# Development of Adolescent Well-Being Model in Malaysia: Analysis of Protective Factors in School

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> Abstract: Well-being is a multidimensional construct that involves a state where individuals find peace, life needs are met, have a meaningful life, have life goals, autonomy, have a satisfactory quality of life in terms of physical, psychological and social. The partial least squares structural equation modelling (PLS-SEM) was employed to assess the research model using SmartPLS 4. This study was conducted on 587 teenagers. Among other factors measured in this study are resilience, relationship with school, parental involvement, self-efficacy, religiosity and spirituality. Among the instruments used in this study are Well-Being Scale, Spiritual Well-being, Religiosity Scale, Resiliency Belief Scale, Coppell's Self-Efficacy Scale, Parental Involvement Questionnaire and School Attachment Questionnaire. The items in this instrument are hypothesized as a priori and have non-zero loading for all dimensions in the model. The analysis of the items shows that the measurement model for all instruments is a well-fitting, multidimensional and reflective model. Data is also free of multicollinearity with good internal validity, convergent and discriminant validity. The results also demonstrate that resilience, school attachment, religiosity, parental involvement, self-efficacy altogether positively affected teenagers' well-being ( $\beta = 0.158$ ,  $\beta = 0.193$ ,  $\beta = 0.154$ , 0.280, 0.345, p < 0.01) respectively, except spirituality. The model explained 68 percent of the variance in well-being (R<sup>2</sup>=. 675) with AVE 0.70 and composite reliability 0.97. Analysis of the items resulted in a well-fitting model (SRMR<0.08, p<0.01). Therefore, wellbeing of young generation is significant to bring sustainable development to the mainstream and as protective factors against some of the challenges that may arise so that they have ability for self-regulation in emotions and become resilience. The promotion of well-being in teens can help mitigate the onset of negative effects of mental health.

Keywords: education, resilience, structural equation modelling, well-being.

# 1. INTRODUCTION

One of the ongoing researches in the history of human existence is the search for well-being and quality of life [1]. The emergence of the Positive Psychology movement introduced by Seligman and Csikszentmihalyi in 2000 has attracted the interest of psychologists to delve into these aspects. Studies on personal well-being continue the direction of

research and strengthen the principles of Positive Psychology [2]. In addition, personal well-being is also emphasized in Transpersonal Psychology. Transpersonal psychology is the fourth perspective after psychoanalysis, behaviorism and humanistic psychology that are influential in psychology [3].

Well-being is often associated with happiness. According to [2], happiness is a state of personal well-being that involves calmness where it is a positive assessment and experience in a person's life. Happiness is also found to have a positive effect on emotional, cognitive and physical functioning [2]. Studies have found that the risk of suicide increases with decreasing happiness. Suicide is the leading cause of death among young people in Malaysia, with the economic cost of suicide estimated to be RM 346.2 million in 2019, according to a new report, Youth Suicide in Malaysia in the Relate.com.

Structural Equation Modeling (SEM) is a statistical methodology that uses a hypothesis testing (confirmatory) approach to structural theory analysis in a phenomenon. The use of SEM is increasing in the analysis of non-experimental data. It has also become a popular method for non-experimental studies to test theories that are not so well established [4]. SEM is a multivariate technique that combines multiple regression components and factor analysis [5].Two aspects in SEM are; the causal process is represented by a structural equation (regression); structural relationships can be modelled graphically to get a clear picture.

The model that results through SEM is based on various variables and interrelationships between variables that can be estimated simultaneously. [6] has proposed SEM as a statistical methodology that should be used to build a statistical model to verify what is expected theoretically and also to understand the real situation that generates the data being studied. SEM is very effective to see various research problems [4].

Master Committee on Student Discipline and the Permanent Secretariat to Address the Symptoms of Student Misbehavior were established to deal with the disciplinary symptoms of school youth as well as to establish an Action Consensus Council for the Ministry of Education Malaysia (KPM) and the Royal Malaysian Police (PDRM). Therefore, it is very important that we understand the development of teenagers because in addition to social problems, it also involves high costs.

Why are some teenagers have the ability to bounce back and succeed in facing life's challenges and some lose? Why do teenagers themselves ignore their own development? Science and research in psychology today is more focused on identifying human strengths that can prevent physical and mental illness. Past studies have neglected a construct that is very important in the success of a student's life, which is the construct of well-being [2].

