

# Psychometric Properties and Factor Analyses of a New Psychological Wellbeing Measure for Postgraduate Students in Malaysia (PWBMP)

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## Abstract

The purpose of this study was to create a theoretically driven instrument of psychological wellbeing entitled psychological wellbeing measure for Postgraduate students in Malaysia) PWBMP) and determine its validity and reliability. Exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were used to assess the dimensionality, structural validity and internal consistency of the instrument. The Chronbach Alpha coefficient was also calculated using the test-retest and Split-half methods. The Participants included 300 postgraduate students in Malaysia. It was found that this measure has theoretically been effectively supported to measure the psychological wellbeing by assessing three dimensions (Achievement Motivation, feeling of responsibility, and Self-acceptance ). Regarding its reliability, the Chronbach Alpha coefficient was 0.89. The test-retest method yielded a coefficient of 0.75 while the split-half method yielded 0.86, indicating that the scale enjoys high reliability.

**Keywords:** Psychological wellbeing, Achievement Motivation, Feeling of Responsibility, Self-Acceptance, Postgraduate Students

## Introduction

The concept of psychological well-being is one of the most important topics in psychology, especially positive psychology, as it is a goal that every individual strives to achieve. It has been the focus of numerous studies to date. Psychologists have considered it a controversial and unclear concept. Some have defined psychological well-being as related to physical pleasures, while others have linked it to mental aspects, such as mental clarity or an individual's state during mental meditation. Others have linked the concept of psychological well-being to piety and helping others. Despite this diversity, psychologists have made clear efforts to define the concept of psychological well-being and its components, identify the theories underlying this concept, and identify possible methods for enhancing psychological well-being.

Furthermore, Psychological well-being is a topic related to educational psychology. The goal of this science is for students to enjoy good mental health and strong social relationships, which positively impacts their desire and motivation to learn, and consequently, their ability to absorb information and achieve a high level of achievement. This is what he pointed out by (Grera, et al, 2024).

Since psychological well-being is one of the most important topics in positive psychology and an integral part of mental health. Both mental health and well-being have been linked to the meanings of a good life that each individual strives to achieve (Henn, et al., 2016). Hird (2003) emphasized that there are many theories that define psychological well-being. Kharnub (2016) argues that psychologists have not yet established a precise, universally agreed-upon definition of well-being, despite the efforts and research that this topic has received. This may be due to several reasons, including:

1. The similarity between the concept of well-being and other positive psychological concepts, and even the difficulty of finding specific and appropriate measures for it.
2. The limited focus on positive psychology concepts, the lack of coordination in research, and the repetition of the same topics.
3. The diversity of factors considered part of the structure of well-being, as well as the diversity of scientific fields that have been interested in studying well-being, such as psychology, sociology, economics, and other sciences (Henn, et al, 2016).

It is worth to mention that, Previous research on adults has found that psychological well-being is a reliable predictor of long-term health and positive coping capacity, revealing that people with high levels of well-being experience fewer illnesses and have a higher life expectancy than others (Ryff, 2017). Moreover, accordingly to (M,Y,Grera, 2022) psychological well-being is significant predictors of achievement motivation for Postgraduate Students in Malaysia.

based on the foregoing, this study explored how postgraduate student accomplishes his psychological wellbeing, and which psychological factors have more influence on their wellbeing. through the aim of the present study which is create the measure of psychological by assessing dimensions.

Therefore, developing a scale to measure psychological well-being is an educational necessity and an urgent requirement to enrich the educational field with such tools that help understand the positive psychological makeup of students, identify their strengths, and work to enhance them.

