MOJES MALAYSIAN ONLINE JOURNAL OF EDUCATIONAL SCIENCES APRIL 2025, 13 (2)

COMPETITIVE SPORTS PARTICIPATION, PERSONALITY ON RESILIENCE AND COPING MECHANISM: A CROSS-SECTIONAL STUDY AMONG MALAYSIA STUDENTS

Farah Lee Xu Jiang[1]
***Ooi Pei Boon[2,3]**
Yashila Subramaniam[4]
[1] OUM Graduate Centre Kelana Jaya, Malaysia
[2] Department of Medical Sciences, School of Medical and Life Sciences, Sunway University, Selangor, Malaysia
[3] Future Cities Research Institute, Sunway University, Selangor, Malaysia
[4] Department of Psychology, School of Medical and Life Sciences, Sunway University, Selangor, Malaysia
**peiboono@sunway.edu.my*

ABSTRACT

In the 21st century, developing resilience and coping skills is crucial for personal progress, a fact underscored by the COVID-19 pandemic. Past research has shown that participation in competitive sports and individual personality traits significantly influence the development of these skills. However, limited studies have explored this in Malaysia's secondary school students. This study examined differences in resilience and coping mechanisms among Malaysian secondary students based on competitive sports participation and personality traits. Data from 100 secondary students were collected through online surveys and analysed using the Big Five Inventory, Resilience Scale (RS-14), and Brief COPE instruments to assess personality, resilience, and coping styles. Findings revealed that students engaged in competitive sports displayed higher resilience levels and preferred adaptive coping strategies. Positive correlations were found between resilience and personality traits like conscientiousness, extraversion, agreeableness, and openness, while neuroticism had a negative but no statistical correlation. Similarly, adaptive coping showed positive correlations with openness, agreeableness, conscientiousness, and extraversion, with negligible correlation observed for neuroticism. Maladaptive coping was positively correlated with neuroticism, openness, and extraversion. It was negatively correlated with conscientiousness and agreeableness. However, openness, extraversion, and agreeableness showed no statistical correlation with maladaptive coping. Resilience displayed a strong positive correlation with adaptive coping and a weak negative correlation with maladaptive coping. These findings suggest that stakeholders should consider interventions to enhance resilience and encourage adaptive coping mechanisms among students, with the understanding of how sports participation and personality traits interplay.

Keywords: *Competitive sports participation, personality, resilience, coping mechanism, secondary school students.*

INTRODUCTION

In this 21st century, where physical activity awareness is growing among Malaysians, physical activity or sports participation has become increasingly important. According to the American Psychology Association (n.d.), resilience is the "process and outcome of successfully adapting to difficult or challenging life experiences, especially through mental, emotional, and behavioural flexibility and adjustment to external and internal demands." Overall, highly resilient individuals are more likely to be competent and comfortable in a world where interpersonal skills are important (Block & Kremen, 1996).

When confronted by stressful events, individuals with a low level of resiliency may show maladaptive behaviour, like acting stiffly and perseverating (Causadias et al., 2012).

Personality is one of the influencing factors in a person's coping mechanisms. People with different personality traits tend to adopt different coping strategies when faced with stressful situations. Effective coping mechanisms help individuals maintain emotional and psychological balance, enhancing their ability to bounce back from stress and adversity (Folkman & Moskowitz, 2004). They are interconnected and interdependent in that coping is a way to set into motion personal resources, and resilience is the positive outcome of successful coping (Compas et al., 2001). The key component to successful coping strategies is being flexible in selecting strategies to overcome stressors (Saarni, 1999).

Research has shown that sports participation can promote resilience (Caldarella et al., 2019) and serve as a positive coping mechanism (Nicholls & Polman, 2007) for young people facing such challenges. Personality traits also influence how individuals cope with stress and adversity (Vollrath & Torgersen, 2000). Therefore, this study investigates the relationship between sports participation and personality traits on resilience and coping mechanisms among secondary school students in Malaysia.

Researchers have suggested that there is a significant decline in resilience levels and an increase in maladaptive coping in young people compared to previous generations (Marty, 2019). Studies are also limited in the context of Malaysian secondary school students. This paper will shed light on the effect of participating in competitive sports to increase the level of resilience and investigate how personality traits come into play in the context of Malaysian secondary school students.

This study explores the relationship between competitive sports participation, personality traits, resilience, and coping mechanisms among Malaysian secondary school students. Specifically, the research seeks to answer the following questions:

1. How does competitive sports participation influence resilience levels among secondary school students?
2. What is the relationship between personality traits and resilience in the context of competitive sports participation?
3. How do different personality traits correlate with adaptive and maladaptive coping mechanisms?

By addressing these questions, this study provides empirical insights into the potential benefits of competitive sports for students' psychological resilience and coping strategies.

Furthermore, a study by Jalili and Hussainchari (2010) found that athletes scored higher than non-athletes in resilience, while there was no significant difference among athletes of different sports fields and between genders. Another study by Fletcher and Sarkar (2013) indicated that athletes are more prepared to deal with stressor events. Further research has suggested that students who participate in sports and extracurricular activities have better attendance in school, lower drop-out rates, fewer discipline problems, and lesser drug usage (Josephine Institute Center of Sports Ethics, 2006, as cited in Omar-Fauzee et al., 2012). Misnan and Shariff (2022) suggested that the resilience level of student-athletes is high among sports schools' secondary students. Building on these findings, another study about the resilience level of university student-athletes conducted by Omar-Fauzee et al. (2014) suggested that Malaysian university student-athletes are better at coping with adversity, concentration, goal setting/mental preparation, and peaking under pressure while having less freedom from worry as compared to Indonesian university student-athletes, suggesting that cultural or contextual factors may influence specific resilience traits. Additionally, research on resilience and mental health among athletes and non-athletes by Khodabakhshi and Khodaee (2011) shows that athlete students have significantly higher resilience and mental health than non-athlete students. Together, this body of research suggests that those participating in competitive sports have higher resilience levels and better mental health.

