

# Development of Educational-Based Psychosocial Resilience Model Guidelines for Student Survival in New Normative Routines

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**Abstract** This study aims to review student-athletes resilience power, coping power, and protective power in surviving the new norm routine in Malaysia. Aspects of the resilience dimension include self-confidence, self-discipline, self-ability, self-control, and self-determination. In addition, this study also aims to identify whether there are differences in resilience and coping dimensions based on some demographic factors. Both aspects of the survey, namely the level of resilience and coping, identify this difference obtained from data collected through questionnaires. The study sample consisted of school students in Malaysia. A total of 190 study samples were randomly selected. This study uses a quantitative approach. The findings of the study through exploratory analysis using principal component analysis (PCA) revealed the structure of four factors: self-confidence, self-discipline, self-ability, and self-control. Structural equation modeling (SEM) showed that the scale items formed four factors related to higher coping. The structure turns out to be stable over different age groups. The study's implications showed the need for exposure to Co-Curriculum education patterns and social support applied directly in increasing the protective power against challenges for student-athletes.

**Keywords** Resilience, Coping, New Norms, COVID-19, Student-Athletes

## 1. Introduction

Countries around the world utilized their services to overcome the extent of COVID-19 disease through diverse measures such as social distance, masks, and hand sanitizers, etc. During this worldwide enforced era, the athletes of all sports have to face distancing from their routine trainings and they are unable to compete in all types of sports competitions as well as to maintain their mental health and well-being. The present research intends to examine the apparent effect (resilience, coping and protective factors) about social distancing processes of COVID-19 on the well-being (acculturation) of school students. The present study is designed to determine how professionals can provide social support psychologically that may be effective for the well-being (acculturation) of school students and to determine whether this support should be centered on social skill development during the pandemic outbreak that has restricted all students and the general public's ability to move, exercise, and interact with one another [1].

Prior researches related to social distancing psychologically in COVID-19 era have explored social distancing processes to be very damaging to physiological health [2] with signs, for instance, post-distressing, worsened by the panic of contamination, lengthier isolation time, hindrance, dullness, inadequate information, and economic sufferers [3]. The findings of some studies have been known, for instance, the relationship among adverse alterations in healthy manners (sleeping, diet, and physical activity) and

enlarged psychological stress (misery, worry, and tension) [4] along with improved psychological indisposition which is recognized as being at risk of diminishing the virus [5].

**1.1. Purpose of the Study**

The basic aim of the present research is to provide guidelines based on the psychosocial resilience model for student survival in the new normal routine. In detail, the main objectives of this study are as follows:

- i. Determining the relationship between resilience and coping among school student-athletes.
- ii. Identifying and understanding the relationship between resilience and protective factors (Co-Curriculum Education and social support).
- iii. Determining the relationship between acculturation and resilience, coping and protective factors (Co-Curriculum Education and Social Support).
- iv. Determining whether there is a difference in the relationship between resilience and coping, acculturation, and protective factors (co-curricular education, and social support) among school student-athletes based on demographic characteristics.

**2. Materials and Methods**

**2.1. Participants and Data Collection**

Correlation studies use causal modeling. The study was conducted through a random sampling method. The sample size used in the study is the total number of samples defined as the population. Therefore, the selection was performed using purposive sampling which is based on certain criteria keeping in view the climate and culture of the respondents’

regions. The study population consisted of school student-athletes. The population includes male and female students. The samples selected for this study are students from excellent co-curricular schools in the state of Perak. A total of 190 respondents give their feedback on this study through survey questionnaire.

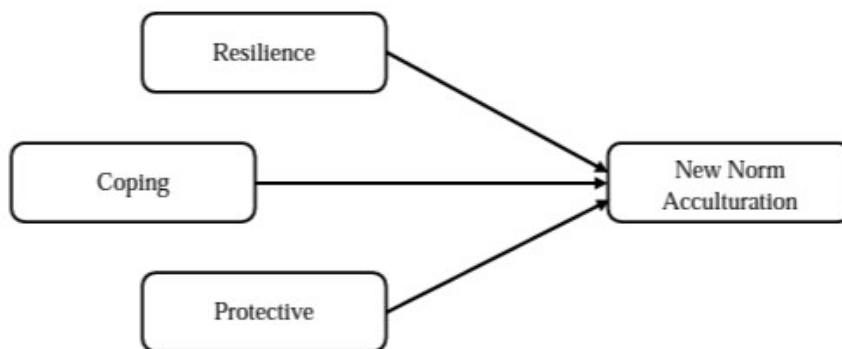
The study respondents consisted of 2nd and 4th-grade students in secondary schools in the state of Perak. Based on Krijie and Morgan’s [6] sampling table, a total of 190 students were selected as respondents using a purposive random sample.