### *Psychological Well Being*

Psychological well-being remains a concept that has puzzled scientists to this day. Definitions have varied and varied due to the difficulty of defining the aspects of this phenomenon, its components, and its specificity. Some view it as synonymous with happiness and quality of life, and have translated it into the good life and a better existence (Maamaria, 2012). Zahran (1987) defined well-being in the Dictionary of Psychology as: cheerfulness, happiness, and well-being. Due to the growing research on well-being, two theoretical approaches have emerged to define well-being. The first approach views pleasure as the foundation of well-being, and as an internal state of pleasure, happiness, and subjective well-being. Therefore,

the experience of well-being reflects high levels of positive affect and low levels of negative affect. While the prevailing view assumes that well-being consists of more than just happiness, and that it is not merely the result of an individual's fulfillment of desires, but rather a process of realizing human potential (Deci & Ryan, 2008), recent studies have confirmed that the concept of psychological well-being does not mean a person's life is free of problems and disturbances, but rather that an individual possesses the capabilities and qualities that enable them to continue and carry on with their lives despite the circumstances they face (Deci, 2012).

Psychological well-being is not characterized by positive feelings alone, which are relatively temporary, but rather includes long-term and stable aspects of functioning (Abbott et al., 2008). This was confirmed by Lykken (2000), who stated that eliminating stress and problems from our lives may reduce our feelings of pain and sadness, but this does not increase our level of happiness and psychological comfort (Abdul Latif, 2009).

Psychological well-being has been defined by some authors as the ability to cope with the difficulties and challenges of life they face in order to achieve their goals and self (Al-Khunaiji, 2006). In this regard, Huppert (2005) states that psychological well-being does not necessarily require individuals to feel comfortable and content throughout their lives, as experiencing sad and painful feelings such as failure and disappointment is an important and natural part of life. A person's ability to adapt and manage these negative feelings is essential for long-term well-being. He adds that long-term negative and painful feelings may jeopardize psychological well-being and affect an individual's daily functioning (Huppert, 2009; Malavia & Punia, 2015). Among these definitions that have taken a modern approach is Shek (1992), who defined it as the state of a mentally healthy person who possesses the positive qualities necessary to achieve psychological health, such as the ability to adapt effectively to the environment in which they live (Afework, 2013). Abdul-Maqsoud (2006) defines psychological well-being as a nearly continuous internal feeling that reflects life satisfaction, enjoyment, the ability to control one's own emotions, self-fulfillment, and the ability to deal with difficulties efficiently (Hiba, Salouma, Sand, 2013). Accordingly, Ryff developed a comprehensive theoretical framework for psychological well-being. This framework is based on the concept of mental health as not merely the absence of illness and disorder and a feeling of constant happiness, but rather examines well-being as the result of a life that is well (Nel, L, 2011).

Also, the definition by (Grera, M.Y, 2025), Psychological well-being is defined as positive psychological performance that stems from within the self, accompanied by strong feelings of pleasure and satisfaction. This performance must be based on a strong desire to struggle and confront life's challenges in order to achieve the ideal image of one's true potential.. As for Ryff (1999) defined psychological well-being as referring to an individual's encounter with existential challenges in life and how to overcome them. The reality of psychological well-being must be linked to the full development of a person's potential. Psychological well-being is not only concerned with achieving satisfaction or pleasure, but also focuses on how a person strives to achieve perfection, which is the realization of the individual's true potential (CD. Ryff, 1989).

The dimensions of psychological well-being in students depend on achievement motivation, where the individual needs to be more ambitious, love challenges and struggle, set ambitious but achievable goals, and also desire feedback on their performance and accomplishments, as well as control and influence their actions to serve their goals. In addition to the need for achievement and growth, a successful individual has a strong desire to work and be with others to receive praise for their work, engage in continuous social interaction, and help others develop and progress. Grera (2023) emphasized that motivation to achieve means that an individual possesses high levels of enthusiasm and interest toward a goal or task, and that they utilize and utilize their maximum capabilities to achieve them. Sense of responsibility includes a sense of self-responsibility, represented by the habits of self-control and self-direction. The individual tends toward independence in life affairs and does not seek help if they are capable of performing this task on their own; this is the need for personal independence. that found by (Grera, M, Y,2009) There is a correlation coefficient between positive psychological feelings and the sense of responsibility, and it is significant at the level of (0.01). This dimension also includes social responsibility, which is learning social awareness, where the individual takes into account the desires and feelings of others in order to form positive relationships with them. that was confedend by (Grera,2023) The positive relationships is of great importance to a university student because of its reflection on his academic achievement at the university, also, because university students often go through many disturbances and conflicts, which may lead to some university conflicts. Good social feeling, whether with his professors or with his colleagues is necesarly to complete his academical future Self-acceptance: This is achieved by accepting oneself, both positively and negatively, without hating or denying it. This self-acceptance does not necessarily mean contentment with one's negatives. Rather, it should not become an obstacle to holding oneself accountable and evaluating one's behavior in order to develop and advance it by enhancing one's strengths and attempting to overcome one's weaknesses.

