may be related to the behavioral inhibition which serves to regulate the feelings and actions when an individual is facing an unfavorable situation (Coombes et al., 2011). However, such inhibition will further intensify negative feelings and result in several maladaptive actions such as avoidant behavior that can be seen in distress intolerant individuals.

Not only that, lower distress tolerance may be resulted from the aversive feeling caused by the heightened emotional reactivity. Individuals who experience long duration of intense feeling, or constant fluctuation between a certain emotion and the baseline usually feel "exhausted" after they react so intensely to the negative event. Thus, a similar event that will induce the similar course of emotional reactions will be seen really distressing to the individual. Eventually, the individual will avoid those so-called distressing events in order to avoid the undesirable feeling evoked by the event itself, as well as the aversive feeling cause by own emotional reactivity.

Furthermore, Zvolensky et al. stated that many psychopathologies such as mood disorders, eating disorder, self-mutilating or suicidal behaviors, and substance abuse are related to high emotional reactivity and distress intolerance. Therefore, this indicates that there is a negative association between emotional reactivity and distress tolerance. The acceptance of this hypothesis does not only support the past findings on the association

between both mentioned variables, but also provide a new proof to the extant literature with similar finding in a student population without serious clinical psychological conditions.

H₂: Learned Helplessness Associates Negatively with Distress Tolerance

Pearson's correlation showed that learned helplessness is negatively associated with distress tolerance significantly. The decision of accepting this hypothesis provides a supporting evidence to the relationship between learned helplessness and distress tolerance which was first postulated in Sommers' (2017) study. It has also been proposed that learned industriousness and learned helplessness may be two different ends of the dichotomy of one variable, which relates to the perception or willingness in expending certain effort in the present situations based on the past experiences relevant to the effort.

However, previously more studies were focusing on the positive relationship between learned industriousness and distress tolerance (Lynch & Mizon, 2011), while the role of learned helplessness in distress tolerance was always underexamined. In the current study, the result confirms the opposite nature between both constructs since the former is found to have significant positive relationship with distress tolerance in the past studies while the latter has a significant negative relationship with distress tolerance.

Besides, this result also supports the findings from the study of Filippello and colleagues in 2018 which reported the association between students' negative view towards adversity and their lower sense of control towards those events. When the students perceive adversity as totally unbearable or uncontrollable, they will be more likely to develop intolerance towards it.

It is understandable that people who always believe themselves as "hopeless" and "powerless" will have lower ability or belief to tolerate distressing events. This is because they might perceive the distressing events or negative feelings as more tremendous and terrible than what they can take control of, due to their persistent feeling on having no power

or control over many domains in their lives. When the amount of expenses (e.g. energy or time) required to deal with the adversities are consistently anticipated far beyond the perception of own resources (e.g. time) and ability (e.g. energy), the “adaptive” way expected of the individual will be avoiding those situations.

Consequently, when such expectation or belief perpetuates, the increased avoidance will cause the person to gradually lose the ability to withstand distress. Being distress intolerant helps the person to protect his or her vulnerable sense of self and feelings. In a long term, these people will also be trapped in an infinite loop of avoiding distress and feeling distressed due to the lack of control in their lives (resulted from avoidance).

H₃: Persistence Associates Positively with Distress Tolerance

Pearson’s correlation showed that persistence is negatively associated with distress tolerance insignificantly. This finding is contrary to the hypothesis as in both direction and strength of the relationship between two variables. Shockingly, this means the validity of using task persistence as the measurement of distress tolerance in past studies may be doubt.

As stated by Zvolensky and colleagues in 2011, the measurement of distress tolerance should include both task persistence and subjective distress. Without the distress experiences, the persistent behavior should only be known as persistence instead of distress tolerance.

In past studies, behavioral measures were widely adopted to capture the degree of distress tolerance. However, there were some limitations of behavioral measurement that jeopardize its validity. First, the performance in the behavioral tasks could be influenced by individuals’ physical or mental capability. For example, an individual who persist longer than most others in a mathematic task may due to his calculating skills rather than higher distress tolerance. This explained the insignificant relationship between different kind of behavioral measurements (Glassman et al., 2016). Secondly, the perceptions towards the task would determine the present of distress experience. For instance, solving difficult mathematic

questions may be an entertaining task for some individuals. Therefore, the use of behavioral measurement alone is insufficient to create both task persistence and subjective distress.

This study utilized self-report measure as measurement for distress tolerance to avoid the aforementioned disadvantages. The insignificant relationship between two variables might be because persisting in a lengthy and intense way might not be distressing for those who are interested in that activity. In fact, the sense of achievement might motivate the individual to enjoy persisting in the task despite of the aversities. In short, persistence alone is inadequate to explain one's levels of distress tolerance.

H₄: Emotional Reactivity Associates Positively with Learned Helplessness

Based on the PPMC findings from this study, there is a significant positive relationship between emotional reactivity and learned helplessness. This result is consistent with the study of Sommers (2017), where a positive association was found between these two variables while studying their predictive effect on distress tolerance and self-damaging behaviors; and another study conducted by Gignac and colleagues (2000) which discovered a same relationship in the sample with chronic illness and disability.

The positive relationship may be explained by the way people process information and react emotionally to different situations in their lives. As people with high emotional reactivity are characterized by sensitive, intense and enduring emotions, they are more likely to react on wider range of things with more intense emotion and it takes longer to return to the original state of emotion. Since they are habituated to reacting intensely to small things, they will also process negative events in an exaggerated manner be it consciously or unconsciously. The exaggeration of negative events plus the difficulty in regulating their emotions cause them to be more susceptible to feel losing control over their own emotion as well as the events. As the situation continues in the long run, they might develop the sense of helplessness because they tend to feel more negative than others towards a same stimulus.

Therefore, lower level of emotional reactivity may protect the individuals from amplifying the negative stimuli and sense of helplessness.

Same goes for the other way round, when people consistently feel helpless, they will gradually generalize such feeling to different situations in their lives. As there are more events resembling their sense of powerless, there is a higher likelihood that these people will be more emotionally sensitive (due to more frequent trigger of negative memories), particularly towards events that are seem distressing or uncontrollable for them even if the events may be really trivial.

The current study also expands the identification on association between emotional reactivity and learned helplessness from clinical samples to a larger population. The current result supports the findings of Strigo and colleagues (2008) among young adults with and without Major Depressive Disorder. They utilized the functional Magnetic Resonance Imaging (fMRI) technique to measure the participants' emotional reactivity and questionnaire to measure helplessness in an experimental setting. Other than the psychological reasons, the association between emotional reactivity and sense of helplessness may be explained by the neurological mechanisms underlying emotion controls. The increased activation of amygdala (which is the brain region responsible for emotion arousal or processing) is related to the higher sense of helplessness (Strigo et al., 2008). This is because people with more active amygdala (higher emotional reactivity) prone to process environmental stimuli in a more negatively biased way and find it more difficult to modulate the painful experiences which eventually leads to a higher sense of helplessness.

H₅: Learned Helplessness Associates Negatively with Persistence.

Based on the PPMC findings from this study, there is a significant negative relationship between learned helplessness and persistence. This result is in line with the past study (Sommers, 2017).

Learned helplessness hypothesis suggested that negative learning history would weaken the individuals' motivation to escape from an unpleasant state by internalizing the expectation of response-outcome independence. In fact, one's motivation to respond to uncomfortable stimuli is from the beliefs that appropriate response would cease the unpleasant conditions (Smallheer et al., 2017). However, the absence of rewards after multiple attempts would give individuals the sense of "powerless" and "helplessness".

