# FACTORS PREDICTING PSYCHOLOGICAL WELL-BEING AMONG UNIVERSITY STUDENTS IN MALDIVES: THE MEDIATING ROLE OF STRESS AND GRIT

#### FATHIMATH MAASHA

DISSERTATION SUBMITTED IN THE FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE IN PSYCHOLOGY

SCHOOL OF MEDICAL AND LIFE SCIENCES SUNWAY UNIVERSITY MALAYSIA

#### ORIGINAL LITERARY WORK DECLARATION

Name of Candidate: Fathimath Maasha

IC /Passport No: NC35G6705

Student ID: 20060737

Name of Degree: Master of Science in Psychology

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## FACTORS PREDICTING PSYCHOLOGICAL WELL-BEING AMONG UNIVERSITY STUDENTS IN MALDIVES: THE MEDIATING ROLE OF STRESS AND GRIT

#### **Abstract**

There is less knowledge and awareness about the significance of psychological well-being as well as the possible variables that predict psychological well-being among Maldivian university students due to the current societal stigma associated with the concept of mental health and psychological well-being in Maldives. Therefore, the current study investigated the mediating roles of stress and grit on the relationships between social support and psychological well-being and between emotional intelligence and psychological well-being, as well as the predicting role of social support and emotional intelligence on psychological well-being. A cross-sectional study was conducted among 206 undergraduate students aged between 18 to 25 years (M = 22.08, SD = 1.24) in Male', Maldives. They are recruited through convenience sampling from both public and private universities. Participants completed an online survey which included Ryff's Psychological Well-being Scale, Multidimensional Scale of Perceived Social Support, Emotional Intelligence Scale, Perceived Stress Scale, and Grit Scale. From the multiple regression analysis, the current research found that both social support and emotional intelligence significantly predicted psychological wellbeing. The relationship between social support and psychological well-being was found to be mediated by stress and grit, according to Hayes' PROCESS mediation analysis. In addition, stress and grit also played a mediating role in the association between emotional intelligence and psychological well-being among the Maldivian students. This shows that intervention in Maldives should focus on providing social support and increasing students' emotional intelligence in order to help in alleviating stress, increasing grit and well-being. Considering the high percentage of university students through mental health issues in Maldives, the findings in this study would help shed light upon the issue of mental health and psychological well-being in a stigma-filled society. This would then help spread awareness about mental health issues among Maldivian university students as well as the general population in Maldives.

Keywords: emotional intelligence, grit, psychological well-being, social support, stress

#### ACKNOWLEDGEMENT

The completion of this dissertation would not have been possible without the continuous support and assistance of some very important people. I am grateful for their continuous supervision which has helped me improve immensely as a research student.

I would like to express my gratitude to my supervisor Dr. Wu Shin Ling for continuously pushing me to do better with her suggestions, reviews and comments throughout the course of this research. I would like to thank my co-supervisor Dr. Grace Yap Chin Choo for her efforts in making it possible to refine me as a research student, especially by helping me improve my research writing techniques. I am grateful for your invaluable guidance provided with utmost patience throughout this course.

I would also like to express my deep gratitude and acknowledge Sunway University Scholarship for providing me with the scholarship for my Masters and making it extremely easy financially to get through these years.

Lastly, I would like to thank my classmates for their feedback and moral support which kept me going throughout this course.

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#### **CHAPTER 1: INTRODUCTION**

#### 1.1 Background

Over the last decade, mental health and psychological well-being of university students have been one of the most important topics of interest to research as university students are extremely vulnerable to mental health problems. Prior research has demonstrated that approximately 75% of mental health disorders started before the age of 25, which is the typical age at which people enroll into undergraduate programs (Hernández-Torrano et al., 2020; Johnson & Crenna-Jenning, 2018). The World Health Organization (WHO) defines mental health as the "state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." (WHO, 2018). Apparently, mental health and psychological well-being go hand in hand whereby negative mental health tends to lower the level of psychological well-being of individuals. On the other hand, good mental health and a higher level of well-being are associated with realizing one's potential and reaching one's highest potential, increasing productivity, creativity, learning, development and enhancement of positive social relationships with other people (Diener & Seligman, 2002). In addition, a higher level of psychological well-being heightens one's ability to face stressful and challenging life events and cope with stress much better compared to individuals with lower level of psychological well-being (Aspinwall, 1998).

Positive emotions and positive moods interpret situations in a more positive light and therefore individuals a adopt better attitude towards learning and life experiences (Nortje, 2021). University students, being at the most crucial stage of life in relation to future and life goals, face numerous challenges in the university which affect their overall mental health and psychological well-being. Homesickness is one of the most common challenges faced by university students; time management and adjustment to more complex and higher academic demands are other challenges faced by university undergraduate students. Moreover,

financial problems and social problems in relation to making new friends and new social support systems are also a few of the challenges faced by university students (Gates, 2022; Porein, 2018)

Given that university life is often seen as a critical determinant of individuals' future employment prospects and overall success, it is imperative to examine and acknowledge university students' mental health and psychological well-being. This is particularly important since a high level of psychological well-being and good mental health can enable students to manage the stress and challenges of university life while remaining perseverant and motivated in achieving their life goals. A survey conducted by Pereira and colleagues (2020) with 21,000 students from different nationalities, ethnicities, ages, and genders revealed that while only 1.2% of students reported having little to no worries or mental health problems during their university lives, a shocking 42.3% of students suffered from personal, emotional, behavioral or mental health issues which needed professional help and 26.6% of students had a current mental health diagnosis which included depression, anxiety and bipolar disorders. The study also found that 3% of the students often do not even reveal their mental health problems due to the negative attitude and stigma attached to them as well as due to fear of exclusion from university life, friend circle, and society activities (Pereira et al., 2020). Statistics obtained by a survey conducted by WHO in 2019 showed that while 1 in every 8 people around the world lives with some mental health problem, most of the people do not even have access to reliable and effective mental health care (WHO, 2022).

According to research done by the American College Health Association and Healthy Minds Network, mental health related issues among students in higher education institutions have increased from 17% to 31% within a span of six years (Roberts, 2022). A meta-analysis and systematic review of research conducted globally across Asia, Europe, as well as Africa showed that 30% of university students go through stress, while the prevalence of anxiety and

depression are equaled to 32% and 34%, respectively (Salari et al., 2020). Amid the COVID-19 pandemic, students' overall psychological well-being and overall mental health have deteriorated tremendously (Kong et al., 2022). Past studies have shown that university undergraduate students reported worsening of their mental health and overall psychological well-being during and after the pandemic (Chaudhary et al., 2021; Hewitt, 2020; Roberts, 2022). The COVID-19 pandemic was found to be a crucial contributor to the increase in mental health issues such as stress, anxiety and depression among university students. Research also found that 60% of students believed that the pandemic hindered the availability of mental health services making it more difficult to get treatment (Roberts, 2022). Past study conducted with university students in the North of England also found high level of mental health issues among university students as well (Chen, 2022).

The stresses and restrictions such as studying from home, and changes in teaching and learning process associated with the Covid-19 pandemic have put university students at greater risk of developing mental health issues thereby imposing a negative impact on the psychological well-being of university students (Chen, 2022). A survey in 2020 which included the UK, USA, Netherlands, France, Spain, Australia and Nordic countries found that 76% of students struggle to maintain a good psychological well-being and mental health (World Economic Forum, 2022). Furthermore, a study conducted with students in Poland, Slovenia, Czechia, Ukraine, Russia, Germany, Turkey, Israel, and Colombia found a high prevalence of stress (61.3%), depression (40.3%), and anxiety (30%) indicating that mental health issues are alarming among university student population affecting their overall psychological well-being negatively (Ochnik et al., 2021).

In Maldives, not much consideration is given to the mental health and psychological well-being of university students. The whole concept of mental health and any concept revolving around psychological issues as well as mental well-being is associated with

negative attitudes and stigma among the people in the society (Ibrahim, 2018; Maldives Independent, 2017). Common assumptions equate having a mental disease with being absolutely insane or being lazy or irresponsible. It is also regarded as spiritual in nature such as having a low level of faith in one's religion (Ibrahim, 2018; Zalif, 2019). There is less awareness among the population of Maldives when it comes to psychological problems, and therefore the seriousness of mental health issues is given a blind eye (Maldives Independent, 2017). The stigma and discrimination related to mental health issues could lead to the denial of basic human rights such as education and employment. What this means is that if individuals are going through mental health problems or perhaps any other psychological issue, they are denied of basic rights and not given enough opportunities in the area of education as well as employment for these individuals to flourish and feel valued, thereby overcoming issues related to their mental health. Mental health problems are also linked to social issues such as family disruption. When individuals go through mental health problems, these individuals tend to rely on and seek help from family and friends before considering professional care. However, in a society like Maldives where there is an extreme lack of awareness about mental health issues as well as psychological well-being, family and friends might not understand the mental health problems an individual could be experiencing. Instead, family and friends are more likely to deem the problem as unimportant, blaming the individuals for being lazy, irresponsible and unmotivated in life. This would then lead to the individuals' mental health being ignored and not being taken care of, leading to conflicts between relationships due to lack of understanding. In addition, educational failure, as well as unemployment are problems faced due to the stigma attached to mental health problems, making it extremely important to address this issue by spreading awareness about the consequences of mental health (National Mental Health Policy, 2017).

Based on the data collected through The World Health Organization Assessment Instrument for Mental Health Systems (WHO-AIMS) on the mental health system of Maldives, it was found that there had been neither a mental health policy nor a mental health law in Maldives prior to the establishment of National Mental Health Strategic Plan: 2016-2021. The Ministry of Health of Maldives stated that there is a high prevalence of mental health problems in the Maldivian society with 29.1% of the population suffering from mental health problems in the Maldives. Out of this 29.1%, nearly 5% of the population was reported to be suffering from severe levels of depression and anxiety (National Mental Health Policy, 2017). However, these percentages were obtained from a research that dates back to 2003. As of recent times, the percentages could be expected to be the same or more considering the fact that no proper policy has been established for mental health in Maldives. In a more recent survey conducted by the Government of Maldives and WHO (2022), it was estimated that 1 in every 5 people in Maldives experienced symptoms of depression (Zuhury, 2022). Moreover, only few mental health services are available in Maldives with inconvenient and unreliable services as well as minimal preventive and mental health promotion efforts (National Mental Health Policy, 2017). Mental health services in Maldives are very much limited and poorly organized considering the fact that the country faces an increase in the number of mental health issues and disorders among the people (DiLuzio, 2022). Moreover, almost all the mental health care clinics and mental health services are available in the capital city of Maldives only, thus, the residents in Maldives would need to travel from their hometown or islands to the capital city to seek help for mental health services. On top of that, people in Maldives refuse to believe that mental health problems are serious issues that need immediate attention and care, making it even more challenging to seek help for mental health related services (Maldives Independent, 2017). This phenomenon reflects that mental health is not regarded as a serious societal issue in the society of Maldives.

After years of neglect around the concept of psychological well-being and mental health in Maldives, Maldives has begun its' journey to having a more mindful and positive attitude towards mental health problems and mental well-being. As of today, mental health has been recognized as one of the key areas of public health concerns highlighting the urgency to prioritize the importance of mental health in the country and establish better and more reliable health care focusing on mental health (National Mental Health Policy, 2017; Zuhury, 2022). Minister of Health of Maldives highlighted the importance of sustainable selfcare and willingness to make positive changes to ones' own life, as well as adopting a more compassionate and empathetic approach towards one another, in order to improve over all mental health and psychological well-being (Zuhury, 2022). National Mental Health Communications Strategy and Campaign launched jointly by the Government of Maldives and UNICEF, intends to optimize the concept of mental health and well-being in the Maldivian society (Zuhury, 2022). In doing this, the campaign plans to allow different organizations and leading partners to work together as a team in helping to improve mental health in the country as well as reduce the prevalence of mental health issues in the Maldivian society. In addition, this campaign aims to emphasize on changing peoples' current perceptions and attitudes towards mental health by promoting social and behavioral changes. Moreover, the key role of family, friends, and a good social support system around individuals in tackling issues of mental health was brought to light by the President of Maldives as well (Zuhury, 2022). Finally, by spreading awareness among people, the campaign aims to create a more compassionate, nurturing, and tolerant community in hopes of eliminating stigma and negative attitudes attached to mental health and psychological issues in the Maldivian society (Zuhury, 2022).

Furthermore, in the context of university students and their mental health, there has been a lack of research conducted in Maldives, specifically addressing the issue of mental health and psychological well-being (National Mental Health Policy, 2017). A study conducted in Maldives with 932 undergraduate students from Maldives National University (MNU) found that 58.9% of students experienced moderate to severe and above levels of anxiety, while 28.9% of students have moderate to severe or above levels of depression, and 58% students have moderate to severe or above levels of stress (Shanoora & Nawaza, 2018). Since Shanoora and Nawaza's (2018) study only focused on the prevalence of mental health issues among university undergraduate students in Maldives, it is crucial to further understand how mental health problems such as stress could affect the overall psychological well-being and mental health of university undergraduate students. Shanoora and Nawaza (2018) highlighted a high prevalence rate of mental health problems among students in Maldives which could affect student's overall psychological well-being, academic life, personal life, as well as social life. Hence, further research should be conducted to understand the possible factors affecting psychological well-being of Maldivian university undergraduate students, which will then help the government and leading health organizations to develop appropriate, reliable and effective educational and mental health policies as well as intervention to curb this problem.

While there are several factors that could possibly affect psychological well-being such as age, gender, socioeconomic status, religious background, cultural upbringing, as well as educational background (Ismail & Shujaat, 2018; Oskrochi at al., 2018), the current study aimed to explore the possible predicting factors of psychological well-being such as social support (Bukhari & Afzal, 2017; Emadpoor & Lavasani, 2018; Mendoza et al., 2018; Varma et al., 2018) and emotional intelligence (Ahmadi et al., 2014; Butt, 2014; Carmeli et al., 2009; Mehmood & Gulzar 2014; Omid et al., 2018). The current study also aimed to explore the mediating role of stress and grit on the relationship between social support and psychological well-being (Cao & Zhou, 2019; Sergin et al., 2007), and the mediating role of stress and grit

on the relationship between emotional intelligence and psychological well-being in the context of Maldivian undergraduate students (Harley, 2015; Kamboj & Garg, 2021; Malinauskas, & Malinauskiene, 2018; Ruiz-Aranda et al., 2013).

#### 1.2 Present Study

The purpose of the current study was to examine the predicting roles of social support and emotional intelligence in relation to psychological well-being among Maldivian university students. In addition to this, the study aimed at investigating the possible mediating role of stress and grit on the relationship between social support and psychological well-being as well as on the relationship between emotional intelligence and psychological well-being. Below are the research questions, research objectives and research hypotheses for the current research.

The research questions for the current research are:

- 1. What is the predicting role of social support and emotional intelligence on psychological well-being among university students in Maldives?
- 2. Do stress and grit mediate the relationship between social support and psychological well-being among university students in Maldives?
- 3. Do stress and grit mediate the relationship between emotional intelligence and psychological well-being among university students in Maldives?

The research objectives of the current research are:

- 1. To investigate the predicting role of social support and emotional intelligence on psychological well-being among university students in Maldives.
- To investigate the mediating role of stress and grit on the relationship between social support and psychological well-being among university students in Maldives.

3. To investigate the mediating role of stress and grit on the relationship between emotional intelligence and psychological well-being among university students in Maldives.

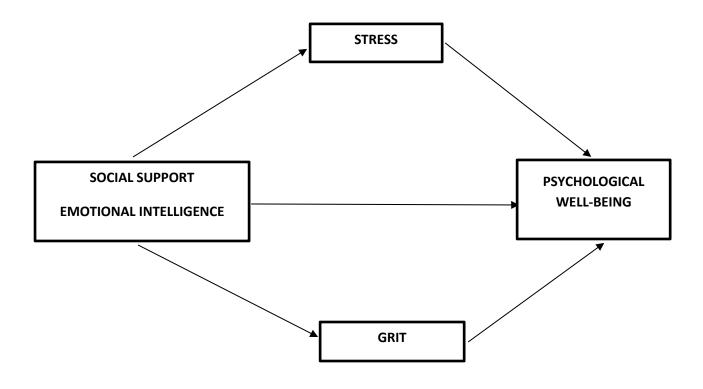
The research hypotheses for the current study are:

- 1. Social support and emotional intelligence will significantly predict psychological well-being among university students in Maldives.
- 2. The relationship between social support and psychological well-being is mediated by stress among university students in Maldives.
- 3. The relationship between social support and psychological well-being is mediated by grit among university students in Maldives.
- 4. The relationship between emotional intelligence and psychological well-being is mediated by stress among university students in Maldives.
- 5. The relationship between emotional intelligence and psychological well-being is mediated by grit among university students in Maldives.

Figure 1.1 shows the conceptual framework for the current study. The figure illustrates the predictor variables (social support and emotional intelligence) in relation to the outcome variable (psychological well-being) as well as the mediators (stress and grit) between the predictor variables (social support and emotional intelligence) and the outcome variable (psychological well-being).

Figure 1.1

Conceptual Framework of the study



#### **CHAPTER 2: LITERATURE REVIEW**

#### 2.1 Psychological Well-being

Psychological well-being is generally used to describe an individual's mental health, emotional health, and overall functioning. Ryff (1989) defined psychological well-being as the feeling of having meaningful control over one's life and one's activities. Ryff and Singer (2006) reviewed the work of several theorists aiming at defining positive psychological functioning which included self-actualization concept of Maslow, view of fully functioning person by Rogers, and formulation of individuation by Jung as all of these theories focused on positive psychological functioning.