Many theories have contributed to building the theoretical foundation for psychological well-being. Maslow and Rogers are considered proponents of the humanistic theory, asserting that psychological well-being consists of self-esteem and self-actualization. This is achieved through the desire and drive for achievement, independence, and freedom, on the one hand, and the desire to gain appreciation from others, on the other. These desires drive the individual to satisfy the ultimate need for self-actualization, through which the individual can realize his or her full potential. Rogers, the author of the theory, asserts that the full realization of one's potential is the individual's ability to live in an atmosphere of complete harmony with oneself and with others, and that this atmosphere reflects unconditional positive acceptance characterized by value and respect for who they are. Therefore, a fully functioning individual is characterized by openness to all new experiences and experiences at various levels. Erikson, the author of the theory of personal development, asserts that the social interactions that an individual exchanges with the social world around them are the most important forces in stimulating human behavior and personal growth. In his theory of maturity, Allport sees that a healthy, mature personality is one that is forward-looking and motivated by long-term goals that it seeks to achieve. These future aspirations keep them in constant pursuit of their future directions and push them to develop a unified philosophy that directs all aspects of their life toward their goal, giving meaning to life and enabling them to bear responsibility toward themselves and others .

### Previous Measures of Psychological Well Being

By conducting a survey of previous studies and research, the researcher find a very few studies similar to the subject under research, and therefore the researcher presented some of them.

Ryff, C. D. (1989) created a scale of psychological wellbeing. This scale is one of the most famous and appropriate scales for measuring the level of psychological well-being. This version of the scale contains 42 items distributed over 6 dimensions: independence, environmental empowerment, personal growth, positive relationships with others, purposeful life, and self-acceptance. Each dimension consists of 7 items, and the scale contains positive and negative items. The scoring of the items is represented by six response points, ranging from strongly disagree "1", moderately disagree "2", slightly disagree "3", slightly agree "4", moderately agree "5", to strongly agree "6". Psychological well being Scale. Watson "1988", which includes 10-item mood scales that comprise the Positive and Negative Affect Schedule (PANAS). The scales are shown to be highly internally consistent, largely uncorrelated, and stable at appropriate levels over a 2-month time period. Normative data and factorial and external evidence of convergent and discriminant validity for the scales are also presented.

Margaret L Kern, et al, (2016) introduced the EPOCH Measure of Adolescent Well-Being, which assesses 5 positive psychological characteristics (Happiness, Perseverance, Optimism, Connectedness, and Engagement) that might foster well-being, physical health, and other positive outcomes in adulthood. To create the measure, a pool of 60 items was compiled, and a series of 10 studies with 4,480 adolescents (age 10-18) from the United States and Australia were used to develop and test the measure, including the factor structure, internal and test-retest reliability, and convergent, discriminant, and predictive validity. The final 20-item measure demonstrated adequate psychometric properties

Ed Diener, et al, (2009) presented new measures of well-being which 8-item summary survey of the person's self-perceived functioning in important areas such as relationships, self-esteem, purpose and meaning, and optimism. The scale is substantially correlated with other psychological well-being scales, but is briefer. The scale provides a single overall psychological well-being score. The Scale of Positive and Negative Experience yield a score for positive experience and feelings (6 items). This 12-item brief scale has a number of desirable features compared to earlier measures of positive and negative feelings. Basic psychometric statistics are presented for the scales based on 573 college students at five universities. the Cronbach's alpha stability coefficient was (0.86).