**2.2. Statistical Analysis**

The resilience and coping capacities of male and female students were examined using descriptive analysis of mean percentage and standard deviation. Correlation test inference analysis was used to study the relationship between acculturation to resilience attitudes, coping, and protective factors in different genders and ages. SEM analysis will suggest a fit model among students against the resilience and protective model in the new normal routine.

**3. Results and Discussion**

This model’s goal is to explain how three predictors – resilience power, coping power, and protective power— affect student athletes’ adoption of new norm acculturation (Figure 1). In terms of construct measurement, all predictors and target constructs have a reflectively determined measurement model with Resilience Power (20 items), Coping Power (17 items), Protective Power (11 items), and New Norm Acculturation (14 items). Table 1 provides an overview of all item classifications.



**Figure 1.** A New Norm Acculturation Resilience Model for Student-Athletes

**Table 1.** Item Classification

Construct	Item statement
Resilience Power	<Based on the research questionnaire>
Coping Power	
Protective Power	
New Norm Acculturation	

### 3.1. Data

Model estimation using data collected from respondents selected among school student-athletes. A number of 190 school student-athletes answered the survey questionnaires based on 5-point Likert scale wherein 1-5 values mattered least to best judgements respectively. The present sample size was considered statistically sufficient for PSL or Path models in correlation with the regression analysis using three exogenous constructs. The level of significance was measured 0.05 for all models. The statistical data found no missing values in collected data.

### 3.2. Model Estimation

The estimation model utilized SEM Algorithm basically by Lohmoller [7], a path model estimation, a finishing criterion of 0.0000001 and similar weightage of constructs at its initial basis.

The norms of the path association constructs described the regression coefficients (standardized), however, the values

of circled dependent variable described  $R^2$  numbers presented in Figure 2. The initial assessment revealed that coping construct carried highest effect (0.341) on the endogenous construct (new norm acculturation). The resilience and protective constructs had second and third highest effect 0.231 and 0.172 respectively on the new norm acculturation (endogenous construct). All three variables revealed 38.8% of the variance in the dependent variable (new norm acculturation).

### 3.3. Evaluation of Reflective Measurement Model

Before the evaluation of structural model, it is essential to measure the models' goodness of fit. The value of Standardized Root Mean Square Residual (SRMS) was used as the criteria of evaluation. The SEM findings measured with the evaluation of reflective measurement model. The criteria for evaluation were displayed in Table 2 and Table 3 respectively. The findings revealed that all three reflective models fulfil the required criteria of evaluation (Table 2).

