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Relationships between perceived stress and resilience with happiness

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Abstract---This study is to determine the relationship between perceived stress and resilience with happiness. This study used a descriptive, cross-sectional design. A representative sample of 310 pre-university students were selected through multistage sampling. The study utilized Perceived Stress Scale, Resilience Scale, and Subjective Happiness Scale. The finding reveals that there is a difference between males and females' pre-university students in terms of happiness variable. Female subjects are happier compared to males. There are simple and multiple relationships between perceived stress and resilience with happiness among pre-university students. Increased level of resilience and decreased level of perceived stress are associated with students' happiness. Based on the results, enhancing the students' level of happiness should receive more attention in order to produce professional graduates who are academically competent, and able to adapt to their environment. Directions for future research are discussed.

Keywords---perceived stress, resilience, happiness, pre-university students.

Introduction

During the human life cycle, the body continually changes and goes through different periods known as stages (Bogin & Varea, 2017). Adolescence is the stage of life when a person is transitioning from childhood to adulthood (Yap, et. al., 2021). According to Ness (2013), adolescence stage begins about the age of 10 years and end between the ages of 20 and 24 years (Lerner & Steinberg, 2009; Ozer & Irwin 2009). It is an important period for progressing and getting ready for the better future and for transferring from the inexperience and raw of childhood into the maturity of adulthood (Steinberg, 2008). For all individuals, mental health is a key issue of overall health and fundamental to persons' well-being and optimal functioning (Saxena, et. al, 2006). One of the important events of this period is the entry of a person into higher education centers and universities. During university years, students are responsible for their personal health, academic life, and financial situation. The years represent one of the most stressful periods since youths need to manage their own lives without family direct assistance (Cress & Lampman, 2007).

In Malaysia, pre-university is simply defined as the time period before entering university, usually lasting one to two years. Secondary school leavers can enroll in the pre-university programme of their choice to kick start their higher education journey. Malaysia offers a wide variety of pre-university programmes for those looking to further their studies. In Malaysia, national secondary school leavers can enroll in pre-university programmes at age 18 as they leave school at 17 years of age. Pre-university education is an important stepping-stone in an individual's academic life before their transition to university. Students have a chance to determine what programme they want to pursue based on their interests, passions, aspirations, and budget. This is also the time where their learning preferences and learning styles will be fully developed. As pre-university courses are offered by colleges and universities, students will experience a taste of university life and provide them an opportunity to hone their soft skills and leadership skills. A number of researchers suggest that social integration into new study environments is an important factor in achieving successful adaptation. Grayson (2003) asserts that students need to be integrated into university life so they will have the motivation to continue their studies. He theorizes that students who have integrated socially into university display higher levels of academic achievement than those who remain isolated or fail to socially integrate, in addition to facing adaptation and adjustment problems. Gharaibeh, Ishak, Jdaitawi, and Taamneh (2011) state that adjustment is "a psychological process of adapting to, coping with, managing problems, challenges, tasks and requirements of daily life. Successful freshman adaptation to university life, as gauged by academic, social and emotional adjustment, is influenced by a number of factors. As freshmen arrive at university with different personal, social, cultural and linguistic backgrounds, and characteristics, the factors that affect the adjustment process necessarily vary from one student to another. The transition from school to university presents significant changes in students' lives. At university, higher levels of academic achievement, in addition to greater social integration, and more mature levels of emotional development, are required than at school. Elias, Mahyuddin, and Uli (2009) state that students who live on campus usually experience higher levels of stress that affect their happiness,

adaptation and adjustment. In line with this the concept of happiness, researchers across different disciplines including psychology, sociology, medicine, and economy which work on students' affairs are interested to explore the topic. Mounting scientific evidence shows that happiness promotes an individual's well-being and quality of life. Happiness is found to be beneficial to one's positive functioning across the various domains of life such as health, social relationships, work life, marriage (for review see Lyubomirsky, King, & Diener, 2005; Myers, & Diener, 2018), and education. Studies indicate that there is a wide range of factors that affect individuals' levels of well-being. Well-being has been defined as the combination of feeling good and functioning well; the experience of positive emotions such as happiness and contentment as well as the development of one's potential, helps in providing a sense of purpose, some control over one's life, and enhances positive relationships.

Happiness is one such variable that related to one's levels of subjective well-being (Joshnloo, 2017). In recent years, with the expending of positive psychology, variables like happiness, resiliency, and their effects on people's life are being studied more than before (Seligman & Csikszentmihalyi, 2000). Happiness is a multi-dimensional concept consisting of emotional, social, and cognitive (Valois et al., 2004). It is the experience of joy, contentment, or positive well-being, combined with a sense that one's life is good, meaningful, and worthwhile (Lyubomirsky, 2007). Happiness may vary between adolescents and adults (O'Higgins, Sixsmith & Gabhainn, 2010), therefore, it is essential to explore factors that affect adolescent' level of happiness (Chaplin, 2009; O'Higgins, Sixsmith & Gabhainn 2010). According to literature review, many psychological constructs such as stress, resilience and so on are related to adolescence happiness that should be studied by helping professionals. Thus, the present study attempts to explore main components which are related to happiness among pre-university students.

Literature Review

Mental Health and Happiness

Mental health is a relatively enduring emotional and behavioural state of good adjustment, subjective state of well-being, and it is not the mere absence of mental illness. There are many different conditions that are recognized as mental illnesses. The more common types include: anxiety, depression, anorexia nervosa, bulimia nervosa, drug abuse, obsessions, suicide, and so on. Mental health is highly correlated with subjective well-being. Well-being is the positive side of mental health and one of the most salient correlates of mental health is the concepts of subjective well-being and happiness (Diener, 2000), as well as hedonic and eudemonic approaches to positive psychological functioning (Ryan & Deci, 2001). Using the medical model, the definition of mental health in terms of a relative absence of pathology is common (Albee, 2000; Boorse, 1976; Maddux, 2005). Given the criticism of the medical model approach to mental health (e.g., Abdel-Khalek, 2011; Wang, Zhang, & Wang, 2011), some researchers, particularly in the positive psychology movement, argued that descriptions of mental health have to be augmented by descriptions of mental wellness (e.g., Ryff & Singer, 1998; Seligman, 2002; Snyder & Lopez, 2005). The dual-factor model of mental

health encompasses low score on pathology and high level of psychological well-being (Abdel-Khalek, 2011; Heubeck & Neill, 2000; Massé et al., 1998; Wang et al., 2011).