### The Present Study

Healthy personal growth and the individual's continued development, improvement, and organization of their behavior independent of social pressures, and the acceptance of new experiences necessarily lead to the creation of a personality with psychological well-being. This well-being enables the student to possess a strong drive for achievement, making them successful on the personal, social, and academic levels. This is confirmed by (Dodge et al., 2012), who states that psychological well-being involves personal empowerment, independence, and a sense of purpose and meaning in life. Through personal growth and

development, a person reaches a state of well-being. If they achieve a state of balance, they will not be affected by difficult and rewarding life events.

Historically, research on well-being has focused largely on adults in developed countries (Rodgers WL, Bachman JG, 1988). There has been little research on psychological well-being, especially in developing countries (Goldbeck L, 2007). There are an estimated 1.2 billion young people in the world (UNICEF, 2002). Nearly 70 percent of these young people live in developing countries, where complex economic, social, political, and environmental difficulties create a wide range of challenges to overcome. Some data indicate that more than half of young people live in poverty worldwide (UNFPA, 2007). They are therefore believed to be "vulnerable" to disorders that will affect their mental health and well-being (USDHHS, 2013). Mental illness has also been estimated to account for 15% of the global burden of disease by 2020 (Biddle SJH, Mutrie N, 2008).

From a broad perspective, measuring and promoting psychological well-being is a desirable educational goal, and ensuring psychological well-being is a socio-psychological necessity. A growing number of longitudinal studies confirm the power of well-being measures to predict their impact on longevity, physical health, quality of life, crime, drug and alcohol use, employment, earnings, and pro-social behavior (such as volunteering) (World Health Organization, 2009). It is also estimated that 10 to 20% of young people globally suffer from mental health conditions, but the level of diagnosis of these conditions is low. Its treatment is still poor (Kessler RC, et al, 2007).

Furthermore, the researcher noticed during her study of the psychological wellbeing that most of the measures prepared for psychological wellbeing were is general, and that cause to have a few numbers of scales. Based on that the researcher in the present study focus on postgraduate students, which is rare and may even be non-existent.

In addition, Given the importance of psychological wellbeing for university students, especially graduate students the aim of the study was to find a special measure for psychological wellbeing by assessing dimensions. Also, it cannot be denied that, providing a workable definition of psychological wellbeing is a very challenging subject. as a result of not having enough measures of psychological wellbeing. Also, psychologists have considered it a controversial and unclear concept.

The present study aimed to achieve the following objectives: 1) to explore the dimensions of a psychological wellbeing scale for Postgraduate students in Malaysia. 2) to identify the psychometric properties of the psychological wellbeing scale for Postgraduate students in Malaysia. It was hypothesised that the instrument enjoys a high degree of validity and reliability.

### **Methodology**

The study employed a survey method. The participants in the study consisted of a total of 300 postgraduate students. Data were collected through three main dimensions of psychological wellbeing Scale which are (Achievement Motivation, feeling of responsibility, Self-acceptance). These are briefly discussed below. The sample was selected using a non-



systematic random method. It included postgraduate students (Master's and PhD) from various nationalities (Malaysian, Arab, and Indonesian).

### Scale Development

The scale was based on an understanding that achievement motivation comprises the following:

**The Achievement Motivation dimension:** It is represented in the type and nature of These individuals have a strong need for achievement, tend to be more ambitious, and always have a strong desire to succeed. They also have a desire to develop themselves, work positively, and have meaningful goals. Maslow's theory of self-actualization (1970), along with the work of pioneers in humanistic psychology such as Rogers, emphasizes that an individual can only achieve self-actualization through a desire for accomplishment, independence, and freedom. This view is also supported by Ryff's research (1989), which offers a model of psychological well-being, suggesting that this level of psychological functioning must be based on a strong desire and motivation to strive and persevere in the face of life's challenges, in order to reach one's full potential. Therefore, the concept of psychological well-being is not limited to fleeting positive emotions, but encompasses broader and more stable aspects of an individual's functioning.