On the other hand, persistence is a reward contingent concept where the individual would persist for possible rewards. Therefore, those with high learned helplessness had lost their motivation to persist for the outcomes. In reality, individuals who are easily giving up in difficult situations are less likely to have high achievement. This experience would then further strengthen the belief that they are incompetent and therefore they should not persist in the future to avoid possible pain or costs. The study conducted by Brandon and his colleagues (2003), smokers who had successfully abstained for at least 3 months are more persistent than those who never quit. In short, the learning history of individuals would influence the levels of persistence in the future.

H₆: Emotional Reactivity Associates Negatively with Persistence.

Based on the PPMC findings from this study, there is a significant negative relationship between emotional reactivity and persistence. This result is coherent with previous studies (Winward et al., 2014; Ellis et al., 2012; Sommers, 2017).

Individuals with higher emotional reactivity are also dubbed as low regulators. Based on Muraven and Baumeister (2000), they require more mental resources to cope with distressing events. This has deteriorated their persistence in distressing tasks as the unpleasant feelings had been magnified. Although the study conducted by Coombes and colleagues (2011) showed that individuals with higher sensitivity to negative emotions tends to result in higher grip force, this study did not obtain the same results. This might be because

the enhancement of physical capability occurred unconsciously, which will not be detected by the self-report measure used in this study.

As consistent to the study conducted by Pitzer and Skinner (2016), emotional reactivity negatively associated with persistence among university students. Moreover, degree students tend to have lower emotional reactivity than foundation students. As degree students are more familiar and resourceful in the university environment than foundation students, this is aligned with the result obtained by Pitzer and Skinner (2016), which stated that students who perceived high personal and interpersonal resources tends to have lower emotional reactivity.

H₇: Emotional Reactivity, Learned Helplessness and Persistence Predict Distress Tolerance.

Multiple linear regression showed that emotional reactivity, learned helplessness and persistence predict distress tolerance significantly. This result is consistent to the study conducted by Sommers (2017) which found that emotional reactivity and learned helplessness together predict distress tolerance significantly.

Based on the theory developed by Lynch and Mizon (2011), this study added in persistence as the third predictor of distress tolerance. Although persistence alone has no significant relationship with distress tolerance in PPMC, its combination with emotional reactivity and learned helplessness was able to explain 29% of variance in distress tolerance.

The key components of distress tolerance were subjective distress and task persistence (Zvolensky et al., 2011). As aforementioned, learned helplessness and emotional reactivity explained the magnification of distressing emotions, which creates intense and prolonged damage to individuals. The inclusion of persistence further explained the persistent behaviour of individuals despite of enormous suffering.

Limitations

As aforementioned, the Learned Helplessness Scale (LHS) reported Cronbach alpha below 0.7 in both pilot study and actual study. The reasons to retain the scale despite low reliability in pilot were two. First, LHS reported high reliability ($\alpha = .82$) in past study (Quinless & Nelson, 1988). Secondly, the statistics during pilot study suggested that the removal of item 15 would improve the reliability. However, the reliability was still unsatisfactory despite the removal of item 15. Therefore, the particular result might not reflect the actual thoughts of the students as accurate as other scales adopted in this study.

This study was intended to discover the mechanism of distress tolerance to provide possible prevention methods for psychopathology that induced by emotional distress. Hence, self-report measure was used to capture the “trait” of distress tolerance (Steinberg & Williams, 2013). However, the cross-sectional survey design has limited the researchers to explore the malleability of distress tolerance across time. As suggested by Leyro and colleagues (2010), an optimal levels of distress tolerance could be a protective factors or risk marker for various psychopathologies if it is found to be malleable.

The use of self-report measure alone has several limitations that constraints the validity and reliability of the result. The common limitations of self-report measure such as self-serving bias, Hawthorne effect, untruthful response and others are potential disruptors to the reliability of the responses. However, some precautions were carried out to ensure the reliability of the responses. First, all the questionnaires were done in the classroom to reduce the environmental disruptions. Also, the instructions given was standardized to avoid misconceptions about the data filling.

Recommendations

The current study that employs the cross-sectional survey design may pose possible risk of bias in the result due to the momentary salience of participants’ certain aspects of self-

perception. In order to measure the association between distress tolerance and its predictors more objectively, longitudinal study design may be used in the future research in order to minimize the situational factor that affect the participants' perception towards their own attitude and their responses during the time they participate in the study. Longitudinal study may tell the stable traits of a person better as opposed to one-time study that is more likely to be influenced by uncontrollable environmental factors (e.g. noises, participant's encounters before the study).

Besides the design of study, method of collecting data can also bring significant impact on the validity of findings. Behavioural measurement of distress tolerance and psychological measurement such as DTS can be administered together in the future study if understanding the overall distress tolerance construct is intended. This is because both methods have their own advantages and disadvantages, while the advantage of one can address the inadequacy of another. For instance, behavioural measurement may be confounded by external factors like differences in physical ability or current physical state when being examined with other factors. Psychological measurements may address the issue because its measurement is more objective. However, there are a few risks that may not be in the researchers' control, including self-serving bias (rating oneself better than actually is), central tendency error (choosing all the responses in the middle of the Likert scale), social desirability (respond in a way that is socially accepted or desired) and more. Hence, conducting a mixed method study could minimize most of the possible limitations as well as utilizing all the advantages of different data collection method. Nonetheless, it is important to ask the question regarding the efficiency of each method before the decision making, e.g., "Will the cost outweigh the outcome?" "Is there any other mean to achieve the same end?" and etc.

Moreover, the instrument used to measure learned helplessness in the future study in Malaysia may be modified in order to increase the researcher's confidence in making conclusive statements. Researchers may solicit responses from Malaysian sample to retest the psychometric quality of the scale in Malaysia context, as well as to modify the items accordingly. Measurements with less reversed item may reduce the possibility of misunderstanding by participants, and if feasible, future researchers may also develop a culture-appropriate measurement for learned helplessness, for example, with choice of words that are more Malaysian-friendly or commonly understood.

In a study conducted in 2017, Sommers proposed that low industriousness may not be as "hopeless" as high learned helplessness because it may be caused by the reinforcement of low effort in the past (e.g. constantly passing exams without putting any hard work), unlike the latter which is resulted from persistent non-contingency between effort and outcome (e.g. failing exams no matter how much hard work has been put in). However, what is the difference between the relationship of learned industriousness and learned helplessness with distress tolerance is still unknown. Future study may focus on whether learned industriousness and learned helplessness exist on a same continuum, so we can may find out whether people with high learned helplessness may score lower in distress tolerance than people with low learned industriousness. Providing insight on this doubt may facilitate the development of more comprehensive or useful measurements for learned helplessness and learned industriousness, or its related constructs.

During the current study, as mentioned before in the result and discussion of findings, it has been noticed that the trend of scoring different variables among participants from lower academic achievement group is seemingly more "negative" than the others. Due to the probability of having an association, researchers may delve into the factor of academic achievement in relation to learned helplessness, persistence and distress tolerance in the

future. This will answer the questions regarding the direction of causal effect (whether these variables predict academic achievement or vice versa) that is not identified in the current study and whether the association is occurred by chance. Identifying the relationship in either direction will help the particular group of people by targeting change on the predisposing factor for the outcome. For instance, if people with lower academic achievement were identified to be more distress intolerant and have higher risk of developing undesirable issues, perhaps the education system can target and offer help to this group of people which will in turn reduce the rate of possible negative consequences like substance use or psychopathology. Other than that, future researchers may also examine the moderating effect of academic achievement on relationship between distress tolerance and its predictors.

Implications

In academia setting, this study has further explored the underlying mechanism of distress tolerance by examining the role of emotional reactivity, learned helplessness and persistence. Also, the result obtained will consolidate the existing theory, which strengthen the understanding regarding distress tolerance. Moreover, the study conducted in Malaysia has provided the supporting details in Asian context. In order to reduce the possible bias from sampling method, students from different field of studies such as social sciences (e.g. Psychology and Public Relations), natural sciences (e.g. Petroleum engineering, Chemical engineering), and applied sciences (e.g. Business administration, Banking Finance) were recruited. Therefore, the perceptions of Malaysia students from different courses were included for future study.