Humans consist of elements such as spirituality, psychology and biology. Personal well-being in this study involves physical, psychological and social well-being. Among the factors for the well-being of teenagers are spirituality [6], religiosity [7], relationship with school [8], parental involvement [9], self-efficacy [10], resilience [11] and academic performance [12]. In this study, the researchers want to determine whether the above factors really contribute to the well-being of teenagers considering that all the studies do not combine the internal and environmental factors of individuals. In this regard, [13] once stated that future studies need to involve several aspects of protective factors as a whole.

This study is based on the theory of cognitive social learning where personal aspects, behavior and environment influence each other in the process of human development (reciprocal determinism). Religiosity, self-efficacy and parental involvement are important elements in the human development process that contribute to resilience and well-being, especially in times of drastic physiological and social changes. In addition, personal well-being will lead to academic excellence and prevent teenagers from engaging in behavioral problems and substance abuse [14].

Spirituality and religiosity influence a person in facing difficulties in daily life such as disability, pain and death. In general, religious concepts emphasize behavior and actions while spiritual concepts are more intrinsic [15]. Religious institutions can also contribute to stability and unity in a person's life. Some researchers found that involvement in religious activities reduces stress among teenagers [16]. Spirituality and resilience encourage elements towards self-improvement when experiencing life changes or challenges [17].

Studies on resilience have found that among the factors that promote resilience among teenagers are social relationships and the ability of teenagers to find emotional strength where spirituality is an important element in emotional strength [18]. Some past studies have emphasized spirituality as a factor that promotes resilience

(resiliency-promoting factor). Like spirituality, resilience is also rooted from the perspective of internal strength that focuses on human growth [13]. There is a relationship between religion and spirituality but it is linked to the effect on the well-being of life [16]. Religion and spirituality are often also linked to achievement in school and commitment to school in addition to giving a positive influence among teenagers [15], [19].

In addition, adolescents who are given attention by their parents not only show positive psychosocial adjustment but also attend religious activities more often. Religious, spiritual factors and parental involvement are protective factors for teenagers to enable them to rise again from failure [15].

Adolescent perception is also important in generating personal well-being. Self-efficacy is a teenager's perception and confidence in himself. Studies that have been carried out on teenagers show that the majority of the sample report doubts about their own abilities, do not know what they want and need guidance from adults [20]. Accordingly, self-efficacy contributes to a prosperous life and resilience [21]. Therefore, self-efficacy is an element of perception in this study. In addition, individuals who have high self-efficacy are found to improve the function of the immune system, are more successful in life, successfully quit smoking and can overcome substance abuse problems [22].

Accordingly, the Malaysia Education Blueprint 2013-2025 was developed which is designed to realize a holistic, progressive and moral education system. Among them is to develop the individual's potential as a whole so that it is balanced in terms of physical, emotional, spiritual and intellectual. The development of human capital based on the strength of faith and well-being of life will give birth to a new generation that is physically and mentally strong, in addition to applying a positive attitude and building discipline among students. In addition, the National Education Philosophy outlines that the victorious student is a student who is balanced in intellectual, spiritual, emotional and physical aspects or personal well-being.

This study needs to be done because the study that gives explanation and prediction is a study that needs to be done, as stated by Elliot (1994); "A review of substantive studies using structural equation modeling shows that once goodness of fit is established, rarely are the structural parameters interpreted....if the goal of the model is to move beyond explanation and toward utilizing the model to address specific substantive questions, then interpretation of the parameters is crucial"[6, p.34].

In addition, previous studies were found to place more emphasis on risk factors than factors that give strength to teenagers. Researchers also face problems in determining the factors that really contribute to human well-being [2]. Factors that contribute to the well-being of teenagers need to be studied considering that well-being can reduce behavioral problems, reduce cases of substance abuse, strengthen mental health, good social relationships and is part of the prevention process as well as important in the adaptation process among teenagers [11], [16], [10]. Personal well-being can also reduce physical health problems [23]. In addition, a person who has personal well-being is found to still have happiness and satisfaction in life despite facing various problems [24]. This means that personal well-being has a positive effect on life satisfaction and happiness.

Accordingly, the objective of this study is to identify whether the postulated model fits with the data sample and to determine the parsimony model for adolescent well-being.

