



**UNIVERSITI PUTRA MALAYSIA**

***PREVALENCE OF BORDERLINE PERSONALITY DISORDER  
SYMPTOMS AND ITS ASSOCIATION WITH PERSONALITY  
FUNCTIONING AMONG MEDICAL STUDENTS OF UNIVERSITY  
PUTRA MALAYSIA***

**GROUP 32**

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## ABSTRACT

**Introduction:** Borderline personality disorder (BPD) is a serious mental illness that often affects adolescents. It causes damaging effects on the person affected and those around him or her. People with BPD are often not fully aware of their behavior and the impacts it has on other people. The impairments, to put it another way, are serious when the condition is not recognized. If BPD occurs among medical students, the symptoms have an adverse effect on work performance and interpersonal relations. People with BPD may have impairment in these four major aspects of personality functioning which are identity integration, self-direction, empathy and intimacy. The typical features of borderline personality disorder are instability of self-image, personal goals, interpersonal relationships accompanied by impulsivity, risk taking, and/or hostility based on The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) Section III Alternative Model for Personality Disorders (AMPD). This study aims to find the prevalence of BPD symptoms and examine its association with personality functioning among medical students in UPM.

**Literature review:** Borderline personality disorder ( BPD) is a mental disorder linked to increased functional impairment and elevated rates of suicide. There are three cluster types in disturbance and each type has different personality traits. BPD is clinically diagnosed. The “traditional” method of diagnosing BPD is by using Section II of Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5). It preserved the concept that the disorder is identified as a cluster of symptoms. For example, the diagnosis of BPD requires 5 out of 9 symptoms. This gives the symptoms equal importance and results in presentation of the same symptoms among a variety of different conditions. In an attempt to fix these problems Section III of DSM-5 suggests an Alternative Model for Personality Disorders (AMPD) that is made up of level of personality functioning and a system of pathological personality traits. Moreover, level of personality functioning is evaluated using the Level of Personality Functioning Scale (LPFS) while BPD is screened through McLean Screening Instrument (MSI-BPD).

**Methodology:** A cross sectional study was conducted among medical students in Faculty of Medicine and Health Sciences, Universiti Putra Malaysia. Stratified random sampling was used in the research. Data of the study population was collected using Google-form based questionnaires which included Level of Personality Functioning Scale - Self Report questionnaire (LPFS-SR) and Mclean Screening Instrument for Borderline Personality Disorder. Bivariate analysis will be used to measure the association between the dependent variable (borderline personality disorder symptoms) and independent variable (total personality functioning and four aspects of personality functioning) among medical students in Universiti Putra Malaysia.

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## CHAPTER 1: INTRODUCTION

### 1.1 Background

Borderline personality disorder (BPD) is a severe mental disorder characterized by instability in four major domains of a person's life (i.e. emotion, behaviour, identity, and interpersonal relationships). A person with BPD may experience intense episodes of anger, depression and anxiety that may persist from a few hours to days. Apart from emotional dysregulation, BPD also includes features of impulsivity and risk-taking behavior, fear of abandonment and frantic efforts to avoid it, unstable self-image, as well as intense involvement with people. The condition is called "borderline" because many doctors used to think that it was on the border between neurosis and psychosis. The causes of the condition are not fully understood, however interplay between genetic and environment factors are said to have a role. For instance, traumatic experiences during childhood or adolescence, such as physical and sexual assault, may lead to this condition. Borderline personality disorder is a well known disorder. For example, in the US, about 1.6% of the population has BPD. Even though the percentage looks small, in a number of conversions, around 4 million people in the US alone have been diagnosed with BPD. Meanwhile, in Australia, Borderline personality Disorder has become the most common personality disorder which affects 1-4% of the population.

Even though many researchers believed that patients with Borderline disorder are unlikely to respond to the treatment but, research has shown that BPD is treatable. Many types of treatment are available to treat patients with BPD. For example, psychotherapy has become the main treatment for BPD patients to help improve the quality of life and also reduce their symptoms. In addition, pharmacotherapy also may help to reduce some symptoms that patients experienced.

BPD is diagnosed clinically. According to 5th edition Diagnostic Statistical Manual (DSM-5), section II, the diagnostic criteria are a pervasive pattern of instability of interpersonal relationships, self-image and affects and marked impulsivity, beginning by early adulthood and present in a variety of contexts, as indicated by five (or more) of the following:

- a. Frantic efforts to avoid real or imagined abandonment.
- b. A pattern of unstable and intense interpersonal relationships characterized by alternating between extremes of idealization and devaluation.

- c. Identity disturbance: markedly and persistently unstable self-image or sense of self.
- d. Impulsivity in at least two areas that are potentially self-damaging (e.g., spending, sex, substance abuse, reckless driving, binge eating).
- e. Recurrent suicidal behavior, gestures, or threats, or self-mutilating behavior.
- f. Affective instability due to a marked reactivity of mood (e.g., intense episodic dysphoria, irritability, or anxiety usually lasting a few hours and only rarely more than a few days).
- g. Chronic feelings of emptiness.
- h. Inappropriate, intense anger or difficulty controlling anger (e.g., frequent displays of temper, constant anger, recurrent physical fights).
- i. Transient, stress-related paranoid ideation or severe dissociative symptoms.

This has been a “traditional” method, since the inception of DSM, to diagnose BPD based on the categorical approach. In view of its limitation, since the publication of DSM-5, an alternative model to diagnose BPD has been proposed under section III which looks at the dimensional impairment of one’s personality functioning and presence of pathological traits.

As such, the level of impairments of personality functioning is measured on four major aspects which are identity disturbances, self-direction, empathy and intimacy - which form the core of everyone's personality functioning.

Identity diffusion in patients with borderline personality organization reflects an inability to integrate positive and negative representations of the self, much as the patient has difficulty integrating positive and negative representations of others . The result is a shifting view of the self, with sharp discontinuities, rapidly shifting roles such as victim and victimizer, dominant and submissive, and a sense of inner emptiness. Kernberg also emphasized the way defenses that allow patients with borderline personality disorder to remain comfortable with remarkable inconsistencies inhibit the capacity to form a coherent view of themselves (Tess et al.,2000).(1)

According to (*Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM-IV)*) DSM-IV and *Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-V)* Criteria for the Personality Disorders ,Self-direction reflects the unrealistic standards for behavior associated with reluctance to pursue goals, take personal risks, or engage in new activities involving interpersonal contact. Meanwhile, empathy describes ability to recognize the feelings and needs of others associated with interpersonal hypersensitivity (i.e., prone to feel slighted or insulted); perceptions of others selectively biased toward negative attributes or vulnerabilities.. Finally, Intimacy reflects reluctance to get involved with people unless they are certain of being liked; diminished mutuality within intimate relationships because of fear of being shamed or ridiculed (2)

## 1.2 Problem statement

BPD is a severe mental illness that commonly affects young adults. It causes detrimental effects on the affected person and those around him or her. Very often, people with BPD aren't fully aware of their behaviour and the impacts it brings on other people. So to say, the impairments are serious when the condition is underrecognized.

People with BPD may have impairment in these four major aspects of personality functioning which are identity integration, self-direction, empathy and intimacy. In terms of identity disturbances and , they have sudden dramatic shifts in self images which are characterised by having unclear goals, difficulty in selecting occupations and difficulty in understanding other people. If it occurs among medical students, one would have no specific goal and this kind of personality may affect their studies if this is ongoing. They may also have had multiple identity crises, chosen a succession of careers or religions, or may not even be aware of their lack of a cohesive identity. Identity diffusion in patients with borderline personality organization reflects an inability to integrate positive and negative representations of the self, much as the patient has difficulty integrating positive and negative representations of others. The result is a shifting view of the self, with sharp discontinuities, rapidly shifting roles, and a sense of inner emptiness (wilkinson et al.,2000). (1)

Next, people with BPD also may harm themselves and even worse they may commit suicide. This is because they believe that by doing self harm and suicide, it can help to reduce emotional pain. Patients with BPD often show poor cognitive empathy. Empathy is the ability to understand and share the feelings of another. If they have poor empathy, it is difficult for them to understand other people and they may have problems communicating with their patients as they become a medical doctor later. Last but not least, patients with BPD are afraid of intimacy. Fear of intimacy is characterized as the fear of sharing a close emotional or physical relationship. For example, initially people with BPD are good in their relationship with friends, colleagues and parents but suddenly they become afraid of intimacy. People who experience this fear do not usually wish to avoid intimacy, and may even long for closeness, but frequently push others away or even sabotage relationships.

Being undetected BPD is a big problem to people, especially young adults. However, a solution has been introduced in order for us to do early detection of BPD. According to the Section III DSM-5 Alternative Model for Personality Disorders, we diagnose BPD first based on the degree of impairment in identity, self-direction empathy and intimacy apart from the presence of

pathological traits. Patients with little to no impairment are more likely to be normal but those who are impaired in these aspects have risk of having BPD. In identifying identity, this aspect of personality functioning represents a person's knowledge and awareness of self. In self-direction, we try to look at their ability to establish and achieve reasonable expectations of themselves, personal goals and standards of personal conduct. For empathy, we focus on their ability to understand and consider another person's experience, including their thoughts, feelings, beliefs and motivations. Finally intimacy, we are measuring their ability to form and maintain close, caring, meaningful and reciprocal relationships.

Therefore, this research aims to find the prevalence of BPD and examines its association with personality functioning among medical students in UPM.

### **1.3 Significance of Study**

This research is aimed at providing early detection and treatment of BPD. Early intervention will mainly seek to modify the life-course trajectory of people with BPD by reducing related adverse outcomes such as violence, self-harm, interpersonal conflict and suicide. In addition, encouraging an enhanced personality functioning and more adaptive developmental pathway.

The findings are intended to be useful as possible recommendations for implementing viable and effective therapeutic treatments to prevent BPD symptoms from adversely impacting work performance and interpersonal relationships. The results can be used to recommend routine screening and early detection for BPD, thus leading to improved personality functioning among medical students.

### **1.4 Research Question**

1.4.1. How many of the UPM medical students have borderline personality disorder (BPD) symptoms?

1.4.2. Is there any difference in the general level of personality functioning between UPM medical students who have BPD symptoms compared to those who do not have BPD symptoms?

1.4.3. Is there any difference in the identity integration aspect of personality functioning between UPM medical students who have BPD symptoms compared to those who do not have BPD symptoms?

1.4.4. Is there any difference in the self-direction aspect of personality functioning between UPM medical students who have BPD symptoms compared to those who do not have BPD symptoms?

1.4.5. Is there any difference in the empathy aspect of personality functioning between UPM medical students who have BPD symptoms compared to those who do not have BPD symptoms?

1.4.6. Is there any difference in the intimacy aspect of personality functioning between UPM medical students who have BPD symptoms compared to those who do not have BPD symptoms?

## 1.5 Objectives

### 1.5.1 General Objective

To determine the prevalence of borderline personality disorder (BPD) symptoms and examine its association with personality functioning among medical students of UPM.

**The objective of the study is to screen for presence of Borderline Personality Disorder symptoms / traits in view that our study uses MSI-BPD as the screening measurement.**

**Screening of the respondents for BPD symptoms / traits do not have significant ethical implication on their future, as it is unethical for us to disclose any of these information to any third party, thus it will not have any relevant implication to their fitness to practice later. Instead, the respondents are encouraged to discuss the results of their screening with the researcher and appropriate advice can be given to them for further assessment or treatment.**

### 1.5.2 Specific Objectives

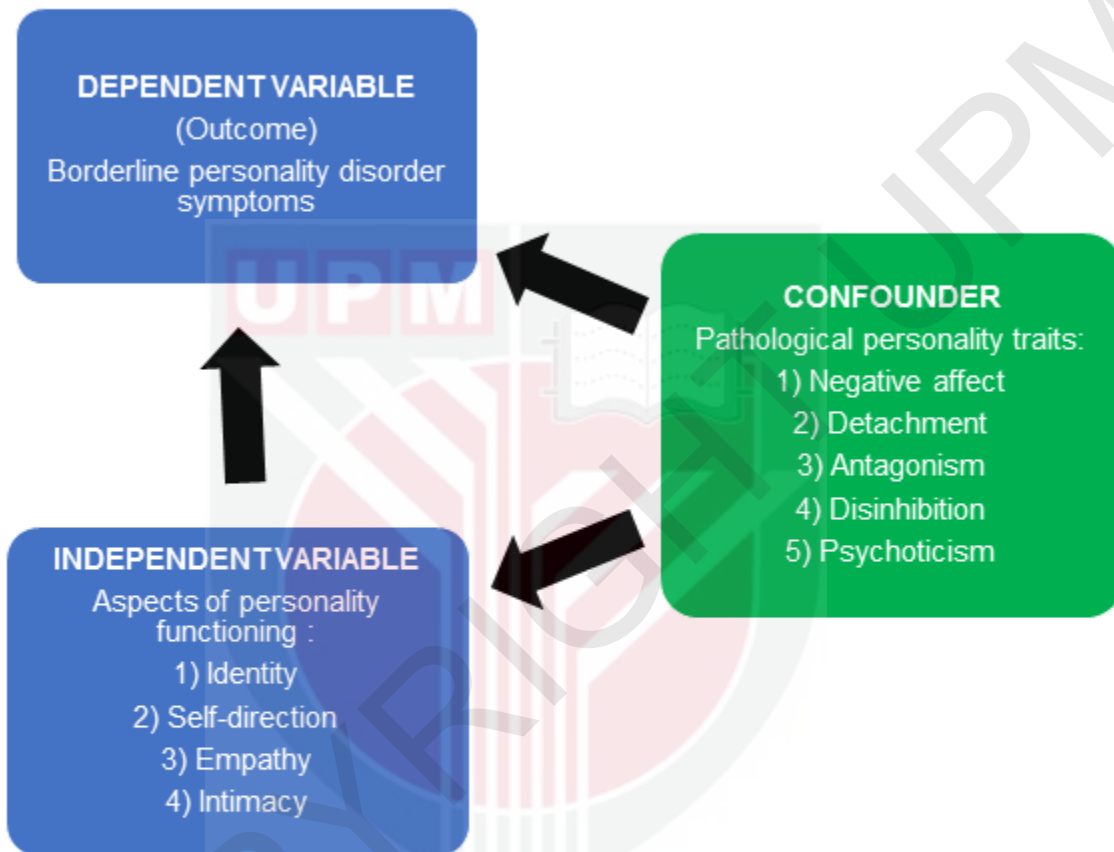
- (a) To determine the prevalence of BPD symptoms among medical students of UPM.
- (b) To examine the association between the presence of BPD symptoms as opposed to those who do not have BPD symptoms, in the general level of personality functioning among medical students of UPM.
- (c) To examine the association between the presence of BPD symptoms as opposed to those who do not have BPD symptoms, in the four aspects of personality functioning (identity, self-direction, empathy and intimacy) among medical students of UPM.

## 1.6 Hypothesis

- (a) There is no association between BPD symptoms with general level of personality functioning.
- (b) There is no association between BPD symptoms with the identity integration component of personality functioning.
- (c) There is no association between BPD symptoms with the self-direction component of personality functioning.
- (d) There is no association between BPD symptoms with the empathy component of personality functioning.
- (e) There is no association between BPD symptoms with the intimacy component of personality functioning.

### **1.7 Conceptual framework**

The conceptual framework shown represents various factors to consider when studying borderline personality disorders (BPD) symptoms among medical students. It is adapted from the Alternative Model for Personality Disorders in the Diagnostic and Statistical Manual 5 (DSM-5).