Apart from that, the validity and reliability of distress tolerance scale has been supported in Malaysia context as majority of the past studies were using behavioural measure. The used of task persistence alone as the measurement of distress tolerance was being doubt as the PPMC should no significant relationship between persistence and distress

tolerance. It suggested that previous measurement might be measuring persistence instead of distress tolerance. In short, this study had filled the research gap and methodological gap that had been overlooked by past researches.

Past studies had proven the significant relationship between low distress tolerance to psychopathologies (Depression, anxiety disorder, self-mutilation, suicide), as well as with addiction to substances. It is crucial for clinicians to gain insight regarding the role of individuals' factors in all these issues regardless for treatment or prevention purposes. For example, individual who had identified with low distress tolerance due to high learned helplessness should receive psychotherapy such as cognitive behavioral therapy (CBT) to alter the false beliefs and regain self-efficacy. As such, more alternatives are provided to clinicians for effective treatment.

In educational setting, gaining knowledge about the mechanism of distress tolerance paved the ground for educators to exert appropriate motivation instead of excessive stress to students. For instance, student's perceived personal resources and interpersonal resources should be emphasized to reduce the emotional reactivity among students (Pitzer & Skinner, 2016), which then extend their tolerance to greater academic pressure. Furthermore, contingent reward system should gradually replace the punishment in the appraisal system. In fact, education that focus on punishment teaches students to focus on their weaknesses instead of maximizing their strengths. As a result, a sense of helplessness and low self-esteem may develop as there are endless of flaws within a person. Therefore, understanding the factors that contribute to low distress tolerance is wiser than blaming the victims for their vulnerability.

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Appendix A

Questionnaires



Informed Consent Form for Research Study

Introduction

This research study is being conducted to examine “The Role of Emotional Reactivity, Learned Helplessness and Persistence in Distress Tolerance” among university students in Malaysia. Your participation in this survey is highly appreciated.

Procedures

The questionnaire consists of five sections, which are Section A, Section B, Section C, Section D, and Section E. You are required to complete ALL the sections. This survey will take approximately 15 to 20 minutes to complete.

Potential Risks and Benefits

There are no foreseeable physical or non-physical risks from your participation in this study. There are no direct benefits from taking part in this research. However, your participation will contribute to the study by helping us get more information and learn more about the relationships between the selected key variables of the study.

Participation

Participation in this study is completely voluntary. If you decide not to participate there will not be any negative consequences. Please be aware that if you decide to participate, you may withdraw from the study at any time.

Confidentiality

Your responses are completely anonymous and all information will be kept private and confidential. The information provided will only be used for academic purposes.

Contact

If you have any questions, or would like a copy of this consent letter, please contact us at leejiajun98@utar.my, ying4869@utar.my or jackysoon13@utar.my.

Please provide your signature to indicate that you have read and understood the abovementioned details if you agree to participate in the present study.

Thank you in advance for your participation.

Signature : _____

Section A: Demographic Information

This section requires you to fill up your personal information.

1. Gender:

Male [] Female []

2. Age: _____

3. Race:

Malay []

Chinese []

Indian []

Other: _____

4. Religion:

Islam []

Buddhism []

Christianity []

Hinduism []

Other: _____

5. Nationality:

Malaysian [] Non-Malaysian []

6. Origin:

Perlis []

Kedah []

Kelantan []

Terengganu []

Penang []

Perak []

Pahang []

Selangor []

W.P. Kuala Lumpur []

Negeri Sembilan []

Melaka []

Johor []

Sarawak []

Sabah []

7. Current educational level:

Foundation []

Bachelor's Degree []

A-level	<input type="checkbox"/>	Master's Degree	<input type="checkbox"/>
Matriculation	<input type="checkbox"/>	Doctoral Degree	<input type="checkbox"/>
Diploma	<input type="checkbox"/>	Other:	_____

8. University, State (e.g. UTAR, Perak) : _____

9. Year of study (e.g. Y1S3 or Foundation): _____

10. Course of study (e.g. Psychology): _____

11. Current GPA:

Below 2.00	<input type="checkbox"/>
2.00 – 2.49	<input type="checkbox"/>
2.50 – 2.99	<input type="checkbox"/>
3.00 – 3.49	<input type="checkbox"/>
Above 3.50	<input type="checkbox"/>

Section B: Emotional Reactivity Scale

This questionnaire asks different questions about how you experience emotions on a regular basis (for example, each day). When you are asked about being “emotional”, this may refer to being angry, sad, excited, or some other emotion. Please rate the following statements.

	Not at all like me	A little like me	Somewhat like me	A lot like me	Completely like me
1. When something happens that upsets me, it's all I can think about for a long time.	0	1	2	3	4
2. My feelings get hurt easily.	0	1	2	3	4
3. When I experience emotions, I feel them very strongly/ intensely.	0	1	2	3	4
4. When I'm emotionally upset, my whole body gets physically upset as well.	0	1	2	3	4
5. I tend to get very emotional very easily,	0	1	2	3	4
6. I experience emotions very strongly.	0	1	2	3	4
7. I often feel extremely anxious.	0	1	2	3	4
8. When I feel emotional, it's hard for me to imagine feeling any other way.	0	1	2	3	4
9. Even the littlest things make me emotional.	0	1	2	3	4
10. If I have a disagreement with someone, it takes a long time for me to get over it.	0	1	2	3	4

11. When I am angry/ upset, it takes me much longer than most people to calm down.	0	1	2	3	4
12. I get angry at people very easily.	0	1	2	3	4
13. I am often bothered by things that other people don't react to.	0	1	2	3	4
14. I am easily agitated.	0	1	2	3	4
15. My emotions go from neutral to extreme in an instant.	0	1	2	3	4
16. When something bad happens, my mood changes very quickly. People tell me I have a very short fuse.	0	1	2	3	4
17. People tell me that my emotions are often too intense for the situation.	0	1	2	3	4
18. I am a very sensitive person.	0	1	2	3	4
19. My moods are very strong and powerful.	0	1	2	3	4
20. I often get so upset it's hard for me to think straight.	0	1	2	3	4
21. Other people tell me I'm overreacting.	0	1	2	3	4

Section C: Learned Helplessness Scale

Please select the answer that most closely describes you or your feelings about yourself.

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. No matter how much energy I put into a task, I feel I have no control over the outcome.	4	3	2	1
2. I feel that my ability to solve problem is the cause of my success.	4	3	2	1

3. I can find solutions to difficult problems.	4	3	2	1
4. I don't place myself in situations in which I cannot predict the outcome.	4	3	2	1
5. If I complete a task successfully, it is probably because of my ability.	4	3	2	1
6. I have the ability to solve most of life's problem.	4	3	2	1
7. When I do not succeed at a task, I do not attempt any similar tasks because o feel that I would fail them also.	4	3	2	1
8. When something doesn't turn out the way I planned, I know it is because I didn't have the ability to start with.	4	3	2	1
9. Other people have more control over their success and/or failure than I do.	4	3	2	1
10. I try new tasks if I have failed similar ones in the past.	4	3	2	1
11. When I perform poorly, it is because I don't have the ability to perform better.	4	3	2	1
12. I accept tasks even if I am not sure that I will succeed at them.	4	3	2	1
13. I feel that I have little control over the outcomes of my work.	4	3	2	1
14. I am successful at most tasks I try.	4	3	2	1
15. I feel that anyone else could be better than me at most tasks.	4	3	2	1
16. I am able to reach my goals in life.	4	3	2	1
17. When I don't succeed at a task, I find myself blaming my own stupidity for my failure.	4	3	2	1
18. No matter how hard I try, things never seem to work out the way I want them to.	4	3	2	1
19. I feel that my success reflects my ability, not chance.	4	3	2	1
20. My behaviour seems to influence the success of a work group.	4	3	2	1