Furthermore, athletes may be more likely to use task-oriented coping as they face specific challenges in their sport and need to find solutions quickly. A study conducted by Dolenc (2015) suggested that

students who participated in sports showed more effective skills for coping with problems than non-sport participants, whereby young athletes use more constructive ways of dealing with problems than their peers who are not involved in sports regularly. Another research suggested that professional athletes scored higher on active coping, planning activities, and focusing on stressful problems than less experienced athletes (Giurgiu & Damian, 2015). In another study conducted by Jennings et al. (2018), the authors suggested that non-student athletes cope with stress by listening to music and socialising with friends and family, while student-athletes identified that they mainly use exercise to cope with stress. In conclusion, students who participate in competitive sports showed more productive, adaptive, and efficient coping strategies than students who do not participate in sports.

Additionally, a study conducted on the relationship between personality and resilience has indicated that the neuroticism of the Big Five Inventory is significantly negatively correlated with resilience (Nakaya et al., 2006). This means that respondents with high scores on resilience do not show neurotic traits, such as anxiety and depression. Another study showed a statistically significant positive relationship between personality traits (conscientiousness, agreeableness, openness, and extraversion) and psychological resilience, while neuroticism and psychological resilience correlate negatively (Fayombo, 2010; Mohammed & Mostafa, 2015). In conclusion, those who scored higher in neuroticism showed a negative correlation with resilience, while conscientiousness, agreeableness, openness, and extraversion showed positive correlation levels of resilience.

A study indicated a positive correlation between resilience and adaptive coping strategies in this age group (Smith et al., 2022). This means that secondary students with higher levels of resilience were more likely to engage in adaptive coping behaviours, such as seeking support from peers or adults, positive reappraisal, and problem-solving, to navigate academic and personal challenges. Additionally, resilience scores correlated positively to task-oriented coping and negatively to disengagement- and distraction-oriented coping (Secades et al., 2016). These results suggest that resilient characteristics may be associated with athletes with more potentially adaptive coping strategies. In conclusion, it is consistent that there is a positive correlation between resilience and adaptive coping strategies, and there is a negative correlation between resilience and maladaptive coping behaviours.

Based on the above literature review, the hypotheses below were hypothesised:

1. H1: Students who participate in competitive sports have higher levels of resilience compared to students who do not participate in competitive sports.
2. H2: Students who participate in competitive sports score higher in adaptive coping strategies and lower in maladaptive coping strategies compared to students who do not participate in competitive sports.
3. H3: There are positive correlations between resilience and the personality traits of extraversion, agreeableness, conscientiousness, and openness, while a negative correlation exists with neuroticism.
4. H4: There are positive correlations between adaptive coping and the personality traits of extraversion, agreeableness, conscientiousness, and openness, with a negative correlation for neuroticism. Conversely, maladaptive coping is negatively correlated with extraversion, agreeableness, conscientiousness, and openness, but positively correlated with neuroticism.
5. H5: Resilience is positively correlated with adaptive coping and negatively correlated with maladaptive coping.

METHODOLOGY

Research Design

The study employed a cross-sectional research design and quantitative research method. The cross-sectional design allowed for data collection at a specific time to gain insights into current patterns and associations among variables (Kesmodel, 2018). The quantitative approach enabled systematic data collection, rigorous analysis, and objective measurement to quantify relationships and establish generalizable findings (Turato, 2005). Random sampling and an online survey were utilised to efficiently

gather data from a large and diverse population (Wright, 2005). These methods yielded valuable information on competitive sports participation, personality traits, resilience, and coping mechanisms (Ary et al., 2018).

Participants

The study recruited 100 participants who met the inclusion criteria. Participants were selected from international and government schools in Malaysia, with proper permissions obtained from the schools and ethical considerations considered. Inclusion criteria involved secondary students aged 12-18 years from various athletic backgrounds who could understand English and/or Malay and provided consent to participate. Individuals with psychological disorders or the inability to provide consent were excluded.

Measures

1. Big Five Inventory

This scale contains 44 items measured on a 5-point scale, where 1= strongly disagree and 5= strongly agree. The resulting data is grouped into five categories that illustrate major variations in human personality - extraversion, agreeableness, conscientiousness, neuroticism, and openness. The reliability test results show that the reliability coefficient (Cronbach's Alpha) for each factor of the personality traits was 0.779 (openness to experience), 0.727 (conscientiousness), 0.725 (extraversion), and 0.716 (neuroticism). Since all the reliability coefficients have surpassed the minimum value of 0.7, the measures were deemed consistent and reliable throughout the study.

2. Resilience Scale (RS-14)

The Resilience Scale was constructed by Wagnild and Young (1993). The conceptual foundation of the resilience scale is known as the Resilience Core, and a strong Resilience Core will enable a person to bounce back, learn, and grow from life's difficulties, exhibiting a very healthy resilience response. RS-14 scores range from 14 to 98. Scores greater than 90 in the RS-14 indicate high resilience, scores from 65 to 81 indicate moderately low to moderate resilience, and scores of 64 and below indicate low resilience.

3. Coping Orientation to Problems Experienced Inventory (Brief COPE)

The Coping Orientation to Problems Experienced Inventory (Brief COPE) is a 28-item, 4-point scale self-report questionnaire designed to measure effective and ineffective ways to cope with stressful life events. This scale uses a 4-point scale, where 1= I never do this, and 4= I always do this. The scale aims to determine someone's primary coping styles with two items in every 14 subscales. The subscales include Acceptance, Emotional Support, Humour, Positive Reframing, Religion, Active Coping, Instrumental Support, Planning, Behavioural Disengagement, Denial, Self-Distraction, Self-Blame, Substance Use, and Venting (Carver, 1997). All scales have exceeded α = 0.60 except for Venting (α = 50), Denial (α = 0.54), and Acceptance (α = 0.57). This shows that the instrument has good internal reliability. As for validity, exploratory factor analysis has been conducted on the item set using an oblique rotation to permit correlations among factors.

An email was sent to all registered International Schools and Sports Schools in Malaysia to invite participants to take part in this study, and institutional permission to conduct this study was obtained from respective private institutions. The questionnaire was distributed via Google Forms, and data collection was from January to March 2023.

The data collected was analysed using the Statistical Package of Social Sciences (SPSS) program software version 27. For H1 and H2, a t-test was used to analyse the data. For H3, H4, and H5, we used Pearson Correlation to analyse correlations between the variables. Simple linear regression was used to analyse the variance explained by the respective dependent variables.