## CHAPTER 2 : LITERATURE REVIEW

### 2.1 Borderline Personality Disorder definition and symptoms

Borderline disturbance (BPD) is a severe mental disorder that's associated with severe functional impairment, and a high suicides rate. There are three styles of clusters in disturbance and each and everyone type has different personality traits. Personality traits are defined because the relatively enduring patterns of thoughts, feelings, and behaviors that distinguish individuals from one another. In line with Mayo clinic, cluster A is characterized by odd, eccentric thinking or behavior. Cluster B is characterized by dramatic, overly emotional or unpredictable thinking or behavior, while cluster c is characterized by anxious, fearful thinking or behavior. Borderline disturbance is also a cluster B during which someone marked with unstable self-image, rapid changes in mood, with fears of abandonment and rejection, and a robust tendency towards suicidal thinking and self-harm (3)

In a study by Awang and colleagues in 2008 found that BPD patients usually involve deliberate self harm. It was a case control study to compare compare the personality traits in deliberate self-harm (DSH) patients with a control group matched for age, sex and race. They found that 14% with borderline personality disorder involved in self injury among cases and no diagnosis of borderline personality disorder in the control group (Awang,2008).(27)

Usually people with BPD may show some symptoms , but the symptoms can vary to every person. Actions such as this tend to shutt intimate interactions that contribute to alienation and loss in BPD individuals. Usually, the unstable mood occurs because the person is stressed with problems like interpersonal relationships or interpersonal conflict , and that they cannot handle it in the right way. When in distress, they may develop psychotic-like symptoms like vividly seeing the hurting person in their mind everywhere they're going which makes them feel scared. This was accompanied by a way being watched and a possible danger may end in explosive anger. The foremost dangerous and fear-inducing feature of BPD is thee self-destructive behavior and potential for suicide. Self-destructive behavior takes many forms in patients with BPD like cutting, burning or banging oneself. People with BPD sometimes make a suicide attempt at a degree after they feel the danger of losing someone important to them. Consistent with American Journal of Psychiatry, about 60 to 70% people with BPD attempting suicide and about 10% die of suicide. (4)

## 2.2 Epidemiology of Borderline Personality Disorder

### Prevalence

A study was done by Marc Walter and colleagues in 2009. This study was done to determine the association between identity disturbance and negative effects in BPD and depressed patients. All the subjects that were admitted to the Psychotherapy treatment Unit of Psychiatric University Clinic Basel in Switzerland and those with Borderline personality disorder were recruited to participate in this study. 24 people have been selected and 12 people were diagnosed with BPD and another 12 were diagnosed. Six of BPD patients have BPD alone, meanwhile the rest have BPD and with other disorders. IPOs have been used to measure the construct of identity diffusion, aggression value, and others. In this survey, they found that patients with Borderline personality disorder had a high value in identity diffusion which is around  $66.25 \pm 11.90$ . Nine (69%) of 12 people with BPD had high identity diffusion. The rest have low identity diffusion. It has been suggested that people with BPD that have severe identity disturbance may have difficulties in verbalizing their effects in interpersonal relationships (walter et al.,2009).(5)

An intensive study was done by Donald and colleagues in 2004. In this study, they found that the percentage of suicidal rates among Borderline patients was 10%. Suicide rates based on the Paris study in 1987 were 8% that took 15 years to complete the study. However, Stone's (1989) suicide rate was different from Paris's which is 7.6% which take around 16 years. This indicates that the percentage of suicides is irregular because of differences in method use and also time consuming. Donald and colleagues also found that 87.5% of patients borderline attempts suicide. Here we can see that the percentage of suicide attempts is very high which can be a problem to patients as it can influence them to commit suicide (Black,2004).(6)

Yet another study was done by Shennon and colleagues in 2000 on the relationship between romantic relationship dysfunction and symptoms of borderline personality disorder in 142 samples of late adolescent women. This was a cohort study done in 1991 and 1992 from senior classes of three local public high schools in the United States of America. The subject was accessed on their romantic chronic stress level, relationship and relationship quality. They found that people with Borderline disorder have impairment romantic and interpersonal relationships compared to those with no Borderline disorder. The study suggested that people with borderline may have impairment in intimacy (Daley et al.,2000).(7) Another similar study was done by Sebastian and colleagues to explain the sexual activities and activities in women with borderline disorder involved in romantic relationships. 34 heterosexual couples that composed of women meeting Borderline criteria were compared with married women in general population. In this study, they found that 68% heterosexual couples with woman Borderline end up with broken relationship. Meanwhile only 28% of these couples dissolve in their relationship. This suggests

that people with borderline personality disorder may have problems with their romantic relationship (Bouchard,2009).(8)

A total of 20 Borderline patients and 19 healthy controls (HC) were studied by Vera Flashback and a German colleague in 2019. (9) This study was conducted to examine empathy for the pain paradigm that will elicit facial reactions when the hands respond with stimuli in a functional magnetic resonance imaging (fMRI). In this study, they have been able to identify that activation occurs in the right supramarginal gyrus and that facial reactions are also seen when BPD patients are exposed to painful stimuli and less activation occurs when patients are exposed to non-painful stimulus as well as facial expressions. whereas, for the left supramarginal gyrus, people with BPD showed less activation when they viewed angry facial expressions compared to those without bouts of pain. In addition, they also find different activations in the left anterior insula where it depends on the expression expressed by people with BPD. This shows that empathy for pain is selected depending on someone's emotions. In addition, they found emotional differences between people with Borderline disorder who signed up for treatment and those with BPD who did not receive treatment. For example, by independent t-test, BPD further revealed a difference in response to angry, happy, and painful faces (angry  $t(18) = 4.16$ ,  $p = 0.001$ ; happy  $t(18) = 2.47$ ,  $p = 0.024$ ; painful  $t(18) = 2.63$ ,  $p = 0.017$ ). In this study, patients with BPD showed low activation in angry, painful, and happy facial experiments under medication compared to patients who did not receive treatment (Flashbeck,2019).(9)

The prevalence for borderline personality disorders in each country varies. This is because there are differences in methodological instruments such as the use of diagnostic criteria (DSM-III or DSM IV), source of study subjects (community samples or relatives psychiatric patients), type of assessment (self-report or direct interview) that lead to the results obtained by each The research is different. For example, 0.7 percent were recorded by 626 English households with Borderline disorder (The British Psychological Society and The Royal College of Psychiatrists ,2009)(10). However, 0.5 percent of data obtained from 742 American households using the international personality disorder examination to access DSM IV and ICD-10 personality disorder as an instrument has been found to have Borderline disorders . Meanwhile the percentage of locals in Norway's survey of 2503 local groups was similar to that obtained is 0.7%. Although there was a slight difference between the percentage of the three studies due to the method used, the median prevalence of BPD across the three studies was 0.7%. In addition, There is a link between borderline personality disorder and one's age, more so for young people, misinformation and even living alone. For example, borderline personality disorder is more likely to occur in young people. However, personality disorders such as schizotypal, avoidant are common in older people (The British Psychological Society and The Royal College of Psychiatrists ,2009)(10).

Next, prevalence in primary care can also be detected. The prevalence rate here is 4 to 6%. Patients with borderline disorders are more likely to make an appointment with a general

practitioner to get treatment and tell them about the symptoms they experience (The British Psychological Society and The Royal College of Psychiatrists ,2009)(10).

In psychiatric patients, prevalence of borderline disorder across eight outpatients with no inclusion , and exclusion criteria is around 15%, and 27% percent was found in four outpatients with folie having borderline personality disorder. Meanwhile, in four inpatient studies that were confined to patients with Personality disorder, the prevalence of borderline is around 51% which is over outpatients (Samuel,2002). (11)

As for gender differences, earlier research has concluded that ladies have higher rates of borderline disorder than male although recent research has determined there are differences in prevalence by gender with regard to specific forms of self harm behavior like self cutting at a clinical presentation. For instance, in line with Diagnostic and Statistical Manual Of mental disturbance, Fourth Edition (Sansone et al.,2011)(13), borderline disorder is more common in women than male with the gender ratio 3:1 female to male. However, in the study of the Epidemiological Survey on Alcohol and Related Conditions, borderline is equally affected by both men and girls. The range prevalence in gender is because there's clinician bias that clinicians have subtle female gender biases regarding diagnosis of borderline and sampling bias within which may contribute to differences in prevalence of borderline (Sansone,2011).

Recent research also found there's gender difference with reference to personality traits, Axis I and II comorbidity and treatment utilization. Mostly men who have borderline disorder usually have explosive temperaments likewise as high levels of novelty seeking and harm avoidance. Meanwhile, in females, they were characterized by high levels of harm avoidance but with no novelty seeking. Thus, this explosive characteristic with novelty seeking appears to differentiate men from women with borderline disorder.

In Axis I comorbidity, 84.5% of patients with borderline personality disorder met criteria for having one or more 12-month axis I disorders (Leichsenring,2011).(12)

Most men with borderline disorder involved in abuse meanwhile women with disorder, anxiety, likelihood mood and post-traumatic stress disorders are commonly found in borderline disorder. With differences in Axis I comorbidity, it's clear that more women will seek their doctor for the treatment and people men are more likely to land up in prison settings which ends up in womens having high prevalence in mental state settings (Sansone,2011) (13)

Borderline personality disorders are often diagnosed with axis II disorder. A study was done by Zanarini and colleagues in 1998 to access the prevalence of axis II Comorbidity in patient borderline disorder. A semi structured research interview was used to assess the lifetime prevalence of many of the common axis I disorders and Revised Diagnostic Interview for

borderline (DIB-R) to distinguish clinically diagnosed borderline patients from others. In 504 personality disordered patients, 379 patients have met both DIB-R and DSM-III-R criteria for BPD. For example, around 50.7% of patients with borderline personality disorder have dependent personality disorder. Meanwhile the patients with other personality disorders have 20% of Dependent personality disorder. Another example is , 43% of patients with Borderline disorder have avoidant personality disorder compared to patients with other personality disorder which is only 17.6% have avoidant disorder. This suggests that borderline personality disorder also can be found among those with axis II disorder (Zanarini et al,1998).(14)

Rates of borderline personality disorder in prison also found to be high. For instance, in Malaysia, a study was done by Affizal and colleagues in 2014 to identify the prevalence of borderline disorder, Antisocial Tendencies and Aggression among male and feminine inmates. This was a cross-sectional study involving 426 inmates in Malaysia (227 male)(199 female). Based on the survey around 47.1% male inmates among 227 male inmates and 23.6% female inmates among 199 female inmates have borderline disorder(21). Based on the mean score, females had slightly higher mean scores which is 3.72 than male 3.56. They also suggested that borderline, antisocial tendencies and 4 scales of aggression (physical aggression, verbal aggression, anger, hostility) were high among male and female inmates. For example, females have shown strong correlation with physical aggression which is  $r=0.464$  but has least correlation in anger which is  $r=0.318$ . Compared to male inmates, the strongest correlation is on anger which is  $r=0.249$  meanwhile the least correlation is with hostility which is  $r=0.182$ . The correlation between borderline and antisocial with four scales aggression demonstrated the potential underlying association between the 2 subtypes of a personality disorder and aggression among the inmates (Ahmad,2014).(15)

In the university environment, the prevalence rate of borderline personality disorders is estimated to be around 0.5 to as high as 32.1 percent and the rate of BPD is increasing with time. The difference in the prevalence of borderline in college is believed to be due to the use of methodology. For example, in structured diagnostic interviews, low baseline rates while in the self-report method resulted in more inter-reporting (Rebecca, 2016). In addition, there were percentages differences between postgraduates and undergraduate students. The percentage for postgraduates is 32.2% compared to undergraduates which is only 8.9%. However, it is unclear whether there are differences in gender distribution. So does ethnicity. For example, some researchers have found Hispanics ethnic have lower rates of border disturbance. Meanwhile, the other researchers said Hispanics ethnic ave a high rate of borderline harassment (Meaney, 2016).(16)

### **2.2.1 Prevalence of Borderline personality disorder symptoms**

A study has been done by ten Have and colleagues in 2016. It was a cohort study on finding the prevalence of various numbers of BPD symptoms in the general population, and what are their associated sociodemographic correlates. Data were obtained from the second wave of the Netherlands Mental Health Survey and Incidence Study-2 (N = 5303), a nationally representative face-to-face survey of the general population. In this study they found that 69.9 % reported having no BPD symptoms, while 25.2 % had 1–2 symptoms, 3.8 % had 3–4 symptoms, and 1.1 % had  $\geq 5$  BPD symptoms. Those who have more than five symptoms are considered to have BPD (according to DSM-IV criteria diagnosis). Those who have more symptoms usually associated with not living with a partner and having no paid job or unstable social life.

### **2.3 Etiological factors of Borderline Personality Disorder**

The causes of borderline personality disorder are difficult and complicated. No existing model has been developed that is capable of incorporating all relevant data. There are several factors that may contribute to the development of BPD which are genetics and constitutional vulnerabilities such as neurophysiological and neurobiological emotional and stress disorders; psychosocial history of childhood maltreatment and abuse; and disorganisation of aspects of the affiliative behavioural system, most particularly the attachment system (The British Psychological Society & The Royal College of Psychiatrists, 2009)

#### Genetics

A personality trait clearly heritable and may contribute to the development of BPD. Traits such as impulsiveness, aggression and mood dysregulation in patients with BPD are also found in their family members. In addition, it is believed that both genetics and environmental factors play a big role in the progression of borderline personality disorder. Some researchers showed that while there was a diagnosis of BPD showed family aggregation, both specific BPD criteria and broader BPD criteria. Symptoms such as types of behavior, memory, impulsive behavior, and interpersonal interaction disruptions demonstrated an even greater family grouping and improved distinction between members with BPD probands and those in contrast (Bradley,2007).(17)

That notion is aligned with the BPD conceptualizing framework and study. As an intense display of elements of heritable personality or behaviors such as impulsivity, neuroticism, and affective lability. Bradley (2007) mentioned that impulsive behaviour is a core feature of Cluster B Axis II disorders, especially BPD and APD and demonstrates considerable heritability. However, family

aggregation statistics are challenging to analyze owing to the difficulty of the disaggregation of heritable temperamental and family environmental consequences like possessing a dysfunctional or similar psychologic parent raises the sum of heritable family aggregation statistics.

### Neurotransmitters

Some researchers suggest that serotonin function is important in regulation of impulses, aggression and affect. The British Psychological Society and The Royal College of Psychiatrists (2009) mentioned that reduction of serotonin level may interfere with someone's ability to control destructive urges. Even Though the mechanism of this phenomena is unclear but still it is related to the symptoms of BPD. Next, borderline personality disorder is also related to the reduction of 5-HT1A receptor sensitivity. For example, there is reduction in the level of 5-HT1A mediated response in patients with BPD, especially women and those who have experienced a history of childhood trauma. This suggests that both environmental factors and 5-HT1A and aggression are interconnected. Association between catecholamines and BPD also may be seen but the evidence of this relationship is very limited. However, people with BPD have reduction in plasma-free methoxy hydroxyphenylglycol which is a metabolite of noradrenaline compared to those who do not have BPD. The British Psychological Society and The Royal College of Psychiatrists (2009) mentioned that The effects produced on administering amphetamines to people with borderline personality disorder suggest that such people are uniquely sensitive and demonstrate greater behavioural sensitivity than control subjects (The British Psychological Society and The Royal College of Psychiatrists ,2009).(10)

### Neurobiology

Some researchers have found there are defects in the central brain region that may influence communication, concentration, self-control and executive function in people with Borderline personality disorder. Areas include the amygdala, hippocampus and orbitofrontal regions may influence the symptoms of individuals with BPD . For instance, a MRI study has found that patients with BPD have reduced the amount of amygdala . Excitotoxicity was discussed within the course of this disorder as a possible explanation for decreased amygdala volume. However, no morphological differences within the amygdala were identified after the primary incidence of symptoms in adolescents. In addition, evidence about reductions in amygdala volume in patients with borderline disturbance is inconsistent. An increased activity area in dorsolateral prefrontal and cuneus and reduction activity in right anterior cingulate also seen in patients combating borderline disorder. Increased activity of the amygdala when seeing emotionally adverse pictures or emotional faces has also been identified (The British Psychological Society and The Royal College of Psychiatrists ,2009).(10)

### Psychosocial factors

Problems such as family background with imbalance and the use of harmful substances such as drugs have contributed to the formation of Bpd. In addition, the issue of neglect in the care of children and the emotional under involvement of caregivers also play an important role in shaping BPD. According to studies, many have found that parents with unstable emotions are a factor in their children's difficulty in socializing and also causing them stress. People with BPD also have a different mindset than normal people who can treat their parents as enemies of their parents' violent behavior. This can also lead to conflict in their families and cause more stress for the patient. This clearly indicates that parental problems are also contributing factors to BPD development. In addition, issues such as physical, sexual and emotional violence are also seen as contributing to the increase in BPD cases. For example, as many as 84% of BPD patients have been diagnosed with neglect and emotional distress before they are 18 years old. In addition, the study also found that patients with history of abuse had an unstable and harmonious family background (The British Psychological Society and The Royal College of Psychiatrists ,2009).(10)

### **2.4 Borderline Personality Disorder treatment**

Treatment will help people with BPD develop the skill to control and deal with the illness. Any other behavioral health conditions that sometimes exist concurrently with ambiguous personality problems, such as depression or drug misuse, must also be treated. With treatment, we can feel better about ourselves and live a more stable, rewarding life.

In BPD , there is no specific treatment or drugs that have been used. But the main treatment or management is psychotherapy. Psychotherapy also known as talk therapy is an important treatment approach for borderline personality disorder. Focus on your current ability to function . The goals of this therapy are to teach patients how to manage their emotions, reduce their impulsiveness, improving relationships by being aware of their feelings and those of others and also to learn about borderline personality

These therapies include Dialectical behavioral therapy, Systems training for emotional predictability and problem solving (STEPPS), Mentalization-based treatment, Transference-focused psychotherapy, Schema-focused therapy and General psychiatric management.

## Psychotherapy

### Dialectical behavior therapy (DBT)

DBT is a type of therapy in which individuals or groups receive therapies by weekly sessions or by telephone. In this therapy, it may help BPD patients deal with their problems as well as the stresses they experienced. For example, they will be helped to control themselves from doing such things that could harm or hurt themselves.

### Schema-focused therapy

Schema-focused therapy is a therapy that helps patients with borderline personality to think rationally, control their feelings, their behaviour and replace all negative thoughts, behaviour with a better and positive one.

### Mentalization based therapy

Mentalization based therapy is a therapy whereby the therapist helps the patient to control their emotions as they calm down when they are in distress and trouble, to solve all the problems and difficulties they are facing and to help them understand the feelings of others. Therefore, they are able to relate to others better and to be friendly

### Systems Training for Emotional Predictability and Problem Solving(STEPPS)

Steps is a therapy that involves 20 weeks with the group. Through this therapy, they are taught to control their emotions, dispel all negative thoughts and take good care of themselves. for example, they will be taught to set their own goals, hope, have a good life such as eating and sleeping, and also discarding anything that may affect them. they are also encouraged to talk or talk with their friends and family members. This is because, by sharing or communicating with close people, it can increase understanding between BPD patients and those who are close to them and understand what they have been through.

### Transference-focused psychotherapy

Transference\_Focused therapy is a therapy that helps them to know the causes of Borderline personality disorder and to help them find better ways of making decisions and thinking. Thus, this therapy, symptoms such as depressive and anxious feelings can be dealt with.

### General psychiatric management

General psychiatric management is a therapy where it is used to help patients improve their self-esteem, to improve their relationships with others and to improve their ability to work. This therapy also helps patients to relieve the symptoms they experience and understand the purpose of their treatment.

### Supportive psychotherapy

Supportive psychotherapy is a therapy that may help BPD patients control their emotions, encourage and support them and thus hope to establish a healthy system of defense against BPD. However, if only supportive therapy is used, it does not reduce critical behaviour such as suicide and self harm.

### Drugs

Drugs also may be used to treat specific symptoms. For example, Lamotrigine is used to reduce the severity of depression, anxiety, mood swings and impulsive tendencies. Antipsychotic drugs are used to reduce anger, stress-related thinking and anxiety. Finally, antidepressants drugs - Selective serotonin reuptake inhibitors (SSRIs)-may also help to lessen depression and anxiety.