Section D: Motivational Persistence Scale

Please select the answer that most closely describes you or your feelings about yourself.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. I often come up with new ideas on an older problem or project	1	2	3	4	5
2. I remain motivated even in activities that spread on several months	1	2	3	4	5
3. I have a good capacity to focus on daily tasks	1	2	3	4	5
4. From time to time I imagine ways to use opportunities that I have given up.	1	2	3	4	5
5. Long term purposes motivate me to surmount day to day difficulties.	1	2	3	4	5
6. Once I decide to do something, I am like a bulldog: I don't give up until I reach the goal.	1	2	3	4	5
7. Even though it doesn't matter anymore, I keep thinking of personal aims that I had to give up.	1	2	3	4	5
8. I purposefully pursue the achievement of the projects that I believe in.	1	2	3	4	5
9. I continue a difficult task even when the others have already given up on it	1	2	3	4	5
10. I often find myself thinking about older initiatives that I had abandoned.	1	2	3	4	5
11. I keep on investing time and effort in ideas and projects that require years of work and patience.	1	2	3	4	5
12. The more difficult a task is, the more determined I am to finish it.	1	2	3	4	5
13. It's hard for me to detach from an important project that I had given up in favor of others.	1	2	3	4	5

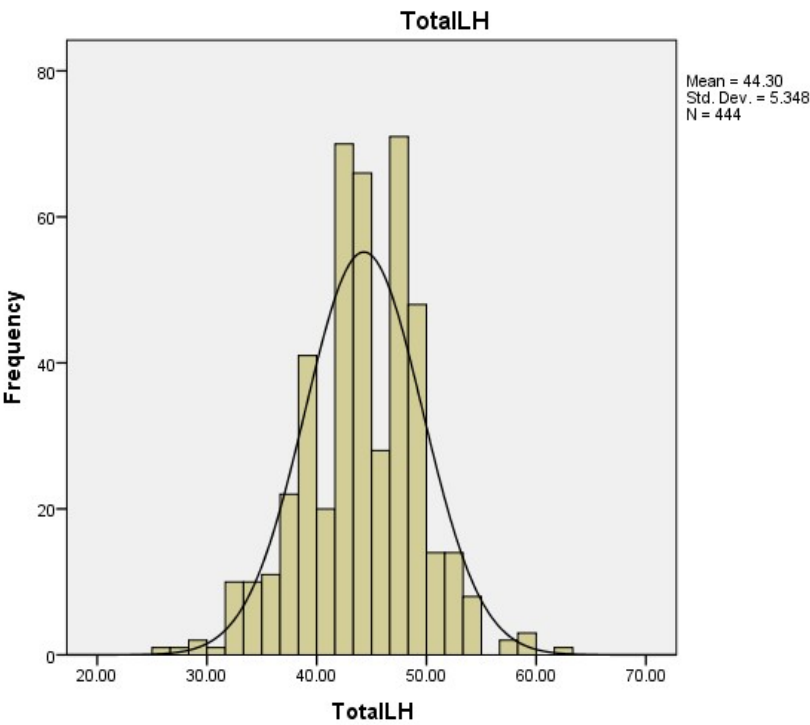
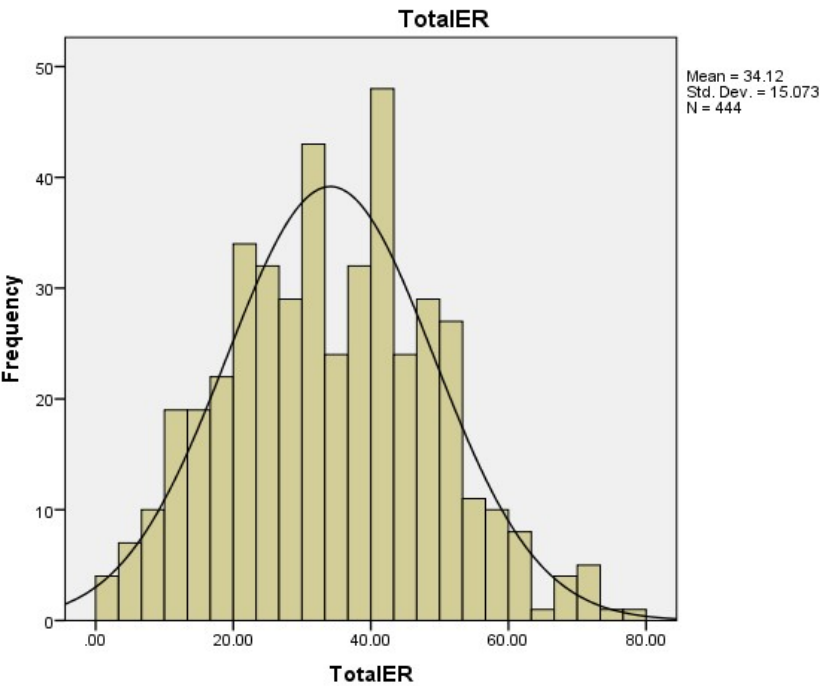
Section E: Distress Tolerance Scale

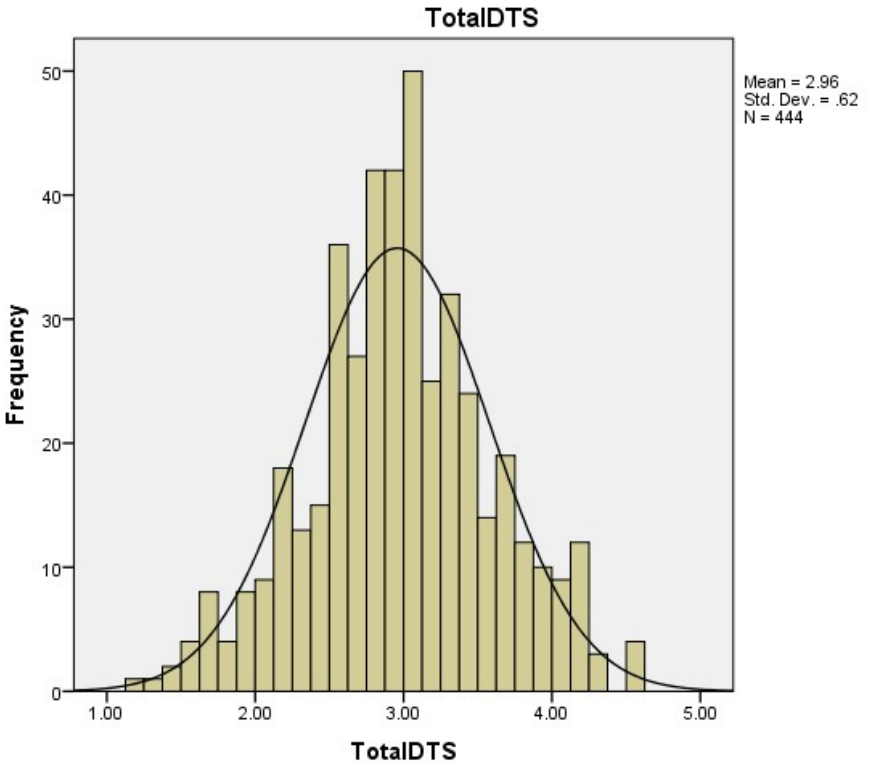
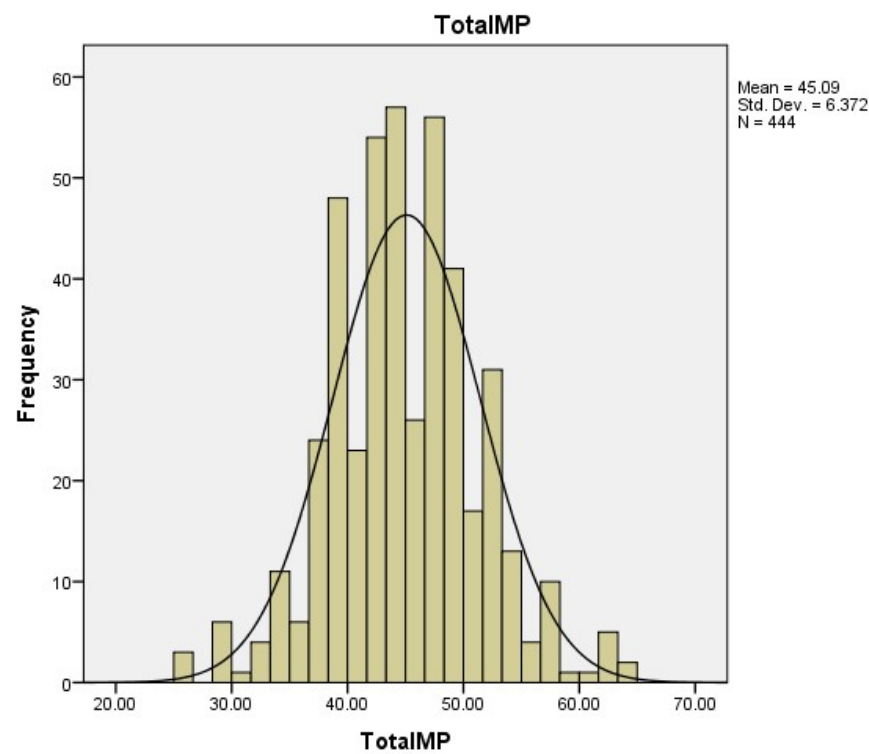
Think of times that you feel distressed or upset. Select the number that best describe your beliefs about feeling distressed or upset.