# 2. METHODOLOGY

#### A. Sample

The sample in this study is a homogeneous sample where the researcher selects individuals who do not differ much in terms of their personal characteristics. There are two opinions regarding the ratio for the sufficient number of samples and the appropriateness of the number of constructs in the study, namely 20:1 and 10:1 [25]. Models that are difficult and have many constructs, a larger sample is required, which is a minimum of 200 sample people. If the ratio in a study is 5:1, then the findings of the study can be disputed [25]. In this study, the sample consisted of 587 teenagers (16 years old) from secondary schools in Malaysia.

#### B. Method

This research method is based on the conventional approach of structural equation modeling. First of all, the appropriate theory is determined, then the sample is selected and the measurement process is performed on the

sample. At this stage, the measurement model can be estimated. Usually this process happens repeatedly and continuously until the results show that the model reaches the desired standard of fit [6].

The researchers have obtained permission from the Ministry of Education EPRD division first before obtaining permission from the State Education Department and the school. After discussing with the class teachers to set the day and time as well as the class that will be selected in this study, the administration of the questionnaire is carried out. The researcher waits for the sample to answer the questionnaire until it is finished and collects the questionnaire. Then the data entry process is done through SPSS software. Finally, the data analysis process is carried out using SPSS and SmartPLS version 4 before the writing is done.

## C. Instruments

Among the instruments used in this study are; Spiritual Well-Being, was designed by Ellison and Paloutzian (1982) and adapted from [26]; Religiosity Scale was adapted from [16]; Resiliency Belief Scale was designed by Mrazek & Mrazek (1987) and adapted from [19]; Coppell's Self-Efficacy Scale was adapted from [27]; Parental Involvement Questionnaire was adapted from [28]. The School Attachment Questionnaire (SAQ) was designed by Mouton, DeWitt & Glazier (1999) and adapted from [19] and Well-Being Scale was adapted from [16].

## D. Data Analysis

Before conducting the analysis, the data has been screened to see the nature of the data. The collected data is analysed using two statistical software, namely Statistical Package for Social Science (SPSS) version 15.0 and SmartPLS4. Data was first entered using SPSS software. It involves the process of coding, transforming data and recoding data. Data screening is done to complete missing data and unreasonable data (outliers).

## E. Results

Table I shows the number of respondents based on gender, almost 59% females and 41.4% males.

Table I					
Gender	Frequency	Percentage (%)			
Male	243	41.4			
Female	344	58.6			
Total	587	100.0			

The assumption of normality is made for the purpose of determining whether the data is normally distributed or not by using skewness and kurtosis. For univariate normality [29] suggest a value of skewness  $\leq \pm 1$  and a value for kurtosis is  $\leq \pm 7$ . While for multivariate normality, [25] suggests the skewness value is  $\leq \pm 3$  and the kurtosis value is  $\leq \pm 20$ . Therefore any item that shows a normal distribution will be accepted and conversely any item that exceeds the suggested value will not be accepted. Table II shows the results of the analysis of skewness and kurtosis values for this study.

Item	Skewness	Kurtosis		
Self Efficacy	0.152	-1.764		
Parental Involvement	0.229	-0.887		
Religiosity	-0.364	-1.681		
Resiliency	0.243	-1.796		
School Attachment	-0.731	-1.243		
Spiritual	-0.601	-1.393		
Well Being	-1.002	-0.514		
Mardia's multivariate skewness and kurtosis	3.700094	53.231323		

#### Table II: Skewness and Kurtosis.

The results of univariate analysis of skewness and kurtosis show that the data is normally distributed. However, for multivariate values, it shows that the skewness (3.70) and kurtosis (53.23) data is not normally distributed. Therefore, [30] suggested the need to report the path coefficient, standard error, t-value and p-value of the structural model using the bootstrapping method of 10,000 samples.

Variable	Self Efficacy	Parental Involvement	Religiosity	Resiliency	School Attachment	Spritual	Well Being
VIF	1.153	1.108	1.040	1.020	1.058	1.035	1.223

#### Table III: Multicollonearity Analysis

Based on table III, all Variance Inflation Factor (VIF) values are less than 5, so this shows that the study data is free from multicollinearity problems. A VIF less than 5 indicates a low correlation of that predictor with other predictors. A value between 5 and 10 indicates a moderate correlation, while VIF values larger than 10 are a sign for high, not tolerable correlation of model predictors [31].