Positive Psychology, Well-being and Happiness

According to Seligman and Csikszentmihalyi (2000) there are three areas of positive psychology. Shimizu and Belic (2011) defined positive psychology as a new area emphasizing on happiness because being happy can help persons achieve their objectives and grow (lower, 2014). The first is positive subjective states (e.g., happiness, love, contentment), which are positive emotions. Secondly, positive individual traits (e.g., courage, wisdom, determination) which are positive patterns of behavior. Thirdly, positive institutions, which are studied at a society level and include healthy family and work environments. Thus, positive psychology studies the positive aspects of human behavior and flourishing on many different levels. Positive psychology seeks to study and understand what people do right and what leads to “the good life” (Compton & Hoffman, 2013). The good life simply refers to the most fulfilling life that is lived well. Seligman (2002) described good life as being able to use personal strengths daily in order to attain true happiness and significant gratification. The good life is attained through feeling connected to others, having positive personal traits, and life regulation abilities (Seligman, 2002). Lyubomirsky (2001), a leading psychologist in researching happiness, believed that happiness is a basic part of positive psychology. Although people experience many problems throughout their lives, a clear majority of individuals report to be happy and doing well (Diener, 2009a). In order for happiness to predominate, the amount of good and positive experiences need to outweigh the bad and negative (Cohen, Fredrickson, Brown, Mikels, & Conway, 2009). Raising and enhancing good experiences help human to control negative experiences (Sparks & Baumeister, 2008).

Subjective well-being (swb) refers to the individual’s evaluations of his or her life and relative amounts of positive and negative emotional experiences (Diener, 2000). This evaluation is based on a consideration of past events, and includes a cognitive assessment of life satisfaction and an affective assessment of happiness (Diener, 2006). There are many synonyms for swb including happiness, joy, satisfaction, enjoyment, fulfillment, pleasure, contentment, and other indicators of a life that is full and complete. Health is the strongest predictor of swb (Koenig, King, & Carson, 2012). Well-being has been linked to resiliency (Tugade & Fredrickson, 2004), the ability to cope with stressful life events (Smith, McCullough, & Poll, 2003), and improved physical health (Veenhoven, 2008).

Happiness

Diener’s (2000) model of subjective well-being has been one of the most widely accepted definitions of happiness. His model is comprised of three components including the cognitive appraisal of one’s life (i.e., life satisfaction) as well as positive and negative affect (i.e., emotions), which are viewed as two separate dimensions. The combination of these three components creates a holistic view of the overall perception of happiness (Pavot and Diener 1993).

Happiness has been defined as the appraisal, both affective and cognitive, of one's own life, consisting of general satisfaction with life, the presence of positive affects and the absence of negative ones (Diener et al., 1999). In her book, "The How of Happiness", Sonja Lyubomirsky (2007), a professor of psychology at the University of California, defines happiness as, "the experience of joy, contentment, or positive well-being, combined with a sense that one's life is good, meaningful, and worthwhile." Kehle et al., (2002) defines happiness as a synonym of psychological health and, accordingly, happy people have four characteristics: resources (feeling of independence or control over one's life), intimacy (friendship, empathy, and capacity to enjoy the company of other people), competence (capacities and awareness of these skills), and health (being aware of and practicing healthy behaviours). However, subjective well-being encompasses a broad range of components such as happiness, life satisfaction, hedonic balance, and affective and cognitive appraisal of one's own life (Kim-Prieto et al., 2005).

A newer conceptualization of happiness has been Seligman's (2002) definition, which consists of three components including: experiencing positive emotion (the pleasant life), being engaged in life activities (the engaged life), and finding a sense of purpose or meaning (the meaningful life). The most satisfied people pursue all three pathways to happiness, with engagement and meaning having a greater influence (Seligman et al. 2005). Similar to Diener's (2000) conceptualization of happiness, Seligman has identified positive emotion as being an important component in a person's perception of happiness. However, unlike Diener, Seligman has not addressed the role of negative affect in this mode.

Veenhoven (2006) categorizes three main theories of happiness including set-point theory, comparison theory, and affect theory, which provide different accounts for happiness. Set-point theory views happiness as a stable attitude toward life that is biologically encoded in humans. It suggests that no matter what we do, we end up staying within a certain, stable level of satisfaction (Lykken 1999). Comparison theory expresses happiness as a continuous judgment process involving the comparison of one's life as it relates to a perceived "ideal life". In this sense, happiness is mainly the product of one's mental evaluation rather than the circumstances in which one lives (McDowell and Newell 1996 pp. 204). Affect theory defines happiness as a sum of the experienced pleasures and pains (Kahneman and Tverski 2000).

Studying more about happiness, its concepts, and theories would be very beneficial to the society, especially to a university and its students as it will also serve as window of the quality of human resource a university produces. Some variables may influence university students' happiness, such as stress (Calderon, Pupanead, Prachakul, & Kim, 2021) and resilience (Robbins, kay, & Catling, 2018; Alreddadi, Faqiehi, & Almeahmadi, 2018). In Malaysia and Indonesia, the number of studies associated with happiness is escalating slowly as this subject is quite new in this region (Jaafar et al., 2009; Ma'rof & Asnarulkhadi, 2006; Noraini, 1999).

Perceived Stress and Happiness

According to Hans Selye (1936), stress is the non-specific response of the body to any demand for change. Stress can be stated as an organism's reply to conditions or occurrences (stressors) that impend the competence to adjust to those circumstances. Cox (1978) and McGrath (1970) defined stress as the imbalance between the perceived demands placed on an individual and his/her perceived capability to deal with the demands. Stress is defined as any change that we have to adapt. This includes difficult life events (bereavement, illness) and positive ones. Getting a new job or going on vacation are certainly perceived to be happy occurrence, but they too, are changes also known as stress, that require some adaptation. The two forms of stress are called distress and eustress (Gerrig & Zimbardo, 2010).