	Strongly disagree	Mildly disagree	Agree and disagree equally	Mildly agree	Strongly agree
1. Feeling distressed or upset is unbearable to me.	5	4	3	2	1
2. When I feel distressed or upset, all I can think about is how bad I feel.	5	4	3	2	1
3. I can't handle feeling distressed or upset.	5	4	3	2	1
4. My feelings of distress are so intense that they completely take over.	5	4	3	2	1
5. There's nothing worse than feeling distressed or upset.	5	4	3	2	1
6. I can tolerate being distressed or upset as well as most people.	5	4	3	2	1
7. My feelings of distress or being upset are not acceptable.	5	4	3	2	1
8. I'll do anything to avoid feeling distress or upset.	5	4	3	2	1
9. Other people seem to be able to tolerate feeling distressed or upset better than I can.	5	4	3	2	1
10. Being distressed or upset is always a major ordeal for me.	5	4	3	2	1
11. I am ashamed of myself when I feel distressed or upset.	5	4	3	2	1
12. My feelings of distress or being upset scare me.	5	4	3	2	1
13. I'll do anything to stop feeling distressed or upset.	5	4	3	2	1
14. When I feel distressed or upset, I must do something about it immediately.	5	4	3	2	1
15. When I feel distressed or upset, I cannot help but concentrate on how bad the distress actually feels.	5	4	3	2	1