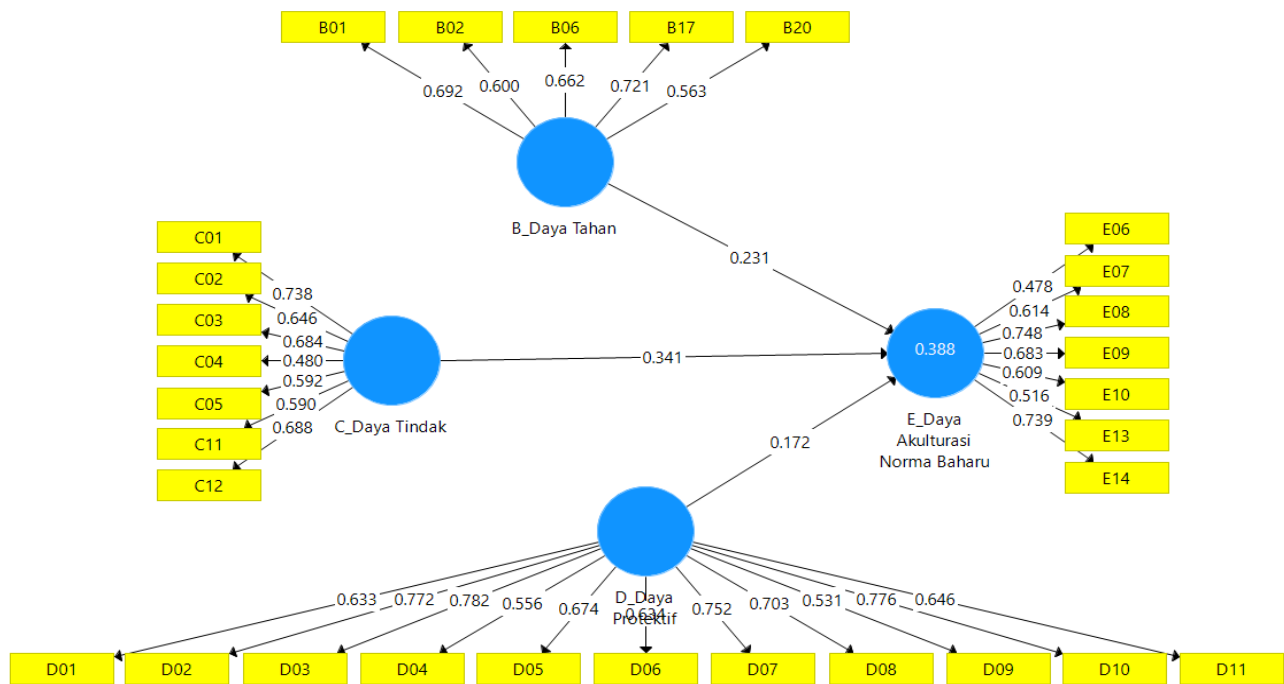


Figure 2. A New Norm Acculturation Model

Table 2. Assessment Criteria for Reflective Measurement Model

Criteria	Indicator	Assessment
Indicator Reliability	Outer Loading	0.4 and higher [8]
Internal Consistency Reliability	Composite Reliability	0.6 and higher [12]
Convergent Validity	AVE	0.5 and higher [12]

**Table 3.** SEM Assessment Results of Reflective Measurement Model

Latent variable	Indicators	Convergent validity		Internal Consistency Reliability
		Loadings	AVE	Composite Reliability
		>0.40	>0.50	>0.60
Resilience Power	B1	0.692	0.423	0.784
	B2	0.600		
	B6	0.662		
	B17	0.721		
	B20	0.563		
Coping Power	C1	0.738	0.405	0.824
	C2	0.646		
	C3	0.684		
	C4	0.480		
	C5	0.592		
	C11	0.590		
	C12	0.688		
Protective Power	D1	0.633	0.467	0.905
	D2	0.772		
	D3	0.782		
	D4	0.556		
	D5	0.674		
	D6	0.634		
	D7	0.752		
	D8	0.703		
	D9	0.531		
	D10	0.776		
	D11	0.646		
New Norm Acculturation	E6	0.478	0.402	0.821
	E7	0.614		
	E8	0.748		
	E9	0.683		
	E10	0.609		
	E13	0.516		
	E14	0.739		

The first indicator to check is the payload of the external indicator. In general, indicators with external loadings of 0.70 and above are preferred. However, since this is an exploratory study, 0.40 and higher are acceptable [8]. Based on the approach of using the indicators, items are removed automatically when the loading of items is below 0.70. For this purpose, the researchers measured the composite reliability, as well as construct and content validity for the removal of items having values below 0.70 [9]. Generally,

the items with external loadings ranging within 0.40 to 0.70 must be removed from the questionnaire if they result in a composite reliability higher than the value mentioned above. On the other hand, those items should also be removed if they affect the validity of the contents. However, some items with weaker loadings may be retained on the basis of their input to content validity.

A common measure for establishing the convergent validity is considered as an average variance extracted

(AVE). In general, the value of AVE (0.50 or greater) pointed to an average value that means the variable describes the value of its indicators more than half. However, in the present study, the AVE of all unobserved variables was found less than 0.50 which indicates that all indicators are on their average range. Though the AVE values of all constructs in the present research are less than 0.50 and all values are higher than 0.40 which is a typical problem in structural equation modeling (SEM). Fornell and Larcker [10] also indicate that the convergent validity of a construct is considered satisfactory if the AVE is less than 0.5 but the composite reliability must be higher than 0.6.

The internal consistency reliability is also much mattered in the construction of a scale. Usually, Cronbach Alpha is utilized as an indicator for the criteria of measurement in social sciences research, however, it has a tendency to be a traditional measure in SEM. Prior studies have endorsed the Composite Reliability as a replacement for the measurement [9, 11]. The findings of the present research are found greater than 0.6 mentioned against the assessment values in Table 4 and all variables have been proved to be accurately represented by a high level than the set criteria.

Lastly, the discriminant validity has been evaluated, which is a modern method to check the correlation ratio through heterotrait-monotrait (HTMT) suggested by Henseler et al [12]. All the findings are found obviously below the goodness of fit value (0.85). The findings of the present research revealed that no HTMT confidence interval contains a value of 1, showing that all the values of HTMT are significantly found dissimilar to 1. The findings revealed that there was a strong association (0.72) between coping power

and acculturation. In conclusion, the discriminant validity has been proven.

### 3.4. Structural Model Evaluation

Based on the structural model evaluation procedure, the VIF values of the structural model had been measured and all predicting constructs were found at their satisfactory level. Therefore, all values of VIF were found less than 5 which revealed that there was no collinearity issue in the statistical data.