Based on the theory of stress and coping developed by Lazarus and Folkman (1984), stress is not simply events that trigger negative emotional responses but it is a two-way process where individuals interact with their environment. In other words, stress can negatively impact individuals' well-being or functioning only when individuals perceive the situation as stressful and their resources are inadequate to handle environmental stimuli (e.g., exam, illness, break-up with a romantic partner, loss of loved one, financial strains; Roddenberry 2007).

Lazarus and Folkman (1984) further proposed the concepts of cognitive appraisal (i.e., primary appraisal and secondary appraisal) in order to explain individual differences in coping with stressful life events and its' relation to well-being and functioning of individuals. Primary appraisal is the process in which individuals evaluate situations as threatening, neutral-positive, or not-relevant whereas secondary appraisal is explained as the process in which individuals assess their coping resources in response to the primary in appraisal evaluation (Folkman and Lazarus, 1985). Depending on how individuals perceive the threat level of the environmental stimuli (i.e., primary appraisal), individuals will determine whether their coping resources are adequate or inadequate (i.e., secondary appraisal), and this secondary appraisal will consequently affect their well-being.

The relationship between stress and happiness has been examined both in terms of the negative effects of stress on well-being as well as the role of positive emotions in buffering against stress. Some research has demonstrated the negative effects of stress on well-being (Chatters 1988; Suh et al. 1996; Zika & Chamberlain, 1987) and other research has not (Feist et al. 1995). Compton (2005), King (2001) and Lyubomirsky et al. (2006) suggested that perceived stress was a significant predictor for a low level of happiness. Perceived stress is not merely assessing stressful life events but assessing the degree to which happiness are considered stressful, which is the primary appraisal (Lazarus and Folkman, 1984).

Chiang (1995) proposed that school is one of the main sources of stress among adolescents. Stress comes from too much homework, unsatisfactory academic performance, preparation for tests, lack of interest in a particular subject, and teacher's punishment. Generally, parents are very concerned about their children's academic achievement and moral behaviors. Parents expect their

children not only to respect teachers and follow moral norms but also become elite in the future (Liu & Chen, 1994). Morgan (1997) and Walton (2002) found that exam anxiety is the most commonly perceived stress experienced by undergraduate students and such high level of perceived stress frequently led to suicide which are inversely related to happiness.

Zivin, Eisenberg, Gollust and Golberstein (2009) observed that students studying in institutions of higher education tend to experience serious mental health problems at a greater rate than their peers who are not students (Hamdan-Mansour, Halabi, & Dawani, 2009) and twice as much stress as the general adult population (Bidwal, Ip, Shah, & Serino, 2015). Students experienced stress during their university year report high levels of stress related to academic performance and changes in personal life (Stallman, 2008), predisposing them to depression, anxiety and stress.

Schiffirin and Nelson (2010) identified linear correlations between happiness and perceived stress with an inverse relationship between these variables among college students. Higher level of self-efficacy helped to reduce the perceived stress and enhance the happiness level among students, with self-efficacy and perceived stress showing an inverse relationship (Shilpa & Prasad, 2017).

A research in Malaysia by Shamsuddin et al (2013) showed that among all students, 27.5% had moderate, and 9.7% had severe or extremely severe depression; 34% had moderate, and 29% had severe or extremely severe anxiety; and 18.6% had moderate and 5.1% had severe or extremely severe stress scores based on the DASS-21 inventory. Both depression and anxiety scores were significantly higher among older students (20 and above) and those born in rural areas. Whereas, higher stress scores were significantly higher among older female students (20 and above), Malays and those whose family had either low or high incomes compared to those with middle incomes. The prevalence of anxiety is much higher than either depression or stress, with some differences in their correlates except for age. Jia and Loo (2018) found that the prevalence rate of perceived stress among the undergraduate students was 37.7%. Multivariate logistic regression model identified that female students and the first-year students perceived more stress than the others.

King, Vidourek, Merianos, and Singh (2014) observed that students who reported low perceived happiness reported higher stress levels and lower emotional closeness to others. Those who experienced low perceived stress expressed higher emotional closeness to others. Silva and Figueiredo-Braga (2018) carried a survey on stress, anxiety, depression, subjective happiness, and academic satisfaction among pharmacy students. They found that students' psychological distress, academic satisfaction, and happiness varied through the school years. First and second year students presented higher levels of academic satisfaction and lower levels of stress, anxiety, and depression than third- and fourth- year students. Happiness and perceived stress could be buffered by emotion-based relationship to parents/ legal guardians, and friends.

Some research showed there are relationships between stress and psychological distress like depression, anxiety, and suicide. High rates of depression, anxiety

and stress among students all over the world in higher education have been revealed in many previous studies (Adewuya, Ola, Olutayo, Mapayi, & Oginni, 2006; Nerdrum, Rustøen, & Rønnestad, 2006; Ovuga, Boardman, & Wasserman, 2006; Wong, Cheung, Chan, Ma, & Tang, 2006). Psychological problems among undergraduate students represent a neglected problem and holds major implications for campus health services and mental health policy-making (Stewart-Brown et al., 2000; Poch, Villar, Caparros, Juan, Cornella, & Perez, 2004). Undergraduate students need to cope with the academic and social demands that they encounter in their preparation for professional careers. Therefore, the period of undergraduate education is regarded by many as important for the development of systems and intervention methods that may prevent or reduce mental health problems. Therefore, universities students frequently experience stress due to the challenging experiences of young adults, and this situation becomes a factor which hampers with their psychological adjustment and happiness.

Resilience and Happiness

For decades, one of the basic concepts that have been considered by psychologists is resilience. The fields of neuroscience, mental health, medicine, psychology, and sociology have been collectively focused on the short-term and long-term consequences of resilience. Resilience has been broadly defined as “the capacity to maintain, or regain, psychological well-being in the face of challenge (Ryff, et al., 2012). This concept was first used in the field of physics to define the properties of elastic objects that were able to recover their original shape after being bent or stretched (Dyer & McGuinness, 1996).