Appendix B

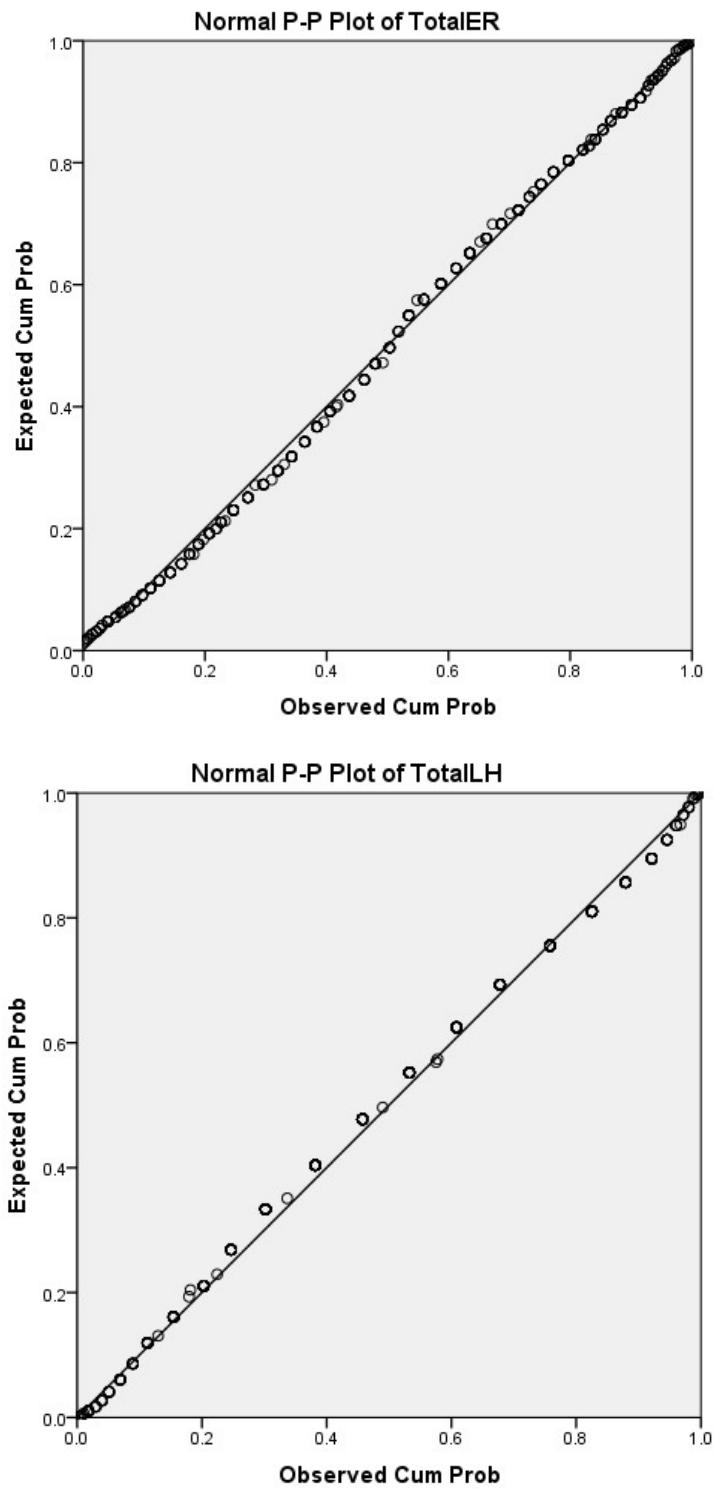
Histograms

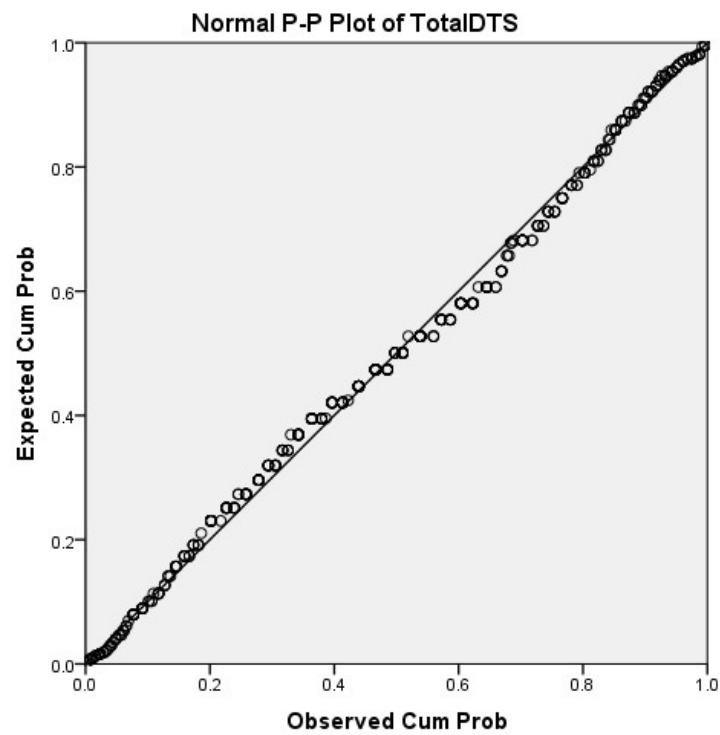
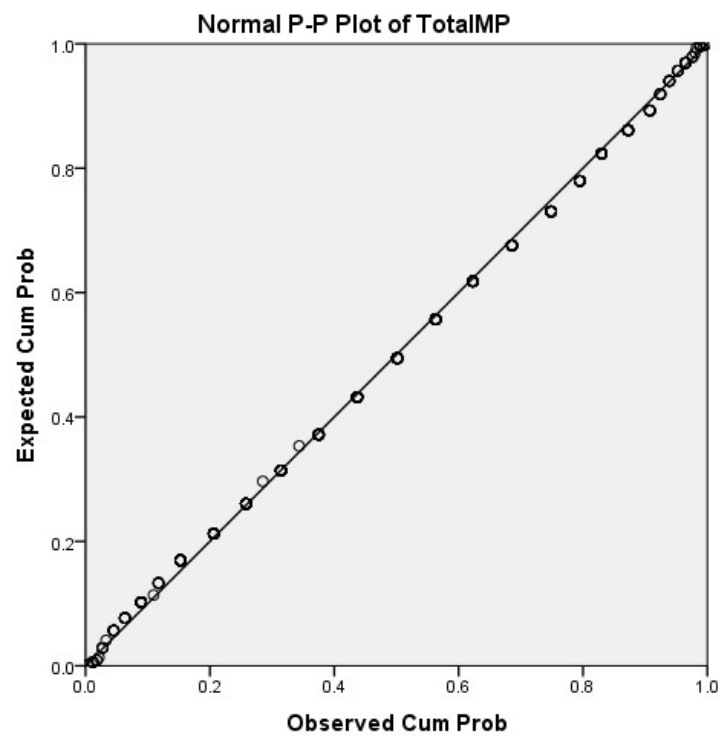




Appendix C

P-P Plots





Appendix D

Turnitin Report

Examining the role of emotional reactivity, learned helplessness and persistence in distress tolerance among Malaysia university students.		
ORIGINALITY REPORT		
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49	Stacy Cruess, Michael Antoni, Kristin Kilbourn, Gail Ironson, Nancy Klimas, Mary Ann Fletcher, Andy Baum, Neil Schneiderman. "Optimism, distress, and immunologic status in HIV-infected gay men following hurricane andrew", International Journal of Behavioral Medicine, 2000 Publication	<1%
50	Submitted to Sunway College Student Paper	<1%
51	Submitted to University of Wales Swansea Student Paper	<1%
<div>Exclude quotesOnExclude matchesOff</div> <div>Exclude bibliographyOn</div>		

Universiti Tunku Abdul Rahman			
Form Title : Supervisor's Comments on Originality Report Generated by Turnitin for Submission of Final Year Project Report (for Undergraduate Programmes)			
Form Number: FM-IAD-005	Rev No.: 0	Effective Date: 01/10/2013	Page No.: 1 of 1



FACULTY OF ARTS AND SOCIAL SCIENCE

Full Name(s) of Candidate(s)	Chai Liang Ying, Lee Jia Jun, Sim Kah Soon
ID Number(s)	1603883, 1602141, 1603024
Programme / Course	Bachelor of Social Science (Hons) Psychology
Title of Final Year Project	Examining the role of emotional reactivity, learned helplessness and persistence in distress tolerance among university students in Malaysia

Similarity	Supervisor's Comments (Compulsory if parameters of originality exceeds the limits approved by UTAR)
Overall similarity index: <u>9</u> % Similarity by source Internet Sources: <u>6</u> % Publications: <u>4</u> % Student Papers: <u>7</u> %	
Number of individual sources listed of more than 3% similarity: <u>No</u>	
Parameters of originality required and limits approved by UTAR are as follows: (i) Overall similarity index is 20% and below, and (ii) Matching of individual sources listed must be less than 3% each, and (iii) Matching texts in continuous block must not exceed 8 words <i>Note: Parameters (i) – (ii) shall exclude quotes, bibliography and text matches which are less than 8 words.</i>	

Note Supervisor/Candidate(s) is/are required to provide softcopy of full set of the originality report to Faculty/Institute

Based on the above results, I hereby declare that I am satisfied with the originality of the Final Year Project Report submitted by my student(s) as named above.

Signature of Supervisor _____

Signature of Co-Supervisor _____

Name: _____

Name: _____

Date: _____

Date: _____

**DEPARTMENT OF PSYCHOLOGY AND COUNSELLING
FACULTY OF ARTS AND SOCIAL SCIENCE
UNIVERSITI TUNKU ABDUL RAHMAN**

UAPZ 3023 Final Year Project II

Research Project Evaluation Form

TURNITIN: *‘In assessing this work you are agreeing that it has been submitted to the University-recognised originality checking service which is Turnitin. The report generated by Turnitin is used as evidence to show that the students’ final report contains the similarity level below 20%.’*

Project Title: Examining The Role of Emotional Reactivity, Learned Helplessness and Persistence in Distress Tolerance Among University Students in Malaysia	
Supervisor: Mr. Ho Khee Hoong	
Student’s Name: 1. Chai Liang Ying 2. Lee Jia Jun 3. Sim Kah Soon	Student’s Id 1. 1603883 2. 1602141 3. 1603024

INSTRUCTIONS: Please score each descriptor based on the scale provided below: <ol style="list-style-type: none"> 1. For criteria 1, 2, 3,4, 5, 6: 0 = no attempt, 1 = very poor, 2 = poor, 3 = average, 4 = good, 5 = very good 2. For criteria 3,4: 0 = no attempt, 1 = very poor, 3 = poor, 5 = average, 7 = good, 10 = very good 3. For criteria 7: Please retrieve the mark from “Oral Presentation Evaluation Form”.

1. ABSTRACT (5%)	Score
1. States clearly the research objectives. (5%)	
2. Describe briefly and clearly the approach/methodology of the study. (5%)	
3. Highlights the outcomes of the study. (5%)	
4. Highlights the significance of the study. (5%)	
5. Three relevant keywords mentioned. (5%)	
Sum	
Subtotal (Sum /5)	/ 5%
Remark:	
2. METHODOLOGY (20%)	
1. Appropriate research design/framework (5%)	
2. Appropriate sampling techniques (5%)	
<ul style="list-style-type: none"> - Sample size is justified. - Sampling method correctly mentioned - Location of how the subjects are selected 	
3. Clear explanation of procedure (5%)	
<ul style="list-style-type: none"> - How is consent obtained - Description of how data was collected 	
4. Explanation on the instruments/questionnaires used (5%)	
<ul style="list-style-type: none"> - Description of instrument measures, scoring system, meaning of scores, reliability and validity information. 	
Subtotal	/ 20%
Remark:	
3. RESULTS (20%)	
1. Analyses used are appropriate for each hypothesis. (10%)	
2. Interpretations and explanations of the statistical analyses are accurate. (10%)	
Subtotal	/ 20%
Remark:	