FINDINGS

Table 1 shows the demographic information of the participants. The demographic information includes age group, gender, nationality, ethnicity, and type of school that participants are currently studying in.

Table 1. *Demographics Information (N = 100)*

Baseline characteristic	*n*	%
Age group		
12 years old and below	19	19
13 - 15 years old	54	54
16 - 18 years old	20	20
Gender		
Male	46	46
Female	54	54
Nationality		
Malaysian	92	92
Non-Malaysian	8	8
Ethnicity		
Malay	26	26
Chinese	47	47
Indian	16	16
Other	11	11
Type of school		
Government school	16	16
International school	78	78
Private national school	5	5
Sports school	1	1

Most of the participants in this study were between the ages of 13 to 15 years old (54%). In terms of nationality, 92% of the participants are Malaysians, while 8% of the participants are non-Malaysians. Participants were also from different types of schools in Malaysia. 16% of the participants are from Malaysia's government schools, 78% are from international schools, 5% are from private national schools, and 1% are from Malaysia sports schools.

Table 2 shows the relationship between competitive sports participation and resilience among Malaysian secondary school students. H1 was tested among students' competitive sports participation and resilience. Based on the result, the resilience mean score for participants who participated in competitive sports is 73.75 (*SD* = 10.52), while the mean score for participants who do not participate in competitive sports is 71.79 (*SD* = 13.13). This indicates that participants who participated in competitive sports have higher resilience levels as compared to participants who do not participate in competitive sports.

Table 2. *Relationship between Competitive Sports Participation and Resilience (N=100)*

Competitive sports participation	*n*	*M*	*SD*
Yes	57	73.75	10.52
No	43	71.79	13.13

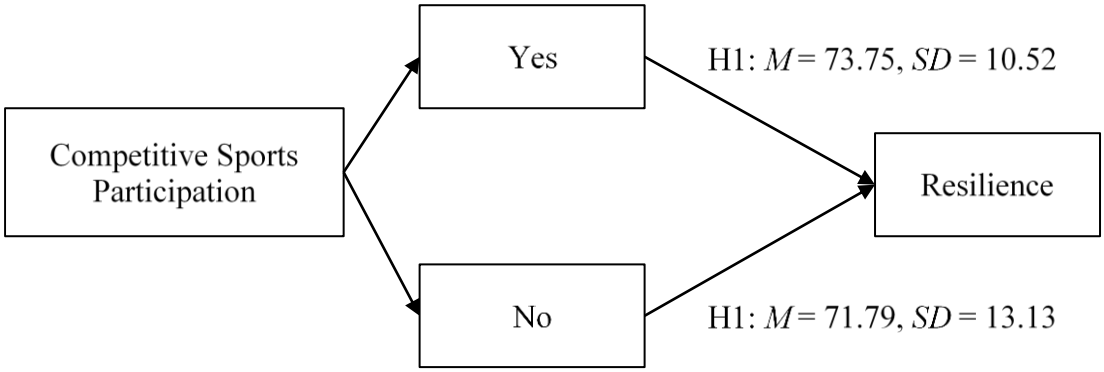


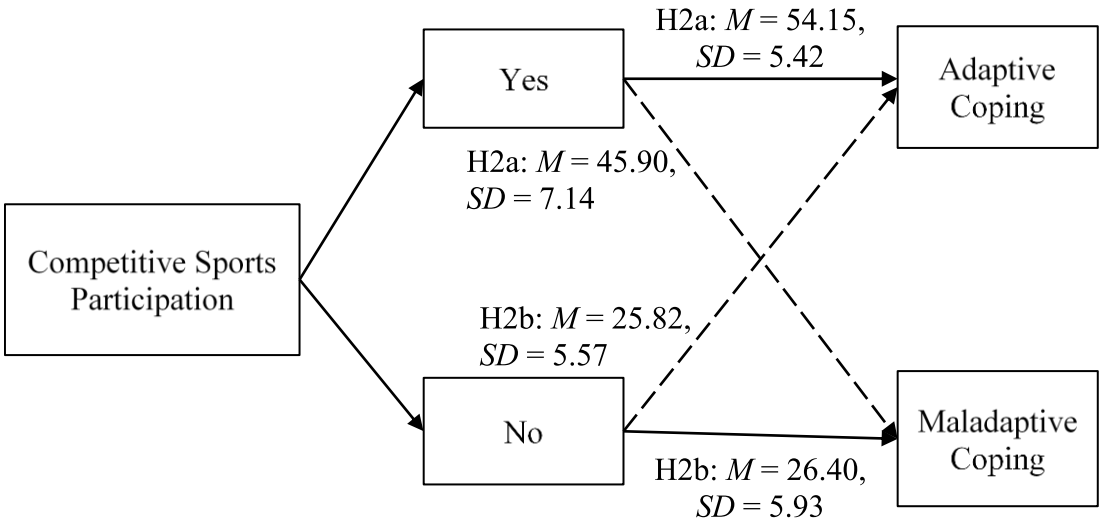
Figure 1. *Relationship between Competitive Sports Participation and Resilience*

Table 3 shows the relationship between competitive sports participation and coping mechanisms among Malaysian secondary school students. H2 was tested among students' competitive sports participation and coping mechanisms. Based on the result, the adaptive coping mean score for participants who participated in competitive sports is 54.15 (*SD* = 5.42), while the mean score for participants who did not participate in competitive sports for adaptive coping is 45.90 (*SD* = 7.14). This indicates that participants who participated in competitive sports have higher adaptive coping as compared to participants who do not participate in competitive sports.

As for maladaptive coping, the mean score for participants who participated in competitive sports is 25.82 (*SD* = 5.57), while the mean score for participants who did not participate in competitive sports is 26.40 (*SD* = 5.93). This indicates that participants who participated in competitive sports have lower maladaptive coping as compared to participants who do not participate in competitive sports.

Table 3. *Relationship between Competitive Sports Participation and Coping Mechanism (N=100)*

	Competitive sports participation	*n*	*M*	*SD*
Adaptive coping	Yes	57	54.15	5.42
	No	43	45.90	7.14
Maladaptive coping	Yes	57	25.82	5.57
	No	43	26.40	5.93



Note. The dotted line in this figure means the relationship between the variables has lower mean and lower standard deviation as compared to the other hypotheses.