Resilience is a complex construct that can be conceptualized as an attribute (a trait) that is possessed to varying degrees by different individuals. It is a dynamic process (a state) (Hu, 2015; Kalisch, 2015) with bidirectional relations to developmental and environmental factors, and as an outcome in the face of stress and adversity (Smith, et al., 2012). Depending on the theoretical perspective, population, and risk factor in question, resilient outcomes may be operationalized as either the presence of a positive outcome (e.g., life satisfaction) or the absence of a negative one (e.g., lack of psychopathology) (Vanderbilt-Adriance et al., 2008). The resilience concept is divided into three kinds, individual, family, and society. Resilience has been described as an enduring and relatively stable personality characteristic that enables individuals to face, overcome or adjust according to extreme difficulties and adversities (Connor & Davidson, 2003). As the construct aids individuals to adapt to stressful life events, psychological resilience encourages healthy behavior and leads to better adjustment and increased levels of well-being (Baek, Lee, Joo, Lee, & Choi, 2010). Resilient individuals have a habitual tendency to effectively cope with adversities in a way that provides them with a buffer against negative outcomes (Fredrickson, Tugade, Waugh, & Larkin, 2003).

Resilience is viewed as the outcome of an interaction between the individual and his or her environment (Cicchetti 2012; Rutten, 2013), which may be influenced through personal (e.g. optimism) as well as environmental (e.g. social support from family and friends) resources (Iacoviello 2014; Kalisch 2015; Southwick

2005). As such, resilience is modifiable and can be improved by interventions (Connor 2006; Färber & Rosendahl, 2018; Helmreich, et al., 2017; Southwick, 2011).

Numerous studies have investigated the relationship between resilience and well-being. Meta-analytic studies suggest that there is a strong relationship between trait resilience and well-being. Trait resilience has previously been negatively related with negative indices of well-being and positively related with positive indices of well-being (Hu, Zhang, & Wang, 2015). Resilience was also found to directly predict different aspects of well-being, including life satisfaction (Cohn, Fredrickson, Brown, Mikels, & Conway, 2009), depression (Loh, Schutte, & Thorsteinsson, 2014), and psychological well-being (Souri, & Hasanirad, 2011). In addition to studies that have demonstrated the direct relationships between resilience and well-being, the indirect effect of resilience on well-being has also been examined. For example, resilience was found to mediate the relationships between traumatic exposure and depression (Kim, Park & Kim, 2017), anxiety and subjective support (Hu, Xiao, Peng, Kuang, & He, 2018), loneliness and mental and physical quality of life (Gerino, Rollè, Sechi, & Brustia, 2017), bullying victimization and depressive symptoms (Zhou, Liu, Niu, Sun, & Fan, 2017), and age and gender with regards to emotional distress among patients with colorectal cancer (Cohen, Baziliansky, & Beny, 2014). Although the study provided important evidence as to the links between the various concepts, it did not provide evidence regarding the links between externality of happiness and resilience to subjective, social, and psychological well-being.

Yildirim and Belen (2019) showed that externality of happiness was negatively correlated with positive affect, satisfaction with life, flourishing, and resilience, whilst being positively correlated with negative affect. Structural equation modeling was used to carry out a mediation analysis. The results indicated that resilience mediated the relationships between the externality of happiness and subjective well-being and flourishing.

A resilient student embodies a set of identified characteristics that include self-managed, able to control emotions, has support network, and has satisfying social relationship. Resilience has played a major as a mediating variable in studies related to happiness, life satisfaction, and stress. Aboalshamat et al., (2018) revealed a significant correlation between resilience and life satisfaction and between resilience and happiness. Resilience was higher in females and students with high family income than it was in lower income groups. Students scored high in resilience reported happier and more satisfied with their life. Lu, Wang, Liu, and Zhang (2014) revealed that resilience partially mediated the association between extraversion and happiness, and the association between neuroticism and happiness. Students higher in resilience enjoyed more satisfying social relationship, thus experienced more happiness. Barnes and Lightsey (2005) found those in the general population who had higher levels of resilience have lower levels of stress and higher levels of life satisfaction. Active problem solving, or the ability to search for solutions to problems, was related to increases in life satisfaction, whereas techniques that involved avoidance led to decreased life satisfaction. Nemati and Maralani (2016) demonstrated that the exogenous variable of life satisfaction has a significant direct effect on happiness. In

addition, according to the study results, the relationship between life satisfaction and happiness is mediated by resiliency. Also, the study results showed that life satisfaction affects happiness directly and via the mediation of resiliency.

Serene, et al., (2021) found that social support and resilience were positively associated with happiness. Besides that, resilience was evidenced as a partial mediator on the association between social support and happiness. The study concluded that individuals with a higher level of social support showed a higher level of resilience which eventually led to a higher level of happiness. In facing adversity, Malaysian adults with poor social support should improve their resiliency to boost their happiness.

Taking into consideration that transition to university life can pose as a major disruptive stage where young adults have to face numerous stressful situations, it is important to understand the role that resilience has in order to successfully manage stressful circumstances and having happiness feeling. Besides, due to the lack of studies relating resilience and happiness at the pre-university, the goal of this study is to explore the relationship between perceived stress and resilience with happiness in the pre- university students' sample in a public university in Malaysia. Overall, the present study tries to answer how relationships are between perceived stress and resilience with happiness among pre-university students in a public university in Malaysia.

Problem Statement

The WHO (2013) considers mental health as a fundamental aspect of human health and published an action plan for 2013–2020 to promote the prevention, treatment, and overcoming of mental health disorders in all age groups like adolescent. One of the crucial stages in adolescents' life is entering university. Adolescents are particularly vulnerable to the problems associated with academic stress as the transition occurs at an individual and social levels. During the university years, some adaptation failures or psychological troubles are quite common owing to the emotional and communal characteristics of this period. Most of the young people are negatively influenced by the problems such as acquiring new friends, being away from the family, getting accustomed to the dormitory life and, economic difficulties (Özkürkçügil, 1999; Tümkaya, Aybek, & Çelik, 2008). The Malaysian Ministry of Health has aired its concern towards the state of Malaysian students' mental health in the late 2016 (Othman, & Rashid, 2018). Othman, Rashid, and Ibrahim (2017) revealed a worsening state of mental health problems among Malaysian students, which shows that there is an increase cases of mental health from 2011 to 2016 (Rashid, Othman, and Ibrahim, 2017).