4. DISCUSSION & CONCLUSION (25%)				
1. Constructive discussion of findings. - Explanation and critical analysis. Results were critically analyzed with similar and/or dissimilar results. (10%)				
2. Implication of the study. (5%)				
3. Limitations mentioned relevant and constructive to the study. (5%)				
4. Recommendations for future research. (5%)				
Subtotal		/ 25%		
Remark:				
5. LANGUAGE & ORGANIZATION (5%)				
1. Comprehensiveness: Content Organization + Language				
Subtotal		/ 5%		
Remark:				
6. APA STYLE AND REFERENCING (5%)				
1. APA format is followed				
Subtotal		/ 5%		
Remark:				
7. *ORAL PRESENTATION (20%)		Score		
		Student 1	Student 2	Student 3
Subtotal				
Remark:				
PENALTY: Maximum 10 marks for LATE SUBMISSION, MISSING FORM or POOR ATTENDANCE for consultation with supervisor				
		Student 1	Student 2	Student 3
**FINAL MARK/TOTAL				

*****Overall Comments:**

Signature: _____

Date: _____

Notes:

1. **Subtotal:** The sum of scores for each assessment criteria
2. **FINAL MARK/TOTAL:** The summation of all subtotal score
3. Plagiarism is UNACCEPTABLE. Parameters of originality required and limits approved by UTAR are as follows:
 - (i) **Overall similarity index is 20% and below**, and
 - (ii) Matching of individual sources listed must be less than 3% each, and
 - (iii) Matching texts in continuous block must not exceed 8 words

Note: Parameters (i) – (ii) shall exclude quotes, references and text matches which are less than 8 words.

Any works violate the above originality requirements will NOT be accepted. Students have to redo the report and meet the requirements in **SEVEN(7)** days.

*The marks of “Oral Presentation” are to be retrieved from “**Oral Presentation Evaluation Form**”.

**It’s compulsory for the supervisor/reviewer to give the overall comments for the research projects with A- and above or F grading.







Action Plan of UAPZ 3023 (group-based) Final Year Project II for Jan & May trimester

Supervisee's Name:

Chai Liang Ying, Lee Jia Jun, Sim Kah Soon

Supervisor's Name:

Mr. Ho Khue Hoong

Task Description	Duration	Date/Time	Supervisee's Signature	Supervisor's Signature	Supervisor's Remarks	Next Appointment Date/Time
Methodology, Data Collection & Data Analysis	W1-W2	14/1/2020 2pm			Discussion about pilot study result. Unsatisfactory result.	
Finding & Analysis Discuss Findings & Analysis with Supervisor Amending Findings & Analysis	W3-W6	21/1/2020 1pm			Discussion about pilot study result. Proceed into actual data collection.	
Discussion & Conclusion Discuss Discussion & Conclusion with Supervisor	W7-W9	09/3/2020 3pm			Data collected, will proceed into data analysis.	
Amending Discussion & Conclusion						
Submission of first draft*	Monday of Week 10				submit the first draft to Turnitin.com to check similarity rate	
Amendment	W10					
Submission of final FYP (FYP I + FYP II)*	Monday of W11				submit hardcopy, CD, and relevant documents to supervisor	
Oral Presentation	W11-W12				Oral Presentation Schedule will be released and your supervisor will inform you via email.	

Notes:

1. The listed duration is for reference only, supervisors can adjust the period according to the topics and content of the projects.
2. *Deadline for submission can not be changed, one mark will be deducted per day for late submission.
3. Supervisees are to take the active role to make appointments with their supervisors.
4. Both supervisors and supervisees should keep a copy of this re 5. This record is to be submitted together with the submission of the FYP II.

Universiti Tunku Abdul Rahman			
Form Title : Sample of Submission Sheet for FYP/Dissertation/Thesis			
Form Number : FM-IAD-004	Rev No: 0	Effective Date: 21 June 2011	Page No: 1 of 1

**FACULTY OF ARTS AND SOCIAL SCIENCE
UNIVERSITI TUNKU ABDUL RAHMAN**


Date: 1st April 2020

SUBMISSION OF FINAL YEAR PROJECT/DISSERTATION/THESIS

It is hereby certified that Chai Liang Ying (ID No: 1603883) has completed this final year project entitled "Examining the Role of Emotional Reactivity, Learned Helplessness and Persistence in Distress Tolerance among University Students in Malaysia" under the supervision of Mr. Ho Khee Hoong (Supervisor) from the Department of Counselling and Psychology, Faculty of Arts and Social Science.

I understand that University will upload softcopy of my final year project in pdf format into UTAR Institutional Repository, which may be made accessible to UTAR community and public.

Yours truly,



Name: Chai Liang Ying

Universiti Tunku Abdul Rahman			
Form Title : Sample of Submission Sheet for FYP/Dissertation/Thesis			
Form Number : FM-IAD-004	Rev No: 0	Effective Date: 21 June 2011	Page No: 1 of 1

**FACULTY OF ARTS AND SOCIAL SCIENCE
UNIVERSITI TUNKU ABDUL RAHMAN**

Date: 1st April 2020

SUBMISSION OF FINAL YEAR PROJECT/DISSERTATION/THESIS

It is hereby certified that Lee Jia Jun (ID No: 1602141) has completed this final year project entitled "Examining the Role of Emotional Reactivity, Learned Helplessness and Persistence in Distress Tolerance among University Students in Malaysia" under the supervision of Mr. Ho Khee Hoong (Supervisor) from the Department of Counselling and Psychology, Faculty of Arts and Social Science.

I understand that University will upload softcopy of my final year project in pdf format into UTAR Institutional Repository, which may be made accessible to UTAR community and public.

Yours truly,



Name: Lee Jia Jun

Universiti Tunku Abdul Rahman			
Form Title : Sample of Submission Sheet for FYP/Dissertation/Thesis			
Form Number : FM-IAD-004	Rev No: 0	Effective Date: 21 June 2011	Page No: 1 of 1

**FACULTY OF ARTS AND SOCIAL SCIENCE
UNIVERSITI TUNKU ABDUL RAHMAN**

Date: 1st April 2020

SUBMISSION OF FINAL YEAR PROJECT/DISSERTATION/THESIS

It is hereby certified that Sim Kah Soon (ID No: 1603024) has completed this final year project entitled "Examining the Role of Emotional Reactivity, Learned Helplessness and Persistence in Distress Tolerance among University Students in Malaysia" under the supervision of Mr. Ho Khee Hoong (Supervisor) from the Department of Counselling and Psychology, Faculty of Arts and Social Science.

I understand that University will upload softcopy of my final year project in pdf format into UTAR Institutional Repository, which may be made accessible to UTAR community and public.

Yours truly,



Name: Sim Kah Soon

Re: U/SERC/10/2020

21 January 2020

Dr Chie Qiu Ting
Head, Department of Psychology and Counselling
Faculty of Arts and Social Science
Universiti Tunku Abdul Rahman
Jalan Universiti, Bandar Baru Barat
31900 Kampar, Perak.

Dear Dr Chie,

Ethical Approval For Research Project/Protocol

We refer to the application for ethical approval for your students' research projects from Bachelor of Social Science (Hons) Psychology programme enrolled in course UAPZ3023. We are pleased to inform you that the application has been approved under expedited review.