Figure 2. *Competitive Sports Participation and Coping Mechanism*

Furthermore, Table 4 shows the relationship between five personalities and resilience. H3 was tested among the five personalities and resilience. Extraversion and resilience were found to have moderate positive correlations and were statistically significant (r = .47, p < .01). This shows that the higher the score for extraversion, the higher the level of resilience. Agreeableness was found to have moderate positive correlations and statistical significance (r = .43, p < .01). This shows that the higher the score for agreeableness, the higher the level of resilience. Conscientiousness was found to have strong positive correlations and was statistically significant (r = .57, p < .01). This shows that the higher the score for conscientiousness, the higher the level of resilience.

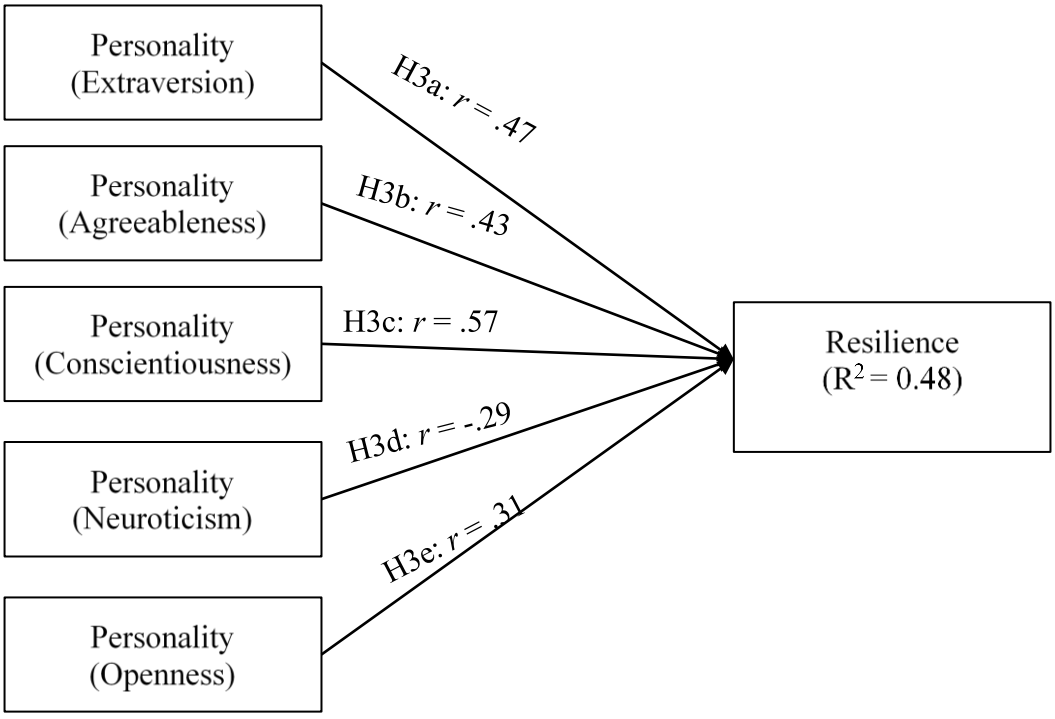
Neuroticism was found to have very weak negative correlations and was statistically significant (r = -.29, p < .01). This shows that the higher the score for neuroticism, the lower the level of resilience. Openness was found to have moderate positive correlations and statistical significance (r = .31, p < .01). This shows that the higher the score for openness, the higher the level of resilience.

Based on the results, all five personalities were statistically significant with resilience. Extraversion (r = .47, p < .01), agreeableness (r = .43, p < .01), conscientiousness (r = .57, p < .01), and openness (r = .31, p < .01) have a positive correlation with resilience, while neuroticism (r = -.29, p < .01) has a negative correlation with resilience. Conscientiousness has the strongest correlation with resilience (r = .57, p < .01), followed by extraversion (r = .47, p < .01), agreeableness (r = .43, p < .01), openness (r = .31, p < .01), and neuroticism (r = -.29, p < .01). Following Cohen's (1988) effect size interpretation, conscientiousness has a strong correlation with resilience; extraversion, agreeableness, and openness has a moderate correlation with resilience; and neuroticism has a weak correlation with resilience. This indicates that participants with high conscientiousness personality traits have higher resilience levels, while participants with high neuroticism personality traits have lower resilience levels. Additionally, extraversion, agreeableness, conscientiousness, and openness accounted for 48.7% of resilience (see Figure 3).

Table 4. *Correlation between Personality and Resilience (N=100)*

	1	2	3	4	5	6
Extraversion	1					
Agreeableness	.29**	1				
Conscientiousness	.25*	.48**	1			
Neuroticism	-.13	-.03	-.16	1		
Openness	.31**	.41**	.32**	.20*	1	
Resilience	.47**	.43**	.57**	-.29**	.31**	1

*p = < .05; **p = < .01.



*p = < .05; **p < .01.

Figure 3. *Correlation between Personality and Resilience*

Additionally, Table 5 shows the relationship between five personalities and coping mechanisms. H4 was tested among the five personalities and coping mechanisms. Coping mechanisms have two subscales, which are adaptive coping and maladaptive coping. Extraversion and adaptive coping were found to have weak positive correlations and were statistically significant at a .05 level (r = .23, p < .05). This shows that the higher the score for extraversion, the higher the score for adaptive coping. Agreeableness was found to have weak positive correlations and was statistically significant at a .05

level (r = .26, p < .05). This shows that the higher the score for agreeableness, the higher the score for adaptive coping.

Conscientiousness has weak positive correlations and was statistically significant at a .05 level (r = .25, p < .05). This shows that the higher the score for conscientiousness, the higher the score for adaptive coping. Neuroticism was found to have very weak negative correlations and was statistically insignificant at both .05 and .01 levels (r = -.03, p > .05). This shows that the higher the score for neuroticism, the lower the score for adaptive coping. Openness was found to have moderate positive correlations and statistically significant at a .01 level (r = .36, p < .01). This shows that the higher the score for openness, the higher the score for adaptive coping.