## **2.5 The traditional Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5)**

The model preserved the concept that the disorder is identified as a cluster of symptoms. In addition, it maintained the categorical diagnostic system. For instance, the diagnosis of borderline personality disorder requires 5 out of 9 symptoms. This grants the symptoms equal importance and leads to presentation of the same symptoms among a number of different disorders. The common approach to personality disorders as outlined in DSM section II states 10 discrete categories for personality disorder diagnosis. Depending on basic similarities, the personality disorders are then classified into three groups. Cluster A comprises paranoid, schizoid, and schizotypal personality disorders. Cluster B encompasses antisocial, borderline, histrionic, and narcissistic personality disorders while Cluster C contains avoidant, dependent, and obsessive compulsive personality disorders. It must be acknowledged that this clustering system has major drawbacks, though it is helpful in certain research situations. In contrast, people in different clusters often experience co - morbid personality disorders (Hidalgo Vicario & Rodríguez Hernández, 2013).

The effort to categorize in this way, however, is compromised by excess co-morbidity and the absence of a defined distinction between normal and pathological personality. There is, nevertheless, a degree of agreement that BPD includes three key features which are dysregulation of emotions, impulsivity, and social-interpersonal dysfunctions (Peter Fonagy, 2016).

## **2.6 Alternative Model of Personality Disorder Diagnosis (AMPD)**

In an effort to correct these problems, Section III of DSM-5 suggests an alternative model for personality disorders made up of three components:

- 1) Level of personality functioning. This has four sub-components of identity and self-direction as well as empathy and intimacy. Impairment severity determines whether the person meets the basic criteria for personality disorder.
- 2) The specific personality disorder diagnoses in the current model are reduced to six which include antisocial, avoidant, borderline, narcissistic, obsessive-compulsive, and schizotypal personality disorders.
- 3) A system of pathological personality traits. Such traits are grouped into five separate domains which are negative affectivity, isolation, antagonism, disinhibition, and psychoticism. There are 25 trait facets within those domains.

With that in mind, individuals with BPD are described as having an impairment in their personality functioning which include problems in 2 or more of the following 4 areas:

- Identity: Markedly impoverished, poorly developed, or unstable self-image, often associated with excessive self-criticism, chronic feelings of emptiness.
- Self-direction: Instability in goals, aspirations, values, or career plans.
- Empathy: Compromised ability to recognize the feelings and needs of others associated with interpersonal hypersensitivity.
- Intimacy: Intense, unstable, and conflicted close relationships, marked by mistrust, neediness, and anxious preoccupation with real or imagined abandonment.

The trait stage of BPD diagnosis requires four or more of the following seven traits which are emotional lability, anxiousness, separation anxiety, depressivity, impulsivity, risk-taking and

hostility. From the four or more traits that have been met, at least one has to be impulsivity, risk-taking, or hostility (Peter Fonagy, 2016).

## **2.7 Definition of personality functioning**

According to the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) Alternative Model of Personality Disorder Diagnosis (AMPD), personality functioning consists of the degree to which there is an intact sense of self (involving a clear, coherent identity and effective self directedness) and interpersonal functioning (reflecting a good capacity for empathy and for mature, mutually rewarding intimacy with others) (Oldham, 2015).

## **2.8 Measuring tool for level of personality functioning**

A need to evaluate the level of personality functioning led to the development of the AMPD's Level of Personality Functioning Scale (LPFS). The DSM-5 proposed dimensional model contains two dimensions which are Criterion A: level of personality functioning and Criterion B: pathological personality traits. Both of these criteria can be used individually or together and which form the basis for determining six categorical disorder options.

Criterion A: Level of personality functioning

Criterion A is composed of four aspects of personality functioning. These are: 1) identity, 2) self-direction, 3) empathy, 4) intimacy.

Identity: A person recognizes their own unique characteristics, have a clear sense of their own boundaries and can experience a full range of emotions.

Self direction: The internal ability to establish and achieve reasonable expectations of themselves. Not excessively preoccupied with personal goals or lack goals entirely

Empathy: The ability to understand and consider another person's experience and feelings.

Intimacy: The desire and ability to form and maintain close, caring, meaningful relationships.

Criterion B : pathological personality traits

Personality traits are a tendency to act in a particular manner. The traits are usually considered along a continuum from healthy to pathological. A trait is considered pathological to the degree that it meddles with the success and happiness in someone's life. There are five broad personality domains, called the Five Factor Model of personality. On the pathological end of the spectrum, these five are:

1. Negative affect :

- Emotional lability
- Anxiousness
- Separation anxiety
- Submissiveness
- Hostility
- Perseveration

2. Detachment :

- Withdrawal
- Intimacy avoidance
- Anhedonia (lack of enjoyment)
- Depressivity
- Restricted affect (limited emotional range)
- Suspiciousness

3. Antagonism :

- Manipulativeness
- Deceitfulness
- Grandiosity
- Attention seeking
- Callousness
- Hostility

4. Disinhibition :

- Irresponsibility
- Impulsivity
- Distractibility
- Risk taking
- Rigid perfectionism

5. Psychoticism :

- Unusual beliefs and experiences
- Eccentricity
- Cognitive and perceptual dysregulation

In the DSM-5 alternative model (Chapter III), there are only six specific personality disorders listed which are antisocial, avoidant, borderline, narcissistic, obsessive-compulsive and schizotypal (Gulf Bend MHMR Center, n.d.).

## **2.9 Reliability, validity and scoring method of LPPF-SR**

Numerous studies have shown that the LPFS-SR is a reliable and valid instrument for assessing the level of personality functioning. For example, interrater reliability was measured and indicated reliability of individual raters' LPFS ratings was Intraclass Correlation Coefficient (ICC) = 0.51, suggesting good reliability (Zimmermann et al., 2014). In addition, students measured the personality functioning of five patients as a test of validity. Their results are compared to gold-standard LPFS ratings by members of the DSM-5 Work Group for measuring the amount of directional bias, that is whether student raters appear to overestimate or underestimate impairment in personality functioning as opposed to experts. Students' LPFS scores were strongly aligned with the respective DSM-5 gold standard scores. This demonstrates the validity of LPFS (Zimmermann et al., 2014).

In comparison, traits with a more vague link to maladaptation such as perfectionism, workaholism and exhibitionism showed weaker correlations with LPFS-SR. These traits are noteworthy as they are related to typically adaptive personality domains. For instance, being a diligent worker with high expectations are good qualities for many individuals. Therefore, a possible reason for their comparatively poor correlations with the LPFS-SR is the complex nature of the relationship between maladaptive behaviour and those specific traits (Hopwood et al., 2018).

## **2.10 Screening of Borderline Personality Disorder Symptoms**

Screening is the systematic implementation of a test or procedure to classify individuals at sufficient risk of a specific condition to require further procedure or prompt preventive intervention for people who have not sought medical treatment due to the symptoms of the condition (19). The borderline personality disorder can be screened through a psychological test ; McLean Screening Instrument (MSI-BPD).

The MSI-BPD is based on a subset of questions found in the borderline module of the Diagnostic Interview for DSM-IV Personality Disorders or DIPD-IV, one of the accurate semi structured interviews to diagnose Axis II disorders (Zanarini et al., 2003). It was found that MSI-BPD has strong sensitivity (.81) and specificity (.85) in the selection of nonpsychotic and nonmaniac patients (Zanarini et al., 2003).

## CHAPTER 3 : METHODOLOGY

### 3.1 Study Location

This study will be carried out at the Faculty of Medicine and Health Sciences, University Putra Malaysia.

### 3.2 Study Design

This is a community-based, cross-sectional study.

### 3.3 Study Duration

This study is planned to be conducted from 1st June 2020 to 9th of October 2020.

### 3.4 Sampling

#### 3.4.1 Study Population

The study population is

#### 3.4.2 Sampling Frame

List of medical students of the Faculty of Medicine and Health Sciences, University Putra Malaysia in the year of 2020.

#### 3.4.3 Sampling Unit

A medical student of the Faculty of Medicine and Health Sciences, University Putra Malaysia in the year of 2020.

#### 3.4.4 Inclusion criteria

- (a) Medical students of year 1 to 5 with an “active” status in the year of 2020.
- (b) Medical students who are able and willing to permit consent to participate in the study.

### 3.4.5 Exclusion criteria

- (a) Medical students who have already been diagnosed with other personality disorders other than BPD.
- (b) Students who are not available and out of campus during data collection.

### 3.4.6 Sample size

#### 3.4.6.1 Sample Size Estimation

The estimation has been calculated using the two proportion formula:

$$n = (Z_{\alpha/2} + Z_{\beta})^2 * (p_1(1-p_1) + p_2(1-p_2)) / (p_1 - p_2)^2$$

•P1= estimated proportion of people having BPD with high identity diffusion

•P2= estimated proportion of people having BPD with low identity diffusion

•Z<sub>α/2</sub> = 1.96 for 95% CI

•Z<sub>β</sub> = power = 80%

$$(1.96 + 0.8)^2 \times \{0.5895(1 - 0.5895) + 0.4105(1 - 0.4105)\} / (0.5895 - 0.4105)^2$$

$$n = 115 \pm 10\% = 128$$

**Design effect will not be taken into consideration since the stratification can be done fairly for clinical and preclinical groups.**

#### 3.4.6.2 Sampling Technique

The stratified random sampling technique is used in this study. All medical students of University Putra Malaysia 511 will be listed. The students of Universiti Putra Malaysia will be divided into stratas according to their year of study. Numbers between 1 to N will be assigned to each student within each year. Based on the sample size (128), we will divide it into pre clinical (64) and clinal year (64).

### 3.5 Data Collection

#### 3.5.1 Study Instrument

The study instrument is a self-administered questionnaire that consists of three sections.

Section A is to identify the socio-demographic data of the participants (i.e. age, gender, ethnicity, education, year of study, marital status and average household income).

Section B is to measure the level of personality functioning by using Morey's Level of Personality Functioning Scale. It is a 80-item questionnaire rated by means of Likert scale. Each response is graded as 1=totally false, not at all true; 2=slightly true; 3=mainly true; 4=very true.

Section C is to screen for the presence of borderline personality disorder by using Zanarini's McLean Screening Instrument for Borderline Personality Disorder (MSI-BPD). It is a 10-item questionnaire rated nominally with a yes or no option, with each positive response is given a mark.

#### 3.5.2 Data Collection Technique

The questionnaire is incorporated into electronic google form and distributed online to the participants during the data collection period from 17th to 24th August 2020. The respondents are required to complete all three sections of the questionnaire and submit back online. The students will be approached three times before being deemed as non-respondents.

#### 3.5.3 Validity and Reliability

A pretest will be carried out to ensure the validity and reliability of the study instrument. The instrument's internal consistency will be determined by Cronbach's alpha.

***This Level of Personality Functioning Scale-Self Report (LPFS-SR) is an 80 item self-rated personality functioning assessment scale for adults age 18 and older. It assesses four interrelated core functions of personality, including Identity, Self-Direction, Empathy, and Intimacy, with each of these sub-component scales consisting of 16 to 23 items.***

Each item on the measure is rated on a 4-point scale. The response categories for the items are 1=totally false, not at all true; 2=slightly true; 3=mainly true; 4=very true. None of the items are reverse-coded,

although some are weighted negatively and thus deduct from score totals.

The weighted item scores are summed to form four sub-composites and a total score. These summary scores allow the clinician to think of the individual's severity of personality dysfunction relative to observed norms. As scores exceed +1.0 standard deviation (SD) above the mean, sub-clinical problems may be expressed; scores exceeding 1.5 to 2.0 standard deviations above the mean may indicate clinically significant personality dysfunction that merits further assessment, treatment, and follow-up.

LPFS-SR is valid questionnaire with content that corresponds directly to the DSM-5 alternative model of personality disorders, Criterion A. The internal consistency estimates for the LPFS-SR were quite high, with an alpha of .969 for the LPFS-SR total score, and alphas ranging from .816 to .891 for the four sub-component scores of Identity, Self-Directedness, Empathy and Intimacy (Morey, 2017)

The McLean Screening Instrument for Borderline Personality Disorder (MSI-BPD) has a strong sensitivity (.81) and specificity (.85) for the diagnosis of DSM-IV BPD (Zanarini et al., 2003). The internal consistency of the MSI-BPD was assessed using Cronbach's  $\alpha$  and the resulting coefficient was as high as 0.74 (SE = 0.03, 95% CI = 0.68-0.81; Feldt, 1965). The scale is a 10-items self-report scale that yields 1 mark for a "yes" response and 0 mark for a "no" response. The cutoff score of 7 or more of the measure's 10 items was judged to be the best cutoff

### 3.6 Data Analysis

Statistical calculations will be carried out using Statistical Package for the Social Science (SPSS version 25) for Windows. Descriptive analysis of data was used in this study whereby percentage is used to describe the proportion of medical students that have borderline personality disorder symptoms. Bivariate analysis will be used to measure the association between the dependent

variable (borderline personality disorder symptoms) and independent variable (total personality functioning and four aspects of personality functioning) among medical students in Universiti Putra Malaysia. The level of significance will be set  $\alpha = 0.05$ .

### 3.7 Study Ethics

Before data collection, we will apply for:

- I. Ethical clearance from the Ethics Committee for Study involving Human subjects of Universiti Putra Malaysia (JKEUPM).
- II. Approval from the Dean of Faculty of Medicine and Health Sciences.

Every respondent will be asked for informed consent via online google form before participation in this study.

The data received from the questionnaire will be kept confidential.

### 3.8 Variables

#### 3.8.1 Dependent variables

The dependent variable is the prevalence of borderline personality disorder symptoms among medical students of Faculty of Medicine and Health Sciences, University Putra Malaysia.

#### 3.8.2 Independent variables

The independent variables are

- (a) Level of severity of impairment in general personality functioning
- (b) Level of severity of impairment in 4 subdomains of personality functioning:
  - Identity disturbances
  - Self-direction
  - Empathy
  - Intimacy

### 3.9 Expected Outcomes

- I. Prevalence of borderline personality disorder (BPD) symptoms among medical students of Universiti Putra Malaysia.

- II. Levels of personality functioning among medical students of Universiti Putra Malaysia.

### 3.10 Operational Definition

- 1) Presence of borderline personality disorder is defined by a cut off score of 7
- 2) Level of Personality Functioning Scale - Self Report questionnaire (LPFS-SR) was utilised. Scores below 1.0 standard deviation (SD) above the mean indicate no subclinical problems, scores of +1.0 signify that subclinical problems may be expressed and scores exceeding 1.5 to 2.0 standard deviations above the mean may indicate clinically significant personality dysfunction.
- 3) Our study adopts the MSI-BPD as its screening measurement for DSM-IV Borderline Personality Disorder (BPD) diagnosis. Although it has high diagnostic efficiency for BPD as evidenced by its good sensitivity (.81) and specificity (.85), researchers suggested that it should not be used as the sole diagnostic measure in either a clinical or research setting (Zanarini et al., 2003). Therefore, we intent to use MSI-BPD to screen for presence of clinically significant BPD symptoms among UPM medical students. We do not intent to use MSI-BPD to diagnose BPD.
- 4) “Active” refers to the students who are of active registration status in the medical programme under Faculty of Medicine and Health Sciences, UPM during data collection period.

### 3.11 Study Limitation

- (a) This study only focuses on medical students in University Putra Malaysia. Thus, findings can not be generalized to a wider population.
- (b) The causal factors cannot be determined by the design of this study which is a cross-sectional study.

## CHAPTER 4 : RESULT

### 4.1. Response rate

Google form based questionnaires were distributed through ‘Whatsapp’ among medical students of Universiti Putra Malaysia. A total of 129 responses were received. However, only 128 responses met the required inclusion and exclusion criteria. One the response did not meet the criteria as the student has been diagnosed with a psychiatric disorder by a psychiatrist. The response rate was 58%. Data of all 128 students that met both the inclusion and exclusion criteria were noted and reviewed.

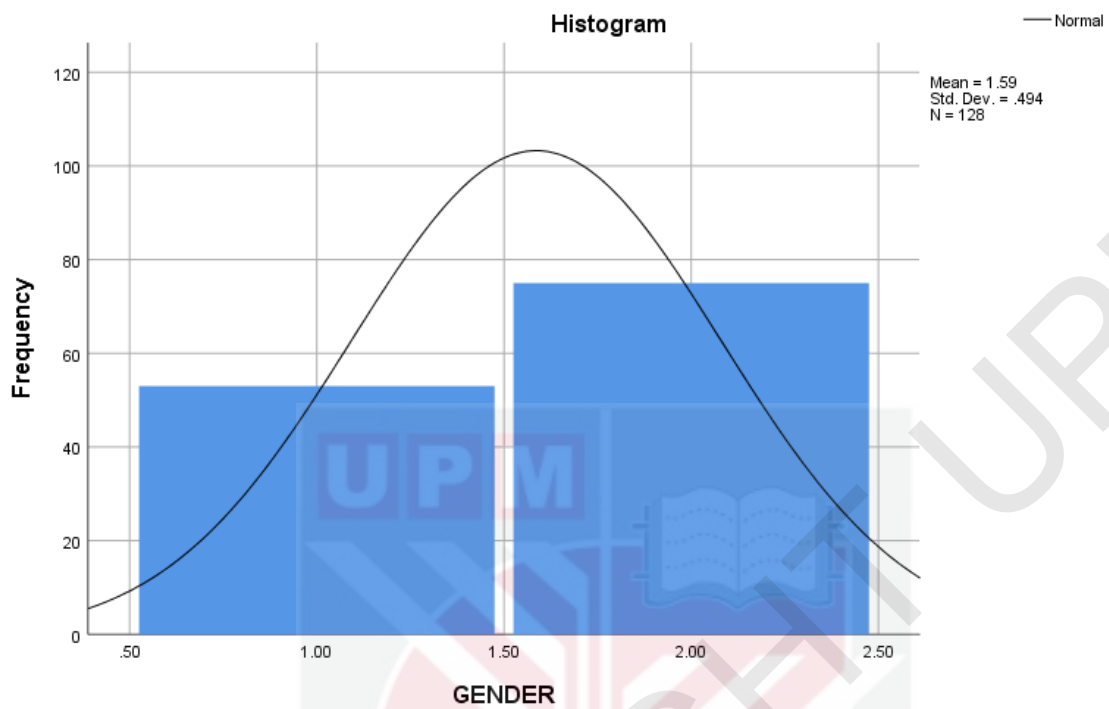
## 4.2. Normality test and other statistical tests

The Statistical Package for the Social Science (SPSS) version 25 has been used for data entry, data analysis and normality testing. For descriptive statistics, categorical data (gender, year of study, home environment and monthly household income) were analyzed into frequency and percentage. For analytical statistics, the association between borderline personality disorder symptoms and total personality functioning among medical students in Universiti Putra Malaysia were assessed by using Chi-Square test.