Ryff (1989) believed that the combination of all these views can produce a more parsimonious definition for the concept of psychological well-being by introducing six main components of psychological well-being that covers all the aspects of well-being which are considered crucial in experiencing optimal psychological well-being. The first component is self-acceptance, which is all about having a positive outlook on oneself and accepting all facets of oneself, including one's own good traits as well as undesirable traits. The second component is positive relations with others. This component is about about forming warm, fulfilling, and trustworthy connections with other people. People with this quality are concerned about the welfare of others and are able to show great levels of empathy, care, and affection towards other people. Autonomy, the third component, is about being selfdetermining and independent. Individuals with higher autonomy are able to resist social pressures to think and act in certain ways by regulating behavior from within. They are able to not let any negative social pressure get in their way of attaining everyday goals, thereby maininting a higher level of psychological well-being. The next component of psychological well-being is environmental mastery. As the name suggests, it is about having a sense of mastery and competence in managing the environment. Individuals possessing this attribute

have the ability to utilize opportunities in their environment to their advantage by selecting or creating environments that align with their values and personal needs. Purpose in life is the fifth component of psychological well-being. This component is about having goals in life and a sense of directedness. People with a higher level of psychological well-being have a purpose in life, aims and objectives for living and working hard to accomplish goals in life. The sixth and final component is personal growth. People with a higher level of psychological well-being are always open to new experiences in life and they see self as growing and expanding due to continued development of self. They are able to realize their potential, paving way for more improvements in self and behavior, thereby reaching their highest potential in life (Ryff, 1989). Having a higher level of psychological well-being facilitates personal as well as social growth. It helps people to face and solve problems and challenges that may arise in their lives effectively (Ryff & Singer, 2006).

A higher level of psychological well-being is associated with realizing one's own potential and reaching one's highest potential, increasing productivity, creativity, learning, development and enhancement of positive social relationships with other people (Diener & Seligman, 2002). A higher level of psychological well-being also improves one's ability to face stressful life events and cope with stress much better (Aspinwall, 1998). Increased workload and making independent decisions related to life and education have shown to increase stress in university students which in turn affect their overall psychological well-being negatively (Hernandez-Torrano et al., 2020; John et al., 2018; Shahira et al., 2018). In addition to this, leaving behind friends and family or their usual social support circle in order to adjust to a new way of life was shown to affect the overall mental health and psychological well-being of university students (Chen et al., 2013; Hernandez-Torrano et al., 2020; John et al., 2018; Shahira et al., 2018). However, considering that students in Maldives might continue studying online at home due to the Covid-19 pandemic, students' psychological

well-being could be affected depending on whether or not they are receiving enough support from the environment they are studying in. Research has found that students learning from home during the Covid-19 pandemic require social support from teachers, parents, as well as friends to maintain a higher level of psychological well-being (Huang et al., 2021). While most of the time is spent at home, parental support that entails autonomy was also found to be a crucial factor in relation to the well-being of students studying online (Huang et al., 2021). What this means is that, while students have full support and inputs from their parents about certain aspects of the students' life, students should also be allowed to be independent and self-determined to take their own decisions and resist social pressure or expectations to enable a higher level of psychological well-being among these students.

Issues related to the mental health and psychological well-being of university students have always been a concern, be it before or after the Covid-19 pandemic (Babb et al., 2022; Gogoi at al., 2022). An increase in mental health issues among university students has been recorded based on several studies conducted worldwide (Gogoi et al., 2022; Huang et al., 2021; Ochnik et al., 2021). A nation-wide survey conducted in China with 746,218 students found that approximately 45% of the students had some kind of mental health issues (Ma et al., 2020). Mental health problems such as acute stress, depression, and anxiety were found to be prevalent during the Covid-19 pandemic (Ma et al., 2020). Students who were exposed to friends and family infected with Covid-19, as well as students who were in more contact with different news sources and information related to Covid-19 on social media, were found to be more susceptible to mental health problems (Ma et al., 2020; Wang et al., 2020). In addition, preventive restrictions and long-term social isolation along with lockdowns contributed to the increased risk of psychological distress among students (Guszkowski & Dabrowska-Zimakowska, 2022; Ochnik et al., 2021). Mental health issues among university students have also been found to be alarming in countries such as Poland, Czechia, Ukraine, Germany,

Russia, Slovenia, Turkey, and Colombia with 61.3% of students with high stress, 40.3% of the students with depression, and 30% of the students with symptoms of anxiety (Ochnik et al., 2021). Prior mental health conditions were found to be associated with worse mental health outcomes among students both throughout and after COVID-19 (Gogoi et al., 2022). Factors such as lack of social support, low economic status, financial situation, as well as food insecurity lead to the worsening of psychological well-being and mental health of the university students (Gogoi et al., 2022).

In the field of psychology and education, psychological well-being has been increasingly emphasized in recent times. This is because of the importance of having a good psychological well-being and mental health, especially among university students. When entering into university level, students face numerous challenges resulting in immense stress and confusion which could have a negative impact on their overall psychological well-being (Khairani et al., 2019). Hence, due to various challenges faced by university students, it is crucial to investigate the possible factors affecting psychological well-being of the university students such as social support, emotional intelligence along with the mediating role of stress and grit.

#### 2.2 Social Support and Psychological Well-being

During the challenging university life, support from family and friends are crucial to help students overcome obstacles and negative life events, have stable mental health and maintain a higher level of psychological well-being (Bukhari & Afzal, 2017; Cooper, 2018; Lo-oh et al., 2018). Social support and social relationship are among the vital predictors of psychological well-being; maintaining a healthy and positive social relationship with family, friends, as well as lecturers affect psychological well-being positively (Bukhari & Afzal, 2017; Emadpoor & Lavasani, 2018; Mendoza et al., 2018; Varma et al., 2018). As defined by

Shumaker and Brownell (1984), social support is "an exchange of resources between at least two individuals perceived by the provider or the recipient to be intended to enhance the wellbeing of the recipient". It has been shown that social support plays a major role in psychological well-being where people who have a stronger support system are both physically and mentally healthier as compared to people who do not (Cherry, 2020; Harindi et al., 2017; Lo-oh et al., 2018; Pasinringi et al., 2020; Poudel et al., 2020; Shumaker & Brownell, 1984). Social support has been found to have direct, indirect, as well as interactive effects on an individual's physical and mental health (Shumaker & Brownell, 1984). Having a strong social support system enhances overall psychological well-being of individuals by helping to decrease the severity of stressful life events faced by the individuals. The right amount of social support from the right people (family, friends, or significant others) can help individuals to resolve minor issues in life before they turn into major issues, which could cause irreversible damage to the mental health of these individuals (Shumaker & Brownell, 1984). Parental support or parent-child relationship is known to be one of the main support systems that affect students' psychological well-being (Emadpoor & Lavasani, 2018; Lo-oh et al., 2018). Research has shown that higher levels of parental involvement, support, and warmth are associated with higher level of psychological well-being (Lo-oh et al., 2018; Mendoza et al., 2018; Varma et al., 2018) while controlling parents resulted in higher level of stress, depression, and anxiety in emerging adults (Mendoza et al., 2018; Varma et al., 2018).

In addition to support from parents, supports from close peers and friends were also found to play a vital role in increasing psychological well-being. Students with higher level of psychological well-being were found to be able to develop more trusting and warm relationships through peer support to overcome hardships and psychological distress faced during their university life (Bukhari & Afzal, 2017; Onuoho & Akintola, 2018). Students with a stronger social support system feel less stressed, less depressed and less anxious,

making them more confident and positive when facing the ups and downs of university life as well as life in general (Kugbey et al., 2015; Lo-oh et al., 2018). Students who are going through academic stress and hardships of university life face more mental health problems when coupled with a lack of social support from family, friends, teachers or significant others (Lo-oh et al., 2018). However, contradictory findings were obtained by a systematic review done by John and colleagues (2018) which did not find any association between peer support and mental well-being among university students.

Although social support could be attained from various support systems such as family, friends, significant others as well as teachers (Lo-oh et al., 2018: Poudel et al., 2020; Saputra et al., 2020), it is not necessary to have an extensive social support system for an individual to achieve a good overall psychological well-being and mental health (Lo-oh et al., 2018). Having at least one trustworthy and supportive confidant could impose a positive impact on the psychological well-being of an individual as well (Lo-oh et al., 2018). Individuals need a good social support system around them in order to make themselves feel loved, respected, and valued which would help enhance their mental health and overall psychological well-being (Pasinringi et al., 2020). Moreover, the presence of a strong social support system in individuals' life makes it easier for them to face obstacles, control emotions, and stay focused throughout, which are essential components to boost psychological well-being during university years (Pasiringi et al., 2020).

Since there are mixed findings when it comes to the link between social support and psychological well-being, and most of these studies were conducted with high school students only (Bukhari & Afzal, 2017; Kugbey et al., 2015; Onuoho & Akintola, 2018), the goal of the present research is to investigate the relationship between social support and psychological well-being in the context of Maldivian undergraduate students. This is because more than 50% of the students in Maldives were found to have some kind of mental health

issue based on a previous study conducted with undergraduate students (Nawaza & Shanoora, 2018), thereby making it crucial to investigate how social support predicts the overall psychological well-being of Maldivan undergraduate students.

#### 2.3 Emotional Intelligence and Psychological Well-being

Salovey and Mayer (1990) defined emotional intelligence as the "ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions". Emotional intelligence is directly related to overall mental health. According to Salovey and Mayor, it is based on the individual's overall awareness of their own emotions as well as the emotions of others. The current study adopts the ability emotional intelligence (Salovey & Mayer, 1990) over trait emotional intelligence since the ability emotional intelligence model conceptualizes emotional intelligence as an interconnected set of cognitive-emotional abilities which includes perceiving, managing, facilitating, and understanding emotion of self and others as well. However, trait emotional intelligence is more about an individual's self-perception of their own emotions, which then results in their behavior and affects their decision making (Petrides, 2011). The ability-based emotional intelligence also gives a good indication of the participant's ability to understand emotions and how they work. In addition, unlike the measures that measure trait emotional intelligence, ability emotional intelligence measures are ideal for knowing about emotional abilities and competencies of the participants (O'Conner et al., 2019).

People with a higher level of emotional intelligence are open to both positive and negative aspects of internal experiences (Salovey & Mayer, 1990). They are able to identify different types of emotions experienced by themselves and others, thereby effectively regulating and maintaining such emotions within themselves. This process or ability affects their mental health and psychological well-being positively. People with higher emotional

intelligence are less likely to get demotivated or hopeless following negative situations, hurtful feelings, or emotional restraints. These negative situations are considered essential in the long run of obtaining greater goals and objectives in life and attain good mental health. However, people with low emotional intelligence might often go through stress and depression to the extent that some people might even become suicidal. This is due to their incapability of recognizing their own emotions and failing to regulate and manage them. Therefore, it is crucial to have stronger emotional intelligence in one's self in order to live a more satisfying and successful life which then increase one's psychological well-being and mental health.

Past studies have shown that people who had higher emotional intelligence or people who were able to identify and regulate their emotions had higher levels of psychological well-being (Ahmadi et al., 2014; Butt, 2014; Carmeli et al., 2009; Garcia-Alvarez et al., 2022; Md Jani et al., 2022; Mehmood & Gulzar 2014; Omid et al., 2018; Shaeen & Shaheen, 2016). The self-understanding of ones' own emotions and feelings was found to play a vital role in the betterment of mental health and psychological well-being of the individuals (Mehmood & Gulzar, 2014). Individuals with higher level of emotional intelligence were also found to cope with negative emotional experiences better by emphasizing more on positive emotions (Costa et al., 2013; Garcia-Alvarez et al., 2022). Students with high emotional intelligence were found to possess a higher level of psychological well-being due to improved coping strategies by regulating emotional distress when faced with obstacles and stressful life events (Garcia- Alvarez et al., 2021). In addition, research has shown that with the increase in individual's ability of comprehension and emotion regulation, their overall happiness and life satisfaction increased as well (Guerra-Bustamante et al., 2019; Jani et al., 2022). Hence, the current study aimed to investigate the predicting role of emotional intelligence on psychological well-being in the context of university undergraduate students in Maldives.

#### 2.4 Stress and Psychological Well-being

Stress is another important predictor of psychological well-being among university students as students go through immense stress during their university life (Saputra et al., 2020). Stress is viewed as "the process by which people perceive and respond to overwhelming life events or situations that could threaten their overall well-being" (Lazarus & Folkman, 1984). Stress highlights the relationship between individuals and their environment which includes different types of stimuli that could endanger their psychological well-being (Lazarus & Folkman, 1984). University students may undergo immense stress related to various aspects such as university assignments, several examinations, as well as financial problems and expenses (Alsubaie et al., 2019; Shahira et al., 2018; Slimmen et al., 2022). Increased stress level in students is considered one of the main factors that negatively impact the mental health and psychological well-being of university students as well as the general population (Barbayannis et al., 2022; Slimmen et al., 2022).

In Maldives, similar results were found where undergraduate students have been found to experience severe and high levels of stress during their university years relating to academic as well as financial stressors, totalling up to a shocking 58% (Shanoora & Nawaza, 2018). The severe stress level experienced by Maldivian university undergraduate students would negatively impact their over all mental health and psychological well-being.

In a study conducted with 843 college students residing in the United States showed that higher level of stress in college students resulted in lower level of psychological well-being irrespective of gender, race or ethnicity (Barbayannis et al., 2022). This study established that apart from academic stress only, academic expectations and students' academic self-perception also produced a significant negative impact on the students' psychological well-being and overall mental health due to an increased level of stress in these students (Barbayannis et al., 2022).

In addition, Slimmen and colleagues (2022) conducted a research with 875 university students who also established a strong negative association between stress and mental well-being of the students. This study found that academic pressure, higher academic demands, financial instability and family pressure were all possible factors that increased stress in university students, leading to lower level of psychological well-being (Slimmen et al., 2022). Based on these findings, stress, be it related to academic, personal, social, or financial problems, was found to affect psychological well-being of university students negatively. Thus, the current study aimed to investigate how stress relates to psychological well-being in the context of Maldivian university students.

#### 2.5 Grit and Psychological Well-being

Grit is a relatively novel factor and has become an important construct in the field of psychology and research in relation to success in life and one's mental well-being. Grit was introduced by Duckworth in 2007 where it has grabbed the attention in the research world in relation to success in education and success in life as well (Hanford, n.d.). Grit is the perseverance and passion for long-term and meaningful goals (Duckworth, 2007). Perseverance means having resilience, which is the ability to overcome setbacks, work hard, and finish tasks rather than give up (Aster, 2021; Duckworth, 2007). Meanwhile, the passion referred to having a strong commitment and direction towards a goal to be achieved in an individual's life (Baruch-Feldman, 2017). A gritty individual is believed to be able to face challenges in life persistently by maintaining determination and interest in making progress and achieving life goals irrespective of failure and adversity (Duckworth et al., 2007). Another aspect of being gritty involves individuals being mindful about what is meaningful and worth the effort and time when it comes to goals in life. This would then facilitate individuals to be satisfied with their lives in general, enabling them to be motivated,

perseverant, and thrive throughout when it comes to achieving life goals and having a purpose in life (Arya & Lal, 2018).

Studies conducted with residents in surgical training and general surgery have shown that grit was a predictive factor of psychological well-being in all the residents who participated in the study. Lower level of psychological well-being was considered one of the reasons why residents choose to quit and leave residency (Salles et al., 2014), and this could be a result of low grit in residents where there is a lack of perseverance, commitment, and resilience in achieving life goals (Dam et al., 2018; Salles et al., 2014). Several studies conducted also found a direct positive relationship between grit and psychological well-being in the case of students, psychiatry residents as well as the general population (Kim et al., 2020; Vainio & Daukantaitè, 2015). It is believed being gritty is able to achieve greater success in life, and goal attainment leads to healthier well-being in individuals. Furthermore, gritty individuals are believed to attain a good psychological well-being through tasks and responsibilities that promote engagement and meaning in life by being perseverant throughout and fighting through obstacles faced day to day (Arya & Lal, 2018; Disabato et al., 2018; Kolemba et al., 2022; Weisskirch, 2019).

In addition, a positive relationship between grit and psychological well-being among students were established in studies conducted by Arya and Lal (2018) as well as Kolemba and Bajkowski (2022). When individuals are gritty, they are more likely to perceive their world as meaningful. Moreover, gritty individuals are able to stay perseverant and passionate in pursuing their goals in life. This then enables individuals to attain a higher level of psychological well-being and a good overall mental health (Arya & Lal, 2018). Not giving up easily due to negative life situations and setbacks are characteristics of grit which help students to attain a higher level of psychological well-being and mental health (Kolemba et al., 2022). Since grit is a new concept and was not well-researched in the Maldivian context,

this study aimed to study how grit correlates with psychological well-being among undergraduate students in Maldives.

#### 2.6 Social Support, Stress (Mediator) and, Psychological Well-being

Stress is viewed as the mechanism by which individuals perceive and respond to overwhelming life events or situations that could threaten their overall psychological wellbeing (Lazarus & Folkman, 1984). University students may undergo immense stress related to different aspects such as assignments, examinations, as well as financial problems and expenses (Alsubaie et al., 2019; Shahira et al., 2018). Undoubtedly, support from family and friends is very important when it comes to overcoming stress associated with academic challenges and obstacles faced in life. Several studies have shown that social support from family and friends was negatively associated with stress where students with higher level of social support experienced lower level of stress and are better at managing stressful situations (Crutcher et al., 2018; Li & Peng, 2019; Ra, 2016). Students with lower perceived social support were predicted to have higher level of stress and to view life events as more stressful. It was observed that perceived social support was a strong predictor of high perception of stress (Hamdan-Mansour et al., 2007). Study conducted with first-year students from an Islamic university in Malaysia found that students who reported lower level of social support, especially from family, had higher level of stress (Baqutayan, 2011). In times of stress, students were found to always choose family over friends whereby support from family was found to allow students to express and share their feelings and stressful life events which in turn help them to cope with stress. In addition to support from family, students who received social support from friends were found to have lower level of perceived stress among university students in Jordan (Hamdan-Mansour et al., 2007). Furthermore, support from educators was also found to help students reduce academic stress (Yıldırım et al., 2017).