According to the National Health and Morbidity Survey (2015), statistics show that 29.2 % of population aged 16 and above are expected to have some sort of mental health issues (Bakar, et al, 2015). The number has increased significantly from 10.7 % in 1996 and 11.2% in 2006. It is expected that mental illness will be the second biggest health issues in Malaysia by 2020 after heart diseases. Also, Research findings on the mental health of engineering students showed that about 1% of them experienced depression, about 18% have anxiety, and 1.5%

developed stress (Lee & Ahmad, 2016). Previous studies have reported high levels of stress and a negative relationship between stress and quality of life among university students. High levels of stress, anxiety, and emotional distress also contribute to students' depression, loneliness, and difficulties with social relationships (Gupchup, Borrego, & Konduri, 2004). However, most students are not keen in seeking help, fearing stigmatization, misunderstanding, or lacking validation by their teachers and tutors (Russell, & Topham, 2012). In the long run, these concerns affect students' happiness level and cause them to feel depressed, lonely, hopeless, and want to commit suicide. Only those with greater resilience are better able to manage stress. Resilient people have strong resources and skills to manage stress and conflict as well as possess good support network to help them deal with the pressures associated with academic stress.

Research with adolescents and university students has underlined that happiness is positively related to friendship (Demir & Davidson, 2013), altruism, social skills (Demir et al., 2012), cooperation (Rigby et al., 1997), academic success, and self-esteem (Salmela-Aro & Tuominen-Soini, 2010; Sato & Yuki, 2014). Recent studies (Cheung et al., 2014) also suggest that people with higher self-control are happier possibly because they are: (1) more promotion-focused on acquiring positive gains thereby facilitating more approach-oriented behaviors, and (2) less prevention-focused on avoiding losses thereby reducing avoidance-oriented behaviors.

Happiness studies have primarily been conducted in industrialized countries (Addai et al., 2013). While these studies are crucial for improving our knowledge and theoretical understanding of the subject, data on happiness in middle-income countries such as Malaysia is scarce. In the research, children and adults are the subjects of more happiness research, with adolescents receiving less attention (van de Wetering et al., 2010). In this line, the present research focuses on adolescent happiness in Malaysia in an attempt to bridge this gap. The present study aims to identify the factors related to pre-university students' happiness at one of public universities in Malaysia. Understanding the sources would facilitate the development of effective counseling intervention strategies to help students manage their stress, and increase their resilience and happiness.

The Research Main Hypotheses

Based on the research literature review of the study, the following hypotheses and model (Figure 1) are presented:

Hypothesis 1: There is a relationship between perceived stress and happiness among pre-university students.

Hypothesis 2: There is a relationship between resilience and happiness among pre-university students.

Hypothesis 3: There are multiple relationship between perceived stress and resilience with happiness among pre-university students

Research Objectives

The present study explored the following two main and one side objectives: (i) to identify the relationships between perceived stress and resilience with happiness among pre-university students, and (ii) to identify the multiple relationships between perceived stress, and resilience with happiness among pre-university students; (iii) to identify the differences in perceived stress, resilience, and happiness between male and female pre-university students.

Methodology

Research Design, Population, Sample, and Procedure

This study is a kind of cross-sectional study using a correlational design. Participants were identified through simple random sampling. Simple size is 310 pre-university students (158 females and 152 males) from a public university in Malaysia. All 310 pre-university students enrolled in the various academic classes as clusters (from selected departments) were eligible to participate during the 2018-2019 academic year. The sample comprised of 152 (49.04%) male, and 158 (50.96%) female pre-university students, with the age range of 18–22 years ($M = 19.3$; $SD = 4.29$). All participants completed anonymous, self-administered questionnaires, which included questions about their socio demographic and research predictor variables and criterion variable.

Research Instruments

The study utilized three instruments, namely the Perceived Stress Scale (PSS), the Connor- Davidson Resilience Scale (CD-RISC), and The Subjective Happiness Scale (TSHS). Perceived Stress Scale (PSS) is a classic stress self-report assessment developed by Cohen et al. (1983). A shorter version of PSS is PSS-10 developed by Cohen and Williamson (1988) consists of 10 items that use a 5-point Likert scale, ranging from 1 (never), to 5 (very often). The PSS-10 has six positive items (No. 1, 2, 3, 6, 9, and 10), and four negative items (No. 4, 5, 7, and 8). Negative items were re-coded during the analysis. The sum of the 10 items represents the total score, with higher scores representing higher levels of perceived stress. For the current study, the alpha Cronbach value for PSS was $\alpha = .79$.

The Connor-Davidson Resilience Scale (CD-RISC) was developed by Connor and Davidson (2003), and acts as a self-report measure of resilience within the Post Traumatic Stress Disorder (PTSD) clinical community. The original instrument has 25 items and 5 sub-scales, with a 5-point Likert scale for assessing personal qualities that enable one to thrive in the face of adversity, ranging from 1 (not true at all), to 5 (true nearly all the time). For the current study used The Resilience Scale which has 10 items and uses Likert 5-point scale from Not True At All (0) to True Nearly All The Time (4). For the current study, the alpha Cronbach value for CD- RISC was $\alpha = .82$.

The Subjective Happiness Scale (SHS) was developed Lyubomirsky & Lepper (1999). The SHS is a 4-item scale of global subjective happiness. The scale uses

Likert 7-point scale from Not At All (1) to A Great Agree (7). To score the scale, reverse code the 4th item (i.e., turn a 7 into a 1, a 6 into a 2, a 5 into a 3, a 3 into a 5, a 2 into a 6, and a 1 into a 7), and compute the mean of the 4 items. Permission is granted for all non-commercial use. The Subjective Happiness' Scale alpha Cronbach value was $\alpha = .65$.

Data Analysis

Data was analyzed using descriptive and inferential statistics. The descriptive statistics involved frequency, percentages, mean and standard deviation. As for the inferential analysis, the study used t-test of independent samples, Pearson correlation and regression. Data was analyzed using SPSS Version 24, before assessing the hypothesized model. The study used a significance level of .05.

The Main Results

Preliminary results

Hypothesis 1: There is a relationship between the perceived stress and happiness among the pre-university students.

Hypothesis 2: There is a relationship between resilience and happiness among the pre- university students.