### 4.2.1 Test of normality for gender

	Kolmogorov-Smirnov	Shapiro-Wilk
Gender	0.000	0.000

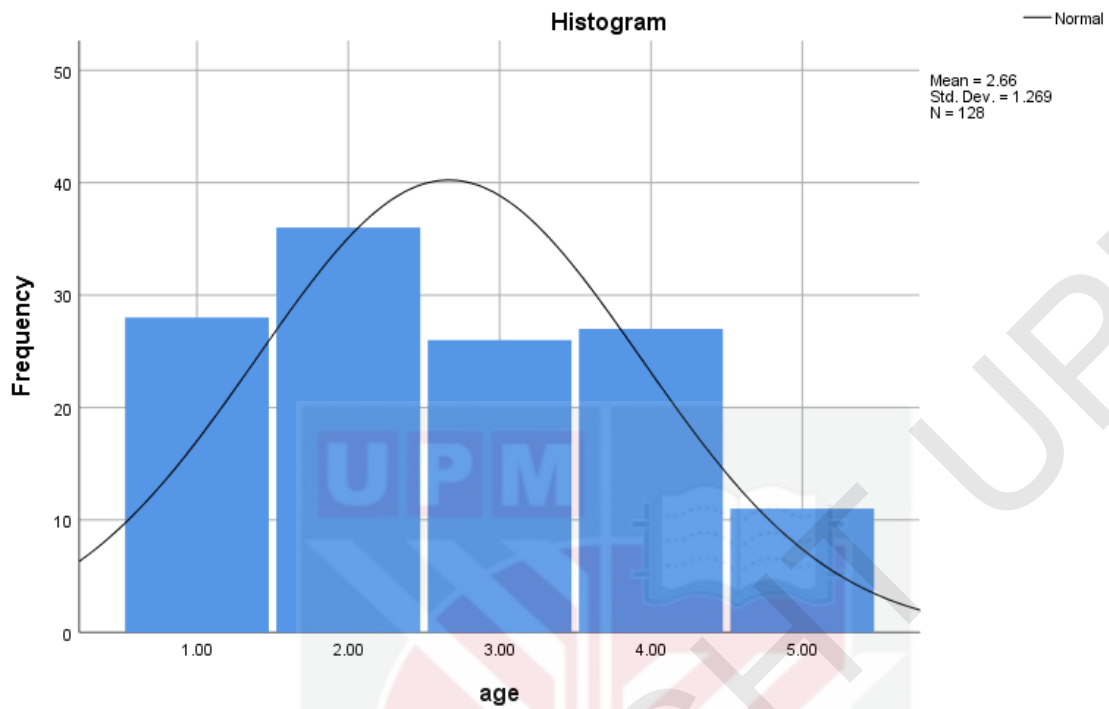
For gender, p value is 0.000. P value is less than 0.001. This shows that gender was drawn from a sample that was not normally distributed. Median is 2 and mode is female.



#### 4.2.2 Test of normality for age

	Kolmogorov-Smirnov	Shapiro-Wilk
Age	0.000	0.000

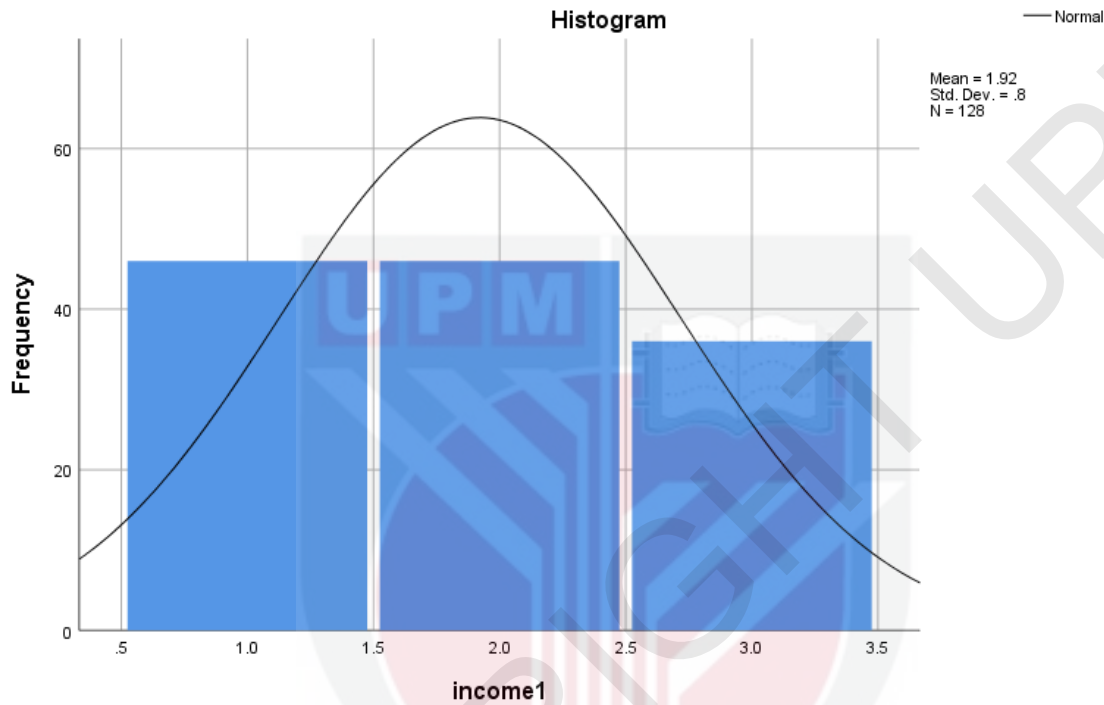
For age, p value is 0.000. P value is less than 0.001. This shows that age was drawn from a sample that was not normally distributed. Median is 2.5 and mode is 21 year olds.



**4.2.3 Test of normality for monthly household income**

	Kolmogorov-Smirnov	Shapiro-Wilk
Monthly household income	0.000	0.000

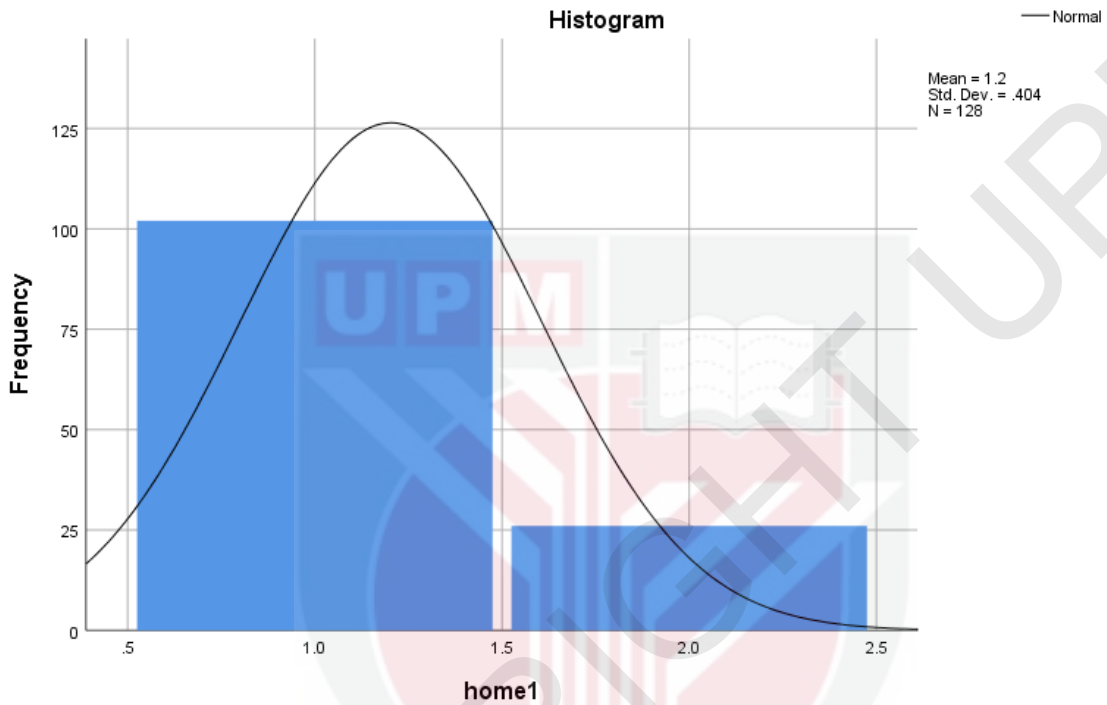
For monthly household income, p value is 0.000. P value is less than 0.001. This shows that monthly household income was drawn from a sample that was not normally distributed. Median is 2 and mode is monthly household income of under RM 4,850 and RM 4,850 - RM 10,959.



#### 4.2.4 Test of normality for home environment

	Kolmogorov-Smirnov	Shapiro-Wilk
Home environment	0.000	0.000

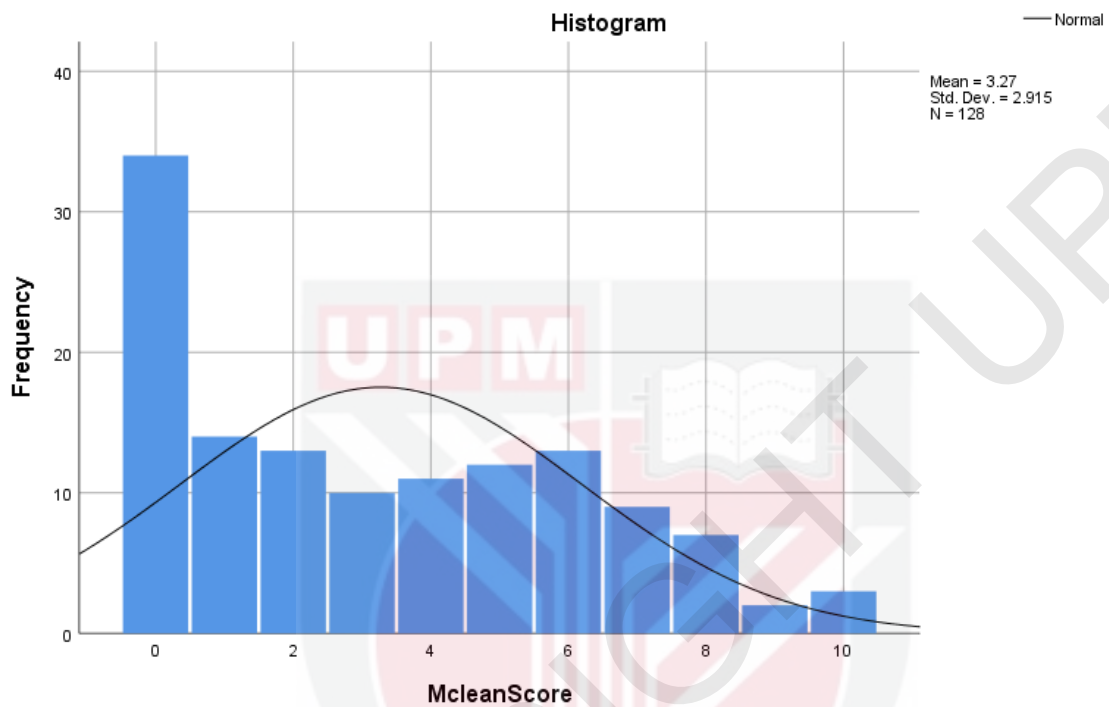
For home environment, p value is 0.000. P value is less than 0.001. This shows that the home environment was drawn from a sample that was not normally distributed. Median is 1 and mode is an urban home environment.



**4.2.5 Test of normality McLean Score**

	Kolmogorov-Smirnov	Shapiro-Wilk
McLean Score	0.000	0.000

P- value is less than 0.001. Data is not normally distributed. Reject null hypothesis.



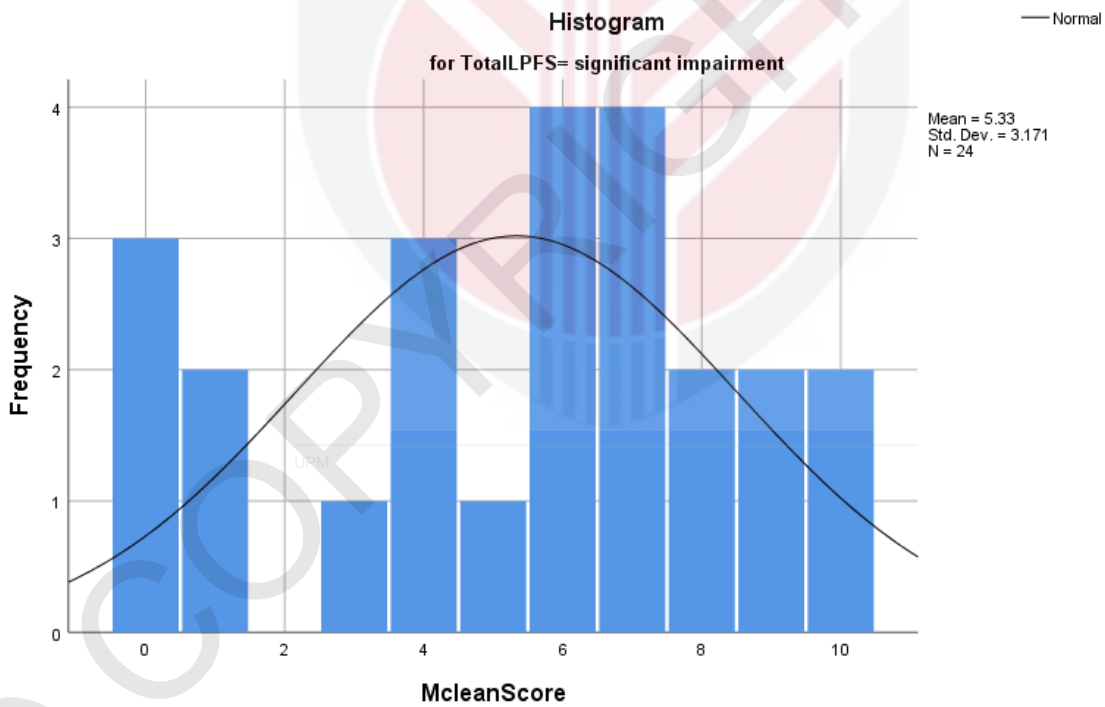
**4.2.6 Test of normality McLean Score and Total LPFS**

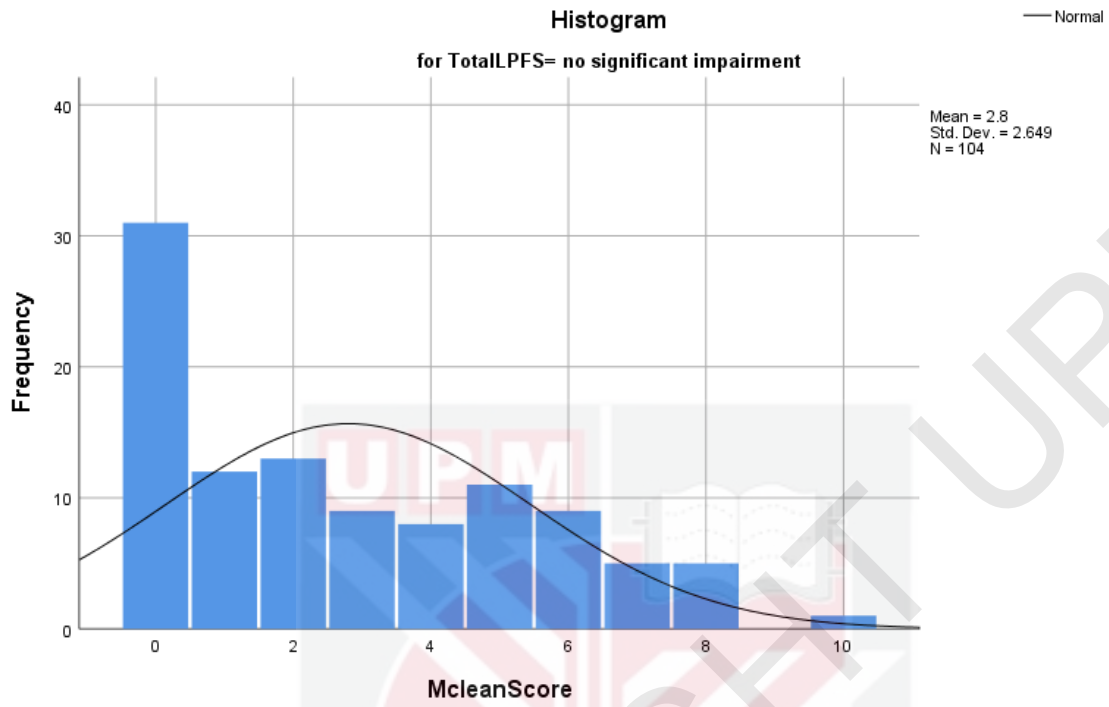
	Total LPFS	Kolmogorov-Smirnov	Shapiro-Wilk
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McLean Score	Significant impairment	0.084	0.084
	No Significant impairment	0.000	0.000

For Total LPFS Score that shows significant impairment, p value is 0.084. P Value is more than 0.05. This shows that the total LPFS Score that shows significant impairment was drawn from a sample that was normally distributed.

For Total LPFS Score that shows not significant impairment, p value is 0.000. P value is less than 0.001. This shows that the total LPFS Score that shows no significant impairment was drawn from a sample that was not normally distributed.