The results of path coefficients (coping, resilience, and protective power) of structural model mentioned in Table 5 presented the satisfactory contribution in the outcome construct (New Norm Acculturation) and were displayed in the New Norm Acculturation Model as well (Figure 2). The findings of the model revealed that the power of coping construct had the height effect (0.341) on the endogenous construct. Whereas, the resilience and protective constructs have weaker effects (0.231 and 0.172) than the coping on new norm acculturation respectively. Bootstrapping findings revealed that the effects of all predictors were found statistically significant. The model also explained 38.8% of the variance in the New Norm Acculturation ( $R^2 = 0.388$ ) of student-athletes. The effect size of  $f^2$  and  $q^2$  are also displayed in Table 5. Interestingly, comparatively small effect sizes measured for all associations excluding the one (coping) with a strong value (0.341) of path coefficient. There has been comparatively fewer consideration and exertion given to expose acculturation and its stimulus on the reactions and the practices of coping [13].

**Table 4.** HTMT Correlation Values

Constructs	Resilience Power	Coping Power	Protective Power	New Norm Acculturation
Resilience Power				
Coping Power	0.768			
Protective Power	0.507	0.689		
New Norm Acculturation	0.681	0.717	0.483	

**Table 5.** Path Coefficients of the Structural Model and Significance Testing Results

Constructs	Path Coefficient	95% Confidence Interval	Significant ( $p < 0.05$ )	$f^2$ Effect Size	$q^2$ Effect Size
Resilience → New Norm Acculturation	0.231	0.231	0.001	0.060	0.016
Coping → New Norm Acculturation	0.341	0.341	0.000	0.100	0.027
Protective → New Norm Acculturation	0.172	0.172	0.025	0.030	0.007

Finally, the  $q^2$  value of path model through SEM used the blindfolding process to examine the predictive relevance. The purpose of the  $q^2$  value was estimated through blindfolding process to know how good the path model predicts the genuine preserved value. For the endogenous component (New Norm Acculturation), the cross- $q^2$  replication value was above zero ( $q^2 = 0.143$ ), supporting the model's ability to predict outcomes with reasonable accuracy. Further analysis of  $q^2$  shows that the relationship between coping power and new norm acculturation (0.027) has a small  $q^2$  effect size of 0.02 and higher. The remaining two relationships (Resilience Power → New Norm Acculturation and Protective Power → New Norm Acculturation) have  $q^2$  effect sizes that are weaker and below the 0.02 value making them insignificant. Utmost athletes revealed that coping approaches opposed to resilience power, on the other hand, the coping approaches linked to great acculturative stress [14].

#### 4. Conclusions

Social support is considered to play a vital role in the protection of well-being of student-athletes during the era of pandemic. They recognize how diverse structural support systems arrange for such gatherings, for instance, trusting family individuals for their passionate support and coaches for their response on their accomplishments in sports. Social support has countless extents that are described in literature.

The previous researches indicated three codependent and reliant dimensions: Structural (who offers their support being a family, peers, sports teachers/coaches, and team-players), Functional (how support is practiced in passionate, gratitude, appreciate-able, systematic, and informative forms), and Perceptual (valuation of the extent and value of accessible social fundamentals of support) [15, 16]. The evidence proposes that there is a need to assess the working staff support to student-athletes during pandemic and to identify their social support precedence by ensuring that the basic needs of student-athletes are accomplished in increasing impact.

The results of the present research are in line with the prior research and proposes that engagement in physical activities may assist protecting the well-being of student-athletes during the lockdown era of pandemic and this influence is more augmented if the activity performs at an open place. Schmitz, et al. [17] revealed that acculturation was positively linked to protective adaptation as a worldwide construct. Thompson-Coon et al. [18] proposed that engaging in co-curricular and leisure activities or education has a better influence on physical and mental well-being rather than it is performed at home.

Most of the student-athletes in the present research were encouraged not only to train to expand their performance in sports but to practice to expand their protective immunity the same as earlier research [19]. Though, there is emergent

concern about the social distancing measures that exercise restriction will lead to obesity, misery, contagions, and heart diseases [20]. Additionally, Mehrsafari et al. [21] proposed that a miserable anxiety level about the COVID is as usual, but peak tension may damage routine life, and failure to deal with stress may result in depression temporarily or permanently [22]. The present research piloted during COVID-19 concluded that enhanced levels of physical activity are linked with the reduction of anxiety and may help to protect student-athletes against various stresses [23]. On the other hand, student-athletes struggle for exercise may enhance their well-being.

The guidelines from the new norm acculturation resilience model emphasize the main elements to describe the level of resilience of student-athletes, namely self-confidence, self-discipline, self-ability, self-control, and self-determination. The study's findings make it abundantly evident how the five characteristics affect the student-athletes degree of endurance. The self-control element offers greater benefits than the five key components of the student's level of resilience. The respondents in this study have traits including a preference for making lists of tasks to be completed and plans, a willingness to disclose secrets with certain individuals, and a positive attitude toward problem-solving. Student-athletes are said to be affected by resilience. This demonstrates how a person's defensive capability will be impacted by their level of resistance. Student-athletes will be more eager and competitive if they have good endurance. Next, student-athletes will be able to complete their work in a timely way and develop into even better athletes.

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