**The feeling of responsibility dimension:** this is represented in the type and nature of the sense of self-responsibility through the individual's tendency toward independence, self-direction, and self-control. On the other hand, the sense of responsibility toward others is represented by respecting their rights for the purpose of forming good relationships with them. This is what Erik Erikson's (1950) theory of psychosocial development, a prominent theory explaining psychological well-being, emphasizes: that social interactions are the primary driving force behind human behavior. The interaction between individual development and societal needs leads to crises and a strong sense of responsibility. Success or failure in resolving these crises often has a significant impact on an individual's development. Similarly, Allport, in his theory of maturity, another theory explaining psychological well-being, asserts that a mature personality is future-oriented. This orientation fosters a sense of responsibility and motivates individuals to continuously strive towards their goals. This sense of responsibility helps them develop a unified philosophy that guides various aspects of their lives, giving meaning to their existence and enabling them to take responsibility for themselves and others.

**Self-acceptance dimension** “this represents the type and nature of a person who accepts himself with his positive and negative aspects. This acceptance of the self necessarily means consolidating the aspects of strength in him and trying to overcome the aspects of weakness. Allport, a pioneer of the theory of psychological maturity, which is one of the most widely accepted theories explaining psychological well-being, emphasizes that self-acceptance is one of the most important indicators of psychological well-being. Self-acceptance helps an individual cope with any kind of frustration without blaming others, and enables them to deal with situations in a more positive and constructive manner. Ryff (1989) also highlighted this point in his explanation of the components of psychological health, stating that self-acceptance is one of the most important components of a healthy

personality, encompassing a positive self-image, and is therefore an essential characteristic of psychological well-being.

The vocabulary of the scale was formulated in the light of previous sources of knowledge and based on the procedural definitions of each dimension of the scale where it reached in its initial form (35) items, the items of the scale were formulated in easy and clear language, and the choice of five alternatives (never - almost never - often - almost always - always) to give the respondent various alternatives to the answer. The scale has been corrected according to existing alternatives (never-Almost never-often- Almost always - always) (the answer grades are obtained from grades (1-2-3-4-5), respectively, the time to answer this scale is 25 minutes

### Results and Discussion

It is certain of the validity and stability of the scale, and there is explain the multiple methods used to determine the validity and stability of the scale as follows:

The validity of the scale has been found in several ways and these methods are as follows:

#### *Content Validity (Arbitrators)*

The scale was presented to a group of educational psychology professors to ascertain the extent to which each item belongs to the dimension to which it belongs, and the extent to which the dimensions belong to the subject of the study. The researcher made all the amendments agreed upon by most of the arbitrators in the drafting of the paragraphs, and the phrases that the majority of the arbitrators agreed to delete from the scale were removed by .80%.

- 1- **FACTORIAL VALIDITY:( Exploratory factory analysis (EFA)** It is one of the forms of formation validity, and it was verified by using factor analysis (EFA) of the items of the psychological wellbeing scale to identify the factors that constitute the psychological wellbeing scale. A factorial analysis of the total study sample (300) was conducted on the psychological wellbeing scale. And through the use of (Principal Components) method, the extracted factors were rotated orthogonally by (Varimax) method, and the researcher considered the acceptable saturation of the item to be at least (0,4), and based on that, three factors of the first degree were extracted for the psychological wellbeing scale. Table (1) shows the matrix of extracted factors.