Based on the results, extraversion (r = .23, p < .05), agreeableness (r = .26, p < .05), conscientiousness (r = .25, p < .05), and openness (r = .36, p < .01) have a positive correlation with adaptive coping, while neuroticism (r = -.03, p > .05) has a negative correlation with adaptive coping. Openness has the highest correlation with adaptive coping (r = .36, p < .01), followed by agreeableness (r = .26, p < .05), conscientiousness (r = .25, p < .05), extraversion (r = .23, p < .05), and neuroticism (r = -.03, p > .05). Extraversion, agreeableness, and conscientiousness were found to be statistically correlated at .05 level (p < .05), openness was found to be statistically correlated at .01 level (p < .01), and neuroticism was found to have no statistically significant correlation with adaptive coping. Following Cohen's (1988) effect size interpretation, openness has a moderate correlation with adaptive coping; extraversion, agreeableness, and conscientiousness have a weak correlation with adaptive coping; and neuroticism has a very weak correlation with adaptive coping. The result also indicates that participants with high openness personality traits are more likely to engage in adaptive coping strategies, while participants with high neuroticism personality traits are less likely to engage in adaptive coping strategies.

As for maladaptive coping, extraversion and maladaptive coping were found to have very weak positive correlations and were not statistically significant at both .05 and .01 levels (r = .02, p > .05). It was hypothesised that there is a negative relationship between extraversion and maladaptive coping yet the results showed a positive relationship. Nevertheless, there is no significant relationship between extraversion and maladaptive coping. This shows that the score for extraversion has no statistically significant effect on the score for maladaptive coping.

Agreeableness has very weak negative correlations and was statistically insignificant at both .05 and .01 levels (r = -.04, p > .05). There is no significant relationship between agreeableness and maladaptive coping. This shows that the score for agreeableness has no statistically significant effect on the score for maladaptive coping. Conscientiousness was found to have weak negative correlations and is statistically significant at a .05 level (r = - .20, p < .05). There is a statistically significant relationship between conscientiousness and maladaptive coping at a .05 level (p < .05). This shows that the score for conscientiousness has a significant effect on the score for maladaptive coping. The higher the score for conscientiousness, the higher the score for maladaptive coping. Neuroticism was found to have strong positive correlations and is statistically significant at a .01 level (r = .52, p < .01). There is a statistically significant relationship between neuroticism and maladaptive coping at a .01 level (p < .01). This shows that the score for conscientiousness has a significant effect on the score for maladaptive coping. The higher the score for neuroticism, the higher the score for maladaptive coping.

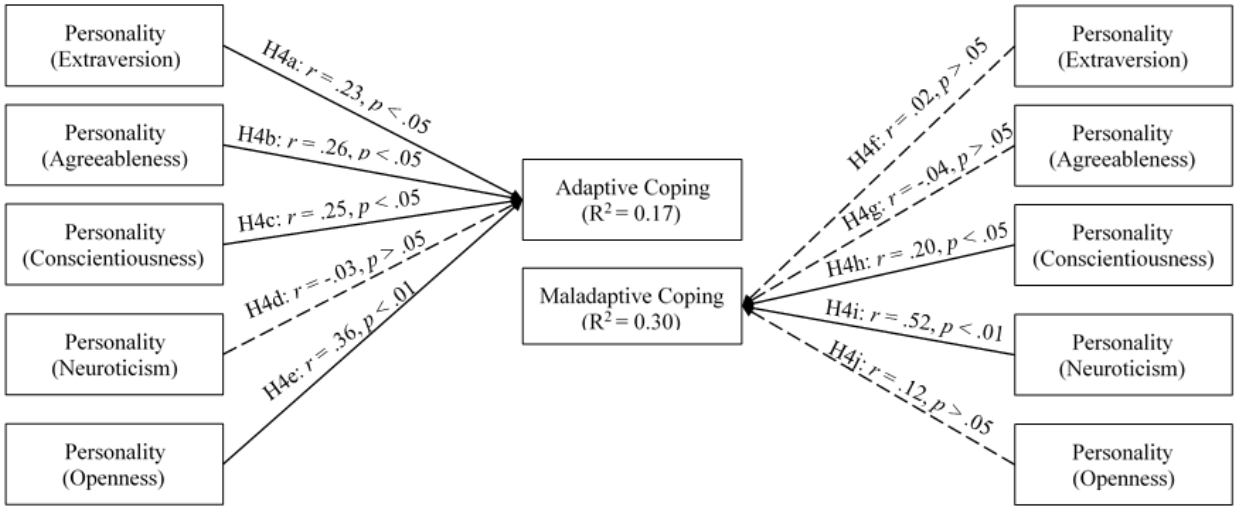
Openness was found to have weak positive correlations and statistically not significant at both .05 and .01 levels (r = .12, p > .05). It was hypothesised that there is a negative relationship between openness and maladaptive coping, yet the results showed a positive relationship. Nevertheless, there is no significant relationship between openness and maladaptive coping. This shows that the score for openness has no statistically significant effect on the score for maladaptive coping.

Table 5. *Correlation between Personality and Coping Mechanism (N=100)*

	1	2	3	4	5	6	7
Extraversion	1						
Agreeableness	.29**	1					
Conscientiousness	.25*	.48**	1				
Neuroticism	-.13	-.03	-.16	1			
Openness	.31**	.41**	.32**	.20*	1		
Adaptive coping	.23*	.26*	.25*	-.03	.36**	1	
Maladaptive coping	.02	-.04	-.20*	.52**	.12	.03	1

*p = < .05; **p < .01.

Based on the results, extraversion (r = .02, p > .05), neuroticism (r = .52, p < .01), and openness (r = .12, p > .05) have a positive correlation with maladaptive coping, while agreeableness (r = -.04) and conscientiousness (r = .20, p < .05) have a negative correlation with maladaptive coping. Neuroticism has the highest correlation with maladaptive coping (r = .52, p < .01), followed by conscientiousness (r = -.20, p < .05), openness (r = .12, p > .05), agreeableness (r = -.04, p > .05), and extraversion (r = .02, p > .05). Neuroticism was found to be statistically correlated at .01 level (p < .01); conscientiousness was found to be statistically correlated at .05 level (p < .05); extraversion, agreeableness, and openness were found to have no statistically significant correlation with maladaptive coping. Following Cohen's (1988) effect size interpretation, neuroticism has a high correlation with maladaptive coping; conscientiousness has a weak correlation with maladaptive coping; and extraversion, agreeableness, and openness have a very weak correlation with maladaptive coping. The result indicates that participants with high neuroticism personality traits are more likely to engage in maladaptive coping strategies, while participants with high conscientiousness personality traits are less likely to engage in maladaptive coping strategies. Additionally, extraversion, agreeableness, conscientiousness, and openness accounted for 16.5% of adaptive coping mechanisms while conscientiousness and neuroticism accounted for 30.3% of maladaptive coping mechanisms (see Figure 4).