Nevertheless, a study conducted with medical students in Khartoum, Sudan did not show a significant association between social support, stress and anxiety (Dafaalla et al., 2016).

Several studies have shown that stress is negatively correlated with the psychological well-being of university students which then negatively impacted their overall mental health (Abdull Rahman et al., 2019; Elmalky et al., 2019; Shahira et al., 2018). Apart from academic stress that stems from university workload, examinations and assignments, as well as financial struggles, (Hanawi et al., 2020; Huang et al., 2020; Shahira et al., 2018), students were being pressured by their parents to pursue specific careers and majors against their own will, which in turn resulted in lower level of psychological well-being among these students (Yang & Smith, 2016). Based on these findings, stress, be it related to academic or social stress, was found to affect the psychological well-being of university students negatively.

When considering the mediating role of stress on the relationship between social support and psychological well-being, a study conducted by Sergin and colleagues (2007) found that stress partially mediated the relationship between social skills and life satisfaction. Even though it discusses about social skills, people who possess strong social skills are more likely to have access to social support according to Sergin and colleagues' (2007). Therefore people with strong social skills have greater access to social support, enabling them to receive support from various social networks and social support circles when faced with stressful and negative situations in life (Sergin et al., 2007). People with better social skills or social support are able to cope with life stressors much better, thereby attaining a higher level of psychological well-being and life satisfaction.

Research has shown a strong positive relationship between social support and psychological well-being (Emadpoor & Lavasani, 2015; Mendoza et al., 2018; Onuoha & Akintola, 2018; Varma et al., 2018). Studies have also shown that students with stronger social support from family and friends as well as educators have lower level of stress

(Baqutayan, 2011; Crutcher et al., 2018; Hamdan-Mansour et al., 2007; Li & Peng, 2019; Ra, 2016; Yıldırım et al., 2017). In addition, past studies have found that stress affected the overall psychological well-being of university students negatively (Abdull Rahman et al., 2019; Elmalky et al., 2019; Shahira et al., 2018; Yang & Smith, 2016). Based on these studies, students with stronger social support will have lesser stress, thereby having a higher level of psychological well-being. These pathways indicate a mediating role of stress on the relationship between social support and psychological well-being. However, due to the lack of studies conducted in exploring the probable mediating role of stress on the relationship between social support and psychological well-being, the current study aimed to investigate the possible mediating role of stress on the relationship between social support and psychological well-being among university undergraduate students.

#### 2.7 Emotional Intelligence, Stress (Mediator), and Psychological Well-being

Emotionally intelligent people have been shown to be capable of adapting to negative situations while facing life stressors and negative life events. They are also able to overcome stress and go through fewer mood deterioration and fewer physiological responses related to stress (Shahin, 2020). Previous studies investigating the relationship between stress and emotional intelligence have revealed a negative correlation between the two variables, where individuals with higher levels of emotional intelligence reported lower levels of stress (Enns et al., 2018, Ranasinghe et al., 2017). Furthermore, research has found that emotional intelligence was indirectly associated with perceived stress where emotional intelligence was shown to reduce stress through cognitive appraisal and resilience (Thomas & Zolkoski, 2020). Larijani and colleagues (2017) conducted a study with 350 nurses from hospitals in Kermanshah City, Iran where it was found that nursing students who applied problem-focused coping styles, which involves strategies that modify stressful situations and generate

substitute solutions to problems, had higher emotional intelligence and were better able to cope with stressful situations. Therefore, a negative relationship was found between emotional intelligence and stress based on the studies conducted previously.

Furthermore, past studies have found that students with higher stress levels reported reduced levels of psychological well-being (Abdull Rahman et al., 2019; Elmalky et al., 2019; Shahira et al., 2018; Yang & Smith, 2016). Stress has also been found to mediate the relationship between emotional intelligence and psychological well-being among individuals (Urquijo et al., 2015). Malinauskas and Malinauskiene (2018) found that perceived stress mediated the relationship between emotional intelligence and psychological well-being among athletes from several universities in Lithuania. Athletes who have higher levels of emotional intelligence experienced lower levels of stress and negative consequences from stressful situations, which in turn would increase their overall psychological well-being (Malinauskas, & Malinauskiene, 2018). In addition, Ruiz-Aranda et al. (2013) found that stress fully mediated the relationship between emotional intelligence and psychological wellbeing. This implied that students with higher levels of emotional intelligence were better at coping with negative and stressful life situations as well as regulating their emotions and hence, resulted in higher life satisfaction, happiness, and psychological well-being. A strong relationship was found between emotional intelligence and psychological well-being as well (Butt, 2014; Carmeli et al., 2009; Costa et al., 2013; Malinauskas & Malinauskiene, 2020; Moeller et al., 2020).

Based on the findings above, it could be assumed that students with high emotional intelligence will have lower levels of stress which would then increase their psychological well-being. Thus, the current study aimed to investigate the possible mediating role of stress on the relationship between emotional intelligence and psychological well-being in the context of Maldivian undergraduate students.

## 2.8 Social support, Grit (Mediator), and Psychological Well-being

Grit is a relatively new concept about perseverance and passion. A gritty individual is believed to be able to face and work towards challenges in life persistently by maintaining determination and interest irrespective of failure, adversity, and make progress (Duckworth et al., 2007).

Recent research found that adolescents who received social support from parents established a higher level of perseverant effort and grit (Clark et al., 2019). A positive correlation was also found between parental care, parental involvement and grit, whereby children whose parents were more supportive, understanding, caring, and involved in their lives were shown to be grittier and more perseverant in achieving goals in life (Howard et al., 2019). High maternal care was found to be a strong predictor of grit in adolescents as well (Levy & Steele, 2011). In addition to parental care and support, classmates were found to contribute to the development of grit in adolescents (Levy & Steele, 2011; Sumter et al., 2009). Adolescents with strong social support from classmates were found to be more motivated, perseverant, and passionate about achieving long-term goals in their lives (Clark et al., 2019). Nevertheless, there is a lack of research that investigates the relationship between social support and grit especially among university undergraduate students, since most of the research conducted across the world have focused on high school students (Howard et al., 2019; Levy & Steele, 2011).

Studies conducted with residents in surgical training and general surgery have shown that grit was a predictive factor of psychological well-being in all the residents who participated in the study. Lower level of psychological well-being was considered one of the reasons why residents choose to quit and leave residency at an early stage of the course or job (Salles et al., 2014), and this could be a result of low grit in residents where there is a lack of perseverance and commitment to goals (Dam et al., 2018; Salles et al., 2014). Several studies

conducted also found a direct relationship between grit and psychological well-being in the case of students, psychiatry residents as well as the general population (Kim et al., 2020; Vainio & Daukantaitė, 2015). It is believed that greater success in life and goal attainment leads to higher level of psychological well-being in individuals. Furthermore, gritty individuals are believed to attain a higher level of psychological well-being through tasks and responsibilities that promote engagement and meaning in life by being perseverant throughout and fighting through obstacles and challenges in life (Disabato et al., 2018; Weisskirch, 2019).

Study conducted by Cao and Zhou (2019) established a mediating relationship of resilience between social support and psychological well-being. Resilience is believed to have an underlying perseverance component, which is similar to grit, that helps individuals to fight through hardships, obstacles, and negative life events (Avey et al., 2009). Hence based on this, a mediating pathway of grit could be assumed where people with higher social support are more perseverant and gritty through difficult and challenging life events, thereby attaining a higher level of psychological well-being.

Based on the findings on the relationships between social support and psychological well-being, social support and grit, as well as grit and psychological well-being, grit could be a mediator of social support and psychological well-being. It could be assumed that students with stronger social support will have a higher level of grit and therefore have a higher level of psychological well-being. Moreover, the possible mediating role of grit on the relationship between social support and psychological well-being is very much under-investigated among university undergraduate students, and the very few researches conducted have focused mainly on employees, work organizations, and high school students (Cao & Zhou, 2019; Harley, 2015; Kamboj & Garg, 2021). Therefore, the current study aimed to fill this

knowledge gap by investigating how grit mediates the relationship between social support and psychological well-being in the context of university undergraduate students in Maldives.

## 2.9 Emotional Intelligence, Grit (Mediator), and Psychological Well-being

Emotional intelligence and grit are the new constructs of interest in the field of psychology and mental well-being. It is not surprising that there has not been much research conducted to investigate the relationship between emotional intelligence and grit (Esin, 2021). People with higher emotional intelligence could possess a higher level of grit, and they might be able to better cope with stressful situations, negative emotions, obstacles and setbacks in life and build perseverance and passion to work through all the hardships and pursue their goals in life (Bar-on, 2006).

According to Goleman (2018), there is a positive correlation between grit and emotional intelligence. People who are able to identify, manage, and regulate their own emotions tend to be grittier and persevering. In a mixed-method study conducted on high school students to investigate various variables that could influence students' grit, emotional intelligence was found to be significantly related to grit (Palmisano, 2019). In addition, a systematic review of 26 research studies found that variables such as hope and positive affect were predictors of grit in students (Christopoulou et al., 2018). The hope and positive affect (Christopoulou et al., 2018) could also be considered as the ability of an individual to maintain positive emotions that were stated in the Emotional-Socio Intelligence model put forward by Bar-On (2006). Hence based on this conceptual view, it could be assumed that grit and emotional intelligence could be related. A recent study conducted found a positive relationship between emotional intelligence and grit among university students in Turkey (Esin, 2021). Emotional intelligence was also found to have a positive relationship with resilience which is similar to being gritty or perseverant through hardships, obstacles, and

stressful life events (Magnano et al., 2016). This particular study showed that individuals with higher levels of emotional intelligence showed greater resilience and perseverance throughout life situations, be it positive or negative.

Moreover, study conducted by Kamboj and Garg (2021) found that people with higher emotional intelligence were better able to deal with any given circumstances or situations in life, be it negative or positive, thereby doing their best to accomplish and achieve goals in life which in turn increased their overall psychological well-being and maintained a good mental health (Harley, 2015; Kamboj & Garg, 2021). This aspect of dealing with adverse situations and fighting through obstacles to achieve goals in life is similar to being gritty and passionate about goals in life no matter the circumstances faced by such individuals.

When it comes to the mediating role of grit on the relationship between emotional intelligence and psychological well-being, studies have found a link between emotional intelligence and psychological well-being (Butt 2014; Carmeli et al., 2009; Costa et al., 2013; Malinauskas & Malinauskiene, 2020; Moeller et al., 2020). Past studies have also shown a relationship between emotional intelligence and grit (Goleman, 2018; Palmisano, 2019). In addition, studies have shown a positive relationship between grit and psychological well-being in students (Dam et al., 2018; Disabato et al., 2018; Vainio & Daukantaitė, 2015; Salles et al., 2014; Weisskirch, 2019). Hence a possible mediating role of grit could be established on the relationship between emotional intelligence and psychological well-being. Thus, the current study aimed to address this knowledge gap of grit as a mediator and investigated how grit mediates the relationship between emotional intelligence and psychological well-being in the context of university undergraduate students.

### **2.10 Underpinning Theory**

The current study aimed to investigate the predicting effect of social support and emotional intelligence on psychological well-being as well as the mediating role of stress and grit on the relationship between social support and psychological well-being, as well as between emotional intelligence and psychological well-being in the conext of Maldivian undergraduate students. The two theories used to support this study were Ryff's (1989) Theory of Psychological Well-being and the Emotional Intelligence Model by Salovey and Mayer (1990).

The current study mainly adopts Ryff's Theory of Psychological Well-being (1989) which consists of 6 main components. Self-acceptance is the first component. It involves adopting an optimistic outlook on oneself and accepting both the positive and negative qualities of oneself. Higher self-acceptance results in a higher level of psychological wellbeing as self-acceptance is associated with being able to control one's own emotions as well (Bingol & Batik, 2018; Waters, 2021). The second component is about having strong positive relations with others where people with higher psychological well-being have more caring, affectionate, warmer, satisfying and trusting relationships with the people around. Positive relations with others and having a support system to depend on has found to contribute to the psychological well-being of individuals positively by means of sharing positive moments, being encouraging and supportive, and by being emotionally engaged to one another (Gomez-Lopez et al., 2019; Mertika et al., 2020). Next component, autonomy, is about being self-determining and independent while being able to resist social pressures by regulating behavior from within. Higher self-autonomy in individuals paves the way for higher level of psychological well-being (Cosme et al., 2018). The next component of psychological wellbeing is environmental mastery which is about having a sense of mastery and competence in managing the environment. Individuals possessing this trait are able to utilize their environment to its fullest potential by creating environments that line up with their ideals and needs. Purpose in life is the fifth component under psychological well-being and this is about having goals in life and a sense of directedness. People with high level of psychological well-being have a purpose in life, aims and objectives for living and working hard to accomplish goals in life which in turn improve their overall psychological well-being (Morin, 2022). The final component is personal growth and people with higher level of psychological well-being are always open to new experiences in life, and they are able to realize their own potential and reach their highest potential, paving way for more improvements in self and behavior in general (Ryff, 1989).

Ryff (1989) stated that strong and positive social relationships could enhance psychological well-being in individuals, highlighting the importance of social support and interpersonal relationships, which is related to the social support variable in the current study. Individuals with stronger interpersonal relationships and social support have shown to attain a higher level of psychological well-being. With continuous support and care from loved ones, individuals are better able to tackle problems in life keeping them in a healthier state of mind without letting any negativity get to them (Bukhari & Afzal, 2017; Emadpoor & Lavasani, 2018; Lo-oh et al., 2018; Mendoza et al., 2018; Onuoho & Akintola, 2018; Pasinringi et al., 2020; Varma et al., 2018). Ryff's psychological well-being model emphasizes on the importance of social relationships when it comes to attaining a good psychological well-being, The relationship between social relationships and psychological well-being is further supported by the past studies conducted as well.

Under the self-acceptance component, Ryff (1989) emphasized on possessing a positive attitude towards self and feeling positive about oneself. In addition, Ryff (1989) stated that individuals with high psychological well-being are able to resist social pressures to think and act in certain ways by being self-determining. They are able to regulate and

evaluate their behavior as well as emotions from within as well (Bingol & Batik, 2018; Waters, 2021). This is related to emotional intelligence, which is another possible predictor of psychological well-being in the current study. The self-acceptance component under Ryff's (1989) theory states that being able to regulate and evaluate one's own emotions and behavior and being able to resist environmental factors to remain positive about oneself affects psychological well-being in a positive way. Hence a relationship between emotional intelligence and psychological well-being is established (Ahmadi et al., 2014; Butt, 2014; Carmeli et al., 2009; Mehmood & Gulzar 2014; Omid et al., 2018).

Ryff (1989) stated that positive relationships with other people help individuals attain a more satisfying life which helps them to fight through stressful times, highlighting the importance of supportive people around them. Hence, the role of positive relationships in relation to lower levels of stress and a more satisfying life is crucial, thereby increasing the overall psychological well-being of the individuals. Ryff's psychological well-being model emphasizes on the role of social relationships and a more satisfying stress free life in relation to attaining a higher level of psychological well-being. In light of this as well as the past studies conducted, a possible mediating role of stress could be established on the relationship between social support and psychological well-being in individuals.

Positive relationships and support from other people through encouragement and engagement help individuals to stay motivated in life in achieving life goals and having a purpose in life. Individuals become grittier and perseverant in life which then helps them to attain a higher level of psychological well-being (Ryff, 1989). Hence, having a strong support system makes individuals grittier, who would then possess a higher-level psychological well-being. This could also mean that grit could be a possible mediator between social support and psychological well-being in individuals.

The emotional Intelligence Model by Salovey and Mayer (1990) is the second theory chosen to support the current study. This theory consists of 4 branches of emotions and emotional perception is the very first branch, which is the ability to identify and express emotions and feeling accurately. It involves being able to identify and label emotions of oneself self as well as others and being able to effectively communicate and discuss these emotions. Understanding how emotions are expressed based on context and culture also comes under the component of perceiving emotions. The second branch is the use of emotions to facilitate thoughts which is the ability to let feelings guide what is truly important to an individual. Moreover, to be able to produce emotions in order to relate to the emotions and experiences of other people around comes under this component as well. Understanding emotions is the next branch under emotional intelligence which is the ability to understand the meaning and purpose of one's own emotions a well as of others. It also encompasses understanding the differences between emotions and mood as well as differences between complex and mixed emotions felt by one's self as well as by others. The final branch is managing emotions which is the capacity to control emotions for social and personal development. Being able to take responsibility for one's own feelings and emotions and being able to turn negative emotions to positive emotions facilitate growth. In addition, managing emotions also involves engaging with positive and helpful emotions and disengaging with negative emotions (Mayer et al., 2016).

The emotional Intelligence Model put forward by Salovey and Mayer (1990) stated that individuals who possess a higher level of emotional intelligence are more proficient when it comes to describing the aims and objectives of life and staying motivated throughout, which is similar to individuals being gritty and perseverant in achieving life goals without giving up and feeling unmotivated (Mayer, 2004; Salovey & Mayer, 1990). Individuals with higher emotional intelligence are better able to manage and regulate what they are feeling by

being responsible for their own happiness and overall satisfaction about ones' own self and life in general. This ability of managing emotions makes it easier for individuals to deal with stressful or negative life situations as well (Salovey & Mayer, 1990). Individuals with higher level of psychological well-being are believed to be open to new experiences by realizing their own potential and working hard to reach their highest potential in life. These individuals not only have goals and purposes in life, but they also have aims and objectives in life that they want to achieve (Ryff, 1989; Ryff & Singer, 2006; Ryff, 1989). This is related to an individual being gritty and perseverant when it comes to achieving life goals, supporting a positive relationship between grit and psychological well-being.