The details of the research projects are as follows:

	Research Title	Student's Name	Supervisor's Name	Approval Validity
1.	The Role of Emotional Reactivity, Learned Helplessness and Persistence in Distress Tolerance Among University Students in Malaysia	1. Chai Liang Ying 2. Lee Jia Jun 3. Sim Kah Soon	Mr Ho Khee Hoong	21 January 2020 – 20 January 2021
2.	Effects of Neurofeedback Games on Affects and Anxiety Among Undergraduate Students	1. Ling Gong Shuen 2. Ng Kuan Sien 3. Tan Pei Chin	Mr Pheh Kai Shuen	
3.	Effects of School-based Neurodiversity Literacy Program on Knowledge, Attitude and Behavioral Intention Among Adolescents in Malaysia	1. Liow Jia Li 2. Pet Jia Yi 3. Wong Xiao Zen		
4.	The Relationship of Emotional Exhaustion and Workplace Arrogance on Job Performance Among Human Resource Professional in Malaysia	1. Chua Yie Hong 2. Chai Jia Yi 3. Moh Jia Hui	Ms Sanggari a/p Krishnan	
5.	The Impact of Social Media and Peer Influence on Perceived Body Image Among Undergraduate Students	1. Cheah Shin Yi 2. Kok Sook Yan 3. Yeap Nai Ying	Dr Zainab Chaudhry	
6.	The Relationship of Self-esteem and Self-efficacy on Career Adaptability Among Undergraduate Students in Malaysia	1. Kong Ai Huong 2. Ooi Shin Ying 3. Paul Liang Choy Pui	Pn Wirawahida binti Kamarul Zaman	
7.	Motives of Gaming and Needs Frustration as Predictors of Internet Gaming Disorder Among Mobile Gamers	1. Ho Jia Yit 2. Lim Jun Yan 3. Lon Ke Hin	Ms T'ng Soo Ting	
8.	A Study of the Relationship between Social Media Addiction, Self-efficacy and Anxiety Level on Academic Procrastination Among Undergraduates in Malaysia	1. Tee Zhi Yuan 2. Chong Jia Min 3. Chong Xin Yi	Ms Sarvarubini a/p Nainee	
9.	Life Satisfaction: Influences of Dark Triad and Internet Addiction Among Emerging Adults	1. Deeva Darshini a/p Mogan 2. Ong Chi Ying 3. Sandra Loo Wei	Ms Komathi Lokithasan	

	Research Title	Student's Name	Supervisor's Name	Approval Validity
10.	The Effects of Conformity and Self- esteem Towards Cyberbullying Among Undergraduate Students in Malaysia	1. Woon Suk Yuen 2. Ng Su May 3. Wong Wai Kiat	Dr Chie Qiu Ting	21 January 2020 – 20 January 2021
11.	Factors Affecting Sexting Behaviour Among Young Adults in Malaysia	1. Adeline Seah Wei Xuan 2. Lee Xin Lin 3. Lim Shar Minn	Mr Tan Soon Aun	
12.	Sexual Desire, Sexual Satisfaction and Personality Traits as Predictors to Cybersexting Behaviour Among Emerging Adults in Malaysia	1. Sherwynn Quay Sherr Nunn 2. Rinnesh a/l Mohan 3. Lee Xin Kei		
13.	Religiosity, Self-perceived Effect of Pornography Usage and Pornography Usage Among Emerging Adults in Malaysia	1. Jasmine Ng Hui-Ying 2. Sharmilah a/p Rajendran 3. Tan Cheok Eng		
14.	Sexual Communal Motivation and Marital Satisfaction: Mediating Effect of Sexual Satisfaction	1. Ooi Wan Ting 2. Yeap Sun Yue		

The conduct of this research is subject to the following:

- (1) The participants' informed consent be obtained prior to the commencement of the research;
- (2) Confidentiality of participants' personal data must be maintained; and
- (3) Compliance with procedures set out in related policies of UTAR such as the UTAR Research Ethics and Code of Conduct, Code of Practice for Research Involving Humans and other related policies/guidelines.

Should the students collect personal data of participants in their studies, please have the participants sign the attached Personal Data Protection Statement for records.

Thank you.

Yours sincerely,



Professor Ts Dr Faidz bin Abd Rahman

Chairman

UTAR Scientific and Ethical Review Committee

c.c Dean, Faculty of Arts and Social Science
 Director, Institute of Postgraduate Studies and Research

PERSONAL DATA PROTECTION STATEMENT

Please be informed that in accordance with Personal Data Protection Act 2010 ("PDPA") which came into force on 15 November 2013, Universiti Tunku Abdul Rahman ("UTAR") is hereby bound to make notice and require consent in relation to collection, recording, storage, usage and retention of personal information.

Notice:

1. The purposes for which your personal data may be used are inclusive but not limited to:-
 - For assessment of any application to UTAR
 - For processing any benefits and services
 - For communication purposes
 - For advertorial and news
 - For general administration and record purposes
 - For enhancing the value of education
 - For educational and related purposes consequential to UTAR
 - For the purpose of our corporate governance
 - For consideration as a guarantor for UTAR staff/ student applying for his/her scholarship/ study loan
2. Your personal data may be transferred and/or disclosed to third party and/or UTAR collaborative partners including but not limited to the respective and appointed outsourcing agents for purpose of fulfilling our obligations to you in respect of the purposes and all such other purposes that are related to the purposes and also in providing integrated services, maintaining and storing records. Your data may be shared when required by laws and when disclosure is necessary to comply with applicable laws.
3. Any personal information retained by UTAR shall be destroyed and/or deleted in accordance with our retention policy applicable for us in the event such information is no longer required.
4. UTAR is committed in ensuring the confidentiality, protection, security and accuracy of your personal information made available to us and it has been our ongoing strict policy to ensure that your personal information is accurate, complete, not misleading and updated. UTAR would also ensure that your personal data shall not be used for political and commercial purposes.


Consent:

1. By submitting this form you hereby authorise and consent to us processing (including disclosing) your personal data and any updates of your information, for the purposes and/or for any other purposes related to the purpose.
2. If you do not consent or subsequently withdraw your consent to the processing and disclosure of your personal data, UTAR will not be able to fulfill our obligations or to contact you or to assist you in respect of the purposes and/or for any other purposes related to the purpose.
3. You may access and update your personal data by writing to us at ying4869@1utar.my.

Acknowledgment of Notice

☒ I have been notified by you and that I hereby understood, consented and agreed per UTAR above notice.

☐ I disagree, my personal data will not be processed.


.....
Name: Chai Liang Ying
Date: 01/04/2020

PERSONAL DATA PROTECTION STATEMENT

Please be informed that in accordance with Personal Data Protection Act 2010 ("PDPA") which came into force on 15 November 2013, Universiti Tunku Abdul Rahman ("UTAR") is hereby bound to make notice and require consent in relation to collection, recording, storage, usage and retention of personal information.

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 - For consideration as a guarantor for UTAR staff/ student applying for his/her scholarship/ study loan
2. Your personal data may be transferred and/or disclosed to third party and/or UTAR collaborative partners including but not limited to the respective and appointed outsourcing agents for purpose of fulfilling our obligations to you in respect of the purposes and all such other purposes that are related to the purposes and also in providing integrated services, maintaining and storing records. Your data may be shared when required by laws and when disclosure is necessary to comply with applicable laws.
3. Any personal information retained by UTAR shall be destroyed and/or deleted in accordance with our retention policy applicable for us in the event such information is no longer required.
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Consent:

1. By submitting this form you hereby authorise and consent to us processing (including disclosing) your personal data and any updates of your information, for the purposes and/or for any other purposes related to the purpose.
2. If you do not consent or subsequently withdraw your consent to the processing and disclosure of your personal data, UTAR will not be able to fulfill our obligations or to contact you or to assist you in respect of the purposes and/or for any other purposes related to the purpose.
3. You may access and update your personal data by writing to us at leejiajun98@1utar.my.

Acknowledgment of Notice

☒ I have been notified by you and that I hereby understood, consented and agreed per UTAR above notice.

☐ I disagree, my personal data will not be processed.


Name: Lee Jia Jun
Date: 01/04/2020

PERSONAL DATA PROTECTION STATEMENT

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3. Any personal information retained by UTAR shall be destroyed and/or deleted in accordance with our retention policy applicable for us in the event such information is no longer required.
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3. You may access and update your personal data by writing to us at jackysoon13@utar.my.

Acknowledgment of Notice

☒ I have been notified by you and that I hereby understood, consented and agreed per UTAR above notice.

☐ I disagree, my personal data will not be processed.


.....
Name: Sim Kah Soon
Date: 01/04/2020