Note. Dotted arrow means the relationship between the variables is not significant.

*p = < .05; **p < .01.

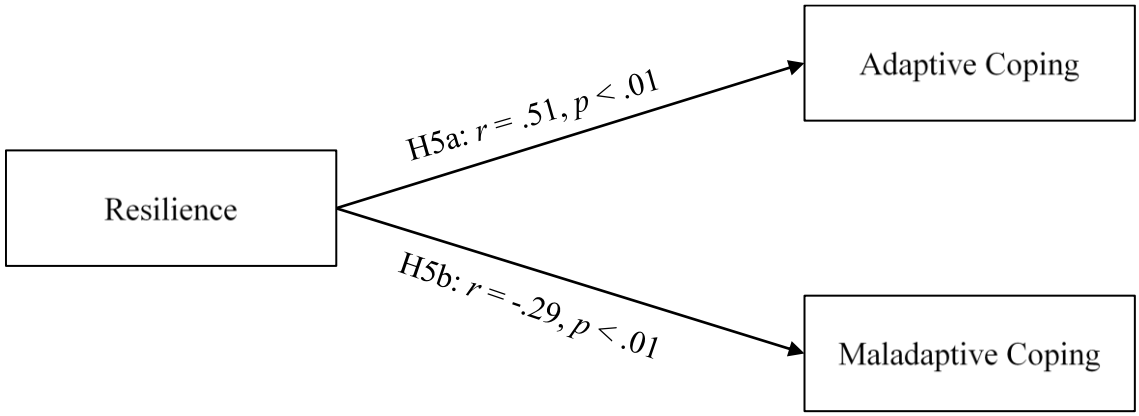
Figure 4. *Correlation between Personality and Coping Mechanism*

The relationship between resilience and coping mechanisms was evaluated, and the result was tabulated in Table 6. H5 was tested between resilience and coping mechanisms. Coping mechanisms have two subscales, which are adaptive coping and maladaptive coping. Based on the result, resilience was found to have strong positive correlations with adaptive coping and was statistically significant at a .01 level (r = .51, p < .01). This shows that the score for resilience has a significant effect on the score for adaptive coping. The higher the score for resilience, the higher the score for adaptive coping. Resilience was found to have weak negative correlations with maladaptive coping and is statistically significant at a .01 level (r = -.29, p < .01). This shows that the score for resilience significantly affects the score for adaptive coping. The higher the score for resilience, the lower the score for maladaptive coping.

Table 6. *Correlation between Resilience and Coping Mechanism (N=100)*

	1	2	3
Resilience	1		
Adaptive coping	.51**	1	
Maladaptive coping	-.29**	.03	1

*p =<.05; **p<.01.



*p = < .05; **p < .01.

Figure 5. *Correlation between Resilience and Coping Mechanism*

DISCUSSION

Students who participated in competitive sports showed higher resilience levels than students who did not. Students who participated in competitive sports also showed higher adoption of adaptive coping styles than students who did not.

As for the correlation between personality, conscientiousness, extraversion, agreeableness, and openness showed a positive statistical correlation with resilience, while neuroticism showed a negative statistical correlation with resilience. For the correlation between personality and coping mechanism, openness, agreeableness, conscientiousness, and extraversion showed positive statistical correlations with adaptive coping, while neuroticism showed no statistical correlation with adaptive coping. For maladaptive coping, neuroticism showed positive statistical correlations, while conscientiousness showed negative statistical correlations. Openness, extraversion, and agreeableness showed no statistical correlations with maladaptive coping. Lastly, the correlation between resilience and coping showed that resilience has strong positive correlations with adaptive coping and weak negative correlations with maladaptive coping.

The mean score for participants who participated in competitive sports is higher than the mean score for participants who did not participate in competitive sports. This indicates that there is a difference in resilience levels among students who participate in competitive sports and students who do not participate in competitive sports. Those who participate in competitive sports have higher resilience levels than those who do not participate in competitive sports. Hence, the hypothesis that students participating in competitive sports have higher levels of resilience was supported. This result is aligned with the literature findings by Misnan and Shariff (2022). The authors suggested that the resilience level of student-athletes in Malaysia is high among Malaysia's Sport School's secondary students. The finding is also supported by Jalili and Hussainchari (2010), Khodabakhshi and Khodaee (2011), and Omar-Fauzee et al.'s (2014) findings, which suggested that athletes have higher levels of resilience as compared to non-athletes.

Next, the mean score for adaptive coping for participants who participated in competitive sports is higher than the mean score for participants who did not participate in competitive sports. Those who participated in competitive sports have a higher adaptive coping style than those who do not participate in competitive sports. Meanwhile, those who do not participate in competitive sports have a higher maladaptive coping style than those who participate in competitive sports. An adaptive coping style

involves effectively dealing with stress and adversity positively and proactively. Engaging in competitive sports is one of the ways that can develop adaptive coping styles (Berkman et al., 2014). Firstly, as athletes train for competitions, they set goals for themselves to achieve during the competition. This gives them a purpose in training, which, during the process, requires resilience, persistence, and the ability to deal with setbacks to achieve the goals that they have set for themselves (McCarthy et al., 2021).