Based on both Ryff's Theory of Psychological Well-being (Ryff, 1989) and Emotional Intelligence Model (Salovey & Mayer 1990), a relationship between grit and psychological well-being, as well as a relationship between emotional intelligence and grit could be established. Hence a possible mediating role of grit on the relationship between emotional intelligence and psychological well-being could be established as well. Moreover, individuals who fight through difficult situations by resisting various types of pressure and stress around them possess a higher level of psychological well-being (Ryff, 1989; Salovey & Mayer, 1990). Therefore, a possible mediating role of stress could be established on the relationship between emotional intelligence and psychological well-being in individuals as well.

Hence, both Ryff's Theory of Psychological Well-being (Ryff 1989) and Emotional Intelligence Model (Salovey & Mayer, 1990) were used as theoretical support for the current study where social support and emotional intelligence were investigated as possible predictors of psychological well-being as well as stress and grit as possible mediators on the relationship between social support and psychological well-being and emotional intelligence and psychological well-being.

## 2.11 Research Gaps

Maldives is a country that has yet to familiarize itself with the concept of psychological well-being and mental health due to the stigma revolving around it. Little is known about the possible predictor variables of psychological well-being among Maldivian undergraduate students as previous studies conducted in Maldives focused mostly on stress, depression, and anxiety in relation to mental health (Shanoora & Nawaz, 2018). The study that was conducted to investigate the prevalence of stress and other mental health issues (depression and anxiety) among Maldivian undergraduate students that showed more than 50% of undergraduate students go through moderate to high levels of stress, which could possibly affect the overall psychological well-being of students negatively as well as impact the mental health of the students negatively (Shanoora & Nawaza, 2018), further research is crucial to be conducted in order to investigate how stress, emotional intelligence, social support, and grit affect the overall psychological well-being of university students in Maldives. Thus, it is justifiable to highlight the need to conduct this study in order to investigate the current state of psychological well-being among Maldivian university students.

In the Maldivian context, factors such as social support, emotional intelligence, grit, and stress are all new concepts in relation to psychological well-being. While previous research did focus on prevalence of mental health disorders such as stress, the study did not go in depth as to how stress could affect the overall psychological well-being of students. All of the chosen variables for the current study are completely new in the Maldivian context, considering only one research has been conducted on university sample in relation to mental health (Shanoora & Nawaza, 2018).

While the relationship between social support, emotional intelligence, stress, grit, and psychological well-being has been investigated in first world countries (Costa et al., 2013; Huang et al., 2020; Mendoza et al., 2018; Salles et al., 2014), the results obtained through

these studies might not be able to generalize to a sample of undergraduate students in a developing or third world country like Maldives. This could be due to the differences in the educational system, cultural upbringing, religious upbringing as well as the average socio-economic status (American Psychological Association, 2017) between first world or second world countries and developing countries which could affect the relationship between the chosen predictor variables (social support and emotional intelligence) and the outcome variable (psychological well-being) among university undergraduate students along with the possible mediating variables of stress and grit as well.

In addition, not only in the context of Maldives but worldwide, grit is still a novel concept in the field of research, psychology, and education. Therefore the mediating role of grit is very much under-investigated (Alhadabi et al., 2019; Duckworth, 2007) between social support and psychological well-being, as well as between emotional intelligence and psychological well-being. Since grit is a rather new concept in academic research, while there are studies conducted to investigate grit as a predictor, there is a lack of literature specifically focusing on grit as a mediator. Hence, the current study aimed at investigating the possible mediating role of grit on the relationship between social support and psychological well-being, as well as between emotional intelligence and psychological well-being in the context of Maldivian undergraduate students.

While several research have been conducted to study grit as a predictor, there is a knowledge gap when it comes to the mediating role of grit. With high social support, people tend to be more persevering and motivated to strive through obstacles and negative life events in order to reach life goals. Furthermore, emotionally intelligent people are more able to manage and regulate their own emotions through difficult and stressful circumstances, thereby keeping them motivated and committed to their life goals. With an increase in perseverance or grit, overall psychological well-being is affected positively, establishing a

mediating role between social support and psychological well-being as well as between emotional intelligence and psychological well-being. In addition, most of the studies conducted to investigate grit were conducted on high school students and employees or in work places (Baruch-Feldman, 2017; Dam et al., 2018; Kim et al., 2020; Salles et al., 2014; Vainio & Daukantaitė, 2015). Generalization of the results from these studies might not be applicable to undergraduate students as there could be differences in the amount of workload (Vaiana, 2020) as well as everyday stressors faced by undergraduate students compared to high school students or even employees. Hence, the current study aimed to address this knowledge gap by investigating the mediating role of grit on the relationship between social support and psychological well-being, as well as on the relationship between emotional intelligence and psychological well-being among Maldivian undergraduate students.

Furthermore, the current study aimed to investigate the mediating role of stress between social support and psychological well-being as well as between emotional intelligence and psychological well-being in the context of Maldivian undergraduate students. Previous studies have been mostly conducted on high school students, employees, and the general population, where findings for this sample might not be generalized to undergraduate students sample (Malinauskas & Malinauskiene, 2018; Ruiz-Aranda et al., 2013; Sergin et al., 2007). Different levels of stress and workload faced by high school students, employees, and university undergraduate students could impact their overall psychological well-being differently for each respective sample group. Hence, there is a knowledge gap in relation to the mediating role of stress that is yet to be investigated in the context of undergraduate students. To further support the mediating role of stress to be investigated in the current study, significant relationships were established between social support and stress (Baqutayan, 2011; Crutcher et al., 2018; Hamdan-Mansour et al., 2007; Li & Peng, 2019; Ra, 2016; Yıldırım et al., 2017), social support and psychological well-being (Bukhari & Afzal, 2017; Emadpoor &

Lavasani, 2018; Mendoza et al., 2018; Varma et al., 2018), and stress and psychological well-being (Abdull Rahman et al., 2019; Elmalky et al., 2019; Shahira et al., 2018; Yang & Smith, 2016). Significant relationships were also established between emotional intelligence and stress (Enns et al., 2018, Ranasinghe et al., 2017), emotional intelligence and psychological well-being (Butt, 2014; Carmeli et al., 2009; Costa et al., 2013; Malinauskas & Malinauskiene, 2020; Moeller et al., 2020), and stress and psychological well-being (Abdull Rahman et al., 2019; Elmalky et al., 2019; Shahira et al., 2018; Yang & Smith, 2016). Hence, the knowledge gap about the possible mediating role of stress on the relationship between social support and psychological well-being and on the relationship between emotional intelligence and psychological well-being would be addressed in the current study.

By identifying the possible predictors of psychological well-being, awareness in the society could be raised regarding the state of psychological well-being and mental health problems along with the factors that could possibly affect psychological well-being among Maldivan university students. In this study, social support and emotional intelligence were the chosen predictors in relation to psychological well-being, along with stress and grit as mediators. This could then help students to confront their problems without having to worry about negative stigma and attitudes attached to mental health issues, and seek help to improve their overall psychological well-being and mental health to attain a successful and a more satisfying university life.

### **CHAPTER 3: METHODOLOGY**

# 3.1 Participants Sampling

A total of 212 Maldivian undergraduate students from both private and public universities participated in this study. Out of 212 students, after removing the outliers and the samples that did not fulfil the inclusion criterion, the final sample number is 206 students. Data was collected from undergraduate students (Maldivians, aged between 18 to 25 years from all fields of study) from both private and public universities located at the capital city of Maldives, Male' through convenience sampling and snowball sampling by distributing an online questionnaire via social media (Instagram, Viber, Whatsapp). There were students from a total of 5 universities which included 1 public university and 4 private universities/college. The sample size was calculated using G\*Power software for mediational analysis with a medium effect size and a power of .80. The current study comprised of a mediational analysis as well as a regression analysis. G\*Power software calculates the sample size required for a study based on the test being run and is one of the most commonly used software to calculate sample size by researchers (Kang, 2021). Other tertiary students from foundation, diploma, postgraduate programmes and non-Maldivian were excluded from the study.

Based on Mahalanobis distance to chi-square distribution, two outliers were detected with values more than .001. The outliers were removed and the analysis was conducted again. A normal distribution of data was obtained based on P-P plot and histogram as well (see Appendix P & Q). After excluding the two outliers as well as data that did not satisfy the inclusion criteria, a total of 206 participants were included for the actual analyses. The participants were between 18 and 25 years of age with a mean age of 22.08 and standard deviation of 1.24. There were 119 male (58%) and 87 (42%) female undergraduate students and their religious background is Islam. In addition, data collected also showed that majority

of the university undergraduate students stayed in rented apartments (71%), compared to own houses and university hostel.

# 3.2 Study Design

A cross-sectional quantitative research design was chosen for the study as to investigate the relationship between the independent variables (social support and emotional intelligence) and the dependent variable (psychological well-being) as well as the possible mediating role of grit and stress between social support and psychological well-being and between emotional intelligence and psychological well-being, through an online survey. A cross-sectional design is less time consuming and ideal for this study as it is able to investigate the predicting factors of psychological well-being among Maldivian undergraduate students at any given point of time (Kesmodel, 2018). In addition, results obtained in cross-sectional research designs can be used as a basis for further research on the concepts or issues of the research (Dovetail Editorial Team, 2023; Wang et al., 2020). A cross-sectional design also ensures lower error rate in this type of study. The risks of missing data points are lower as the data being collected are only from a chosen sample at a specific time point (Gaille, 2018). With students having to study from home during the COVID-19 pandemic phase, approaching students physically was unethical and prohibited. Therefore, an online survey was the most ideal approach, given the time and circumstances. The COVID-19 pandemic, which was occurring at the time this survey was performed, may have affected the students' overall psychological well-being. It is likely that the lockdown had a detrimental impact on the students' psychological well-being, increasing their stress levels. In this times of extreme tension and unpredictability, cross-sectional design was ideal in order to investigate and look into the psychological well-being and stress levels of the students.

### 3.3 Instruments

# 3.3.1 Psychological well-being

Ryff's 42-item version of Psychological Well-being Scale (PWB; Ryff, 1989) was used in the current study to measure overall psychological well-being in Maldivian university students. The scale includes six components of psychological well-being and happiness that include autonomy, purpose in life, personal growth, environmental mastery, positive relations with others, and self-acceptance. To calculate the score for each of these sub-scales, participants' responses to each subscale are added together and the total score for the scale was obtained by calculating the average score of all 42- items. Among the items, Q1, Q2, Q3, Q4, Q6, Q7, Q11, Q13, Q17, Q20, Q21, Q22, Q23, Q27, Q29, Q31, Q35, Q36, Q37, Q38, and Q40 were reversely scored by using the formula; [(Number of scale points) + 1)] -(Respondent's answer). Ryff's PWB Scale was chosen as it covers all the crucial aspects or components of well-being, happiness, and satisfaction, thereby giving a true measure for overall psychological well-being (Ryff, 1989). The response option for this scale ranges from 1 (Strongly Agree) to 7 (Strongly Disagree). Examples of the items are "I like most parts of my personality", "When I look at the story of my life, I am pleased with how things have turned out so far", "I am not interested in activities that will expand my horizons", "I judge myself by what I think is important, not by the values of what others think is important", "When I compare myself to friends and acquaintances, it makes me feel good about who I am", "I think it is important to have new experiences that challenge how you think about yourself and the world", "My attitude about myself is probably not as positive as most people feel about themselves" and "I have confidence in my opinions, even if they are contrary to the general consensus". Higher scores indicate higher levels of psychological well-being and lower scores indicate lower levels of psychological well-being. Based on previous studies conducted using Ryff's psychological well-being scale, this scale has shown to have high

Cronbach's values of bigger than .70 indicating good internal reliability (Mendoza et al., 2018, Sasaki et al., 2020, Sharma & Sharma, 2018). With the current sample, the 42-item PWB scale showed a high reliability Cronbach's alpha of .99.

### 3.3.2 Social Support

The 12-item Multidimensional Scale of Perceived Social Support (MSPSS) by Zimet and colleagues (1988) was employed to determine the degree of social support received from friends, family, and significant others. This 12-item scale is divided into three different subscales which measure social support from family, friends, and significant others. For the current study, the total score was calculated by summing up all 12 items. The MSPSS was answered using a 7-point rating scale ranging from 1 (very strongly disagree) to 7 (very strongly agree). Examples of the items are "There is a special person who is around when I am in need", "I get the emotional help and support I need from my family", "I can talk about my problems with my friends" and "There is a special person with whom I can share joys and sorrows" and "I have a special person who is a real source of comfort to me". Higher scores on MSPSS scale indicate higher level of social support. This scale has shown to have strong internal consistency and reliability with Cronbach's values of more than .80 for the total score of the measure (Basol, 2008; Hardan-Khalil & Mayo, 2015; Tresjos-Herrera et al., 2018; Yap et al., 2015). With the current sample, this scale had high reliability with a Cronbach's alpha of .99.

### **3.3.3** *Stress*

The 10-item Perceived Stress Scale (PSS) by Cohen (1988) was used to measure stress. PSS scores were obtained by scoring items 4, 5, 7, and 8 reversely, and then summing across all items. Examples of the items include "In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?", "In the last month, how often have you felt that you were unable to control the important things in your life?" "In the last month, how often have you been able to control irritations in your life?" and "In the last month, how often have you found that you could not cope with all the things that you had to do?". Higher total scores indicate higher stress and lower scores indicate lower stress in participants. Based on previous research conducted, Cronbach's alpha of the PSS was greater than .70 indicating a good reliability (Chen et al., 2021; Lee, 2012; Malik et al., 2021). Cronbach's alpha of the PSS-10 for the current sample was .97 indicating a high reliability.

#### 3.3.4 *Grit*

The 12-item Grit Scale by Duckworth (2007) was used to measure levels of grit. The Grit scale has two subscales which are perseverance of effort and consistency of interest. Perseverance of effort subscale is measured using items 1, 4, 6, 9, 10 and 12, while consistency of interest subscale is measured using items 2, 3, 5, 7, 8 and 11. Each item was rated on a range from 5 (*Very much like me*) to 1 (*Not like me at all*). Average score for perseverance of effort and consistency of interest is measured by taking the average score of items corresponding to the subscales. For the current study, an average score of all items was calculated. Examples of items include "I have achieved a goal that took years of work", "I often set a goal but later choose to pursue a different one.", "I have overcome setbacks to conquer an important challenge", "I have been obsessed with a certain idea or project for a short time but later lost interest" and "I have difficulty maintaining my focus on projects that

take more than a few months to complete". Higher scores indicate higher levels of grit. This measure has good reliability with Cronbach's alpha of .85 for overall scale and .78 for perseverance of effort and .84 for consistency of interest subscales based on previous research conducted (Duckworth et al., 2007). This measure has high reliability with Cronbach's alpha of .96 for overall scale from the current sample.

### 3.3.5 Emotional Intelligence

The 33-item Emotional Intelligence Scale by Schutte (1998) was used to assess emotional intelligence. This scale was developed based on Salovey and Mayer's Emotional Intelligence model (1990) and the scale has been found to have great internal validity. Out of the 33 items in this scale, 13 items are related to appraisal and expression of emotion, 10 items are related to regulation of emotion, and 10 items are related to the application of emotion category of the model of Emotional Intelligence. For the current study, total score of this scale was used to measure emotional intelligence. Each of the items is rated using a 5point scale which ranges from 1 (Strongly Disagree) to 5 (Strongly Agree). Examples of items in this scale are "I know when to speak about my personal problems to others" (regulation), "when I am faced with obstacles, I remember times I faced similar obstacles and overcame them" (Utilization of emotions), "When I experience a positive emotion, I know how to make it last" (Utilization of emotions), "I can tell how people are feeling by listening to the tone of their voice" (Appraisal of others emotions), "By looking at their facial expressions, I recognize the emotions people are experiencing" (Appraisal of others emotions) and "When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself". Higher scores on this scale indicate a higher level of emotional intelligence. Based on previous research conducted, it was found that this scale has good internal consistency with high Cronbach's alpha of .90 (Oyindamola et al.,

2020; Schutte et al., 1997). For the current study, this scale has good internal consistency with high Cronbach's alpha of .98.

# 3.4 Sampling procedure

This research was approved by Sunway University's Research Ethics Committee-Ethics Approval Code: /03PGSUREC20217 (see Appendix K). Participants were provided with the participant information sheet along with consent form (see Appendix N). Consent was obtained from the participants prior to answering the survey. In addition to this, participants were led to the 42-item Psychological Well-being Scale, 33-item Emotional Intelligence Scale, 12-item multidimensional scale of perceived social support scale, 10-item Perceived Stress Scale, and 12-item Grit Scale (Duckworth, 2007) to fill in for the purpose of the current research. Debriefing statement (see Appendix O) which stated the purpose and objectives of the current study was provided as well. In addition, participant's responses were ensured to be confidential and protected. Participants were allowed to withdraw at any point of the research without any penalty and there was no compensation for the participants in the current study.

Data collection was completed within a time period of four months, from September to December 2021. Participants were not given any compensation for participating in the current research and participation was consensual. Participants had to answer a total of 109 items from all the 5 scales used for the current research and it would take approximately 15-20 minutes for the students to complete the whole survey.

### 3.5 Data Analysis

Data collected from the online survey was analyzed using SPSS software version 23.