Table 1 shows the mean, standard deviation, and bivariate correlation for all of the research variables. To determine the relationship between the predictor variables and the criterion variables, as well as the factors that influenced the SHS, Pearson correlations and multiple linear regressions tests were used. There is a significant negative correlation between perceived stress and resilience. There is a significant negative correlation between perceived stress and happiness. There is a significant positive correlation between resilience and happiness. Therefore, H1 and H2 were well supported.

Table 1: Study variables' means, standard deviations, and correlations ($N = 310$)

Variable	Mean	SD	1	2	3
1. PS	30.02	5.90	-	- 0.34*	- 0.35*
2. RE	28.97	5.43	- 0.34*	-	0.44*
3. SHS	19.54	3.85	- 0.35*	0.44*	-

Note. Perceived Stress=PS ; Résilience= RE ; Subjective Happiness Scale= SHS ; $P < .05$.

Final Results

Hypothesis 3: There are multiple relationship between perceived stress and resilience with happiness among pre-university students

In addition, the hypothesis was also tested using an independent-samples t-test, to compare male and female students independent, or criterion variables (happiness= SHS), and the associated predictors (family communication, perceived stress, and resilience). The variables of the perceived stress, as well as

resilience, cumulatively a significant and high-level relationship, with the happiness (SHS) score for the university students being $R=.498$, $R^2=.248$, $p<.05$. All predictor variables accounted for 24.8% of the variance in the Happiness for our study.

Table 2: Summary of simple regression analyses for variables predicting happiness (N=310)

Model	R	R Square	Adjusted Square	RStd. Error of the Estimate
1	.356a	.127	.124	3.60737
2	.498b	.248	.243	3.35249

Predictors: perceived stress and resilience Dependent: Happiness (SHS)

Table 3. Perceived stress and resilience, as predictors of Subjective Happiness

No.	Model	B	S. E	β	<i>t</i>	<i>p</i>
	(Constant)	16.47	1.73	-	9.49	P <0.001
1	PS	-0.15	0.03	- 0.23	- 4.38	P<0.001
2	RE	0.26	0.03	0.37	7.04	P<0.001

Note. Note.; the Perceived stress=PS; Resilience= RE ; Subjective Happiness Scale= SHS ; F ratio = 50.65, $p < 0.001$

As shown in the Tables 2 and 3, perceived stress and resilience as predictive variables could explain 24.8% of variance in happiness \square MR= 0.498, $F(2, 308) = 50.65$, $p \square .05$]. Resilience ($\beta = 0.37$) played an important role in explaining happiness much more than perceived stress \square $\beta = - 0.23$]. The happiness (SHS) regression formula was as follows: $\hat{y} = 16.47 - 0.23$ (perceived stress) + 0.37 (resilience).

As presented in Table 2 and 3, a multiple regression analysis was performed to determine the contribution of each independent variable (the perceived stress and resilience) in predicting the dependent variable (psychological well-being). The model is statistically significant ($p = 0.000$) as the value of ANOVA was found to be 287.258 which is greater than the table value. Furthermore, the table indicates that the value of R square is 0.248 ($p<.05$) which shows that 24.8% of the variance in happiness is significantly represented by the independent variables in the model.

The results of regression analysis revealed Resilience ($\beta = 0.37$) played an important role in explaining happiness much more than perceived stress \square $\beta = - 0.23$]. Hence, the null hypothesis that perceived stress and resilience have no significant contribution to predicting happiness among the pre-university students was rejected. It plainly indicates that perceived stress has a reverse relationship with happiness and it can harm the happiness and psychological well-being of the student. It was also shown that resilience has a direct positive relationship with happiness and it can promote the level of happiness and psychological well- being, finally leading to their self-actualization.

The Side Results

Table 4. Results of independent t-test for the differences in all research variables between female and male (N=310)

Variable	Group	Mean	SD	t	Sig
P S	Male	30.09	6.99	.23	.82
	Female	29.94	4.63		
RS	Male	28.91	5.22	-.19	.84
	Female	29.03	5.68		
SH	Male	20.01	3.70	2.182	.030
	Female	19.07	3.94		

The side hypotheses were tested using independent-samples t-test to compare male and female students in dependent or criterion variable (happiness) and predictors (the Perceived Stress and Resilience). According to Table 4, there is only a significant difference in mean scores of happiness among female students and male students. It means, there are no differences between the male and female in terms of variables of perceived stress and resilience in this research; but there is a difference between male and female in terms of happiness. The mean score of this variable is more in the female group compared to the male group.

Discussion

There are two main models, named pathogenesis and salutogenesis (Antonovsky, 1979), in psychology in order to study psychological phenomena. Salutogenesis is the origins of health and focuses on factors that support human health and well-being, rather than on factors that cause disease (pathogenesis). More specifically, the "salutogenic model" was showed the relationship between health, stress, and coping through that related to resilience and happiness. Stress is universal, according to Antonovsky (1979), although not everyone suffers severe health consequences as a result of it. Instead, some people manage to stay healthy while being exposed to potentially harmful stressors. Resilience is another notion in the salutogenesis paradigm. Resilience has been broadly defined as "the capacity to maintain, or regain, psychological well-being in the face of challenge (Ryff, et al., 2012). Resilience is a multi-dimensional, dynamic ability that is impacted by the combination of internal and external variables. Resilience can be defined as a person's personality, physical health, social position, and financial stability. It can be difficult for people with disabilities to cope with life's challenges (Windle, 2011). In general, resilience is seen as the result of a relationship between an individual and his or her environment, which may be impacted by both personal (cognitive, emotional, behavioral, physical, spiritual), and environmental (e.g. social support from family and friends) resources. As a result, resilience is changeable and improvable through treatments. Stress and resilience are two major factors influencing students' happiness and mental health. In psychology, happiness is frequently used as a word for subjective well-being (Lyubomirsky et al. 2005a; Sagiv et al. 2004; Sheldon and Lyubomirsky 2004). According to research, happiness has a wide variety of psychological consequences on students' individual and social performance (Badri, M., Al Nuaimi, A., Guang, Y., et al., 2018; Heizomi, et al., 2015; Demirbatir, 2015).