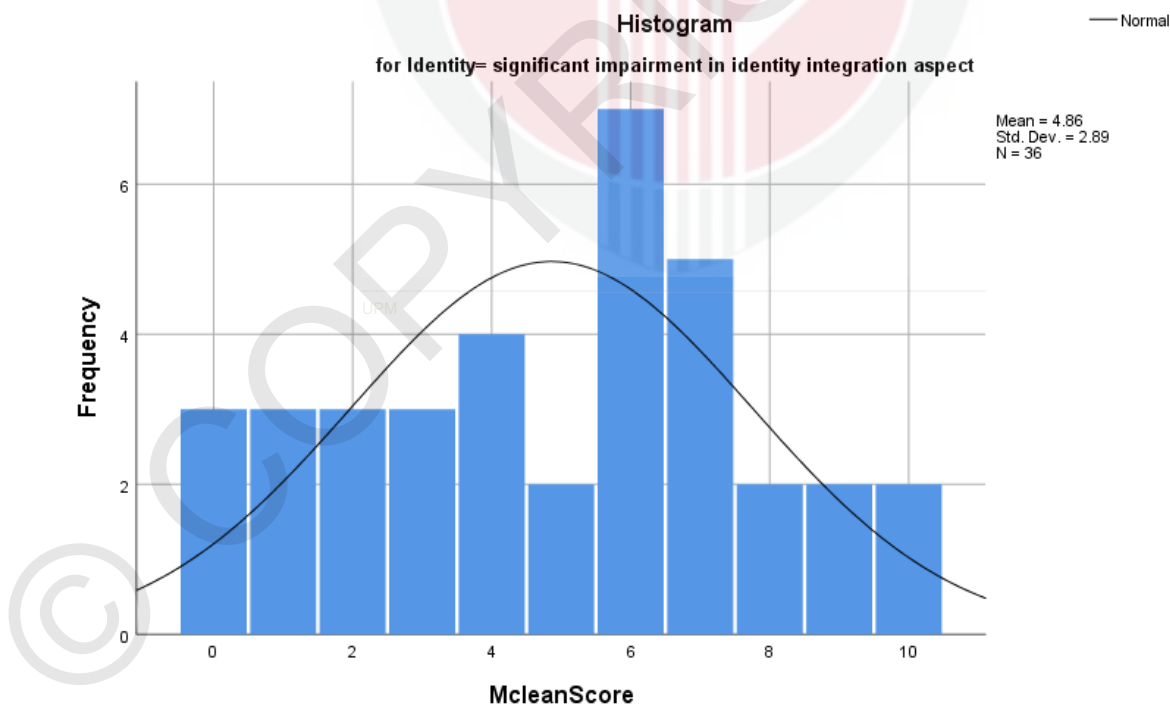


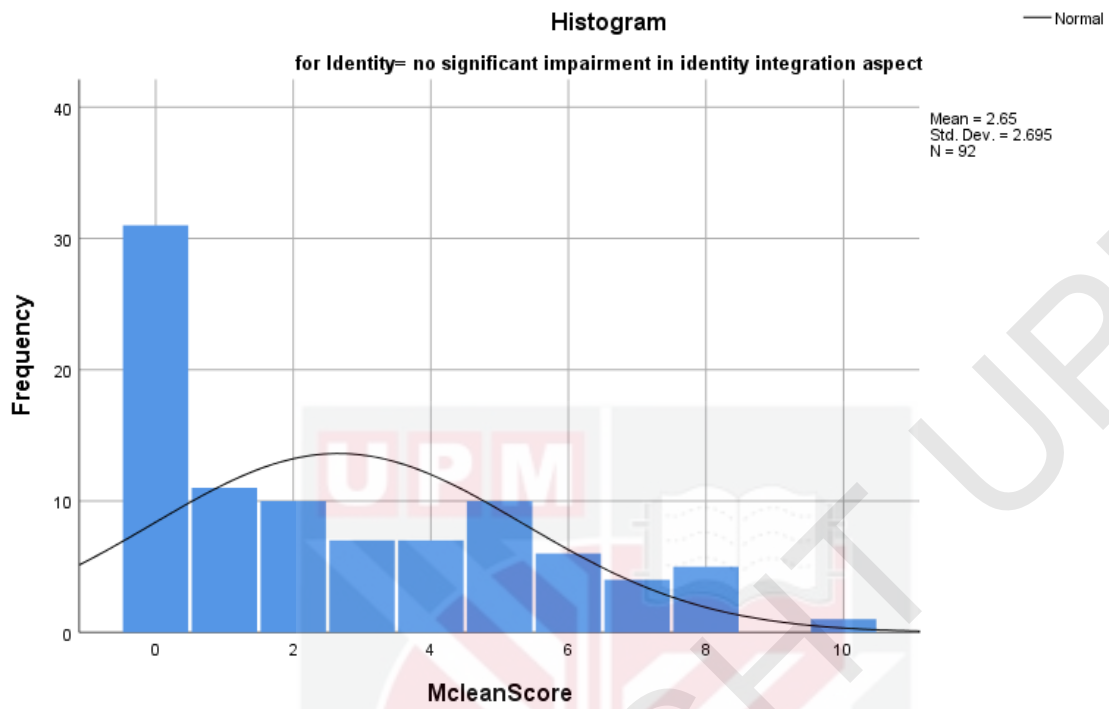
**4.2.7 Test of normality McLean Score and Identity Score**

	Identity	Kolmogorov-Smirnov	Shapiro-Wilk
McLean Score	Significant impairment	0.032	0.161
	No Significant impairment	0.000	0.000

For Identity Score that shows significant impairment, p value is 0.161. P Value is more than 0.05. This shows that the Identity Score that shows significant impairment was drawn from a sample that was normally distributed.

For Identity Score that shows not significant impairment, p value is 0.000. P value is less than 0.001. This shows that the Identity Score that shows no significant impairment was drawn from a sample that was not normally distributed.



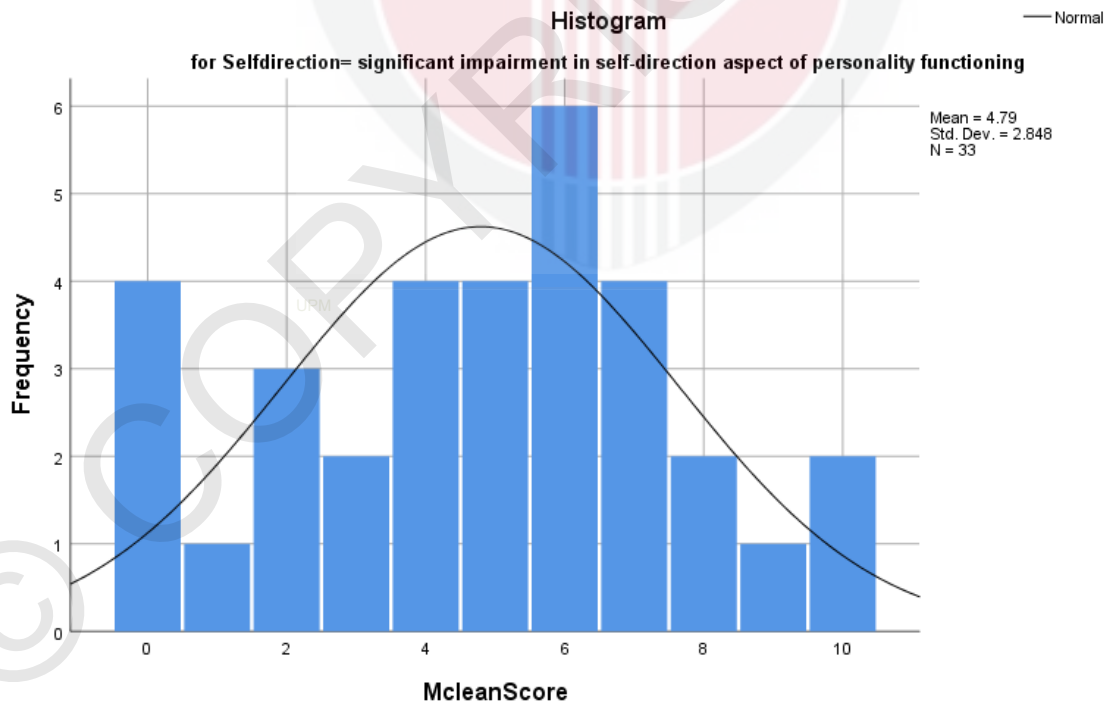


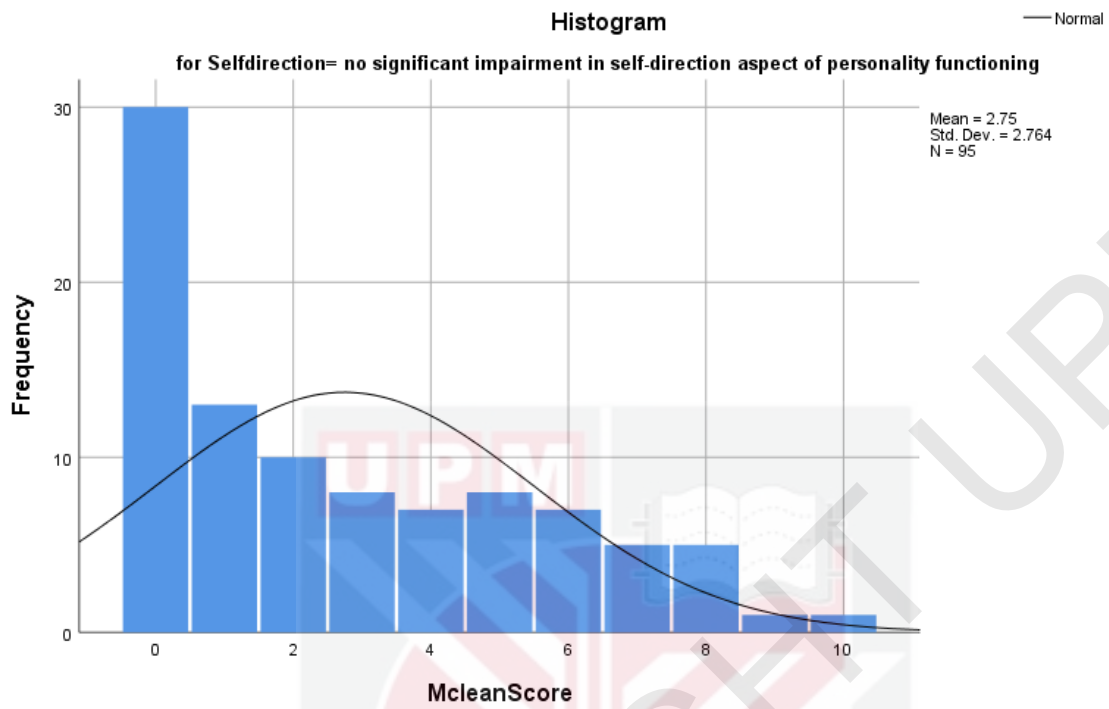
**4.2.8 Test of normality McLean Score and Self- direction Score**

	Self- direction	Kolmogorov-Smirnov	Shapiro-Wilk
McLean Score	Significant impairment	0.2	0.214
	No Significant impairment	0.000	0.000

For Self- direction Score that shows significant impairment, p value is 0.214. P Value is more than 0.05. This shows that the Self- direction Score that shows significant impairment was drawn from a sample that was normally distributed.

For Self- direction Score that shows not significant impairment, p value is 0.000. P value is less than 0.001. This shows that the Self- direction Score that shows no significant impairment was drawn from a sample that was not normally distributed.



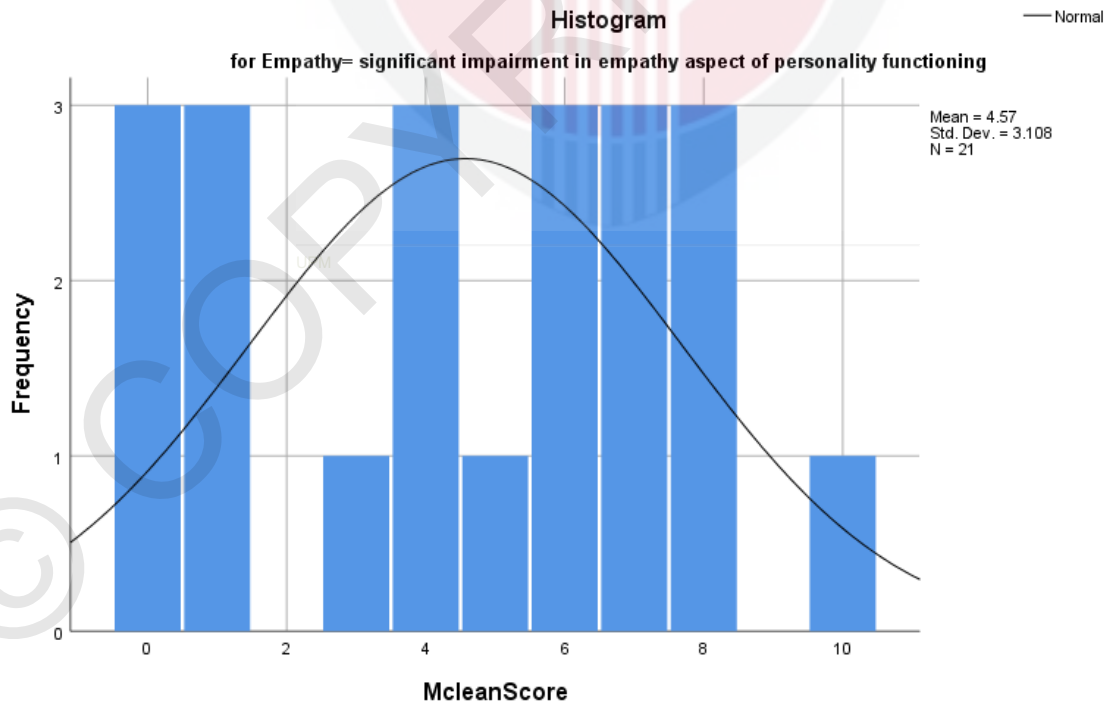


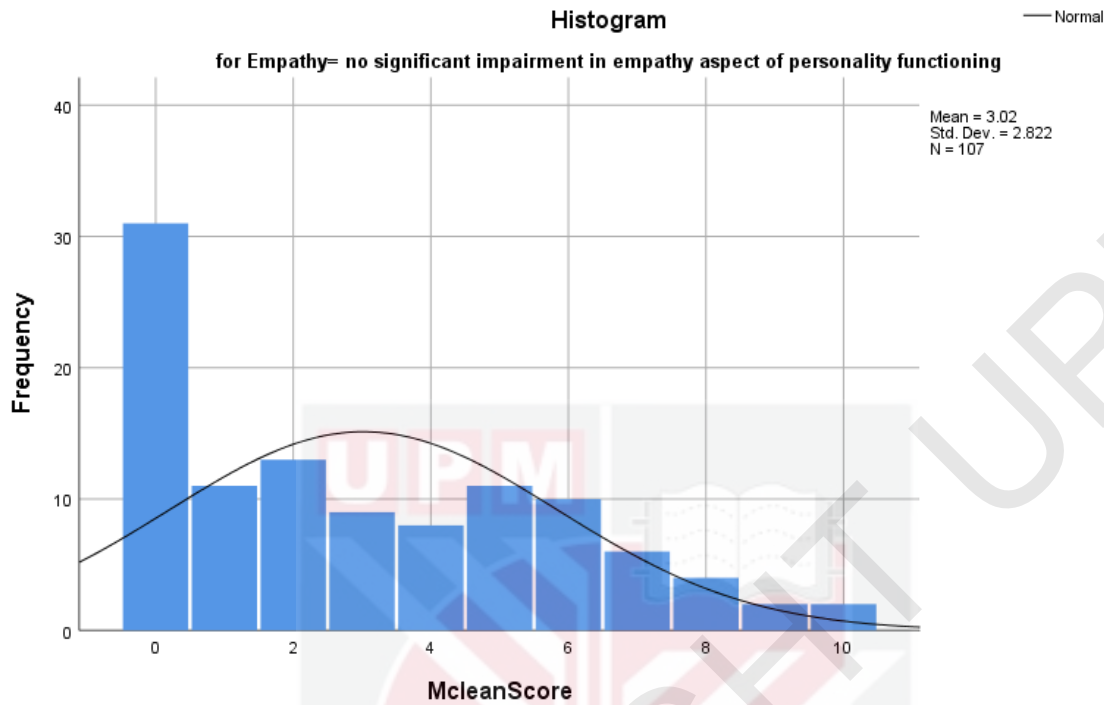
**4.2.9 Test of normality McLean Score and Empathy Score**

	Empathy	Kolmogorov-Smirnov	Shapiro-Wilk
McLean Score	Significant impairment	0.167	0.104
	No Significant impairment	0.000	0.000

For Empathy Score that shows significant impairment, p value is 0.104. P Value is more than 0.05. This shows that the Empathy Score that shows significant impairment was drawn from a sample that was normally distributed.

For Empathy Score that shows not significant impairment, p value is 0.000. P value is less than 0.001. This shows that the Empathy Score that shows no significant impairment was drawn from a sample that was not normally distributed.