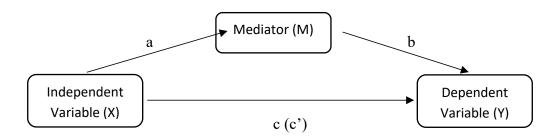
The current research hypothesized that social support and emotional intelligence are

predictors of psychological well-being among Maldivian undergraduate students. For the purpose of investigating the predicting effects of social support and emotional intelligence on psychological well-being, multiple linear regression was conducted. The current study hypothesized that stress and grit would mediate the relationship between social support and psychological well-being. The study also hypothesized that stress and grit would mediate the relationship between emotional intelligence and psychological well-being. The mediating role of grit and stress on the relationship between the predictor variables (social support and emotional intelligence) and outcome variable (psychological well-being) were investigated using SPSS PROCESS (Hayes, 2018). Mediation happens when an independent variable (X) affects the dependent variable (Y) through a mediator.

Figure 3.1 shows the pathway of the mediation process. Path a represents the effect of X on M and path b represents the effect of M on Y. Path c represents the direct effect of X on Y. Finally, path c represents the effect of X on Y while controlling for M. For the mediation analysis, PROCESS Model 4 with a 5,000 bootstrapping was used.

Figure 3.1

Mediation pathway



#### **CHAPTER 4: RESULTS**

To examine the predicting role of social support and emotional intelligence on psychological well-being of Maldivian undergraduate students, along with the mediating roles of stress and grit on the relationship between the predictor variables (social support and emotional intelligence) and the outcome variable (psychological well-being) among Maldivian undergraduate students, a sample of 206 students were used from private and public universities of Maldives. The intercorrelations, means and standard deviation for all the variables are displayed in Table 4.1. From table 4.1, emotional intelligence (r = .96, p < .001), social support (r = .93, p < .001), and grit (r = .94, p < .001) were significantly and positively correlated to psychological well-being while stress (r = -.93, p < .001) was found to be significantly and negatively correlated to psychological well-being. Results indicated that with stronger social support, higher emotional intelligence and higher levels of grit, the psychological well-being of Maldivian undergraduate students was higher as well. Results also indicated that with higher levels of stress, psychological well-being was lower among Maldivian undergraduate students.

Table 4.1

Descriptive statistics and Pearson's correlation table for social support, emotional intelligence, stress, grit, and psychological well-being

Descriptive Statistics and Correlations for Study Variables (N=206)

Variables	Mean	SD	1	2	3	4	5
1. Psychological Well-being	3.92	1.27	-				
2. Emotional Intelligence	105.98	23.95	.96***	-			
3. Social Support	4.10	1.27	.93***	.92***	-		
4. Stress	22.63	8.62	93***	90***	89***	-	
5. Grit	3.18	0.87	.94***	.94***	.90***	93***	-

<sup>\*\*\*</sup>p<.001

Based on Zimet et al. (1988), a mean score of 4.10 on the Multidimensional Scale of Perceived Social Support indicates a moderate level of social support. Meanwhile a mean score of 3.92 on the Psychological Well-being Scale indicates a moderate level of psychological well-being (Ryff, 1989). For emotional intelligence, based on the cut-off score put forward by Schutte (1998), the participants were found to have a moderate level of emotional intelligence, with a mean score of 105.98 on the Emotional Intelligence Scale. In addition, based on Duckworth's (2007) study, a mean score of 3.18 on the Grit Scale indicates a moderate level of grit among students. Finally, based on the cut-off values by Cohen (1988), the participants were found to experience high levels of stress, with a mean score of 22.63 on the Perceived Stress Scale.

In order to test the predicting role of social support and emotional intelligence on psychological well-being, a multiple linear regression was run. Assumptions for multicollinearity, normality, and outliers were tested as well prior to the main analysis (Multiple Linear Regression), and there was no violation of multicollinearity with VIF value less than 10 and Tolerance value more than 0.1 (Field, 2018).

H1: Social support and emotional intelligence will significantly predict psychological wellbeing among university students in Maldives.

A significant regression result was found F(2,203) = 1427.90, p<.001, with an  $R^2 = .93$ , which means 93% of the variance in the psychological well-being was explained by social support and emotional intelligence. Based on the analysis, it was found that both social support ( $\beta$ =.30 p<.001) and emotional intelligence ( $\beta$ =.68, p<.001) were significant predictors of psychological well-being among Maldivian undergraduate students. The coefficient of social support indicated that for every one unit change in social support, psychological well-being increases by .30. For emotional intelligence, psychological well-

being increases by .68 for every one unit change in emotional intelligence. Out of both the predictors (social support and emotional intelligence), emotional intelligence was found to be the stronger predictor of psychological well-being with a higher coefficient value. Table 4.2 shows the coefficients for the regression model. Based on these results, hypothesis 1 for the current study was supported where social support and emotional intelligence were found to be the significant predictors of psychological well-being among university undergraduate students in Maldives.

 Table 4.2

 Coefficients table for regression model

Results of Linear Regression

Variable	Beta	SE	LL	UL	β	p
Constant	-1.12	.12	-1.41	95		<.001
Social Support	0.29	.05	.16	.35	.30	<.001
Emotional Intelligence	0.04	.003	.03	.04	.68	<.001

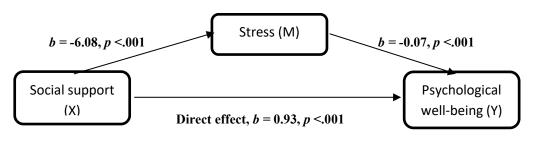
In order to test the hypotheses on the mediating roles of stress and grit on the relationship between social support and psychological well-being (H2 & H3) as well as the mediating roles of stress and grit on the relationship between emotional intelligence and psychological well-being (H4 & H5), mediation analysis was run using PROCESS model 4. Assumptions for normality, outliers, and multicollinearity were tested before running the mediation analysis. Based on the P-P plots and histogram, a normal distribution of data was found for each mediation case (see Appendix R to Appendix Y). In addition, the multicollinearity assumption was also not violated with VIF values less than 10 and Tolerance values more than 0.1 (Field, 2018) for all of the four mediation models.

H2: The relationship between social support and psychological well-being is mediated by stress.

Based on the mediation output, social support significantly predicted psychological well-being when stress was not present, b = 0.93, t = 38.42, p < .001, 95% CI [0.88, 0.98]. It was also shown that social support significantly predicted stress (mediator), b = -6.08, t = -29.17, p < .001, 95% CI [-6.49, -5.67]. In addition, stress significantly predicted psychological well-being in students, b = -0.07, t = -9.80, p < .001, 95% CI [-0.08, -0.05]. Finally, the output showed that social support predicted psychological well-being while controlling for stress, b = 0.53, t = 11.66, p < .001, 95% CI [0.44, 0.62]. The indirect effect of social support (X) on psychological well-being (Y) via stress (M) showed that there was a significant indirect effect of social support on psychological well-being through stress, b = 0.40, 95% BCa CI [0.28, 0.52]. Hence, hypothesis 2 for the current study was supported and stress was found to mediate the relationship between social support and psychological well-being among Maldivian undergraduate students. Figure 4.1 shows the mediation model of stress on the relationship between social support and psychological well-being.

Figure 4.1

Mediation model for social support, stress, and psychological well-being



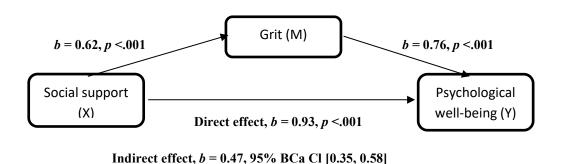
Indirect effect, b = 0.40, 95% BCa Cl [0.28, 0.52]

H3: The relationship between social support and psychological well-being is mediated by grit.

Based on the mediation output, social support significantly predicted psychological well-being when grit was not present b=0.93, t=38.43, p<0.01, 95% CI [0.88, 0.98]. It was also shown that social support significantly predicted grit (mediator), b=0.62, t=33.23, p<0.01, 95% CI [0.58, 0.65]. In addition, grit significantly predicted psychological well-being in students b=0.76, t=10.51, p<0.01, 95% CI [0.61, 0.90]. The output showed that social support predicted psychological well-being while controlling for grit b=0.46, t=9.26, p<0.01, 95% CI [0.36, 0.56]. Based on the results obtained, there was a significant indirect effect of social support on psychological well-being through grit, b=0.47, 95% BCa CI [0.35, 0.58]. Hence, grit was found to mediate the relationship between social support and psychological well-being among Maldivian undergraduate students, supporting hypothesis 3 of the current study. Figure 4.2 shows the mediation model of grit on the relationship between social support and psychological well-being.

Figure 4.2

Mediation model for social support, grit, and psychological well-being

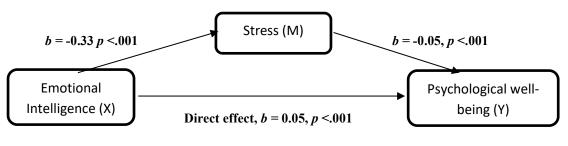


H4: The relationship between emotional intelligence and psychological well-being is mediated by stress.

Based on the mediation output, it was found that emotional intelligence significantly predicted psychological well-being when stress was not present, b = 0.05, t = 49.56, p < .001, 95% CI [0.05, 0.05]. Emotional intelligence significantly predicted stress (mediator), b = -0.33, t = -30.67, p < .001, 95% CI [-0.35, -0.31]. In addition, stress significantly predicted psychological well-being in students b = -0.05, t = -8.06, p < .001, 95% CI [-0.06, -0.04]. The output showed that emotional intelligence predicted psychological well-being while controlling for stress, b = 0.03, t = 16.67, p < .001, 95% CI [0.03, 0.04], where as emotional intelligence increases, psychological well-being also increases in students. The indirect effect of emotional intelligence (X) on psychological well-being (Y) via stress (M) showed that there was a significant indirect effect of emotional intelligence on psychological well-being through stress, b = 0.02, 95% BCa CI [0.01, 0.02]. Hence, stress was found to mediate the relationship between emotional intelligence and psychological well-being among Maldivian undergraduate students, supporting hypothesis 4 of the current study. Figure 4.3 shows the mediation model of stress on the relationship between emotional intelligence and psychological well-being.

Figure 4.3

Mediation model for emotional intelligence, stress, and psychological well-being



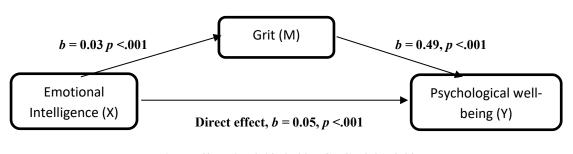
Indirect effect, b = 0.02, 95% BCa Cl [0.01, 0.02]

H5: The relationship between emotional intelligence and psychological well-being is mediated by grit.

Mediation output showed that emotional intelligence significantly predicted psychological well-being when grit was not present, b = 0.05, t = 49.56, p < 0.001, 95% CI [0.05, 0.05]. It was shown that emotional intelligence significantly predicted grit, b = 0.03, t = -38.95, p < 0.01, 95% CL [0.03, 0.04]. In addition, grit predicted psychological well-being in students as well, b = 0.49, t = 6.36, p < 0.01, 95% CI [0.33, 0.64]. The output showed that emotional intelligence predicted psychological well-being while controlling for grit, b = 0.03, t = 12.67, p < 0.01, 95% CI [0.03, 0.04] where as emotional intelligence increases, psychological well-being also increases. The indirect effect of emotional intelligence (X) on psychological well-being (Y) via grit (M) showed that there was a significant indirect effect of emotional intelligence on psychological well-being through grit, b = 0.02, 95% BCa CI [0.01, 0.02]. Hence hypothesis 5 of the current study is supported as grit was found to mediate the relationship between emotional intelligence and psychological well-being among Maldivian undergraduate students. Figure 4.4 shows the mediation model of grit on the relationship between emotional intelligence and psychological well-being.

Figure 4.4

Mediation model for emotional intelligence, grit, and psychological well-being



#### **CHAPTER 5: DISCUSSION**

In Maldives, it has become vital to spread awareness about the importance of psychological well-being and mental health of university students. The main reason behind it is the negative attitude and stigma revolving around the concept of psychological well-being and mental health among people in the Maldivian society. The current study was conducted to investigate the predicting role of social support and emotional intelligence on psychological well-being, as well as the mediating role of stress and grit on the relationships between the predictors (social support and emotional intelligence) and the outcome variable (psychological well-being) among undergraduate students in Maldives. It is found that social support and emotional intelligence significantly predicted psychological well-being among Maldivian undergraduate students. In addition, stress and grit were found to mediate the relationship between social support and psychological well-being as well as between emotional intelligence and psychological well-being.

Based on the means scores and standard deviation obtained for the variables in the current study, it was found that students experienced a moderate level of psychological well-being, grit, social support, and emotional intelligence. A moderate level of psychological well-being obtained in the context of Maldivian undergraduate students indicated that students might not be living to their fullest potential (Khairani et al., 2019; Ryff, 1989). University is a place where students learn and attain social skills as well as leadership skills for their future endeavours, thus, it is crucial to enhance and boost their overall psychological well-being to help these students reach their highest potential (Khairani et al., 2019; Ryff, 1989). While psychological well-being, social support, emotional intelligence, and grit were found to be in moderate levels, the mean score obtained for stress indicated that the students possessed high levels of stress based on the cut-off values by Cohen (1998). In Maldives where quality education resides in the capital city of Male', a large number of students

migrate or settle down in Male' to pursue university level education after completing their secondary and higher secondary education (Shanoora & Nawaza, 2018). Homesickness, study commitments, workload, financial difficulties as well as concerns about Covid -19 pandemic and lockdown could affect students negatively, thereby increasing stress in these students. Considering that majority of the students stayed in rented apartments (71%) with either family friends or by themselves, this could be one of the major reasons that resulted in high stress in these students. Compared to living in ones' own house, living in rented apartments might add to already existing stress and increase stress levels in university students as they could be worrying about managing house rent, living expenses, along with their university finances. Especially, university students living all by themselves in rented apartments without family or friends to rely on and attain support from, could elevate stress in university students as well. Staying away from family and friends or their usual support system, especially during the Covid-19 pandemic, could have had an adverse effect on the students' lives, causing them to go through high levels of stress thereby affecting their overall psychological well-being and mental health negatively.

As hypothesized in the current study, social support and emotional intelligence were found to predict psychological well-being among Maldivian university students. Results indicated that psychological well-being was better among university students with more social support and higher emotional intelligence compared to students with less social support and lower emotional intelligence. The results obtained were consistent with past research where social support was found to predict psychological well-being among individuals (Emadpoor & Lavasani, 2015; Lo-oh et al., 2018; Mendoza et al., 2018; Onuoha & Akintola, 2018; Varma et al., 2018). Based on the Psychological Well-being Model (Ryff, 1989), having a stronger social support system facilitates a higher level of psychological well-being among individuals. Social support enables individuals to maintain a good psychological well-

being due to continuous encouragement, social engagement and emotional engagement attained from loved ones. It helps individuals to stay motivated and focused in life and fight through any given circumstances, be it positive or negative (Gomez-Lopez et al., 2019; Mertika et al., 2020; Ryff, 1989). An affectionate and supportive relationship is able to promote good psychological well-being among university students (Ryff, 1989). With a stronger social support system around, individuals feel loved, valued, and well-respected, which in turn affects their overall psychological well-being positively (Pasinringi et al., 2020). This could be a possible reason as to why university students with higher social support showed higher levels of psychological well-being.

However, inconsistent results were obtained with one of the research studies conducted where no association was found between social support and mental well-being among university students (John et al., 2018). Research has found that support from peers or family alone does not facilitate well-being as much. Support from parents as well as support from peers and teachers are crucial in attaining a higher level of well-being (Awang et al., 2014; Gomez-Lopez et al., 2019). Basically, a strong support system which includes family, friends, and other important people in a student's life is important. In addition, John and colleagues (2018) focused on high school students, whereas the focus of the current study was university undergraduate students. University students who have to adjust to higher and newer academic demands and new learning environments have been found to experience elevated stress. Transition from school to university has been found to increase stress in students (Chen et al., 2013; Hernandez-Torrano et al., 2020; John et al., 2018; Shahira et al., 2018). Due to differences in stress levels and workload experienced between high school and university students, the inconsistent finding between John et al. (2018) and this current study is explainable.

Consistent with past research, this study found that emotional intelligence significantly predicted psychological well-being among individuals (Butt, 2014; Carmeli et al., 2009; Costa et al., 2013; Malinauskas & Malinauskiene, 2020; Moeller et al., 2020). Ryff (1989) stated that individuals who are better able to regulate, manage, and evaluate their own emotions and behaviors are able to resist environmental stressors to stay positive throughout, and that in turn affect their overall psychological well-being positively. Being emotionally intelligent means that individuals are able to understand what is happening around them, and they possess the ability to manage and regulate their own emotions based on any given circumstances, be it positive or negative (Guerra-Bustamante et al., 2019; Lopez-Zafra et al., 2019). They do not focus on the negative aspect of the situation and breakdown only to have their mental health affected negatively. Instead, they always try to remain positive and act appropriately and accordingly based on the situation faced by them (Ryff, 1989; Salovey & Mayer, 1990). By having this positivity and mental agility, individual's psychological wellbeing is enhanced which could be why university students with higher emotional intelligence also possessed higher levels of psychological well-being. When faced with obstacles and stressful life events, these individuals are better able to avoid emotional distress as a result of their improved coping strategies. Consequently, these individuals would have a better overall psychological well-being and mental health (Garcia-Alvarez et al., 2021).