The majority of a student's day is spent at educational institutions such as schools and universities. A link between student happiness and academic success and adjustment as behavioral indicators has been identified in several research (Tabbodi, et al., 2015; Otaghi, et al., 2020). As a result, examining university students' happiness is an important topic. The study's goal was to investigate the link between perceived stress and resilience with happiness among pre-university students. This study was a quantitative, descriptive, and correlative research design.

The present study revealed that there is a negative correlation between perceived stress and happiness, therefore, the first hypothesis was confirmed. The finding is supported by previous studies (Schiffrin & Nelson, 2010; Shilpa & Prasad, 2017; Figueiredo-Braga, 2018; King, Vidourek, Merianos, Singh, 2014). In order to probable explanation of the result, we should consider the kinds of stress. Stress is simply the body's response to changes that create taxing demands. for categorizing stress, there are different views. According to American Psychological Association (APA), there are three different types stress — acute stress, episodic acute stress, and chronic stress. The three types of stress each have their own characteristics, symptoms, duration, and treatment approaches. Stress management can be complicated because each of the 3 different types of stress can present as single, repeated, complicated, or chronic. Therefore, they require different levels of treatment interventions, management, and psychological treatment modalities due to the nature of the person's environment, lifestyle, developmental history, coping resources, and personality. The study result is related to negative stress. stress can have an impact on student' dimensions including physical, psychological, spiritual, social, intellectual, academic performance.

In addition to, the previously mentioned Lazarus (building on Dr. Selye's work) suggested that there is a difference between eustress, which is a term for positive stress, and distress, which refers to negative stress. Stress can be positive ("eustress") -- such as getting an education promotion or being given greater responsibilities -- keeping us alert and ready to avoid danger. Stress becomes negative ("distress") when a student faces continuous challenges without relief or relaxation between challenges. However, negative stress doesn't make positive emotions and attitudes, such as compassion and gratitude, can buffer the ill effects of stress and enhance satisfaction and genuine happiness. As a result, the student person becomes overworked and stress-related tension builds up. Distress can lead to physical symptoms including headaches, upset stomach, elevated blood pressure, chest pain, and problems sleeping. Research suggests that stress also can bring on or worsen certain symptoms or diseases that are related to student's happiness.

Stress has been examined both in terms of the negative effects of stress on happiness as well as the role of positive emotions in buffering against stress. Some research has demonstrated the negative effects of stress on happiness as the main component in well-being (Chatters 1988; Schiffrin & Nelson, 2010; Suh et al. 1996; Zika and Chamberlain 1987). The educational system also plays an enabling role subsequently leading to increased stress levels experienced by students. Some of the sources include overcrowded lecture halls, semester

grading system, inadequate resources and facilities (Awing & Agolla, 2008), the vastness of syllabus (Agrawal & Chahar, 2007; Sreeramareddy et al., 2007), long hours, and expectations of rote learning (Deb et al., 2015). Parents and institutions relentlessly instill the fear of failure which affects their self-esteem and confidence.

Overall, Stress can play a part in problems such as headaches, high blood pressure, heart problems, diabetes, skin conditions, asthma, arthritis, depression, and anxiety, which are seen in higher perceived stress students. Ang and Huan (2006) reported increased expectations as one of the factors responsible for increased stress levels. Thus, as the sources of stress vary despite identical stress responses elicited by the body, understanding the former will help develop tailor-made interventions targeted to reduce stress levels of students, which will, in turn, contribute towards the holistic well-being of the individual.

As expected, the second hypothesis was confirmed. The present study analysis showed that there is a positive relationship between resilience and happiness. The present finding is confirmed by some studies which resilience was found to be related directly and indirectly to happiness (e.g., Tecson, et al., 2019; Aboalshamat, et al., 2018). Resilience is a psychological process developed in response to intense life stressors, which facilitates healthy functioning (Khairina et al., 2020). There have been many investigations conducted in the field of positive psychology on the topics of resilience and happiness. Several studies have shown that resilience and happiness have a positive correlation to each other (Aboalshamat et al., 2018; Brailovskaia et al., 2019; Gomez et al., 2013). Several studies have shown that resilience acts as a mediator for several factors such that relate to happiness, positive affect, good mental health, life satisfaction and positive subjective well-being of individuals (Lü et al., 2014; Shi et al., 2015; Yildirim & Belem, 2019). According to Barnes and Lightsey (2005), higher levels of resilience were linked to lower stress levels, that leading to greater levels of happiness. Nemati and Maralani (2016) found the effect of life satisfaction on happiness with the mediation of resilience was investigated. Structural equation modeling analysis confirmed the hypothesis of the research concerning the relationship between life satisfaction and happiness with the mediation of resilience. Many studies has high pointed the role of resilience as a protective factor. According to Rutter (1990), a resource, internal and external, acts as a protective factor if it moderates risk. Campbell- Sills and colleagues (2007) found that individuals who are highly resilient engage more often in adaptive coping skills and convert stressful situations into opportunities for learning and development. Besides, in a sample of college students, it was found that students high on resilience face stressful situation using problem-solving coping strategies (Kariv & Heiman, 2005) what lead to better academically compared to students who used emotion-focused coping strategies (Struthers et al., 2000). In a study, Rahat and Ilhan (2016) found that college students with high levels of resilience displayed better adjustment to university. Therefore, a student's levels of resilience are related to effective adaptive resources to academic stress. Hence, resilience, construct framed in the positive psychology field, can be understood as a protective factor since it prevents students from maladaptive strategies reducing, in turn, academic stress levels. Literature has highlighted the benefits that resilience have on physical and psychosocial well-being, i. e. reducing

depressive symptoms and stress impact, enhancing self-esteem, forming and maintaining relationships, and favoring adjustment to university life (Ferguson & Goodwin, 2010; Hatachett & Park, 2004; Krypel & Henderson-King, 2010; Puskar et al., 2010) which show student has high level of happiness. It can be concluded that when the level of resilience in individuals is high, the level of happiness of individuals will be high as well. In addition, resilience was found to be one of the most influencing factors which could either determine or predict the level of happiness of individuals (Cummins & Wooden, 2013; Smith & Hollinger-Smith, 2014).