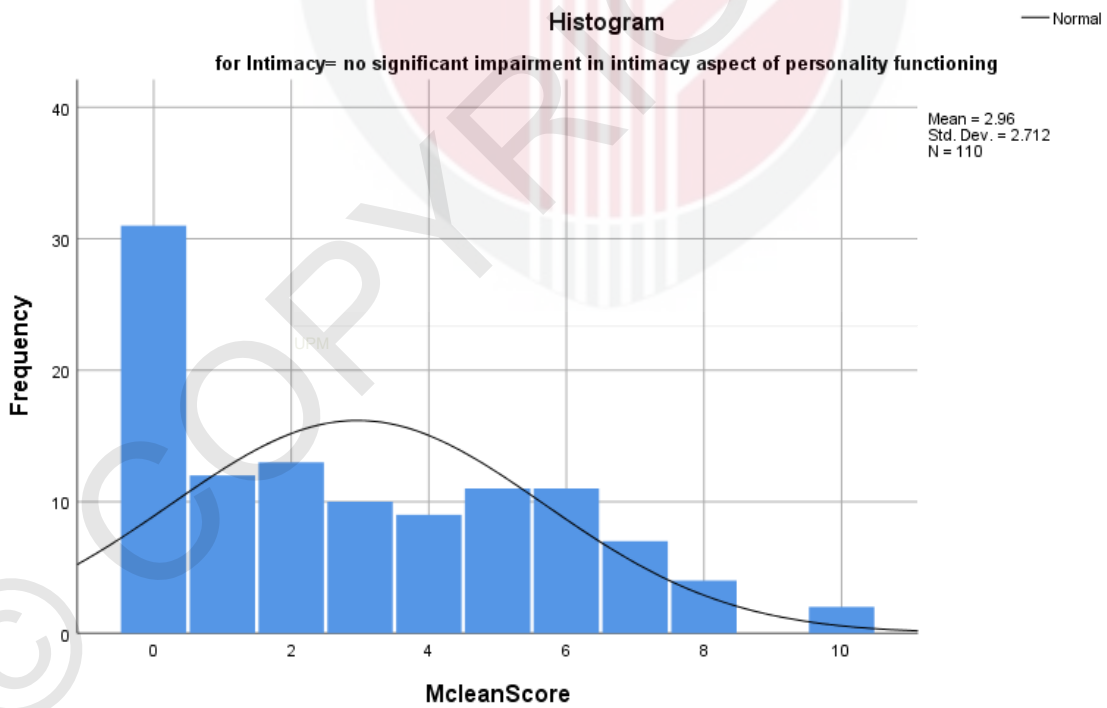
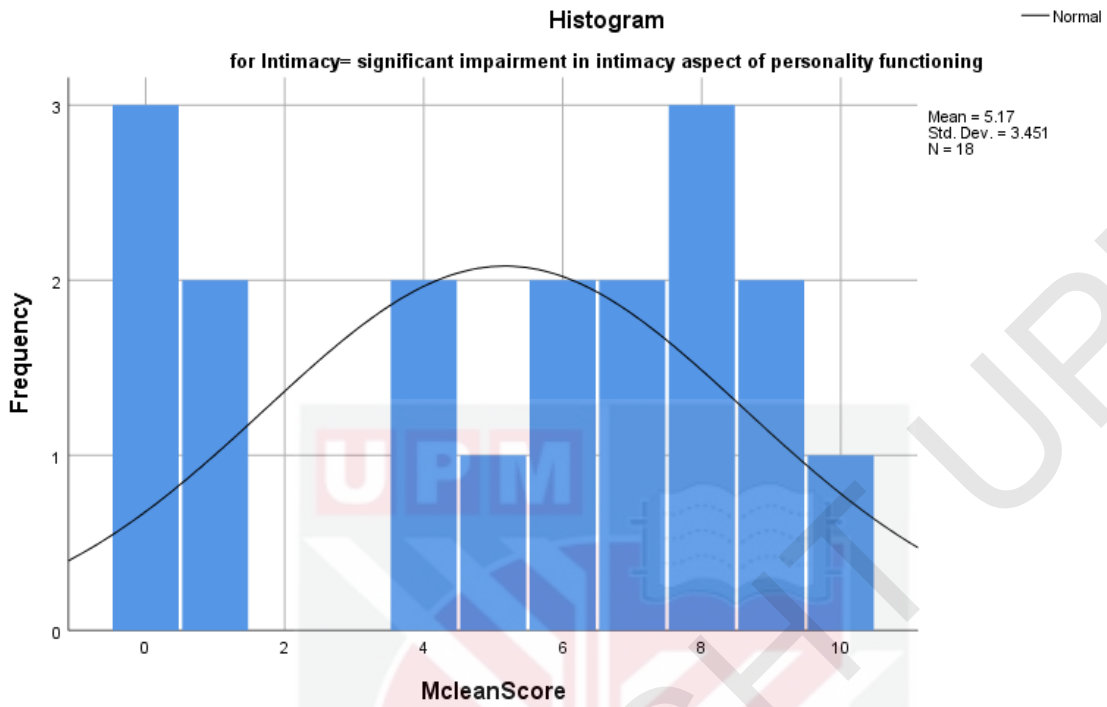


**4.2.10 Test of normality McLean Score and Intimacy Score**

	Intimacy	Kolmogorov-Smirnov	Shapiro-Wilk
McLean Score	Significant impairment	0.200	0.049
	No Significant impairment	0.000	0.000

For Intimacy Score that shows significant impairment, p value is 0.049. P Value is less than 0.05. This shows that the Intimacy Score that shows significant impairment was drawn from a sample that was not normally distributed.

For Intimacy Score that shows no significant impairment, p value is 0.000. P value is less than 0.001. This shows that the Intimacy Score that shows no significant impairment was drawn from a sample that was not normally distributed.



### 4.3. Socio-demographic characteristics of respondents

The distribution of respondents' socio-demographic characteristics is shown in Table 4.3.1. The median score was 22 for the respondents' age, whereby the interquartile range was 2. The majority of respondents were females (58.6%), medical students in second year (28.1%) and lived in urban homes (79.7%). In addition, there were equivalent percentages (35.9%) in both categories of monthly household income under RM 4,850 and monthly household income between RM 4,850 – RM 10,959.

**Table 4.3.1 Socio-demographic characteristics of respondents**

Cases characteristics	Median	IQR	Minimum	Maximum
Age (years)	21.5	2	20	24
Cases characteristics	Frequency, n		Percentage (%)	
<b>Gender</b>				
<b>Male</b>	53		41.4	
<b>Female</b>	75		58.6	
<b>Year of study</b>				
<b>1<sup>st</sup> year</b>	28		21.9	
<b>2<sup>nd</sup> year</b>	36		28.1	
<b>3<sup>rd</sup> year</b>	26		20.3	
<b>4<sup>th</sup> year</b>	27		21.1	

<b>5<sup>th</sup> year</b>	11	8.6
<b>Home environment</b>		
<b>Urban</b>	102	79.7
<b>Rural</b>	26	20.3
<b>Monthly household income</b>		
<b>Under RM 4,850</b>	46	35.9
<b>RM 4,850 – RM 10,959</b>	46	35.9
<b>Above RM 10,959</b>	36	28.1

#### 4.4 The prevalence of Borderline Personality Disorder symptoms among medical students in UPM.

Table 4.4.1 of the prevalence of Borderline Personality Disorder symptoms among Medical students in UPM.

	<b>Frequency</b>	<b>Percent (%)</b>
<b>Show significant BPD symptoms</b>	<b>21</b>	<b>16.4</b>
<b>No significant BPD symptoms</b>	<b>107</b>	<b>83.6</b>

<b>Total</b>	<b>128</b>	<b>100</b>
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**Table 4.4.1 (Mclean)**

The table 4.4.1 shows the prevalence of Borderline Personality Disorder symptoms among Medical students in UPM. . In this study, the Mclean Screening instrument (MSI-BPD) is a screening tool for Borderline Personality Disorder. An MSI-BPD cut off score of 7 or more is suggestive of the presence of Borderline Personality Disorder. This means that those who scored 7 or more have significant Borderline Personality Disorder symptoms. There were 21 respondents with score 7 or more in Mclean questionnaires, hence they were categorized into 'show significant BPD symptoms'. The prevalence of Medical students with significant BPD symptoms was 16.4 %. Meanwhile, about 107 out of 128 respondents have shown no significant BPD symptoms with the prevalence of 83.6%.

**Table 4.4.2 of the number of Mclean scores of Borderline Personality Disorder symptoms among Medical students in UPM.**

<b>Mclean scores</b>	<b>Percentage (%)</b>	<b>Frequency</b>
0	26.6	34
1	11.7	15
2	9.4	12
3	7.8	10
4	8.6	11
5	9.4	12
6	10.2	13
7	7.0	9
8	5.5	7
9	1.6	2

10	2.3	3
<b>TOTAL</b>	<b>100</b>	<b>128</b>

Table 4.4.2

From the table 4.4.2, we noted that the majority 34 (26.6%) of the respondents score 0 in Mclean questionnaires and the lowest score was 9 which is about 2 (1.6%) respondents.

**Table 4.4.3 of the Percentage (%) of yes for repeated breakups in Mclean questionnaires**

Year of study	Frequency	Total respondents each year	Percentage (%) yes within year of study	Percentage (%) of yes within repeated breakups
1	7	28	25.0	16.7
2	17	36	47.2	40.5
3	7	26	26.9	16.7
4	8	27	29.6	19.0
5	3	11	27.3	7.1

Table 4.4.3

**Table 4.4.4 of the Percentage (%) of yes for cut yourself, burned yourself in Mclean questionnaires**

<b>Year of study</b>	<b>Frequency</b>	<b>Total respondents each year</b>	<b>Percentage (%) yes within year of study</b>	<b>Percentage (%) of the respondents that say yes for cut yourself, burned yourself</b>
1	5	28	17.9	21.7
2	7	36	19.4	30.4
3	4	26	15.4	17.4
4	5	27	18.5	21.7
5	3	11	18.2	8.7

**Table 4.4.4****Table 4.4.5 of the Percentage (%) of yes for impulsive behaviour in Mclean questionnaires**

<b>Year of study</b>	<b>Frequency</b>	<b>Total respondents each year</b>	<b>Percentage (%) yes within year of study</b>	<b>Percentage (%) of the respondents that say yes impulsive behavior</b>
1	11	28	39.3	23.9

2	14	36	38.9	30.4
3	9	26	34.6	19.6
4	9	27	33.3	19.6
5	3	11	27.3	6.5

Table 4.4.5

Table 4.4.6 of the Percentage (%) of yes for have been extremely moody in Mclean questionnaires

Year of study	Frequency	Total respondents each year	Percentage (%) yes within year of study	Percentage (%) of the respondents that say yes extremely moody
1	17	28	60.7	27.4
2	21	36	58.3	33.9
3	10	26	38.5	16.1
4	10	27	37.0	16.1
5	4	11	36.4	6.5

**Table 4.4.6**

**Table 4.4.7 of the Percentage (%) of yes for have been frequent felt angry in Mclean questionnaires**

<b>Year of study</b>	<b>Frequency</b>	<b>Total respondents each year</b>	<b>Percentage (%) yes within year study</b>	<b>Percentage (%) of the respondents that say yes for frequent felt angry</b>
1	11	28	39.3	23.9
2	16	36	44.4	34.8
3	8	26	30.8	17.4
4	8	27	29.6	17.4
5	3	11	27.3	6.5

**Table 4.4.7**

**Table 4.4.8 of the Percentage (%) of yes for have been distrustful people in Mclean questionnaires**

<b>Year of study</b>	<b>Frequency</b>	<b>Total respondents each year</b>	<b>Percentage (%) yes within year of study</b>	<b>Percentage (%) of the respondents that say yes for distrustful people</b>
1	10	28	35.7	16.9
2	26	36	72.2	44.1
3	9	26	34.6	15.3
4	11	27	40.7	18.6
5	3	11	27.3	5.1

Table 4.4.8

Table 4.4.9 of the Percentage (%) of yes for have been felt unreal in Mclean questionnaires

<b>Year of study</b>	<b>Frequency</b>	<b>Total respondents each year</b>	<b>Percentage (%) yes within year of study</b>	<b>Percentage (%) of the respondents that say yes for felt unreal</b>
1	11	28	39.3	32.4
2	15	36	41.7	44.1

3	4	26	15.4	11.8
4	2	27	7.4	5.9
5	2	11	18.2	5.9

Table 4.4.9

Table 4.4.10 of the Percentage (%) of yes for have been chronically felt empty in Mclean questionnaires

Year of study	Frequency	Total respondents each year	Percentage (%) yes within a year of study	Percentage (%) of the respondents that say yes for felt chronic empty
1	10	28	35.7	21.3
2	18	36	50.0	38.3
3	7	26	26.9	14.9
4	9	27	33.3	19.1
5	3	11	27.3	6.4

Table 4.4.10

**Table 4.4.11 of the Percentage (%) of yes for have been felt no idea who they are they or no identity in Mclean questionnaires**

<b>Year of study</b>	<b>Frequency</b>	<b>Total respondents each year</b>	<b>Percentage (%) yes within year of study</b>	<b>Percentage (%) of the respondents that say yes for no identity</b>
1	7	28	25.0	24.1
2	13	36	36.1	44.8
3	3	26	11.5	10.3
4	4	27	14.8	13.8
5	2	11	18.2	6.9

**Table 4.4.11**

**Table 4.4.12 of the Percentage (%) of yes for have been made desperate efforts to avoid feeling abandoned who they are they or no identity in Mclean questionnaires**

<b>Year of study</b>	<b>Frequency</b>	<b>Total respondents each year</b>	<b>Percentage (%) yes within year of study</b>	<b>Percentage (%) of the respondents that say yes for made desperate efforts to avoid feeling abandoned</b>

1	8	28	28.6	26.7
2	11	36	30.6	36.7
3	7	26	26.9	23.3
4	2	27	7.4	6.7
5	2	11	18.2	6.7

**Table 4.4.12**

**Table 4.4.13 of the prevalence Borderline personality disorder symptoms among Medical students in UPM based on gender.**

<b>Gender</b>	<b>Frequency respondents with BPD symptoms with the home environment</b>	<b>Percentage of the respondents with BPD symptoms with the home environment (%)</b>
<b>Male</b>	<b>9</b>	<b>42.90</b>
<b>Female</b>	<b>12</b>	<b>57.10</b>

**Table 4.4.13**

**Table 4.4.14 of the prevalence Borderline personality disorder symptoms among Medical students in UPM based on year of study.**

<b>Year</b>	<b>Percentage (%) students that have BPD symptoms Among students that show BPD symptoms</b>	<b>Frequency of students that show BPD symptoms</b>	<b>Total of respondents each year</b>	<b>Percentage (%) students that show BPD symptoms Among the year of study</b>
<b>1</b>	<b>28.6</b>	<b>6</b>	<b>28</b>	<b>21.4</b>
<b>2</b>	<b>38.1</b>	<b>8</b>	<b>36</b>	<b>22.2</b>
<b>3</b>	<b>9.5</b>	<b>2</b>	<b>26</b>	<b>7.7</b>
<b>4</b>	<b>14.3</b>	<b>3</b>	<b>27</b>	<b>11.1</b>
<b>5</b>	<b>9.5</b>	<b>2</b>	<b>11</b>	<b>18.2</b>

**Table 4.4.14**

**Table 4.4.15 of the prevalence Borderline personality disorder symptoms among Medical students in UPM based home environment.**

<b>Home environment</b>	<b>Frequency respondents with BPD symptoms with the home environment</b>	<b>Percentage of the respondents with BPD symptoms with the home environment</b>
<b>Urban</b>	<b>14</b>	<b>66.7</b>
<b>Rural</b>	<b>7</b>	<b>33.3</b>

Table 4.4.15

Table 4.4.16 of the prevalence Borderline personality disorder symptoms among Medical students in UPM based monthly household income.

<b>Monthly household income</b>	<b>Frequency respondents with BPD symptoms with the home environment</b>	<b>Percentage of the respondents with BPD symptoms with the home environment</b>
<b>Under RM4850</b>	<b>4</b>	<b>19.1</b>
<b>Between RM4850- RM10959</b>	<b>12</b>	<b>57.1</b>
<b>Above RM10959</b>	<b>5</b>	<b>23.8</b>

**Table 4.4.16****4.5 General personality functioning among medical students in UPM**

Table 4.5.1 of the prevalence of general personality functioning among medical students in UPM.

	Frequency	Percent (%)
Show significant impairment	24	18.8
No significant impairment	104	81.2
<b>Total</b>	<b>128</b>	<b>100</b>

**Table 4.5.1 (LPFS-SR)**

Table 4.5.2 of the prevalence of general personality functioning among medical students in UPM based on the year of study.

Year of study	Frequency	Total respondents each year	Percentage (%) significant impairment within year of study	Percentage (%) of personality functioning impairment among the significant impairment
1	5	28	17.9	20.8

<b>2</b>	<b>7</b>	<b>36</b>	<b>19.40</b>	<b>29.2</b>
<b>3</b>	<b>5</b>	<b>26</b>	<b>19.20</b>	<b>20.8</b>
<b>4</b>	<b>5</b>	<b>27</b>	<b>18.50</b>	<b>20.8</b>
<b>5</b>	<b>2</b>	<b>11</b>	<b>18.20</b>	<b>8.3</b>

Table 4.5.2

Table 4.5.1 shows the prevalence of general personality functioning among Medical students in UPM. In this study, Level of Personality Functioning Scale-Self-Report Questionnaires (LPFS-SR) was used. Level of Personality Functioning Scale-Self-Report Questionnaires (LPFS-SR) is a tool to assess the general personality functioning and the four interrelated core functions of personality- Identity integration, self-direction, empathy and intimacy. The four subcomponent scores are summed to yield an index of the level of severity impairment in general personality functioning. Total score exceeding 1.5 to 2.0 standard deviation above the mean indicates clinically significant impairment in general personality functioning. This means that those with a total score of more than 347.1 have a significant impairment in general personality functioning. The prevalence of Medical students with significant impairment in general personality functioning was 18.8% which involved only 24 respondents out of 128. Meanwhile, about 104 respondents show no significant impairment in general personality functioning with the percentage 81.2%.

In table 4.5.2, we noticed that the majority of the second year students have the highest rate (29.2%) of impairment in general personality functioning and the minority was from fifth year students with percentage 8.3%.

#### 4.6 Prevalence of four specific aspects of personality functioning among Medical students in UPM.

Table of the prevalence specific aspects of personality functioning among Medical students in UPM.