Comparing between social support ( $\beta$  = .30) and emotional intelligence ( $\beta$  = .68), emotional intelligence was found to be the stronger predictor of psychological well-being among Maldivian undergraduate students. Even though social support was found to impact the psychological well-being of undergraduate students, it was evident that individuals who are able to understand, manage, and regulate their own emotions and feelings possessed higher levels of psychological well-being compared to the level of social support they receive. Studies have found that emotional intelligence is essential in the processes of social

adaptation and the development of interpersonal relationships as well (Lopez-Zafra et al., 2019; Malinauskas & Malinauskiene, 2020). One of the reasons why emotional intelligence better predicted psychological well-being compared to social support could merely be based on the fact that emotionally intelligent individuals are very well adaptive, understanding and excellent at regulating their own emotions as well as of others (Lopez-Zafra et al., 2019). Hence, when an individual possesses these qualities, whether or not they have the social support from the people around them, they are still able to stay positive and manage their own emotions and direct their behaviors appropriately. This is facilitated by being positive about themselves and becoming their own support system. This helps individuals with higher emotional intelligence to maintain a higher level of psychological well-being as well as a good mental health, supporting the possibility of emotional intelligence being a stronger predictor of psychological well-being than social support. Based on this result, it could be assumed that an individual's psychological well-being is based on how well an individual controls and manages their own feelings. This is attained by molding and adjusting themselves into any given situation, be it positive or negative, which then let them have control over their own psychological well-being. Individuals with higher levels of emotional intelligence believe that they can deal with any circumstances or situations in life, thereby doing their best to accomplish and achieve goals in life, which in turn affected their overall psychological well-being positively (Kamboj & Garg, 2021).

In a country where there is still a lot of stigma and negative approaches towards mental health issues and psychological issues, there is a slight lack of social support received by the university students. There is a high chance of students not receiving the support and help they require regarding mental health issues, as often times these problems are given a blind eye and neglected by family or loved ones. Individuals with mental health issues are deemed to be either irresponsible or lazy in nature when approached for help most of the time

(Ibrahim, 2018: Zalif, 2019). This could be one of the major reasons as to why emotional intelligence was a stronger predictor of psychological well-being compared to social support in the current study. University students might have to depend on themselves and become their own support system in order to deal with day to day experiences and circumstances, be it positive or negative. Eventually, these students would learn how to manage and regulate their own emotions and appropriately direct their behaviors. Therefore, whether or not students receive the social support they need from family, friends, or significant others, they are still able to cope with life situations and regulate emotions much better, thereby having a positive impact on their overall mental health and psychological well-being.

As hypothesized in the current study, stress was found to mediate the relationship between social support and psychological well-being among Maldivian undergraduate students. This means that the psychological well-being of students is affected directly by social support as well as indirectly by social support through stress. This showed that students with stronger support around them have a higher level of psychological well-being. This also showed that students with stronger social support are less susceptible to stress, which in turn increases their overall psychological well-being positively. Consistent with past research, university students with stronger social support have a higher level of psychological well-being (Emadpoor & Lavasani, 2015; Mendoza et al., 2018; Onuoha & Akintola, 2018; Varma et al., 2018). This is because social support serves as a good foundation in supporting students, making them less vulnerable to stress in their everyday life (Abdull Rahman et al., 2019; Elmalky et al., 2019; Shahira et al., 2018; Yang & Smith, 2016). Therefore, social support is crucial to help students overcome obstacles and stressful life events, have stable mental health, and maintain a higher level of psychological well-being (Bukhari & Afzal, 2017; Cooper, 2018).

In the Psychological Well-being model put forward by Ryff (1989), she emphasized on the importance of positive relationships with other people in relation to how it helps individuals in attaining a more satisfying and happy life, thereby helping them to get through difficult situations. Such strong positive relationships and support systems could be attained by family, friends, teachers, as well as significant others. A strong social support system is crucial in leading a life with lower levels of stress, which would then lead to a good level of psychological well-being, supporting the mediating role of stress on the relationship between social support and psychological well-being among university undergraduate students.

The current study also found that grit mediated the relationship between social support and psychological well-being among Maldivian undergraduate students. The psychological well-being of university students is affected directly by social support as well as indirectly by social support through grit. It showed that students with stronger social support have a higher level of psychological well-being, and students with stronger social support are grittier, which in turn increases their overall psychological well-being. Consistent with past research, students with stronger social support have a higher level of psychological well-being (Emadpoor & Lavasani, 2015; Mendoza et al., 2018; Onuoha & Akintola, 2018; Varma et al., 2018), and students who are grittier and perseverant tend to have higher psychological well-being as well (Dam et al., 2018; Disabato et al., 2018; Salles et al., 2014; Vainio & Daukantaitė, 2015; Weisskirch, 2019). Students with a healthy and strong social support system around them are believed to be more motivated, grittier, and perseverant in attaining life goals. Such individuals are also more resilient against stressful situations, thereby increasing their overall psychological well-being (Avey et al., 2009; Cao & Zhou, 2019). When individuals have support from people around them, during times of hardship and hopelessness, they remain focused and motivated without losing interest in their final life goals (Clark et al., 2019). This is due to the continuous encouragement and involvement of loved ones in individuals' life that help them to stand strong by being resilient. The current study filled the knowledge gap of grit as a possible mediator on the relationship between social support and psychological well-being among Maldivian undergraduate students.

In relation to grit as a mediator on the relationship between social support and psychological well-being, Ryff (1989) stated the importance of positive relationships and support from other people (friends, family, teachers, and significant others) in relation to the psychological well-being of individuals. In addition, individuals with purpose or goal in life are motivated to achieve those goals by having a sense of direction in life which indicates a higher level of psychological well-being. This is similar to individuals possessing characteristics such as grit or perseverance in achieving life goals and succeeding in their lives.

As hypothesized, stress was also found to mediate the relationship between emotional intelligence and psychological well-being where psychological well-being of university students is influenced directly by emotional intelligence as well as indirectly by emotional intelligence through stress. Consistent with past research, Maldivian undergraduate students with higher emotional intelligence have a higher level of psychological well-being (Butt, 2014; Carmeli et al., 2009; Costa et al., 2013; Malinauskas & Malinauskiene, 2020; Moeller et al., 2020), and students who experience lower stress in their daily dealings tend to have a higher level of psychological well-being as well (Abdull Rahman et al., 2019; Elmalky et al., 2019; Shahira et al., 2018; Yang & Smith, 2016). Therefore, being emotionally intelligent helps students overcome obstacles and stressful life events, have a stable mental health, thereby maintaining a higher level of psychological well-being (Malinauskas, & Malinauskiene, 2018; Ruiz-Aranda et al., 2013; Urquijo et al., 2015). While previous research focused on high school students when investigating the mediating role of stress on the relationship between emotional intelligence and psychological well-being (Malinauskas,

& Malinauskiene, 2018; Urquijo et al., 2015), the current study focused on undergraduate students and managed to address one of the research gaps in this area as well.

Results obtained for the mediating role of stress on the relationship between emotional intelligence and psychological well-being are also supported by both Emotional Intelligence Model (Salovey & Mayer, 1990) and the Psychological Well-Being Model (Ryff, 1989), where individuals with higher emotional intelligence are better able to manage and regulate their feelings by being responsible for their own happiness. This ability of managing emotions makes it easier for the individuals to deal with stressful or negative life situations as well (Salovey & Mayer, 1990). Individuals who fight through difficult situations and resist various types of stress possess a higher level of psychological well-being (Ryff, 1989; Salovey & Mayer, 1990).

The final hypothesis of the current study was supported where grit mediated the relationship between emotional intelligence and psychological well-being among Maldivian undergraduate students. The psychological well-being of students is influenced directly by emotional intelligence as well as indirectly by emotional intelligence through grit. This showed that Maldivian undergraduate students who are better at maintaining and regulating and managing their own emotions have a higher level of psychological well-being. By the same token, students who are more able to maintain and regulate their emotions are grittier that in turn increases their overall psychological well-being. These findings are consistent with several past research denoting that students who are emotionally intelligent have a higher level of psychological well-being (Butt, 2014; Carmeli et al., 2009; Costa et al., 2013; Malinauskas & Malinauskiene, 2020; Moeller et al., 2020), and students who are grittier and perseverant tend to have a higher level of psychological well-being as well (Dam et al., 2018; Disabato et al., 2018; Salles et al., 2014; Vainio & Daukantaitè, 2015; Weisskirch, 2019). Hence, students with higher levels of emotional intelligence are inclined to experience higher

levels of grit and the ability to persevere in any given situation by maintaining a higher level of psychological well-being (Harley, 2015; Kamboj & Garg, 2021). These findings are supported by both Emotional Intelligence Model (Salovey & Mayer, 1990) and Psychological Well-Being Model (Ryff, 1989) where these models stated that individuals with higher psychological well-being have goals and purposes in life (Ryff & Singer, 2006; Ryff, 1989). This is related to an individual being gritty and perseverant when it comes to achieving life goals. Salovey and Mayer (1990) stated that individuals who possess a higher level of emotional intelligence are more proficient when it comes to describing aims and objectives of life and staying motivated throughout to achieve these objectives in life, which is similar to individuals being gritty and perseverant in achieving life goals (Mayer, 2004; Salovey & Mayer, 1990).

Therefore, it is crucial to spread awareness in Maldivian society about the factors affecting and predicting the psychological well-being of university students, be it from family, friends, or educational organisations. Awareness about mental health issues is much crucial to be spread considering the high stigma and negative approach by the people in relation to the concept of mental health and psychological well-being (Ibrahim, 2018; Maldives Independent, 2017). As long as the negative attitude towards mental health issues is not fully eradicated, people in need of psychological help would never be able to receive the support they require from loved ones as well as professionals in order to overcome psychological and mental health problems they experience. The neglectful attitude of society towards mental health issues and its severity could be one of the reasons why emotional intelligence appears to be a stronger predictor of psychological well-being among university students compared to social support. Based on the results, it would be safe to say that support and encouragement from loved ones have an important impact on students' mental health and psychological well-being. A strong social support system keeps them motivated to work hard, stay perseverant, and

achieve their life goals. In addition, students can be made aware of the importance of emotional intelligence where informative sessions and programmes can be held for university students to understand the concept of emotional intelligence and how emotional intelligence could be attained or increased.

Since there had been no mental health policies or mental health laws in Maldives until recently (National Mental Health Policy, 2017), this research would contribute to the recently planned and introduced mental health policies by shedding light on the importance of mental health and psychological well-being of university students. By having a proper policy and law for mental health, it would enable more community services involving families and stakeholders in mental health promotion, prevention, care and rehabilitation (National Mental Health Policy, 2017; WHO-AIMS Report, 2006). Past study conducted with more than 900 Maldivian undergraduate students revealed that more than 50% of the students suffered from extreme levels of stress and anxiety as well as depression during their university years (Nawaza & Shanoora, 2018). Considering this finding, it is crucial to establish proper awareness programmes about mental health and psychological well-being. It is crucial to have interventions for reducing stress levels in university students considering there was a high level of stress among the students. Moreover, discussing factors that could contribute to lower level of psychological well-being and providing ways to tackle such factors could help students improve their own mental health and focus on their psychological well-being. In addition, parents and teachers could be made aware of factors that could positively and negatively affect the psychological well-being of these students in order to facilitate a healthier environment for students to bloom in the context of mental health and psychological well-being. With the help of the current study, awareness could be raised on how social support, emotional intelligence, stress and grit are related to overall psychological well-being among university undergraduate students.

This study has several strengths. Firstly, the current study is the first study that investigated psychological well-being, social support, emotional intelligence, stress, and grit in relation to university students in Maldives. Publishing the current study and joining the knowledge pool about mental health and psychological well-being of the university students could help spread awareness on the seriousness and importance of mental health and psychological well-being, especially in the case of Maldivian university students due to much under-investigation. To the author's knowledge, the current study is the first study that was conducted in Maldives to investigate on psychological well-being, social support, emotional intelligence, stress, and grit in relation to university students. Secondly, sample representation is another strength of the current study. Participants from both public and private universities in Maldives were recruited for the current study, which contrasts with a previous study that only recruited students from public universities (Shanoor & Nawaza, 2018). Lastly, this study achieved a balance of male and female participants, with 57.8% male and 42.2% female students, making the sample representative of the university student population in Maldives.

There are a few limitations in the current study. Firstly, majority of the questionnaires were distributed at a time period where university students were preparing and attending their semester examination. Even though questionnaires were distributed around the beginning to mid of the semester, most of the responses and data from the students were received during the end of the semester, coinciding with the days of examination preparation and assignment submission dates. It is recommended to conduct research involving stress as a variable in relation to mental health and well-being during a time period with no examinations or assignment deadlines. This is because, results obtained for stress in relation to psychological well-being might vary depending on whether questionnaires were distributed before, during, or after examination. Undoubtedly, students would be going through more than usual levels of stress during times of examinations which could affect their responses related to stress,

psychological well-being, as well as emotional intelligence on the questionnaire, which could further affect the final results of the study. Confounding variables such as academic related stressors or academic performance could affect the overall psychological well-being and mental health of the undergraduate students either positively or negatively. Based on a research conducted by Cohen and Janicki-Deverts (2012), it was found that the usual or normal mean score obtained on the Perceived Stress Scale for individuals below the age of 25 was M = 16.78, and in the current study, mean score for stress was M = 22.63 indicating that students were indeed going through a higher level of stress during this period of time. A high number of university students have been found to go through immense stress which negatively impacted their overall psychological well-being (Durbas et al., 2021; Lischer et al., 2021; Malik et al., 2021). Moreover, this study was carried out during the COVID-19 pandemic whereby the pandemic might influence the students' stress level and psychological well-being.

Another limitation for the study was being unaware of the household conditions of the individuals. During the time of data collection, students were still mostly studying from home. The household conditions and family conditions of the participants may affect the psychological well-being of the students because of the environment the individuals live and study in. Studying from home was found to distract students from their studies, making it hard for them to focus on their goals. Students also developed a feeling of uncertainty and fear towards examinations while studying online (Idris et al., 2021) as they might not be having the usual face-to-face group studies with their classmates, which might boost their confidence for their examinations and assignments. Therefore, future studies should consider investigating more variables such as demographic variables that include home environment (Fahssbender & Leyendecker, 2018; Navarro-Carrillo et al., 2020) and marital status of the parents of university students (Geshica & Musabiq, 2018; Wahyuningsih et al., 2020) in

relation to psychological well-being as these variables might have an effect on the university students' psychological well-being and mental health as well.

Lastly, the current study used cross-sectional method to investigate the possible predictors and mediators of psychological well-being. It is known that a cross-sectional study cannot establish a cause-and-effect relationship between the predictor variables and outcome variables. Further research adopting longitudinal research design could be conducted in order to better understand what factors could likely affect the overall psychological well-being of university undergraduate students and whether or not social support and emotional intelligence are actual predictors of psychological well-being in the context of Maldivian university students, thereby establishing a cause and effect relationship between the predicting variables and the outcome variable.

#### **CHAPTER 6: CONCLUSION**

The goal of the current study conducted with Maldivian undergraduate students was to investigate whether social support and emotional intelligence predict psychological well-being. The current study also investigated the mediating role of stress on the relationship between social support and psychological well-being, as well as between emotional intelligence and psychological well-being. Finally, the study investigated the mediating role of grit on the relationship between social support and psychological well-being, as well as between emotional intelligence and psychological well-being in the context of Maldivan undergraduate students.

The current study conducted with a total of 206 students from the capital city of Maldives, Male' included university undegraduate students from both private and public universities from all fields of study. This cross-sectional study included a total of 119 male and 87 female students. Data were collected through an online survey where the participant information sheet, consent form, debriefing statement and questionnaires were distributed via social media. Carol Ryff's 42-item Psychological Well-being Scale (Ryff, 1989), Zimet and colleague's (1988) 12-item Multidimensional Scale of Perceived Social Support (MSPSS), 10-item Perceived Stress Scale (PSS) by Cohen (1988), 12-item Grit Scale by Duckworth (2007), and 33-item Emotional Intelligence Scale by Schutte (1998) were used to measure the psychological well-being, social support, stress, grit, and emotional intelligence, respectively. All of these five instruments showed good internal reliability in the current study, obtaining Cronbach's Alpha values of more than .90. SPSS software version 23 was used to analyze the collected data. After testing for violation of assumptions and removing outliers, Multiple Linear Regression was run to test for the predicting roles of social support and emotional intelligence on psychological well-being and SPSS PROCESS, model 4 (Hayes, 2018) was run to test for possible mediation (stress and grit).

Multiple linear regression analysis showed that both social support and emotional intelligence significantly predicted psychological well-being among Maldivian undergraduate students where emotional intelligence was found to be the stronger predictor of psychological well-being compared to social support. The results of the current study also demonstrated that stress acted as a significant mediator in the relationship between social support and psychological well-being, as well as in the relationship between emotional intelligence and psychological well-being. In addition, a significant mediating role of grit was also found in the relationship between social support and psychological well-being, and in the relationship between emotional intelligence and psychological well-being in the context of Maldivian undergraduate students.

Social support and emotional intelligence have been found to be important predictors of psychological well-being of university students. University students undergo immense stress due to university workload and having to keep up with their grades from year to year in their undergraduate level. This stress that they are experiencing could be due to the absence in the ability to manage and regulate emotions or due to having lower emotional intelligence. In general, students go through societal and parental pressure to reach an expected achievement or academic outcome, putting the students under more stress. Continuous stress and workload could affect university students' overall mental health and psychological well-being as well. As the current study found that social support and emotional intelligence positively predicted psychological well-being, students with higher social support and emotional intelligence will have higher levels of psychological well-being.

In a country like Maldives, where there is less awareness and more negativity around the concept of mental health and psychological well-being, it is recommended for universities, the government and leading organizations to shed light upon psychological well-being and mental health and spread awareness considering the high percentage of university students, as well as the general population, going through high stress as well as different kinds of mental health challenges. Shedding light upon important factors contributing to mental health issues and educating the society about psychological well-being could eliminate any stigma related to psychological issues faced by the general population. In addition, mental health awareness programmes coordinated by experts or professionals could be conducted at least once a year to raise awareness specifically among university students. A recent campaign that was launched jointly by the Government of Maldives and UNICEF has begun their journey in eliminating negative attitudes and stigma that revolve around the concept of mental health problems in the Maldivian society (Zuhury, 2022). This would be a great start in spreading awareness and making people realize that mental health problems are as serious as any physical problem. Finally, universities should recruit more mental health counselors to attend and assist students who encounter issues in psychological well-being and mental health. This could then enable more studies to be conducted in Maldives relating to the field of psychology and psychological well-being, which could then foster a more accepting and understanding society.