Concerning to the third research hypothesis, the results of regression analysis revealed resilience ($\beta = 0.37$) played an important role in explaining happiness much more than perceived stress ($\beta = -0.23$). The present finds are supported by some studies (Tecson, et al., 2019; Aboalshamat, et al., 2018). The universities educational system plays an enabling role subsequently leading to increased stress levels experienced by students. Some of the sources include overcrowded lecture halls, semester grading system, inadequate resources and facilities (Awing & Agolla, 2008), vastness of syllabus (Agrawal & Chahar, 2007; Sreeramareddy et al., 2007), long hours and expectations of rote learning (Deb et al., 2015). Parents and institutions relentlessly instill the fear of failure which affects their self-esteem and confidence that lead to increase stress in students in universities. All of this causes negative emotions in students, which leads to a decrease in their level of happiness. As a result, they will not be able to adapt individually and socially. Therefore, resilience is an important factor in assisting students in adjusting to themselves as well as the university. There are other types of resilience including individual, group, family, community, cultural, and organizational. Individual (also called personal) resilience is a person's ability to cope with stress and adversity, and continue to function effectively despite failures, setbacks, and losses. This requires developing effective coping skills. Resilient students are able to persist and continue to function at a high level in times of adversity, generally believe in their ability to succeed and have the ability to remain optimistic, that affect their happiness. They also have a healthy self-esteem and less of a fear of failing. Many factors influence individual resilience, including cultural background and ethnicity, personality, socioeconomic status, family history, physical and mental health, and history of past traumatic events and social experiences. A person's social support networks (family, friends, community, colleagues, and co-workers) also play an important role in fostering resilience by providing a sense of security and a sense of being connected to people and resources. The explanation of the result that protective factors of resilience have reported to be important contributors of individual's happiness. For example, personal, social, and family factors have been reported to positively influencing happiness (Baumeister et al. 2003; Chaplin 2009; Cheng & Furnham 2002; Csikszentmihalyi & Hunter 2003; Demir, Ozdemir & Weitecamp 2007; Demir & Weitecamp 2007; Diener & Seligman 2002; Holder & Coleman 2008; van de Wetering et al. 2010).

Overall, based on the present study findings, there exist relationships between perceived stress and resilience with happiness. Increased level of resiliency and decreased level of stress are associated with happiness. The results of regression analysis revealed resilience ($\beta = 0.37$) played an important role in explaining

happiness much more than perceived stress ($\beta = -0.23$). The findings show that female scored higher in happiness compared to male subjects even though their stress and resilience scores are about the same. Meaning that, given similar stressful situation, female is happier than male. Aboalshamat et al. (2018) also find that females scored higher in resilience and experienced more happiness. As the situation in Malaysia where female constitutes more than 60% of university population, happiness can relate to having more social connection to other females. Social connection reduces stress as it provides emotional and physical support to adjust to the new situation, share experience, and eliminate feeling of loneliness (Lu et al., 2001). Stress is unavoidable in any situation, but being resilient may buffer the effect of stress to experience happiness. The finding supports Schiffrin and Nelson's (2010) claim of the existing of relationship between perceived stress and happiness among college students. Both perceived stress and resilience are able to explain happiness with resilience having more influence compared to perceived stress.

Conclusion

Pre-university life is an avenue to better future in term of career and social life. Some students graduated as planned and some failed miserably. To achieve success, students have to struggle challenging experiences particularly in meeting their personal needs, academic requirements, and professional development. This study has identified that stress can decrease a student's happiness. But resilience can buffer the effect of stress on happiness. University should be looked upon not only as a place to acquire and enhance one's higher level of cognitive skills, but also as a setting where students feel safe to explore and grow as a mature individual, equipped with the ability to think rationally, make a wise judgment, and more importantly, manage one's emotions, actions, and thoughts. Students need to enhance their ability to manage stress by acquiring constructive self-management skills. By doing that, they can increase their self-empowerment and self-confidence that lead to feeling of happiness. If students can be creatively guided to increase their resilience level, they then are able to manage internal and external stress constructively. The key to happiness as college students lies in their ability to recover quickly from difficult situations. Therefore, to buffer emotional and mental stress from causing psychological breakdown, low resilient students need proper intervention to utilize their internal strength to overcome adversity. The results of this study appear to imply the need of counseling services for students studying in higher education settings. The study suggests that the university counseling unit assists the students by organizing intervention programs consisting of life skill workshops, stress management support groups, and other psycho-educational programs throughout the semester for students to participate. Appropriate intervention programs may enhance the student's life skills and academic performance. Counselors and educational professionals can use this data to help build interventions and support services, which will improve the quality of life for university students. From the practical aspect, the findings may help university counselors to view adolescent's happiness comprehensively, and help to develop preventive plans for its newly enrolled students, especially those with high level of perceived stress, low levels of resilience and low level of happiness. Also, the results will provide students with some knowledge on their happiness, and its effects. It will help the students to realize that a decrease in

happiness may adversely affect their academic performance abilities, and their future achievements. The university counseling unit should organize workshops and provide support groups for students to learn self-management skills and learn to support each other.

Limitation and Recommendation

There are some limitations to this study. Because the study used a correlational design, it's crucial to be cautious when stating correlations between variables. It's likely that the factors that influence an academic's research performance emerge with some latency. The findings were restricted in their generalizability because the subjects were pre-university students in a public university in Malaysia. The research is limited to students studying at a public university in Malaysia. Therefore, the results of the study cannot be generalized to others public universities' students. The sample may not be typical of public universities' students. The findings were limited in their generalizability. More study work across all universities and colleges in Malaysia is needed in order to generate a much larger generalization. Although the instruments used to measure the research's variables showed high reliability, appropriate measures for those constructs have been developed and validated for using with adolescents in Malaysia. Finally, the researchers used a variety of structures to gather information. As a result, the findings may fall short of capturing all of the elements that impact the participant's happiness. The writers recommend that future research be conducted on other potential variables which may serve as independent variables such as personality traits, attachment styles, emotional intelligence, parents' relationships, sibling 'relationships, and so on.

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Data Availability Statement

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Ethical Considerations

The participants provided their written informed consent to participate in this study.

Author Contributions

All authors contributed to the article and approved the submitted version.

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Conflict of Interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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