**Rotated Component Matrix<sup>a</sup>**Rotated Component Matrix<sup>a</sup>

	Component		
	1	2	3
Q1			.760
Q2	.824		
Q3		.792	
Q4			.770
Q5	.901		
Q6		.793	
Q7			.734
Q8		.722	
Q9		.820	
Q10		.809	
Q11			.759
Q12		.783	
Q13			.798
Q14		.808	
Q15	.845		
Q16	.885		
Q17	.839		
Q18			.784
Q19	.815		
Q20	.855		

These factors can be explained as follows:

*Table (2) The First Factor*

Interpretation of the first factor: The first factor includes (seven variables) whose saturations ranged between (.815 - .901) and it is noted that this factor is highly saturated.

It is noticed from the components of the first factor that there is an overlap and interdependence between these components and when we understand the psychological content of these phrases, we find that they all contain a specific psychological meaning that refers to me being " A desire to succeed, develop, and learn new experiences, meaningful goals to achieve, high levels of ambition and perseverance, and a strong ability to endure difficult ". Therefore, this factor, in view of its high saturations, can be called achievement motivation dimension.

*Table (3) the Second Factor*

**Interpretation of the second factor:** The second factor includes (five items) whose saturations ranged between (.722 - .820) and it is noted that this factor is highly saturated.

Number of items	Items texts	Rotated component matrix
3	I can control myself and direct myself in difficult situations.	.792
6	I can communicate with my family and friends in a smooth manner.	.793
8	I can handle my personal life and financial responsibilities well.	.722
9	I can change my way of thinking and behavior to achieve my goals.	.820
10	I can establish a lifestyle that satisfies myself, one that is largely consistent with what I love about my daily life and does not conflict with or harm the interests of others	.809
12	I feel comfortable with my community because I have good social skills.	.783
14	I don't find it difficult to solve my life's problems in a way that suits me.	.808

It is noted from the components of the second factor that there are an overlap and interdependence between these components and when we understand the psychological content of these phrases, we find that they all include a specific psychological meaning that refers to "A sense of self-responsibility through independence and self-reliance in managing one's environment in a way that serves one's goals. Also, a sense of social responsibility, represented by the individual's ability to establish positive social relationships with others.". so, this factor can be called in light of its high saturation with feeling of responsibility dimension.

*Table (4) the Third Factor*

**Interpretation of the third factor:** The third factor includes (four variables) whose saturations ranged between (.734 - .798) and it is noted that this factor is highly saturated.

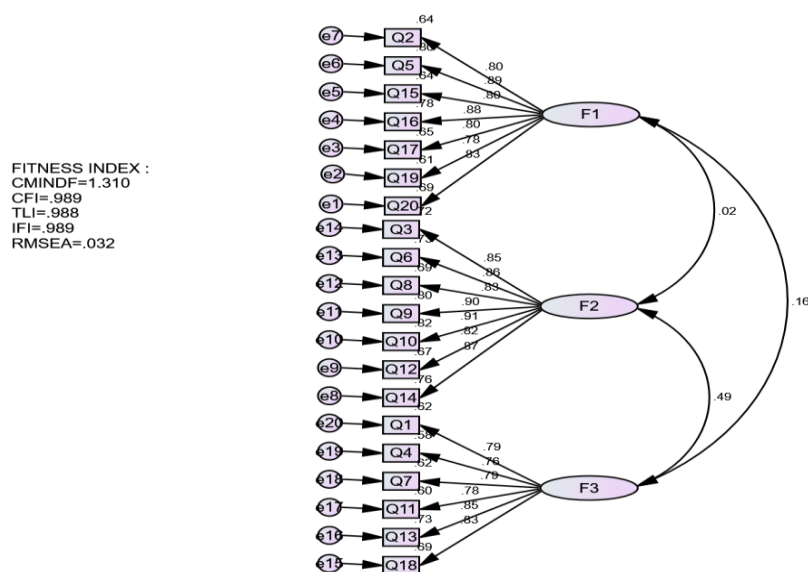
Number of items	Items texts	Rotated component matrix
1	I feel confident and positive about myself.	.760
4	I feel satisfied and completely confident about myself when I think about the achievements and goals I have achieved in life.	.770
7	I believe in my principles and values and stand up for them.	.734
11	I don't feel guilty when others don't like my choices.	.759
13	I learn from the past, plan for the future, and live my present life to the fullest.	.798
18	don't change my opinions for the sake of others unless I am convinced by their opinions.	.784