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## Appendix A

### Psychological Well-being Scale (Ryff, 1989)

Number of item: 42

Answer format: 1= Strongly agree, 2= somewhat agree, 3= A little agree, 4- Neither agree nor disagree, 5= A little disagree, 6= Somewhat disagree, 7= Strongly disagree

Items 1, 2, 3, 4, 6, 7, 11, 13, 17, 20, 21, 22, 23, 27, 29, 31, 35, 36, 37, 38, and 40 should be reverse scored.

Total scale score is obtained by calculating the average of the total score obtained for all the 42 items.

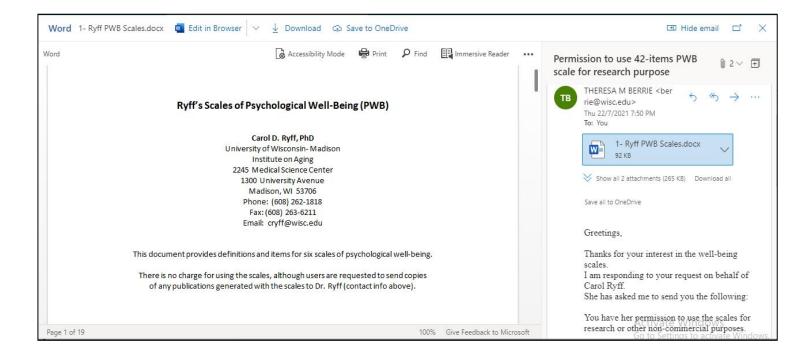
	Statement	Strongly agree	Somewha t agree	A little agree	Neither agree nor disagree	A little disagree	Somewha t disagree	Strongly disagree
1	"I am not afraid to voice my opinions, even when they are in opposition to the opinions of most people."	1	2	3	4	5	6	7
2	"For me, life has been a continuous process of learning, changing, and growth."	1	2	3	4	5	6	7
3	"In general, I feel I am in charge of the situation in which I live."	1	2	3	4	5	6	7
4	"People would describe me as a giving person, willing to share my time with others."	1	2	3	4	5	6	7
5	"I am not interested in activities that will expand my horizons."	1	2	3	4	5	6	7
6	"I enjoy making plans for the future and working to make them a reality."	1	2	3	4	5	6	7
7	"Most people see me as loving and affectionate."	1	2	3	4	5	6	7
8	"In many ways I feel disappointed about my achievements in life."	1	2	3	4	5	6	7
9	"I live life one day at a time and don't really think about the future."	1	2	3	4	5	6	7
10	"I tend to worry about what others think of	1	2	3	4	5	6	7

10   Without   Long and the starty of my life   Long my life and with how the more than a large and the more than a larg		22							
Story of my life, I am plessed with how things have turned out."	11	me."	1	2	2	1	5	6	7
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arranging my life in a way that is satisfying me."									
Way that is satisfying	12		1	2	3	4	5	6	7
13									
13									
usually influenced by what everyone else is doing."   14   71 gave up trying to 1 make big improvements or changes in my life a long time ago."   2   3   4   5   6   7     15   71 he demands of everyday life often get me down."   2   3   4   5   6   7     16   71 have not 1   2   3   4   5   6   7     17   Think it is important to have new experiences that challenge how you withink about yourself and the world."   2   3   4   5   6   7     18   "Maintaining close relationships has been difficult and provided as positive as most people feel about themselvies as most bink is important, not by the values of what others think is important, not by the values of what others think is important, not by the values of what others think is important, not by the values of what others think important, not by the values of what others think is important, not by the values of what others think important, not by the values of what others think important, not by the values of what others think important, not by the values of what others think important, not by the values of what others think important, not by the values of what others think important, not by the values of what others think important, not by the values of what others think important, not by the values of what others think important, not by the values of what others think important, not by the value of which are with the value of which are value of the	12		1	2	2	1	5	6	7
What everyone else is dolong."   1   2   3   4   5   6   7	13		1	2	3	4	3	O	\
14   "I gave up trying to make big improvements or changes in my life a long time ago."   2   3   4   5   6   7     15   "The demands of exceptioned many warm and trusting relationships with others."   1   2   3   4   5   6   7     16   "I have not experienced many warm and trusting relationships with others."   1   2   3   4   5   6   7     17   "I think it is important to have new experiences that challenge how you think about yourself and the world."   2   3   4   5   6   7     18   "Maintaining close relationships has been difficult and presented in the interestives."   2   3   4   5   6   7     19   "My attitude about prospective as most use people feel about themselves."   2   3   4   5   6   7     20   "I have a sense of direction and purpose in life."   2   3   4   5   6   7     21   "I judge myself by what I think is important, not by the values of what others think is important."   2   3   4   5   6   7     22   "In genal, I feel I build a living environment and a lifestyle for myself that is much to my liking."   2   3   4   5   6   7     24   "I tend to be influenced by people for land positive and the community and the community around me."   2   3   4   5   6   7     26   "I do not enjoy being in new situations that community around me."   2   3   4   5   6   7									
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Improvements   Or changes in my life a long time ago."	14	"I gave up trying to	1	2	3	4	5	6	7
Changes in my life a long time ago."		2							
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15   "The demands of everyday life often get me down."   2									
veryday life often get me down."	15		1	2	3	4	5	6	7
16	13		•	-	3				
16   "  have not experienced many warm and trusting relationships with others."   17   "I think it is important to have new experiences that challenge how you think about yourself and the world."   2   3   4   5   6   7     18   "Maintaining close relationships has been difficult and frustrating for me."   2   3   4   5   6   7     19   "My attitude about myself is probably not as positive as most people feel about themselves."   2   3   4   5   6   7     20   "I have a sense of direction and purpose in life."   2   3   4   5   6   7     21   "I judge myself by what I think is important. not by the values of what others think is important.   2   3   4   5   6   7     22   "In general, I feel confident and positive about myself."   2   3   4   5   6   7     23   "I have been able to build a living environment and a lifestyle for myself that is much to my liking."   1   2   3   4   5   6   7     24   "I tend to be build a living environment and a lifestyle for myself that is much to my liking."   2   3   4   5   6   7     25   "I do not enjoy being in new situations that require me to change my old familiar ways of doing things."   2   3   4   5   6   7     26   "I do not fit very well with the people and the community around me."   2   3   4   5   6   7									
warm and trusting relationships with others."	16	"I have not	1	2	3	4	5	6	7
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17     "I think it is important to have new experiences that challenge how you think about yourself and the world."									
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as positive as most people feel about themselves."   20   "I have a sense of direction and purpose in life."   2   3   4   5   6   7	19	"My attitude about	1	2	3	4	5	6	7
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22       "In general, I feel confident and positive about myself."       1       2       3       4       5       6       7         23       "I have been able to build a living environment and a lifestyle for myself that is much to my liking."       1       2       3       4       5       6       7         24       "I tend to be influenced by people with strong opinions."       1       2       3       4       5       6       7         25       "I do not enjoy being in new situations that require me to change my old familiar ways of doing things."       1       2       3       4       5       6       7         26       "I do not fit very well with the people and the community around me."       1       2       3       4       5       6       7         27       "I know that I can       1       2       3       4       5       6       7									
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the community around me."  27 "I know that I can 1 2 3 4 5 6 7	26		1	2	3	4	5	6	7
around me."         3         4         5         6         7									
27 "I know that I can 1 2 3 4 5 6 7									
	27		1	2	3	4	5	6	7

	they know they can							
	trust me."							
28	"When I think about it, I haven't really improved much as a person over the	1	2	3	4	5	6	7
29	years." "Some people wander	1	2	3	4	5	6	7
2)	aimlessly through life, but I am not one of them."	1	2	3		3	O .	,
30	"I often feel lonely because I have few close friends with whom to share my concerns."	1	2	3	4	5	6	7
31	"When I compare myself to friends and acquaintances, it makes me feel good about who I am."	1	2	3	4	5	6	7
32	"I don't have a good sense of what it is I'm trying to accomplish in life."	1	2	3	4	5	6	7
33	"I sometimes feel as if I've done all there is to do in life."	1	2	3	4	5	6	7
34	"I feel like many of the people I know have gotten more out of life than I have."	1	2	3	4	5	6	7
35	"I have confidence in my opinions, even if they are contrary to the general consensus."	1	2	3	4	5	6	7
36	"I am quite good at managing the many responsibilities of my daily life."	1	2	3	4	5	6	7
37	"I have the sense that I have developed a lot as a person over time."	1	2	3	4	5	6	7
38	"I enjoy personal and mutual conversations with family members and friends."	1	2	3	4	5	6	7
39	"My daily activities often seem trivial and unimportant to me."	1	2	3	4	5	6	7
40	"I like most parts of my personality."	1	2	3	4	5	6	7
41	"It's difficult for me to voice my own opinions on controversial matters."	1	2	3	4	5	6	7
42	"I often feel overwhelmed by my responsibilities."	1	2	3	4	5	6	7

#### Appendix B

### Permission to use 42-item Psychological Well-being Scale (Ryff 1989)



## **Appendix C**

# **Emotional Intelligence Scale (Schutte, 1998)**

Instructions: Indicate the extent to which each item applies to you using the following scale:

1 = strongly disagree, 2 = disagree, 3 = neither disagree nor agree, 4 = agree, 5 = strongly agree

Total score for the scale is obtained by calculating the sum for all the 33 items.

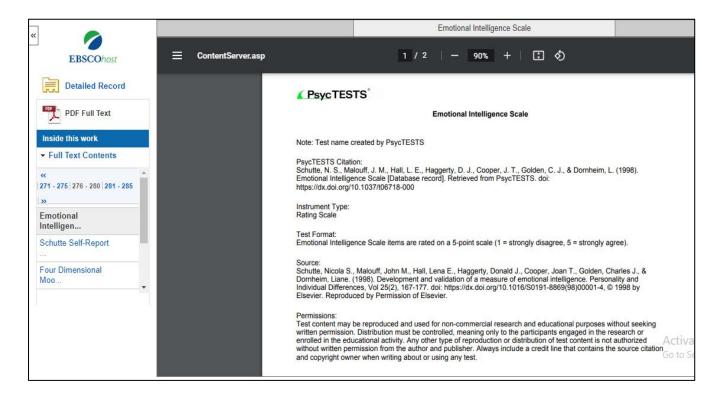
	Statement	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1	I know when to speak about my personal problems to others	1	2	3	4	5
2	When I am faced with obstacles, I remember times I faced similar obstacles and overcame them	1	2	3	4	5
3	I expect that I will do well on most things I try	1	2	3	4	5
4	Other people find it easy to confide in me	1	2	3	4	5
5	I find it hard to understand the non- verbal messages of other people	1	2	3	4	5
6	Some of the major events of my life have led me to re-evaluate what is important and not important	1	2	3	4	5
7	When my mood changes, I see new possibilities	1	2	3	4	5
8	Emotions are one of the things that make my life worth living	1	2	3	4	5
9	I am aware of my emotions as I experience them	1	2	3	4	5
10	I expect good things to happen	1	2	3	4	5
11	I like to share my emotions with others	1	2	3	4	5
12	When I experience a positive emotion, I know how to make it last	1	2	3	4	5
13	I arrange events others enjoy	1	2	3	4	5

14	I seek out activities that make me happy	1	2	3	4	5
15	I am aware of the non-verbal messages I send to others	1	2	3	4	5
16	I present myself in a way that makes a good impression on others	1	2	3	4	5
17	When I am in a positive mood, solving problems is easy for me	1	2	3	4	5
18	By looking at their facial expressions, I recognize the emotions people are experiencing	1	2	3	4	5
19	I know why my emotions change	1	2	3	4	5
20	When I am in a positive mood, I am able to come up with new ideas	1	2	3	4	5
21	I have control over my emotions	1	2	3	4	5
22	I easily recognize my emotions as I experience them	1	2	3	4	5
23	I motivate myself by imagining a good outcome to tasks I take on	1	2	3	4	5
24	I compliment others when they have done something well	1	2	3	4	5
25	I am aware of the non-verbal messages other people send	1	2	3	4	5
26	When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself	1	2	3	4	5
27	When I feel a change in emotions, I tend to come up with new ideas	1	2	3	4	5
28	When I am faced with a challenge, I give up because I believe I will fail	1	2	3	4	5
29	I know what other people are feeling just by looking at them	1	2	3	4	5
30	I help other people feel better when they are down	1	2	3	4	5
31	I use good moods to help myself keep trying in the face of obstacles	1	2	3	4	5

32	I can tell how people are feeling by	1	2	3	4	5
	listening to the tone of their voice too					
33	It is difficult for me to understand why	1	2	3	4	5
	people feel the way they do					

#### Appendix D

#### Permission to use Emotional Intelligence Scale (Schutte. 1998)



#### **Appendix E**

#### **MSPSS (Zimet, 1988)**

Instructions: We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

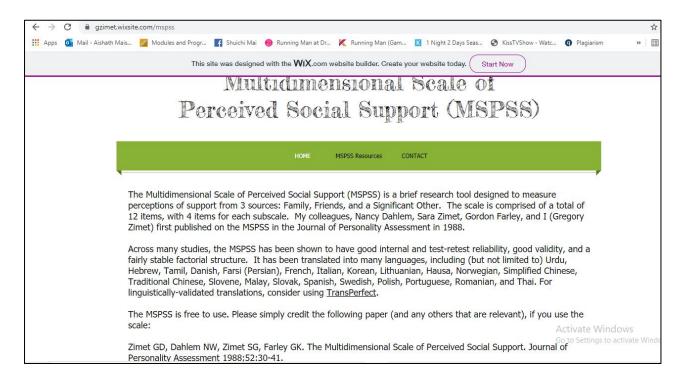
Circle the "1" if you Very Strongly Disagree, "2" if you Strongly Disagree, "3" if you Mildly Disagree, "4" if you are Neutral, "5" if you Mildly Agree, "6" if you Strongly Agree, "7" if you Very Strongly Agree

Total score for the scale is obtained by calculating the average for all the 12 items.

•	Statement	Very strongly	Strongly disagree	Mildly disagree	Neutral	Mildly agree	Strongly agree	Very strongly
		disagree	8			8	8	agree
1	There is a special person who is around when I am in need.	1	2	3	4	5	6	7
2	There is a special person with whom I can share joys and sorrows.	1	2	3	4	5	6	7
3	My family really tries to help me.	1	2	3	4	5	6	7
4	I get the emotional help & support I need from my family	1	2	3	4	5	6	7
5	I have a special person who is a real source of comfort to me	1	2	3	4	5	6	7
6	My friends really try to help me.	1	2	3	4	5	6	7
7	I can count on my friends when things go wrong	1	2	3	4	5	6	7
8	I can talk about my problems with my family	1	2	3	4	5	6	7
9	I have friends with whom I can share my joys and sorrows	1	2	3	4	5	6	7
10	There is a special person in my life who cares about my feelings.	1	2	3	4	5	6	7
11	My family is willing to help me make decisions.	1	2	3	4	5	6	7
12	I can talk about my problems with my friends	1	2	3	4	5	6	7

#### Appendix F

#### Permission to use MSPSS (Zimet et al, 1988)



# Appendix G

# Perceived Stress Scale (Cohen, 1988)

The rating scale is as follows:

0: Never, 1: Almost never, 2: Sometimes, 3: fairly often, 4: Very often

Items 4, 5, 7, & 8 should be reversed scored.

Total score for the scale is obtained by calculating the sum of all the 10 items.

٠	Statement	Never	Almost never	Sometimes	Fairly often	very often
1	In the last month, how often have you been upset because of something that happened unexpectedly?	0	1	2	3	4
2	In the last month, how often have you felt that you were unable to control the important things in your life?	0	1	2	3	4
3	In the last month, how often have you felt nervous and "stressed"?	0	1	2	3	4
4	In the last month, how often have you felt confident about your ability to handle your personal problems?	0	1	2	3	4
5	In the last month, how often have you felt that things were going your way?	0	1	2	3	4
6	In the last month, how often have you found that you could not cope with all the things that you had to do?	0	1	2	3	4
7	In the last month, how often have you been able to control irritations in your life?	0	1	2	3	4
8	In the last month, how often have you felt that you were on top of things?	0	1	2	3	4

9	In the last month, how often have	0	1	2	3	4
	you been angered because of					
	things that were outside of your					
	control?					
10	In the last month, how often have	0	1	2	3	4
	you felt difficulties were piling					
	up so high that you could not					
	overcome them?					

#### Appendix H

#### Permission to use Perceived Stress Scale (Cohen, 1988)

#### PERMISSION FOR USE OF THE PERCEIVED STRESS SCALE

I apologize for this automated reply. Thank you for your interest in our work.

PERMISSION FOR USE BY STUDENTS AND NONPROFIT ORGANIZATIONS: If you are a student, a teacher, or are otherwise using the Perceived Stress Scale (PSS) without making a profit on its use, you have my permission to use the PSS in your work. Note that this is the only approval letter you will get. I will not be sending a follow-up letter or email specifically authorizing you (by name) to use the scale.

PERMISSION "FOR PROFIT" USE: If you wish to use the PSS for a purpose other than teaching or not for profit research, or you plan on charging clients for use of the scale, you will need to see the next page: "Instructions for permission for profit related use of the Perceived Stress Scale".

QUESTIONS ABOUT THE SCALE: Information concerning the PSS can be found at <a href="https://www.cmu.edu/dietrich/psychology/stress-immunity-disease-lab/index.html">https://www.cmu.edu/dietrich/psychology/stress-immunity-disease-lab/index.html</a> (click on scales on the front page). Questions about reliability, validity, norms, and other aspects of psychometric properties can be answered there. The website also contains information about administration and scoring procedures for the scales. Please do not ask for a manual. There is no manual. Read the articles on the website for the information that you need.