All five personalities were found to be statistically significant with resilience. Conscientiousness, extraversion, agreeableness, and openness positively correlate with resilience, while neuroticism negatively correlates with resilience. Conscientiousness has the strongest correlation with resilience, followed by extraversion, agreeableness, openness, and neuroticism. Following Cohen's (1988) effect size interpretation, conscientiousness has a strong correlation with resilience; extraversion, agreeableness, and openness have a moderate correlation with resilience; and neuroticism has a weak correlation with resilience. The result is also supported by Fayombo's (2010) and Mohammed and Mostafa's (2015) studies, where conscientiousness was the best predictor of resilience. Out of all the personality traits that have a positive correlation with resilience, openness was found to be the least accurate predictor of resilience. This finding is aligned with Mohammed and Mostafa's (2015) finding, where the authors suggested the same result.

Our study reported that all personality traits were statistically significant with adaptive coping, except neuroticism. Openness highly correlates with adaptive coping, followed by agreeableness, conscientiousness, extraversion, and neuroticism. The result aligned with Billings and Moos' (1981) and Carver et al.'s (1989) studies. Both studies suggested that neuroticism has a positive relationship with maladaptive coping. This means that individuals who scored high in neuroticism tend to engage in maladaptive coping behaviours.

Our study reported that resilience is statistically significant and positively correlates with adaptive coping strongly. This shows that the score for resilience significantly affects the score for adaptive coping. The higher the score for resilience, the higher the score for adaptive coping. For maladaptive coping, resilience was found to be statistically significant and have weak negative correlations with maladaptive coping. This shows that the score for resilience significantly affects the score for adaptive coping.

Competitive sports participation does impact the resilience level of a person and encourages adaptive coping behaviours. While our findings support the idea that competitive sports participation enhances resilience and promotes adaptive coping mechanisms, alternative perspectives must be considered. Psychological resilience is influenced by broader social, cultural, and environmental factors beyond sports engagement. For instance, family support, socioeconomic background, and educational pressures can also shape students' coping styles and resilience development. Additionally, cultural attitudes toward sports participation in Malaysia may differ from Western contexts, where most resilience and coping research has been conducted.

Furthermore, not all competitive sports experiences foster positive psychological outcomes. High-performance sports environments can also introduce stressors, such as performance anxiety, fear of failure, and overtraining, which may lead to maladaptive coping mechanisms. Future research should explore how different competitive sports structures (e.g., individual vs. team sports, recreational vs. elite levels) impact resilience outcomes. Understanding these contextual factors will provide a more nuanced perspective on the relationship between sports participation, personality, and psychological well-being.

Hence, strategies to encourage competitive sports participation and personality traits that enhance resilience and adaptive coping should be considered. For more students to participate in competitive sports, educating key stakeholders is essential. Key stakeholders include parents, students, teachers, coaches, school management, and government sectors. When stakeholders have access to relevant information and a thorough understanding of the benefits of student engagement in competitive sports, they will be better equipped to make well-informed choices and take proactive steps to promote sports

participation. Hence, education plays a central role in building awareness and understanding among all stakeholders, emphasising the importance and benefits of participating in competitive sports.

This research aims to understand how competitive sports and personality affect resilience and coping mechanisms. However, limitations have impacted the findings' quality, validity, and generalizability. Firstly, there are only 100 participants, and 78% of students are from international schools. There is no fixed or minimum number of participants to be achieved, yet a larger sample size will cover more population representation, and the result can be generalised to a larger population. This also degrades the value of the study, especially when stakeholders seek to apply the study outcomes to real-world scenarios. As a result, the applicability of this study to the real world becomes irrelevant.

Next, self-report measures may provide answers perceived as socially acceptable or desirable. According to Albert et al. (2013), teenagers tend to be influenced by their peers than adults. Since this study is targeted at teenagers only, participants may answer based on what would be acceptable and desirable to their peers instead of answering based on what they truly think or feel. This is amplified when their peers are around, and those with agreeableness traits will be more likely to answer inaccurately. This results in inaccurate data and questionable collected data's validity (Paulhus, 1991).

CONCLUSION

In conclusion, participants who engage in competitive sports exhibit higher levels of resilience and adopt more adaptive coping styles than non-participants. The demanding nature of sports and the constant exposure to setbacks and challenges contribute to developing resilience-related skills such as goal setting, problem-solving, and stress management. The competitive training environment also encourages participants to adopt adaptive coping strategies to perform better. Personality traits such as conscientiousness, extraversion, agreeableness, and openness are positively correlated with resilience, while neuroticism has a negative correlation. Similarly, openness, agreeableness, conscientiousness, and extraversion positively correlate with adaptive coping, while neuroticism is positively correlated with maladaptive coping. Resilience has strong positive correlations with adaptive coping and weak negative correlations with maladaptive coping, indicating that individuals with higher resilience levels possess stronger adaptability, problem-solving skills, and positive appraisal of challenges. Strategies to promote competitive sports participation and enhance resilience and adaptive coping include educating stakeholders, government initiatives, and fostering personality traits that support resilience and adaptive coping in students.

REFERENCES

Albert, D., Chein, J., & Steinberg, L. (2013). The teenage brain: Peer influences on adolescent decision making. *Current Directions in Psychological Science*, *22*(2), 114-120. https://psycnet.apa.org/doi/10.1177/0963721412471347

American Psychological Association. (n.d.). Resilience. https://www.apa.org/topics/resilience

Ary, D., Jacobs, L. C., Irvine, C. K. S., & Walker, D. (2018). *Introduction to research in education.* Cengage Learning.

Billings, A. G., & Moos, R. H. (1981). The role of coping responses and social resources in attenuating the stress of life events*. Journal of Behavioral Medicine*, *4*(2), 139-157.

Block, J., & Kremen, A. M. (1996). IQ and ego-resiliency: Conceptual and empirical connections and separateness. *Journal Of Personality and Social Psychology*, *70*(2), 349-361. https://doi.org/10.1037/0022-3514.70.2.349

Caldarella, P., Johnson, J. E., Larsen, R. A., Heath, M. A., & Warren, J. S. (2019). Adolescent sports participation and parent perceptions of resilience: A comparative study. *The Physical Educator*, *76*(4). https://doi.org/10.18666/TPE-2019-V76-I4-8451

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology, 56*(2), 267–283. https://doi.org/10.1037/0022-3514.56.2.267

Carver, C. S. (1997). You want to measure coping but your protocol's too long: Consider the brief COPE. *International Journal of Behavioral Medicine*, *4*(1), 92–100. https://doi.org/10.1207/s15327558ijbm0401_6

Causadias, J. M., Salvatore, J. E., & Sroufe, L. A. (2012). Early patterns of self-regulation as risk and promotive factors in development: A longitudinal study from childhood to adulthood in a high-risk sample. *International Journal of Behavioral Development*, *36*(4), 293–302. https://doi.org/10.1177/0165025412444076

Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences* (2nd ed.). Routledge.