It is noticed from the components of the fourth factor that there is an overlap and interdependence between these components, and when we understand the psychological content of these phrases, we find that they all include a specific psychological meaning that refers to " By maintaining a positive attitude toward oneself, a person accepts themselves, both positive and negative, by emphasizing their strengths and trying to overcome their weaknesses. ", so this factor can be called, in light of its high saturation, with Self-acceptance dimension.

2- **FACTORIAL VALIDITY (confirmatory factor analysis (CFA))** : It is one of the statistical techniques used to determine the factor and factor loading of measured variables. Also, it used to verify the factor structure of a set of observed variables. Next figure (1) shows the first result of this factory analysis.

*The Result of (CFA): - Figure (1)*

The model included three latent variables: The Achievement Motivation (F1), the feeling of responsibility (F2), the Self- acceptance dimension (F3). The Achievement Motivation latent variable included seven items, feeling of responsibility dimension included seven items. and Self-acceptance dimension" included six items. The results showed that the fit indices indicated a mediocre fit for the data, CMIN / DF= 1,310, CFI = .989, TLI = .988, GFI = .989, RMR =0.015 and RMSEA =0.032.



The figure (1)

### Modification Indices

Modification indices (MIs) suggested that there is no any error covariance between items of the model.

### Internal Consistency

It is one of the forms of validity of composition. The spss v 23 used to find this validity, it used to ensure that the items are consistent with the scale as a whole. validity internal consistency of the scale was applied to respondents. The items reached the statistical level. Table (6) showed the results of the Pearson correlation to investigate if the items are consistent with the scale as a whole.

**Table (5): The result of the Pearson correlation** to investigate if the items are consistent with the scale as a whole.

items	Pearson correlation	Sig	items	Pearson correlation	Sig
1	.077	0.01	11	.557**	0.01
2	.542**	0.01	12	.589**	0.01
3	.644**	0.01	13	.621**	0.01
4	.590**	0.01	14	.635**	0.01
5	.547**	0.01	15	.423**	0.01
6	.049	NO SIG	16	.590**	0.01
7	.128*	0.05	17	.133*	0.05
8	.619**	0.01	18	.624**	0.01
9	.536**	NO SIG	19	.051	NO SIG
10	.668**	0.01	20	.509**	0.01

the previous table (6) showed that most of the correlation coefficients between the items of the psychological wellbeing scale and the total score are statistically significant, and it is clear from that the items of the scale are associated with the total degree of the scale, and

there are consistency and homogeneity between its items and this indicates the stability of the scale as well.

It is clear from the previous table that most of the correlation coefficients between the items of the psychological wellbeing scale and the total score are statistically significant coefficients at (0.01) except of (7-17) items whose is statistically significant coefficients at (0.05). Therefore, except of (3) items whose correlation with the total score did not reach the level of statistical significance in the total sample which items numbers are (1-6 and 19), so it was decided to exclude these items. It can be seen that the items of the scale are related to the total degree of the scale, and that there are consistency and homogeneity between its items, which indicates the stability of the scale

### The Reliability of the Scale

Scale stability has been found in several ways: "re-test and spilt-half, alpha half, Cronbach alpha coefficient is the best to use several methods determining reliability. This is because each method aims to achieve the psychometric requirement, such as the method of the retest method shows stability over time, while the method of spilt-half is to find reliability across the cells of the scale. The finding of the reliability of the scale showed the reliability factor through the three methods.

- 1- **Cronbach Alpha coefficient:** The researcher used the Cronbach Alpha coefficient to find the validity of internal consistency and was valued at 0.89.
- 2- **Test-retest method:** The researcher re- applies the scale to the same sample of (100) students after two weeks and the correlation factor was found between the two times and the value of the stability factor was at 0.75.
- 3- **Split-half method:** The researcher used this method to find stability using the spss v23 program, and the correlation coefficient was 0.86.