**TRANSLATIONS**: The website (see URL above) also includes copies of translations of the PSS into multiple languages. These translations were done *by other investigators*, not by our lab, and we take no responsibility for their psychometric properties. If you translate the scale and would like to have the translation posted on our website, please send us a copy of the scale with information regarding its validation, and references to relevant publications. If resources are available to us, we will do our best to post it so others may access it.

Good luck with your work.

Sheldon Cohen

Robert E. Doherty University Professor of Psychology

3/20(h. (3)

Department of Psychology

Baker Hall 335-D

Carnegie Mellon University

Pittsburgh, PA 15213

## Appendix I

#### Grit Scale (Duckworth, 2007)

1= Very much like me, 2= Mostly like me, 3=Somewhat like me, 4= Not much like me, 5= Not much like me at all

Perseverance of effort subscale is measured using items 1, 4, 6, 9, 10 and 12

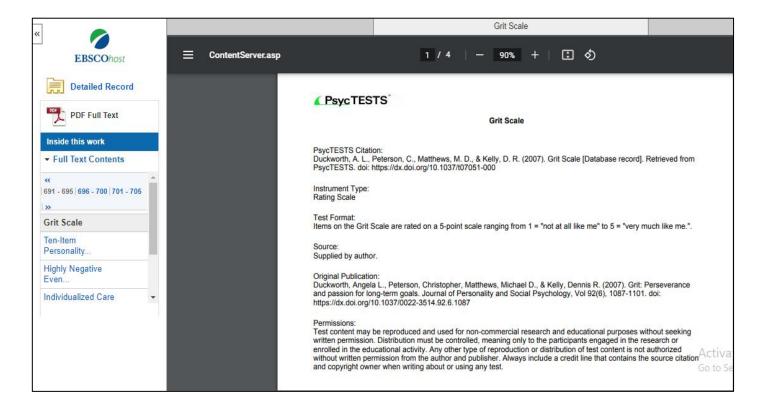
Consistency of interest subscale is measured using items 2, 3, 5, 7, 8 and 11 with a score of 5 = Very much like me to 1 = Not like me at all.

Total score for the scale is obtained by calculating the average of all the 12 items.

•	Statement	Very much	Mostly like	Somewhat like	Not much like	Not like me at all
		like me	me	me	me	
1	I have overcome setbacks to conquer an important challenge.	1	2	3	4	5
2	New ideas and projects sometimes distract me from previous ones.	1	2	3	4	5
3	My interests change from year to year	1	2	3	4	5
4	Setbacks don't discourage me.	1	2	3	4	5
5	I have been obsessed with a certain idea or project for a short time but later lost interest.	1	2	3	4	5
6	I am a hard worker.	1	2	3	4	5
7	I often set a goal but later choose to pursue a different one.	1	2	3	4	5
8	I have difficulty maintaining my focus on projects that take more than a few months to complete	1	2	3	4	5
9	I finish whatever I begin	1	2	3	4	5
10	I have achieved a goal that took years of work	1	2	3	4	5
11	I become interested in new pursuits every few months.	1	2	3	4	5
12	I am diligent.	1	2	3	4	5

#### Appendix J

#### Permission to use Grit Scale (Duckworth, 2007)



#### Appendix K

#### **Ethics Approval Letter**



17 September 2021

Ref No: PGSUREC2021/037

#### Fathimath Maasha

Department of Biological Sciences School of Medical and Life Sciences (SMLS) Sunway University

Dear Fathimath Maasha,

Research Ethics Approval of "Psychological well-being among university students in Maldives- The mediating role of stress and grit"

Sunway University Research Ethics Committee has reviewed the documents you have submitted and has given approval for your proposed study.

The final list of documents reviewed and approved by the Committee is as per below:

- 1. Ethics Application Form
- 2. Participation Information Sheet
- 3. Consent Form
- 4. Citi Certificate

Please remember that you are required to inform the Committee of (1) any changes in your research procedures and (2) the date when the project is completed.

The Committee wishes you the best success for your project.

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Yours sincerely, For Head

Prof. Peter Heard

Chair,

Sunway University Research Ethics Committee

Owned and governed by the

Jeffrey Cheah Foundation

# Appendix L

# **Demographic Information Form**

Gender:	Male		Female	
Age:		Religion:		
Region/island:				
Name of the University:	·			
Field of study:				
Level of study:  Foundation	n Diploma	a 🔲 l	Jndergraduate	Postgraduate
CGPA:				

#### Appendix M

#### **Participant's Information Sheet**

**Title of Study:** Psychological well-being among university students in Maldives: The mediating role of stress and grit.

**Objective:** To investigate the predictors of psychological well-being among university undergraduate students in Maldives with stress and grit as the potential mediators.

**Procedures:** Upon consenting, participants will be given a 109 questions questionnaire that is related to social support, emotional intelligence, stress, grit and psychological well-being. At the end of the survey, a debriefing statement will be provided. It might take approximately 20-30 minutes for participants to complete the survey and go through the necessary documents. Depending on the participant, the time taken might be more or less.

Participants are eligible to participate in this survey if particapant is a Maldivian undergraduate student who is currently studying at a university of Maldives and aged between 18 to 25 years old.

**Right to Refuse or Withdraw:** Participants participation in the study would be completely voluntary and refusal to take part in this research or withdrawal from this research would not involve any penalty.

Risks and Discomforts: There is no known risks or discomforts in participating in this research.

Benefits: Participants will not receive any direct benefit of participation.

**Compensation:** No compensation for participation in this research.

**Anonymous and Confidential Data Collection:** The data collected from the participants would be anonymous ensuring full confidentiality of the whole process.

Confidentiality of records: Data collected from the participants would be kept confidential between the researcher and the participants, and data will be collected anonymously without having to reveal the participant's identity. Data will be stored on Excel or SPSS software on a password protected device (laptop). Data will be accessible to the researcher only. Participants would also be assured that only grouped data would be used for research purpose. Data collected will be disposed at the end of the research.

Who to contact with questions: This study has been approved by the Sunway University's Research Ethics Committee (Ethics Approval Code: /03PGSUREC20217). If there are inquiries about research participant's right, please contact the Sunway University's Research Ethics Committee at researchethics@sunway.edu.my or 03-74918622 (Ext. 7547).

If any doubts or questions arise in relation to any questions provided, feel free to contact the researcher, Fathimath Maasha, at

20060737@imail.sunway.edu.mymailto:fathimath.maasha25@hotmail.com.

Research Supervised by:

Dr. Wu Shin Ling

Lecturer

shinlingw@sunway.edu.my

Dr. Grace Yap Chin Choo

Health Psychologist

Department of Psychology

gracey@sunway.edu.my

# Appendix N

# **Consent Form**

I understand the procedures described above. My questions had and I acknowledge that I am participating in this study of my or refuse to participate or stop participating at any time.		•
Hence, I am willingly agreeing to participate in this research.	YES	NO 🔲

#### **Appendix O**

#### **Debriefing Statement**

#### **The Debriefing Statement**

Thank you for the participation in this research!

#### Purpose of Study

Your participation is highly important in helping researchers to investigate the predictors of psychological well-being among university undergraduate students in Maldives with stress and grit as the potential mediators.

#### Confidentiality

All results are grouped together; therefore, individual results are not available. Your participation will remain confidential and information collected will be used for research purposes only.

#### Contact information

If you have any questions or concerns regarding this study, its purpose or procedures, or you would like to obtain the results summary, please feel free to contact the researcher(s).

If you have other concerns about this study or would like to speak with someone not directly involved in the research study, you may contact the Sunway University's Research Ethics Committee at researchethics@sunway.edu.my or 03-74918622 (Ext. 7547).

We realize that some of the questions asked may have provoked strong emotional reactions. If you feel upset after having completed the study, talking with a qualified clinician may help. As researchers, we do not provide mental health services and we will not be following up with you after the study. Should you decide you need to have some assistance, available clinical resources and mental health services in Maldives is provided below:

Thibaa Psychology (Mental Health Service)

Address: Level 3, M. Flamingo, Majeedhee Magu Rd, Male', Maldives

Contact No: +9607567030

Institute for Mental Well-being

Address: H. Hulhugali, 2<sup>nd</sup> Floor, Karanka Magu Rd, Male', Maldives

Contact No: +9603337892

Family Relationship Services

Address: H. Maafolhey Villa, Male', Maldives

Contact No: +9607672659https://www.myhealthmylife.com.my/sites/default/files/2019-

11/Mental Health Booklet 181119.pdf

\*Note that the professionals suggested may or may not necessarily be the most suitable for you. Neither the researcher nor Sunway University, is affiliated with the professionals and the organizations mentioned.

Thank you again for the participation!

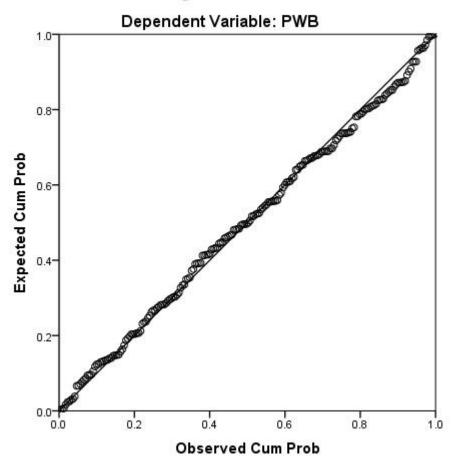
Research conducted by,
Fathimath Maasha
20060737@imail.sunway.edu.my

Supervised by,
Dr. Wu Shin Ling
Lecturer
shinlingw@sunway.edu.my

Dr. Grace Yap Chin Choo Health Psychologist Department of Psychology gracey@sunway.edu.my

# Appendix P Mutilple Linear Regression- P-P Plot

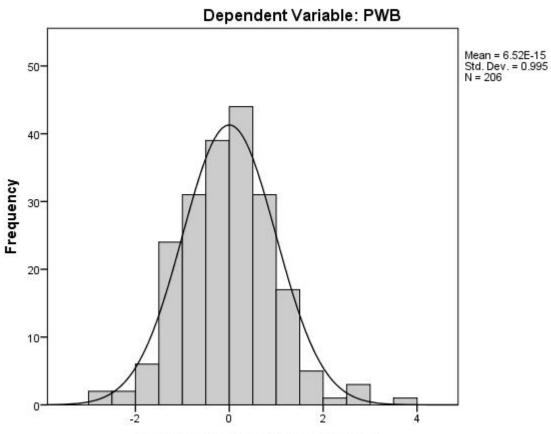
Normal P-P Plot of Regression Standardized Residual



# Appendix Q

# Multilple Linear Regression- Histogram

# Histogram



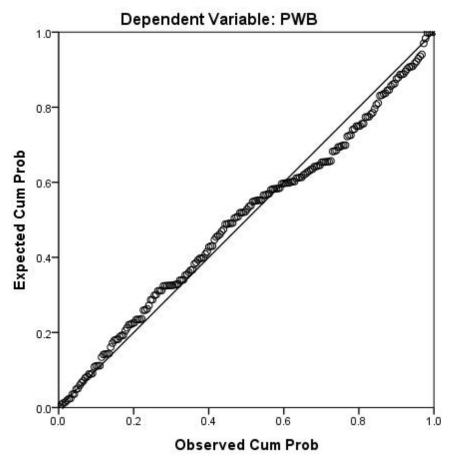
Regression Standardized Residual

## Appendix R

# P-P plot for mediation model - Emotional intelligence and stress (mediator) and psychological well-being

P-P plot for Emotional intelligence and stress and psychological well-being

Normal P-P Plot of Regression Standardized Residual

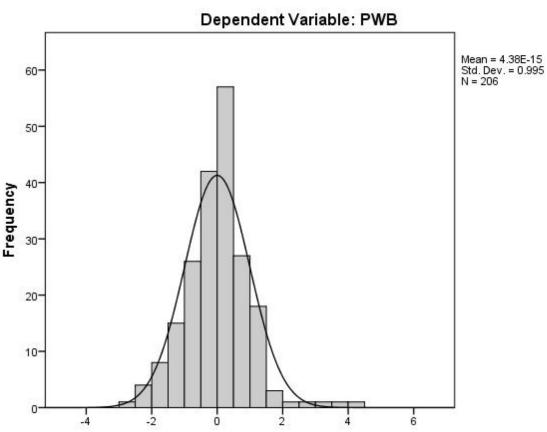


# Appendix S

# Histogram for mediation model - Emotional intelligence and stress (mediator) and psychological well-being

Histogram for Emotional intelligence and stress and psychological well-being

# Histogram



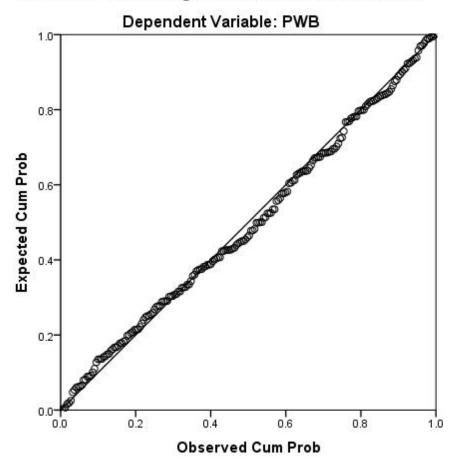
Regression Standardized Residual

# Appendix T

# P-P plot for mediation model - Emotional intelligence and grit (mediator) and psychological well-being

P-P plot for emotional intelligence and grit and psychological well-being

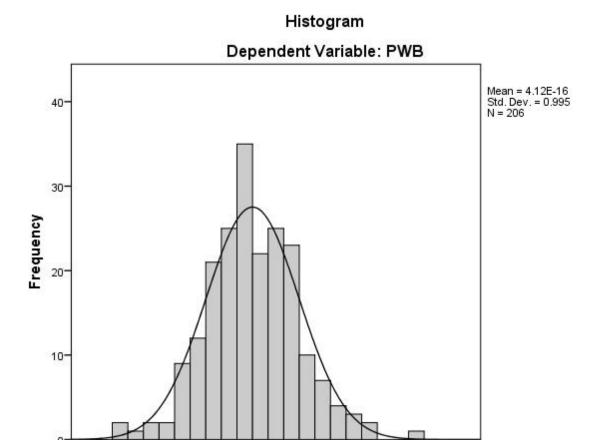




# Appendix U

# Histogram for mediation model- Emotional intelligence and grit (mediator) and Psychological well-being

Histogram for emotional intelligence and grit and psychological well-being



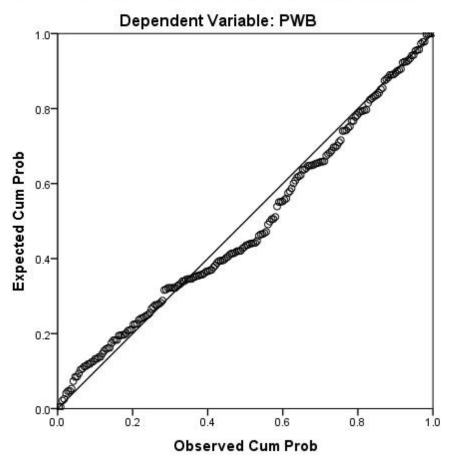
Regression Standardized Residual

# Appendix V

# P-P plot for mediation model - Social support and stress (mediator) and psychological well-being

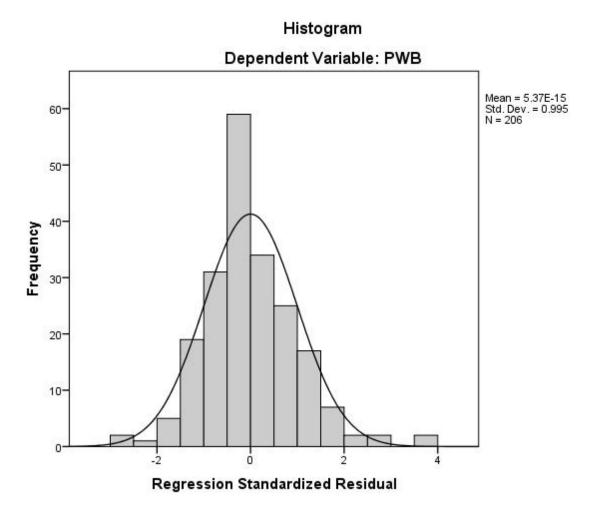
P-P plot for social support and stress and psychological well-being

Normal P-P Plot of Regression Standardized Residual



Appendix W
Histogram for mediation model - Social support and stress (mediator) and psychological well-being

Histogram for social support and stress and psychological well-being

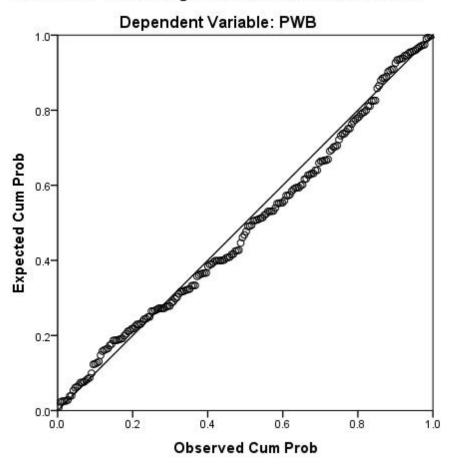


## Appendix X

# P-P plot for mediation model - Social support and grit (mediator) and psychological well-being

P-P plot for social support and grit and psychological well-being

Normal P-P Plot of Regression Standardized Residual



# $\label{eq:Appendix Y} \mbox{Histogram for mediation model - Social support and grit (mediator) and psychological $$ well-being $$$

Histogram for social support and grit and psychological well-being