	Frequency	Percent (%)
Significant impairment in identity integration	35	27.3
No Significant impairment in identity integration	93	72.7
Total	128	100

**Table 4.6.1**

	Frequency	Percent (%)
Significant impairment in self-direction	32	25.0
No Significant impairment in self-direction	96	75.0
Total	128	100

**Table 4.6.2**

	Frequency	Percent (%)
Significant impairment in empathy	21	16.4
No Significant impairment in empathy	107	83.6
Total	128	100

**Table 4.6.3**

	Frequency	Percent (%)
Significant impairment in intimacy	18	14.1

No Significant impairment in intimacy	110	85.9
Total	128	100

**Table 4.6.4**

Table of the prevalence specific aspects of personality functioning among Medical students in UPM based on the year of study

Year of study	Frequency	Total respondents each year of study	Percentage (%) of significant impairment within year of study	Percentage (%) of identity integration impairment among the significant impairment
1	9	28	32.1	25.7
2	10	36	27.8	28.6
3	6	26	23.1	17.1
4	6	27	22.2	17.1
5	4	11	36.4	11.4

Table 4.6.5

<b>Year of study</b>	<b>Frequency</b>	<b>Total respondents each year of study</b>	<b>Percentage (%) of significant impairment within year of study</b>	<b>Percentage (%) of self-direction impairment among the significant impairment</b>
1	6	28	21.4	18.8
2	8	36	22.2	25.0
3	7	26	26.9	21.9
4	7	27	25.9	21.9
5	4	11	36.4	25.0

Table 4.6.6

<b>Year of study</b>	<b>Frequency</b>	<b>Total respondents each year of study</b>	<b>Percentage (%) of significant impairment within year of study</b>	<b>Percentage (%) of empathy impairment among the significant impairment</b>
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1	3	28	10.7	14.3
2	9	36	25.0	42.9
3	5	26	19.2	23.8
4	2	27	7.4	9.5
5	2	11	18.2	9.5

Table 4.6.7

<b>Year of study</b>	<b>Frequency</b>	<b>Total respondents each year of study</b>	<b>Percentage (%) significant impairment within year of study</b>	<b>Percentage (%) of intimacy impairment among the significant impairment</b>
1	3	28	10.7	16.7
2	6	36	16.7	33.3
3	5	26	19.2	27.8
4	2	27	7.4	11.1

5	2	11	18.2	11.1
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Table 4.6.8

.Table 4.6.1, 4.6.2, 4.6.3 and 4.6.4 shows prevalence of four specific aspects of personality functioning among Medical students in UPM. There are 4 sub-composites scores. Each sub-composite score represents a specific aspect of the personality functioning. Those with an identity sub-composite score of more than 113.6 have a significant impairment in identity integration aspect of personality functioning. Those with a self-direction sub-composite score of more than 83.7 have a significant impairment in self-direction aspects of personality functioning. Those with an empathy sub-composite score of more than 60.5 have a significant impairment in empathy aspects of personality. Those with an intimacy sub-composite score of more than 98.6 have a significant impairment in intimacy aspects of personality.

In table 4.6.1, the prevalence of Medical students with significant impairment in identity integration aspect was 28.1% which only involved 36 respondents. Meanwhile about 92 respondents have shown no significant impairment in identity integration with the prevalence rate 71.9%.

In table 4.6.2, the prevalence of Medical students with significant impairment in self-direction was 25.8% which involved only 33 respondents. Meanwhile about 95 respondents have shown no significant impairment in self-direction with the prevalence rate 74.2%.

In table 4.6.3, the prevalence of Medical students with significant impairment in empathy was 16.4% which involved only 21 respondents. Meanwhile about 107 respondents have shown no significant impairment in empathy with the prevalence rate 83.6%.

In table 4.6.4, the prevalence of Medical students with significant impairment in intimacy was 14.1% which only involved 18 respondents. Meanwhile about 82 respondents have shown no significant impairment in intimacy with the prevalence rate 85.9%.

In table 4.6.5, we noticed that fifth year students have the highest rates (36.4%) of impairment in identity integration and followed by first year, second year, third year and fourth year.

In table 4.6.6, the highest rate of impairment in self-direction was also fifth year students (36.4%) compared to the other year of study.

In table 4.6.7, second year students become the highest group that have significant impairment in empathy (25.0%) and the lowest was the fourth year students (7.4%).

In table 4.6.8, third year students have shown the highest rate of intimacy impairment (19.2%) compared to others.

#### 4.7 Association of the presence of BPD symptoms with the identity integration aspect of personality functioning among Medical students in UPM

Table 4.7.1 frequency of the presence of BPD symptoms with the identity integration aspect of personality functioning among Medical students in UPM.

Presence of BPD symptoms	significant impairment in identity integration aspect	No significant impairment' in identity integration aspect	Total
Significant BPD symptoms	11	10	21
No significant BPD symptoms	24	83	107
Total	35	93	128

**Table 4.7.1 (Mclean \* Identity Cross Tabulation)**

	Value	df	p-value
Pearson Chi-square	7.927 <sup>a</sup>	1	.005

**Table 4.7.2 (Chi-square)**

Table 4.7.2 shows the association of Borderline Personality Disorder symptoms and identity integration aspect of personality functioning among Medical students in UPM. The hypothesis of

the association of the presence of BPD symptoms with the identity integration aspect of personality functioning among Medical students in UPM was analysed using **Pearson Chi-square test**. The test showed that the p-value is 0.005 which is smaller than 0.05. This means the value was statistically significant. Thus the null hypothesis is rejected. The data suggest that the variable of the presence of BPD symptoms with the identity integration aspect of personality functioning among Medical students in UPM are associated with each other.

#### 4.8 Association of the presence of BPD symptoms with the self- direction aspect of personality functioning among Medical students in UPM.

Table 4.8.1 frequency of the presence of BPD symptoms with the self-direction aspect of personality functioning among Medical students in UPM.

<b>Presence of BPD symptoms</b>	<b>significant impairment in self-direction aspect</b>	<b>No significant impairment in self-direction aspect</b>	<b>Total</b>
<b>Significant BPD symptoms</b>	9	12	21
<b>No significant BPD symptoms</b>	23	84	107
<b>Total</b>	32	96	128

**Table 4.8.1 (Mclean \* Self-direction Cross Tabulation)**

	Value	df	p-value
<b>Pearson Chi-square</b>	4.272 <sup>a</sup>	1	0.039

**Table 4.8.2 (Chi-square)**

Table 4.8.2 shows the association of Borderline Personality Disorder symptoms and self-direction aspect of personality functioning among Medical students in UPM. The hypothesis of the association of the presence of BPD symptoms with the self-direction aspect of personality functioning among Medical students in UPM was analysed using **Pearson Chi-square test**. The test showed that the p-value is 0.039 which is less than 0.05. This means the value was statistically significant. Thus the null hypothesis is rejected. The data suggest that the variable of the presence of BPD symptoms with the self-direction aspect of personality functioning among Medical students in UPM are associated with each other.

#### **4.9 Association of the presence of BPD symptoms with the empathy aspect of personality functioning among Medical students in UPM.**

Table 4.9.1 : Frequency of the presence of BPD symptoms with the empathy aspect of personality functioning among Medical students in UPM.

<b>Presence of BPD symptoms</b>	<b>Significant impairment in empathy aspect</b>	<b>No significant impairment in empathy aspect</b>	<b>Total</b>
<b>Significant BPD symptoms</b>	7	14	21
<b>No significant BPD symptoms</b>	14	93	107
<b>Total</b>	21	107	128

**Table 4.9.1 (Mclean \* empathy Cross Tabulation)**

	<b>Exact Sig.(2-sided)</b>
<b>Fisher's Exact Test</b>	0.046

**Table 4.9.2 (Chi-square)**

Table 4.9.2 shows the association of Borderline Personality Disorder symptoms and empathy aspect of personality functioning among Medical students in UPM. The hypothesis of the association of the presence of BPD symptoms with the empathy aspect of personality functioning among Medical students in UPM was analysed using **Fisher's Exact Test**. The test showed that the p-value is 0.046 which is less than 0.05. This means the value was statistically significant. Thus the null hypothesis is rejected. The data suggest that the variable of the presence of BPD symptoms with the empathy aspect of personality functioning among Medical students in UPM are associated with each other.

#### **4.10 Association of the presence of BPD symptoms with the intimacy aspect of personality functioning among Medical students in UPM.**

Table 4.10.1 frequency of the presence of BPD symptoms with the intimacy aspect of personality functioning among Medical students in UPM.

<b>Presence of BPD symptoms</b>	<b>Significant impairment in intimacy aspect</b>	<b>No significant impairment in intimacy aspect</b>	<b>Total</b>
<b>Significant BPD symptoms</b>	8	13	21
<b>No significant BPD symptoms</b>	10	97	107
<b>Total</b>	18	110	128

**Table 4.10.1 (Mclean \*intimacy Cross Tabulation)**

	<b>Exact Sig.(2-sided)</b>
<b>Fisher's Exact Test</b>	0.002

**Table 4.10.2 (Chi-square)**

Table 4.10.2 shows the association of Borderline Personality Disorder symptoms and intimacy aspect of personality functioning among Medical students in UPM. The hypothesis of the association of the presence of BPD symptoms with the intimacy aspect of personality functioning among Medical students in UPM was analysed using **Fisher's Exact Test**. The test showed that the p-value is 0.002 which is less than 0.05. This means the value was statistically significant. Thus the null hypothesis is rejected. The data suggest that the variable of the presence of BPD symptoms with the intimacy aspect of personality functioning among Medical students in UPM are associated with each other.

#### **4.11 Association of the presence of BPD symptoms with the general personality functioning among Medical students in UPM.**

Table 4.11.1 frequency of the presence of BPD symptoms with the general personality functioning among Medical students in UPM.

<b>Presence of BPD symptoms</b>	<b>Significant impairment in general personality functioning</b>	<b>No significant impairment in general personality functioning</b>	<b>Total</b>
<b>Significant BPD symptoms</b>	10	11	21

<b>No significant BPD symptoms</b>	14	93	107
<b>Total</b>	24	104	128

**Table 4.11.1 (McNemar \*general personality functioning Cross Tabulation)**

	<b>Exact Sig.(2-sided)</b>
<b>Fisher's Exact Test</b>	0.001

**Table 4.11.2 (Chi-square)**

Table 4.10.2 shows the association of Borderline Personality Disorder symptoms and general personality functioning among Medical students in UPM. The hypothesis of the association of the presence of BPD symptoms with general personality functioning among Medical students in UPM was analysed using **Fisher's Exact Test**. The test showed that the p-value is 0.001 which is less than 0.05. This means the value was statistically significant. Thus the null hypothesis is rejected. The data suggest that the variable of the presence of BPD symptoms with general personality functioning among Medical students in UPM are associated with each other.

#### **4.12 Socio-demographic characteristics of respondents that show BPD symptoms**

Table 4.12.1 shows the socio-demographic characteristics of 21 respondents' that showed BPD symptoms. The majority of respondents were females (12 respondents), medical students in second year (8 respondents) and lived in urban homes (17 respondents). Furthermore, the category of monthly household income between RM 4,850 – RM 10,959 showed the highest number of participants with BPD symptoms (12 participants).

**Table 4.12.1 Socio-demographic characteristics of respondents that show BPD symptoms**

<b>Cases characteristics</b>	<b>Total respondents</b>	<b>Number of respondents that show BPD symptoms</b>
<b>Gender</b>		

<b>Male</b>	53	9
<b>Female</b>	75	12
<b>Year of Study</b>		
<b>1st Year</b>	28	6
<b>2nd Year</b>	36	8
<b>3rd Year</b>	26	2
<b>4th Year</b>	27	3
<b>5th Year</b>	11	2
<b>Home environment</b>		
<b>Urban</b>	102	14
<b>Rural</b>	26	7
<b>Monthly Household Income</b>		
<b>Under RM 4,850</b>	46	4
<b>RM 4,850 – RM 10,959</b>	46	12
<b>Above RM 10,959</b>	36	5

## Chapter 5

### DISCUSSION

## 5.1 Study design

The study design used for this research was a cross sectional study which is a type of observational study that analyses a population subset at a specific point in time. This study design was used to determine the prevalence of Borderline Personality Disorder symptoms and personality functioning among medical students in University Putra Malaysia. An association study was also conducted between BPD symptoms and 4 aspects (identity integration, self-direction, empathy, intimacy) of personality functioning to check for any association between these two variables among medical students in UPM. The respondents for this study were Medical students from the first year to the fifth year. The total number of responses received were 191 responses. The questionnaire was used to obtain the responses was divided into three sections which consist of the socio-demographic questions, Level of Personality Functioning Scale-Self-Report Questionnaires (LPFS-SR) which is to access the general personality functioning and the four interrelated core functions of personality- Identity integration, self-direction, empathy and intimacy and Mclean Screening instrument (MSI-BPD) which is screening tool for Borderline Personality Disorder symptoms.

## 5.2 Sociodemographic

In this study the questionnaires were distributed through the online applications and we received only 129 responses out of 511 medical students in UPM. Only 128 respondents meet the inclusion and exclusion criteria. We found that one respondent does not meet the criteria requirement because the respondents have already been diagnosed with psychiatric disorder by the psychiatrist. So in our survey, the response rate was 25.24%.

Based on the socio-demographic aspects, about 41.4% were male respondents and majority were female respondents which was 58.6%.. According to the year of study, about 28 respondents (21.9%) were from the 1<sup>st</sup> year students, 36 respondents (28.1%) were from 2<sup>nd</sup> year students, 26 respondents (20.3%) from the 3<sup>rd</sup> year students, 27 respondents (21.1%) were from 4<sup>th</sup> year students and 11 respondents (8.6%). Among the respondents, 50% were from the preclinical year and 50% from the clinical year. Most of the respondents (79.7%) were living in urban areas and the rest were living in rural areas. For the monthly household income, we found that respondents with under RM 4850 and RM4850 -RM10959 monthly household income have shared the same number of respondents which was 46 (35.93%). Meanwhile, only 36 (28.2%) respondents with above RM10959 monthly household income.

## 5.3 Prevalence of Borderline Personality Disorder symptoms among Medical students in UPM

Through this study, it was revealed that the prevalence of Borderline Personality Disorder symptoms among Medical students in UPM was 16.4%. About 21 respondents with score 7 or

more in Mclean questionnaires, hence they were categorized into 'show significant BPD symptoms'. Meanwhile, about 107 (83.6%) respondents with scores below than 7 hence they were categorized into 'no significant BPD symptoms'.

Among the respondents that show Borderline personality symptoms, we found that 9 (42.9%) out of 21 were male respondents and 12 (57.1%) were female. In our study, we concluded that females have slightly high rates of borderline symptoms. Even though some researchers assumed that women are much more likely to meet criteria for BPD symptoms than men (as high as a ratio of 3:1) due to sampling bias (Sansone,2011). In our research, we assumed that the differences between the rate of borderline personality symptoms in male and females is due to the number of female respondents being more than male respondents in which it can give females more chances to give positive results (shows significant borderline personality disorder symptoms). In addition, this may be due to the male-female biological differences. Biological differences may help explain why males display more aggressive and externalizing behavior patterns and females show more behavioral inhibition and internalizing problems. Compared with females, males have lower levels of autonomic arousal (27) and reduced frontal activity in the brain (28). These would make females more likely to develop stronger consciences, experience more fear, guilt, depression and therefore have an affective component of an impulse control problem (29).

According to each year of study, we found that 21.4% was from the 1st year , 22.2% were from the 2nd year, 7.7% were from the 3rd year, 11.1% were from the 4th year and 18.2% were from the 5th year. We assume that the 2nd year has the highest rate of Borderline personality disorder symptoms because of the environmental factors as they have the first professional examination which they have never experienced before which may lead to stress and the stress may increase the risk to develop borderline personality symptoms. The transition from preclinical to clinical years of these respondents might cause fear of not being good enough thus elicit the symptoms of Borderline Personality Disorder. Furthermore, BPD symptoms are believed to decrease because the symptoms naturally "burn out" or people actually develop out of the symptoms as they age. For example , research has shown that BPD's impulsiveness symptoms are more likely to decrease over time (30). It is consistent with the fact that older people typically participate in less impulsive behaviour, even though they have no BPD. It might be that as we age and grow we slowly lose the desire to indulge in impulsive behaviour, allowing us to make more calculated and logical decisions.

According to the home environment, most of the respondents that have Borderline symptoms live in Urban areas which is 66.7%. This finding was similar to the study done in Medical University in Lublin (MUL) in which they found that Borderline personality features occur most commonly in the students from big cities with point median of 2.66, small city is 1.48 and less commonly from rural areas with 1.24. This poses concerns about how an environment's culture affects personality psychopathology. Since the culture of an area can influence one's personality, interpersonal relationships, communication styles and coping mechanisms. It is believed that the

environment of an urban area encourages more independence and therefore more room for impulsivity. Impulsiveness may manifest in excessive drinking and increased promiscuity. Whether the environment of an area protects against BPD symptoms or increases vulnerability are important questions for future research.

As we analysed the Mclean questionnaires, we found that mostly the respondents that had the problem with (trouble in the relationship or repeated breakups, deliberately hurt themselves physically, having at least two other problems with impulsivity, experienced extremely moody, frequently been angry, have distrustful of other people, felt frequently unreal, experiencing chronically felt empty, feel they have no idea of who they are or no identity in themselves, made desperate efforts to avoid feeling abandoned or being abandoned) were from the preclinical students. So we assumed that the reason why the preclinical students score more than clinical students is because they are still new in the medical field and they might have a problem to handle their stress or have difficulty making a new friend which may increase the risk of borderline personality symptoms.

#### **5.4 Prevalence of general personality functioning among medical students in UPM.**

Through this study, it was revealed that the prevalence of general personality functioning among medical students in UPM that show significant impairment was 18.8%. In this study Level of Personality Functioning Scale-Self-Report Questionnaires (LPFS-SR) was used. Level of Personality Functioning Scale-Self-Report Questionnaires (LPFS-SR) is a tool to access the general personality functioning and the four interrelated core functions of personality- Identity integration, self-direction, empathy and intimacy.

There were 24 (18.8%) respondents out of 128 that score more than 347.1 in the LPFS-SR questionnaires, hence they were categorized in 'significant impairment' in general personality functioning. Meanwhile, about 104 respondents scored below than 347.1 and they were categorized in the group of 'no significant impairment' in general personality functioning with the percentage of 81.2%.

According to the year of study, we found that the 2<sup>nd</sup> year students have the highest rate of the impairment in general personality functioning (19.4%), followed by 3<sup>rd</sup> year students (19.2%), 4<sup>th</sup> year students (18.5%), 5<sup>th</sup> year students (18.2%) and the lowest was the 1<sup>st</sup> year students (17.9%).