Compas, B. E., Conner-Smith, J. K., Saltzman, H., Thomsen, A.H., & Wadsworth, M. E. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological Bulletin*, *127* (1), 87-127. https://doi.org/10.1037/0033-2909.127.1.87

Dolenc, P. (2015). Anxiety, self-esteem and coping with stress in secondary school students in relation to involvement in organized sports. *Slovenian Journal of Public Health*, *54*(3), 222–229. https://doi.org/10.1515/sjph-2015-0031

Fayombo, A. G. (2010). The relationship between personality traits and psychological resilience among the Carribean adolescents. *International Journal of Psychological Studies*. *2*(2), 105-116. https://doi.org/10.5539/ijps.v2n2p105

Fletcher, D., & Sarkar, M. (2013). Psychological resilience: A review and critique of definitions, concepts, and theory. *European Psychologist, 18*(1), 12–23. https://doi.org/10.1027/1016-9040/a000124

Folkman, S., & Moskowitz, J. T. (2004). Coping: pitfalls and promise. *Annual Review of Psychology*, *55*, 745–774. https://doi.org/10.1146/annurev.psych.55.090902.141456

Giurgiu, R. L., & Damian, M. (2015). Stress & coping in athletes and non-athletes students-comparative study. *Procedia-Social and Behavioral Sciences*, *180*, 332-337. https://doi.org/10.1016/j.sbspro.2015.02.125

Jalili, A. & Hussainchari, M. (2010). Explaining psychological resilience based on self-efficacy in athlete and non-athlete university students. *Journal of Motor Learning and Movement*, *2*(3).

Jennings, R. A., Henderson, C. S., Erla, M. A., Abraham, S., & Gillum, D. (2018). Stress coping behaviors of faith–based college non-student athletes vs. student-athletes. *College Student Journal*, *52*(2), 245-257. https://guides.wpunj.edu/ld.php?content_id=44669080

Kesmodel, U. S. (2018). Cross-sectional studies - what are they good for? *Acta Obstetricia et Gynecologica Scandinavica*, *97*(4), 388–393. https://doi.org/10.1111/aogs.13331

Khodabakhshi, A., & Khodaee, M. R. (2011). The comparison between resiliency and mental health among athlete and non-athlete male students. *European Psychiatry*, *26*(S2), 1588. https://doi.org/10.1016/S0924-9338(11)73292-8

Marty, A. (2019). *Are young people less resilient than they used to be?* SACS Consulting. https://sacsconsult.com.au/blog/are-young-people-less-resilient-than-they-used-to-be/

McCarthy, H. J., Dickson, J. M., & Lydon-Staley, D. M. (2021). Setting and achieving goals in stressful contexts: The importance of control. *Journal of Personality and Social Psychology*, *120*(2), 341-362.

Misnan, S. and Shariff, A. R. M. (2022). The resilience and coping strategies for student-athletes on acculturation of the new normal. *Fitness, Performance and Health Journal*, *1*(1), 24-29. https://fphjournal.com/index.php/fphj/article/view/8

Mohammed, A. A., & Mostafa, A. A. (2015). Five factor personality traits and psychological resilience among secondary school students in Egypt. *Psycho-Educational Research Reviews*, *4*(2), 3–9. https://perrjournal.com/index.php/perrjournal/article/view/325

Nakaya, M., Oshio, A. & Kaneko, H., (2006). Correlations for adolescent resilience scale with big five personality traits. *Psychological Reports*, *98*(3), 927-930. https://doi.org/10.2466/pr0.98.3.927-930

Nicholls, A. R., & Polman, R. C. (2007). Coping in sport: A systematic review. *Journal of Sports Sciences*, *25*(1), 11–31. https://doi.org/10.1080/02640410600630654

Omar-Fauzee, M. S., Nazarudin, M. N., Saputra, Y. M., Sutresna, N., Taweesuk, D., Chansem, W., Latif, R. A., & Geok, S. K. (2012). The strategies for character building through sports participation. *International Journal of Academic Research in Business and Social Sciences*, *2*(3), 48-58. https://eprints.ums.edu.my/id/eprint/20463

Omar-Fauzee, M. S., Don, Y., Susterna, N., Saptra, Y. M., Hanif, S., Abdullah, N. M., & Shahril, M. I. (2014). Examining the Indonesia and Malaysia student-athletes coping strategy in sports. *European Scientific Journal*, *2*, 331-337.

Paulhus, D. L. (1991). Measurement and control of response bias. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of Personality and Social Psychological Attitudes* (Vol. 1, pp. 17-59). Academic Press. https://doi.org/10.1016/B978-0-12-590241-0.50006-X

Secades, X. G., Molinero, O., Salguero, A., Barquín, R. R., de la Vega, R., & Márquez, S. (2016). Relationship between resilience and coping strategies in competitive sport. *Perceptual and Motor Skills*, *122*(1), 336-349. https://doi.org/10.1177/0031512516631056

Smith, K. R., Johnson, L. M., & Anderson, M. S. (2022). Resilience and coping mechanisms in secondary students: A school-based study. *Journal of Adolescent Psychology*, *40*(8), 800-815. http://dx.doi.org/10.22521/jesr.2018.82.2

Turato, E. R. (2005). Métodos qualitativos e quantitativos na área da saúde: Definições, diferenças e seus objetos de pesquisa [Qualitative and quantitative methods in health: Definitions, differences and research subjects]. *Revista de Saúde Pública*, *39*(3), 507–514. https://doi.org/10.1590/s0034-89102005000300025

Vollrath, M., & Torgersen, S. (2000). Personality types and coping. *Personality and Individual Differences, 29*(2), 367–378. https://doi.org/10.1016/s0191-8869(99)00199-3

Wagnild, G. M., & Young, H. M. (1993). Development and psychometric evaluation of the Resilience Scale. *Journal of Nursing Measurement*, *1*(2), 165–178.