Table (6) showed psychological wellbeing scale stability coefficient (Cronbach's alpha coefficient, Test-retest method, split-half)

The scale	Chronbach Alpha coefficient	Test-retest	split-half
Total	0.89	0.75	0.86

By analysing the statistical values in the previous table, it is clear that the stability coefficients of the scale as a whole are high, for the Cronbach Alpha coefficient (0.89), Test-retest method (0.75) while the split-half method was at (0.86), indicating that the scale enjoys high stability.

The results of this study showed that the measure of the psychological wellbeing has three dimensions which are (Achievement Motivation, feeling of responsibility, and Self - acceptance"). Although there were no much studies to the subject under research which aimed to create a measure of psychological wellbeing for graduated students with its dimensions. Wherefore, the researcher presented similar studies to the current study. The study performed by (Ryff, 1989) found that there are six dimensions of psychological wellbeing foe adult. Also, Margaret L Kern, el at, (2016) introduced the EPOCH Measure of Adolescent Well-Being, which assesses 5 positive psychological characteristics. While, Ed

Diener, et al, (2009) presented new measures of well-being which 8-item summary survey of the person's self-perceived functioning.

### Conclusion

This study aimed to create a theoretically driven instrument of psychological wellbeing based on the experiences of Postgraduate students in Malaysia and determine its validity and reliability. The measure has three dimensions of psychological wellbeing which (Achievement Motivation, feeling of responsibility, and Self -acceptance"). The psychometric properties of this new psychological wellbeing measure indicated a high level of reliability, with a Cronbach Alpha coefficient of 0.89. The test-retest method yielded a coefficient of 0.75 while the split-half method yielded 0.86, indicating that the scale enjoyed high reliability and can be applied and further evaluated by researchers. Results of Exploratory factor and confirmatory analysis (EFA- CFA) and test-retest and Split-half reliability analysis methods were used for validation. It was found that this measure had theoretically been effectively supported to measure the psychological wellbeing by assessing three dimensions ((Achievement Motivation, feeling of responsibility, and Self -acceptance") while enjoying high levels of internal consistency and reliability.

The scale of this study can help researchers conduct comparative studies across dimensions. However, this study has limitations, the most significant of which is that it was limited to graduate students in Malaysia. Therefore, the generalizability of the results is limited. Future studies should include participants from different educational levels and ages.

There are now numerous opportunities for researchers to use the PWBMP scale in conducting research on students in educational settings. When mental health is a problem, the PWBMP scale can provide a rapid way to address and assess it. Furthermore, the PWBMP scale can be used in counselling and guidance services to assist graduate students who are experiencing low levels of mental health by identifying the causes of this decline and addressing it that perhaps will develop the educational and social group interventions to guide students based upon the test scores. Replications of this study and research investigations from other settings are encouraged.

This study introduces the PWBMP scale, a novel, reliable, and valid instrument measuring psychological well-being among postgraduate students through three dimensions: Achievement Motivation, Responsibility, and Self-Acceptance. It advances social science by providing a culturally grounded, psychometrically sound tool for mental health assessment and intervention in educational contexts.

**The Final Form of the scale (Pwbmp):** The scale in its final form consists of 17 items distributed over three sub-dimensions related to psychological wellbeing which are (6) items addressing the Achievement motivation, (6) items addressing the feeling of responsibility, (5) items written for self -acceptance". All of which are positive and in front of each statement are five alternatives (never – almost never- often- almost always- always), the examiner chooses one of them when answering, and the first alternative is given (1) never, the second is given (2) almost never, (3) often, (4) almost always and always is given (5). and thus, a high degree indicates a high rate of psychological wellbeing, A low score indicates a low rate of



psychological wellbeing, the time is 25 minutes to respond to this scale. Next table showed the final form of the Scale.

## References

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