Convergent validity is evaluated through the square root value of the AVE. In order to evaluate this convergent validity, the AVE value for each construct should exceed 0.50 [32]. Table IV shows that the AVE value for each construct is between 0.645 to 0.757. The findings show that the AVE value for each construct in this study is above 0.50 and the convergent validity of this study is also satisfactory.

Variable	Self Efficacy	Parental Involvement	Religiosity	Resiliency	School Attachment	Spritual	Well Being
Self Efficacy	0.803						
ParentalInvolvement	0.153	0.810					
Religiosity	0.07	0.171	0.857				
Resiliency	0.078	0.091	0.045	0.87			
SchoolAttachment	0.058	0.092	0.044	0.026	0.809		
Spritual	0.128	0.132	0.108	0.04	0.103	0.835	
Well Being	0.343	0.275	0.141	0.129	0.169	0.107	0.838

## Table IV: Discriminant Validity (Fornel & Larker Criterion)

Discriminant validity is measured through three measurements, namely cross loading, Fornell and Larcker criteria and also the Heterotrait Monotrait test (HTMT). In order to measure cross-loading, item loading for each indicator needs to be greater than each construct that has been set. Therefore, result shows that cross-loading measurement of the discriminant validity is achievable.Table V: Results of Hypothesis Testing

Hypothesis	Std. Beta	Std. Dev.	t-value	p-value	PCI LL	PCI UL	f2
H1 Spritual -> Well Being	-0.106	0.121	0.875	0.191	0.059	0.113	0.011
H2 Resiliency -> Well Being	-0.158	0.036	4.356	0.000	0.081	0.185	0.025
H3 Self Efficacy -> Well Being	0.345	0.032	10.93	0.000	0.279	0.396	0.135
H4 School Attachment-> Well Being	0.193	0.03	6.374	0.000	0.108	0.223	0.039
H5 Religiosity -> Well Being	0.154	0.055	2.806	0.003	0.085	0.168	0.024
H6Parental Involvement-> Well Being	0.28	0.03	9.280	0.000	0.196	0.313	0.085

Analysis of Hypothesis 1 found that there is no significant relationship between Spirituality and well being ( $\beta$ = -0.106, t= 0.875, p= 0.191). While Hypotheses 2, 3, 4, 5 and 6 found that there is a significant relationship between Resilience and well Being ( $\beta$ = - 0.158, t= 4.356, p= 0.000), Self-Efficacy with well Being ( $\beta$ = 0.345, t= 10.93, p= 0.000), School Attachment with well Being ( $\beta$ = 0.193, t= 6.374, p= 0.000), Religiosity with well Being ( $\beta$ = 0.154, t= 2.806, p= 0.003) and Parental Involvement with well Being ( $\beta$ = 0.280, t= 9.280, p= 0.000).



Figure I: Full Model of Well being

This study also used the standardized root mean square residual (SRMR) as a goodness of fit measure for PLS-SEM proposed by [33]. Standardized Root Mean Square Residual (SRMR) is an absolute measure of fit and a value of zero indicates perfect fit. The SRMR is defined as the difference between the observed correlation and the predicted correlation [34]. Thus, it allows assessing the average magnitude of the discrepancies between observed and expected correlations as an absolute measure of model fit criterion. The result of SRMR as a goodness-of-fit (GOF) measure for PLS-SEM has shown a good fit for the structural model with the value of SRMR= 0.06. A value less than 0.08 is generally considered a good fit [35]. The model explained 68 percent of the variance in adolescents' well-being (R<sup>2</sup>=. 675).

#### 3. DISCUSSION

This study has produced a model of adolescent well-being that fits with sample data. All the factors in the postulated model have a role either directly or indirectly in the well-being model. Aspects of personal well-being in this study involve physical, psychological and social aspects. The concept of well-being in this study is quite different from the Keyes model, where Keyes emphasizes mental health, emotional, psychological and social well-being [36] and Keyes does not include physical elements. In this study, emotional elements have been included in psychological well-being indicators.

In addition, the well-being model that resulted in this study is consistent with the concept of 'reciprocal determinism' which is the backbone of the theory in this study that is the Social Cognitive Theory of Learning. The theory emphasizes the interaction between personal aspects and the environment. Humans can plan actions, make assumptions about the effects and consequences of an action and can set goals and challenges for themselves to motivate and control their behavior (forethought).