This could be due to the fact that respondents of 2nd year students have to sit for professional exam I and commit to their research project simultaneously in the pandemic of Coronavirus in

2020. Online classes during quarantine needed to be adapted well by the students since it is not the primary education platform. This incite anxiety which is associated with impaired personality functioning (Doering et al. BMC Psychiatry, 2018).

### **5.5 Prevalence of four specific aspects of personality functioning among Medical students in UPM.**

In this study, we found about 36 (28.1%) out of 128 respondents who have scored more than 113.6, hence they were categorized in the group of having significant impairment in identity integration aspect. For the self-direction aspects, we noted that about 33 (25.8%) respondents scored more than 83.7 and we assume that they have the impairment in self-direction aspects. Meanwhile about 21 (16.4%) of the students were reported to have impairment in empathy aspects. Last but not least, in the intimacy aspects we found that 18 (14.1%) students have impairment in these aspects.

Based on the year of study, in the identity integration aspect, we noted that the fifth year students have the highest rate of impairment (36.4%) and the lowest was the fourth year students (22.2%). It is believed that fifth year students have the highest rate of identity integration impairment because of the depression or the stress. As we know, fifth students have a very chaotic environment as they need to face the final examination before they finally graduate from their medical school. This kind of environment may contribute to an unstable sense of self. Furthermore, being able to think about the mental states of themselves and others such as dreams, thoughts, emotions, and goals also can be a potential factor that contributes to the impairment in identity integration (32).

Next, for the self-direction aspects, we also found that fifth students also have the highest rate of impairment in self-direction (36.4%) followed by third year (26.9%), fourth year (25.9%), second year (22.2%) and first year (21.4%). As we can see, the fifth year also has the highest rate of identity integration impairment. We assume that the reason why fifth year students have the highest rate of the impairment in self-direction is because of their stressful event such as they have to sit for the professional exam 3 and this stress which makes them become confused about their goal and dream.

Next, in the empathy aspects, we noticed that 2<sup>nd</sup> year students have the highest rate of impairment in empathy (25%). In other studies, (33) reported that a student's empathy declined during medical school education. According to a study on empathy of medical school students in the U.S. conducted using the Jefferson Scale of Physician Empathy-Student Version (JSPE-S), the empathy scores declined significantly during their 3rd year, which was their first full year of clinical experience (34). This may be due to the fact that 2nd year medical students are all in the transition between clinical and preclinical education which incite nervousness to excel both in examinations and prepare for clinical endeavour.

Last but not least, we found that 3<sup>rd</sup> year medical students have the highest rate of impairment in intimacy (19.2%) and the lowest was the 4<sup>th</sup> year students (7.4%).

Based on these results, we indicate the impairment of the specific personality functioning (identity integration, self-direction, empathy, intimacy) do not depend on the year of study as they also can affect the other year of study as well.

#### **5.6.1 Association of the presence of BPD symptoms with general personality functioning among Medical students in UPM.**

The association of Borderline Personality Disorder Symptoms and general level of personality functioning was studied. 47.6% of respondents with BPD symptoms have impairment in general personality functioning whereas 52.4% have no impairment. 14 (13.1%) from 107 respondents with negative BPD symptoms have impairment in their general level of personality functioning, 93 (86.9%) marked no impairment in this aspect. There is a significant association between general personality functioning and borderline personality disorder from the Chi Square test where p value is less than 0.05 ( $p = 0.001$ )

#### **5.6.2 Association of the presence of BPD symptoms with the identity integration aspect of personality functioning among Medical students in UPM.**

Based on the research that we conducted on the prevalence of Borderline personality disorder symptoms with the identity integration aspect of personality functioning among medical students in UPM, it can be observed that Borderline personality disorder symptoms were statistically significantly associated with the identity integration with the P value 0.005 . From the survey, we found that about 21 respondents have borderline symptoms. 11 (52.4%) out of 21 respondents with borderline personality disorder symptoms reported to have impairment in identity integration. Meanwhile, only 10 (47.6%) students reported that they have no significant impairment in identity integration.

From here, we can see that the majority of the respondents who have Borderline personality symptoms also have the impairment in identity integration. So, we suggest that impairment in identity integration will increase the risk of development of Borderline personality disorder symptoms.

#### **5.6.3 Association of the presence of BPD symptoms with the identity self-direction aspect of personality functioning among Medical students in UPM.**

There are 42.9% of respondents having significant BPD symptoms and impairment in self-direction aspect. 57.1 % of respondents with these symptoms have no significant impairment in

this aspect. 21.5% have no significant symptoms of Borderline Personality Disorder symptoms but have impairment in self-direction, whereas 78.5% have no impairment and BPD symptoms. The p value of 0.039 from Chi Square test indicates association between self direction aspect and Borderline Personality Disorder symptoms.

#### **5.6.4 Association of the presence of BPD symptoms with the empathy aspect of personality functioning among Medical students in UPM.**

The association of empathy with Borderline Personality Disorder Symptoms is signified by p value of 0.046 from Fisher's exact test. 7 (33.3%) students have positive results for BPD symptoms and impairment in empathy aspect of personality functioning. 14 (66.7%) students have BPD symptoms but no impairment in their empathy aspect. There are 14 (13.1%) respondents that have no significant symptoms but showed impairment in empathy aspect of personality functioning whereas 93 (86.9%) of the students have negative results for Borderline Personality Disorder symptoms and impairment in empathy aspect.

Empathy is, essentially, an observer's emotional response to the observed person's emotional state. The empathy's key components are perspective taking (In other words, cognitive empathy), and emotional contribution [48] which are complemented by (i.e. affective empathy) [48] regulatory mechanisms which monitor the origins of self-feelings and other feelings. Recent evidence indicates that in individuals with BPD, cognitive and affective empathic abilities can dissociate[36].

#### **5.6.5 Association of the presence of BPD symptoms with the identity intimacy aspect of personality functioning among Medical students in UPM.**

38.1% of the respondents have significant borderline personality disorder symptoms and impairment in intimacy whereas 61.9% have the symptoms without impairment. 9.3% of the respondents have no significant BPD symptoms but showed significant impairment in intimacy. 90.7% manifested null symptoms of borderline personality disorder and impairment in the intimacy aspect of personality functioning. The p value of 0.002 from Fisher's exact test marked an association between BPD and intimacy among medical students in Universiti Putra Malaysia.

. Previous research revealed that the diagnosis of BPD is significantly higher among the unmarried [37], and their psychopathology is associated with breakups of important relationships or with implications of impulsive actions on relationships [38]

### **5.7 Limitation and Recommendation**

The results obtained were primarily affected by a series of methodological limitations. For starters, given the cross-sectional nature of our study, inferences could be made about causality and directionality. However, it may be difficult or impossible to determine the temporal sequence of exposure and effect. Furthermore, this study could be conducted relatively quickly, since the contact point with the respondents is only once. Hence, it is recommended that a longitudinal study be carried out for future research on this topic. In addition, our respondents were medical students from Universiti Putra Malaysia, so the findings and results of this study could not be generalised to represent medical students from other Malaysian universities. Thus, a larger-scale study is recommended involving more universities across the country. Besides, the classification of both level of personality functioning using the Level of Personality Functioning Scale - Self Report questionnaire (LPFS-SR) and borderline personality disorder using the Mclean Screening Instrument was based solely on a self-report screening tool. Therefore bias in social desirability could not be prevented completely. To overcome this in future studies, the Social Desirability Bias Scale, which is the Marlowe-Crowne Social Desirability Scale, is suggested to be implemented. A high number of socially desirable responses could indicate that the respondent is generally concerned with social approval and compliance with societal conventions, while a low score may indicate that the respondent is less concerned with societal conventions and more willing to respond to survey questions in a truthful and accurate manner.

The sampling method used is convenient sampling to meet the sample size thus the study lacks strength and cannot be generalizable to the population. In further studies, stratified random sampling should have been implemented to have greater power for study.

### **5.8 Strength of studies**

A cross sectional study, based on a methodological point of view, is simple, quick, good for descriptive analyses and for generating hypotheses. In addition, a cross-sectional study allows us to measure the prevalence of all the factors under investigation. Moreover, this was one of the first few studies conducted on this particular topic concerning the prevalence of borderline personality disorder symptoms and its association with the level of personality functioning among medical students at a Malaysian university. Besides, this study enables us to provide baseline information about the prevalence of borderline personality disorder symptoms and its association with the level of personality functioning. This would be of great assistance to researchers in the future in comparing their data as they know the baseline information about how many medical students express the symptoms of borderline personality disorder and their level of personality functioning.

The strength of the study was not powerful enough to be generalized to the population. 0.7% of 626 English households have BPD whereas 0.5% of Borderline Personality cases were recorded

among 742 American households. 0.7% from 2503 Norway's survey group were noted to have this disorder. The difference in sample size between our study and other studies showed that our study lacked strength.

### **5.9 Clinical implication**

Our study reveals that there is a significant association between borderline personality disorder symptoms and personality functioning. Therefore, clinicians and family members should pay greater attention to medical students expressing symptoms of borderline personality disorder with impaired personality functioning. This study presents a clear association between borderline personality disorder symptoms and personality functioning. Consequently, measures need to be taken because repercussions such as having unclear goals and a difficulty in understanding other people which are frequently seen among individuals with borderline personality disorder symptoms and impaired personality functioning can affect the social and academic aspects of a medical student which ultimately leads to a lower quality of life.

## CHAPTER 6:

### CONCLUSION

### **6.0 Conclusion**

Based on the results, we can conclude that there is an association between borderline personality disorder symptoms and general personality functioning among medical students of University Putra Malaysia. The subcomponents of personality functioning consisting of identity integration, self-direction, empathy and intimacy aspects have significant relation with borderline personality disorder symptoms.

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## APPENDICES

### Questionnaire

#### Section 1

Name \_\_\_\_\_

Year of Study \_\_\_\_\_

Pre- clinical

Clinical

Phone Number \_\_\_\_\_

Email Address \_\_\_\_\_

Would you like to participate in this study?

- I have read the foregoing information. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I consent voluntarily to be a participant in this study
- I have read the foregoing information. I have had the opportunity to ask questions about it and any questions I have been asked have been answered to my satisfaction. I do not consent to be a participant in this study

Section 2 : Level of Personality Functioning Scale (LPFS)

**LPFS - SR**

Name/ID: \_\_\_\_\_

<b>Instructions:</b> For the following questions, please indicate the extent to which the statements are true for you:					
		<b>Totally False, not at all True</b>	<b>Slightly True</b>	<b>Mainly True</b>	<b>Very True</b>
1	Across many different situations, I manage to behave in a manner appropriate to that situation.	1	2	3	4
2	All I can really understand about other people are their weaknesses.	1	2	3	4
3	Almost no close relationship turns out well in the end.	1	2	3	4
4	Although I might have different feelings at different times, I can handle all of them pretty well.	1	2	3	4
5	Although I try, I can't seem to keep any successful, lasting relationships.	1	2	3	4
6	Although I value close relationships, sometimes strong emotions get in the way.	1	2	3	4
7	Events in my life can really change whether or not I feel good about myself.	1	2	3	4
8	Feedback from others plays a big role in determining what is important to me.	1	2	3	4
9	Getting close to others has little appeal to me.	1	2	3	4
10	Getting close to others just leaves me vulnerable and isn't really worth the risk.	1	2	3	4
11	I can appreciate the viewpoint of other people even when I disagree with them.	1	2	3	4
12	I can only get close to somebody who understands me very well.	1	2	3	4
13	I can only get close to someone who can acknowledge and address my needs.	1	2	3	4
14	I can step back and objectively evaluate the way that I'm feeling at any given time.	1	2	3	4
15	I can't always tell the difference between what is my opinion, and what is the way other people want me to think.	1	2	3	4
16	I can't even imagine living a life that I would find satisfying.	1	2	3	4
17	I can't stand it when there are sharp differences of opinion.	1	2	3	4
18	I don't have a clue about why other people do what they do.	1	2	3	4
19	I don't have many positive interactions with other people.	1	2	3	4
20	I don't pay much attention to, or care very much about, the effect I have on other people.	1	2	3	4
21	I don't understand what motivates other people at all.	1	2	3	4
22	I don't waste time thinking about my experiences, feelings, and actions.	1	2	3	4
23	I have a strong need for others to approve of me.	1	2	3	4
24	I have difficulty setting and completing goals.	1	2	3	4
25	I have little understanding of how I feel or what I do.	1	2	3	4
26	I have many satisfying relationships, both personally and on the job.	1	2	3	4
27	I have relationships, but not many that I consider to be very close.	1	2	3	4
28	I have some difficulty setting goals.	1	2	3	4
29	I have trouble deciding between different goals.	1	2	3	4
30	I mainly act in the moment, rather than focusing on long term goals.	1	2	3	4
31	I mainly pay attention to others to the extent that they are likely to impact me in some way.	1	2	3	4
32	I mainly pay attention to people based upon what they might do to me, or for me.	1	2	3	4
33	I never seem to have much hope that good things will happen to me.	1	2	3	4
34	I set personal standards for myself that are very difficult to satisfy.	1	2	3	4

35	I tend to feel either really good or really bad about myself.	1	2	3	4
36	I tend to let others set my goals for me, rather than come up with them on my own.	1	2	3	4
37	I try hard to be flexible and cooperative when dealing with others.	1	2	3	4
38	I typically understand other peoples' feelings better than they do.	1	2	3	4
39	I work on my close relationships, because they are important to me.	1	2	3	4
40	I'm confident about the difference between my values and those that others might want me to have.	1	2	3	4
41	I'm no good at stepping back and looking objectively at my life.	1	2	3	4
42	I'm not sure exactly what standards I've set for myself.	1	2	3	4
43	I'm only interested in relationships that can provide me with some comfort.	1	2	3	4
44	I'm very aware of the impact I'm having on other people.	1	2	3	4
45	In a close relationship, it's as if I can't live without the other person.	1	2	3	4
46	In close relationships I tend to be torn between being afraid and being "clingy".	1	2	3	4
47	In many situations I feel quite differently than others seem to expect me to feel.	1	2	3	4
48	In very trying times, I sometimes lose sight of what is important to me.	1	2	3	4
49	Interacting with other people usually leaves me feeling confused.	1	2	3	4
50	It seems as if most other people have their life together more than I.	1	2	3	4
51	I've got goals that are reasonable given my abilities.	1	2	3	4
52	I've had lasting relationships, but they haven't always been very satisfying.	1	2	3	4
53	Life is a dangerous place without a lot of meaning to it.	1	2	3	4
54	Many people around me have very destructive motives.	1	2	3	4
55	Most things that I do are a reaction to what others do.	1	2	3	4
56	My emotions rapidly shift around.	1	2	3	4
57	My life is basically controlled by the actions of others.	1	2	3	4
58	My motives are mainly imposed upon me, rather than being a personal choice.	1	2	3	4
59	My personal standards change quite a bit depending upon circumstances.	1	2	3	4
60	Other people often expect too much from me.	1	2	3	4
61	People think I am pretty good at reading the feelings and motives of others in most situations.	1	2	3	4
62	People think I'm a "hater", but it's often more related to them than to me.	1	2	3	4
63	Relationships are mainly a source of pain and suffering.	1	2	3	4
64	Sometimes all I care about are my goals.	1	2	3	4
65	Sometimes I am too harsh on myself.	1	2	3	4
66	Sometimes I feel that certain other people are just like me; other times I believe they are nothing like me at all.	1	2	3	4
67	Sometimes I'm not very cooperative because other people don't live up to my standards.	1	2	3	4
68	Sometimes it is easy for me to overlook the impact that I'm having on others.	1	2	3	4

		Totally False, not at all True	Slightly True	Mainly True	Very True
69	The key to a successful relationship is whether I am getting my needs met.	1	2	3	4
70	The standards that I set for myself often seem to be too demanding, or not demanding enough.	1	2	3	4
71	The way that others perceive me is totally different from the way that I really am.	1	2	3	4
72	There are parts of my personality that just don't fit together very well.	1	2	3	4
73	When dealing with people, I mainly pay attention to how they are likely to affect me.	1	2	3	4
74	When feelings get too strong, I try to shut myself off from them.	1	2	3	4
75	When I disagree with others, there often isn't much use in trying to see things from their perspective.	1	2	3	4
76	When I feel that I've done something well, I'm almost always right.	1	2	3	4
77	When I'm not doing well at something, I might get very angry or feel ashamed about my abilities.	1	2	3	4
78	When I'm successful I tend to feel like an imposter.	1	2	3	4
79	When others disapprove of me, it's difficult to keep my emotions under control.	1	2	3	4
80	When thinking about myself, I can get pretty narrow in my focus.	1	2	3	4

Section 3 : McLean Screening Instrument for Borderline Personality Disorder (MSI-BPD)

Have any of your closest relationships been troubled by a lot of arguments or repeated breakups?

- Yes
- No

Have you deliberately hurt yourself physically (eg ; punched yourself, cut yourself, burned yourself)? How about made any suicidal attempts

- Yes
- No

Have you had at least two other problems with impulsivity ( eg : eating binges and spending sprees, drinking too much and verbal outbursts?)

- Yes
- No

Have you been extremely moody?

- Yes
- No

Have you felt very angry a lot of the time? How about acted in an angry or sarcastic manner?

- Yes
- No

Have you been distrustful of other people?

- Yes
- No

Have you felt frequently unreal or as if things around you were unreal?

- Yes

No

Have you chronically felt empty

Yes

No

Have you ever felt that you have no idea of who you are or that you have no identity?

Yes

No

Have you made desperate efforts to avoid feeling abandoned or being abandoned (eg ; repeatedly called someone to reassure yourself that he or she still cared, begged them to not leave you, clung them physically?)

Yes

No

**Gantt Chart**

Months/Activities	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER
Proposal preparation	■	■					
Submission of proposal			■				
Proposal presentation			■				
Preparation ethical approval/ letters to respective organization			■				
Data collection and analysis					■		
Submission of data analysis report					■	■	
Presentation of analysed data					■	■	
Report writing and poster preparation					■	■	
Submission of final report and scientific articles					■	■	
Poster competition					■	■	
Preparation for final presentation					■	■	
Final presentation							■
Submission log book							■

**Budget Planning**

Items	Cost (RM)
Printing	30
Binding	20
Total	50



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