Accordingly, characteristics such as taking risks and planning for the future are part of the characteristics of Resilience in this study. Humans also have the ability to control their behavior through the process of self-observation and self-evaluation, as in Self-Efficacy or better known as the 'self-regulatory mechanism' process in the theory. It is a mind control that controls human behavior.

The Social Cognitive Theory of Learning also states that Self-Well-being can be increased by changing cognitive processes, emotions, motivation, competitive behavior or changing the social situation in which a person is [37]. Accordingly, the Resilience aspect involves one of the elements of competitiveness and the ability to adapt to the environment. Resilience, Spiritual and Religious factors are personal elements when linked to this theory. Factors of Relationship with School and Parental Involvement are environmental elements. Self-Efficacy is the basis for cognitive, perception, motivation and Self-Well-being.

From the environmental aspect, Bandura stated that parents who respond to their children's behavior and provide opportunities and provide an encouraging environment will have children who excel in cognitive and social development [38]. In this study, Relationship with School was found to be important in generating the well-being of 923

the sample, Relationship with School also has a relationship with Religion and Parental Involvement. [39] study also found that Religiosity, Self-Efficacy and Relationship with School are interrelated with each other. In addition, apart from being a place for teenagers to generate cognitive development and gain knowledge, school also involves social relationships that can directly affect the development of teenagers. However, [8] study found that the Religious factor was not related to Relationship with School.

The model in this study also found that the factors of Religiositu, Parental Involvement and Relationship with School are mutually related to each other. This finding is consistent with what has been stated by [40] that protective factors are interrelated with each other. The findings of this study also confirm the findings of previous studies which found that protective factors are related to each other, namely, aspects of religiosity and parental involvement [15], [8]; relationships with schools and religiosity [7]; parental involvement and relationship with school [28].

In addition, [8] uses the term 'reciprocal determinism of behavior' to explain the covariance relationship between school, parents and religiosity. These three aspects are protective factors for teenagers [8]. Protective factors are important in the process of overcoming the negative effects of problematic adolescent development, in the process of adaptation and adolescent mental health [41].

According to [8], Relationship with School has to do with the student's ability to build the characteristics of Resilience in himself. His study also found that Relationship with School has a positive impact on the Well-being of teenagers and is a protective factor against the desire to commit suicide among teenagers. This may happen because teenagers seek external support from the home environment such as support from peers. If the relationship with the school is good, the involvement of teenagers in problematic behavior is also reduced [42]. In turn, this will contribute to the Well-being of teenagers.

An unexpected finding in this study was that the Spiritual factor did not contribute to the Well-being of teenagers. This result is not consistent with previous studies. It is possible that this phenomenon is related to the cultural perspective as explained by [43], a social psychologist who has done an early study on the culture of society across the world. According to Hofstede, people differ in their culture either in terms of religion, gender, generation and social class. The study that he has conducted around the world includes Malaysia, where this country, which is made up of a majority of Muslims, found that the highest score in Malaysia is for the 'power distance index' (PDI) domain [43].

It is possible that the high PDI factor makes the Religiosity aspect contribute in the Well-being model instead of the Spiritual factor. In addition, it is possible that the level of spiritual maturity of the sample in this study plays a role in this phenomenon considering that the age of the sample is only 16 years old and they are still in their teens and have not yet entered adulthood.

# 4. CONCLUSION

The development of the adolescent well-being model in this study is a first step to identify the strengths of human beings, especially the adolescent group. As stated in the problem statement, this study is very important because a study that is 'explanation and prediction' is a study that needs to be done through the SEM approach [6]. Individuals have the power to change and control changes in themselves, especially well-being, through the approach they take and the activities they engage in in their daily lives. The Well-Being Model in this study can also inspire counsellors in an effort to form a structure to design a concept for the clients' mental health. Teachers can encourage the development of a school environment climate that positive with consistency. This study encourages towards "promoting healthy behaviour" with the assumption that every teenager is valuable and has the potential to make a positive contribution to society and become healthy adults, especially in terms of emotions and psychology. Accordingly, schools can also be a suitable place to generate quality of life for teenagers through the "health promoting schools" program, which is to be a school that is willing to listen and take into account the views of students, parents and staff. This is also appropriate and fulfils the government's vision to empower youth, families and society. The promotion of well-being in teens can help mitigate mental health.

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