

Interrelation of mental toughness, religiosity, and happiness of elite adolescent athletes based on gender, type of sport, and level of education

Interrelación de fortaleza mental, religiosidad y felicidad de deportistas adolescentes de élite según género, tipo de deporte y nivel de educación

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Abstract. There are no studies that comprehensively discuss mental toughness, religiosity, and satisfaction based on gender, type of sport, and different school levels, especially in the context of elite youth athletes. In fact, this variable is believed to be a very important construct in relation to athletes' performance and achievements on the field. The purpose of this research is to explore athlete's mental toughness, religiosity, and life happiness based on gender, type of sport, and school level. A total of 97 elite youth athletes were included in the study (age = 15.22 ± 1.34 ; $F = 36$, $M = 61$). Research data were collected using standard instruments used by scientists around the world, namely the Mental Toughness Index (MTI), Spirituality in Sports Test (SIST), and Satisfaction with Life Scale (SWLS). Analysis of variance, correlation, and path analysis were used to understand more deeply the three research variables based on the athlete's gender, type of sport, and school level. This study found that there was a significant difference only in the athlete's religiosity variable based on school level ($F = 6.212$, $p \leq .01$). Athletes' mental toughness has a significant relationship with religiosity ($r = .343$; $\rho = .323$; $p \leq .01$) and happiness in life ($r = .340$; $\rho = .200$; $p \leq .01$). Apart from that, it also appears that religiosity has a significant relationship with happiness in life ($r = .475$; $\rho = .406$; $p \leq .01$) and athlete age is significantly correlated with religiosity ($r = .233$; $\rho = .200$; $p \leq .05$). Athletes' mental toughness has a significant relationship directly to satisfaction and indirectly through religiosity. These three variables have an important role in competitive sports so coaches or athlete coaches need to provide psychological intervention to improve these three variables.

Keywords: elite youth athletes, mental toughness, religiosity, satisfaction.

Resumen. No existen estudios que analicen de manera integral la fortaleza mental, la religiosidad y la satisfacción según el género, el tipo de deporte y los diferentes niveles escolares, especialmente en el contexto de los atletas juveniles de élite. De hecho, se cree que esta variable es un constructo muy importante en relación con el rendimiento y los logros de los atletas en el campo. El propósito de esta investigación es explorar la fortaleza mental, la religiosidad y la felicidad en la vida de los atletas según el género, el tipo de deporte y el nivel escolar. Se incluyeron en el estudio un total de 97 atletas juveniles de élite (edad = $15,22 \pm 1,34$; $F = 36$, $M = 61$). Los datos de la investigación se recopilaron utilizando instrumentos estándar utilizados por científicos de todo el mundo, a saber, el Índice de Fortaleza Mental (MTI), la Prueba de Espiritualidad en los Deportes (SIST) y la Escala de Satisfacción con la Vida (SWLS). Se utilizaron análisis de varianza, correlación y análisis de ruta para comprender más profundamente las tres variables de investigación según el género del atleta, el tipo de deporte y el nivel escolar. Este estudio encontró que hubo una diferencia significativa sólo en la variable religiosidad del deportista según el nivel escolar ($F = 6.212$, $p \leq .01$). La fortaleza mental de los deportistas tiene una relación significativa con la religiosidad ($r = .343$; $\rho = .323$; $p \leq .01$) y la felicidad en la vida ($r = .340$; $\rho = .200$; $p \leq .01$). Aparte de eso, también parece que la religiosidad tiene una relación significativa con la felicidad en la vida ($r = .475$; $\rho = .406$; $p \leq .01$) y la edad del atleta se correlaciona significativamente con la religiosidad ($r = .233$; $\rho = .200$; $p \leq .05$). La fortaleza mental de los atletas tiene una relación significativa directamente con la satisfacción e indirectamente a través de la religiosidad. Estas tres variables tienen un papel importante en los deportes de competición por lo que los entrenadores o entrenadores de deportistas necesitan proporcionar una intervención psicológica para mejorar estas tres variables.

Palabras clave: deportistas juveniles de élite, fortaleza mental, religiosidad, satisfacción.

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Introduction

Discussing athlete achievement, there are four key factors that affect athlete success, namely physical, skill, tactical, and mental factors (Gucciardi & Gordon, 2011; Akbar et al., 2024). In line with this, García-Naveira (2010) states that the result of a match, whether an athlete emerges as a winner or loser, is a combination of several aspects such as physical capacity, technique, tactics, and psychological aspects. Apart from that, the dimension of athlete religiosity is also believed to contribute to performance on the field (Roychowdhury, 2019; Flower, 2017). Apart from the

constructs above, the dimension of happiness is also thought to have an effect on athlete performance (Goswami & Sarkar, 2016; Calleja-gonzález et al., 2018; Savardelavar & Arvin, 2012). This means that the success or failure of athletes on the field is affected by many aspects. However, studies that reveal the mental aspects, religiosity, and happiness of athletes together have never been conducted. Generally, studies are carried out partially or with other variables.

For example, Crust & Clough (2005) only revealed mental toughness with endurance. Nicholls (2011) reviews only the mentality of athletes. Dagnall et al. (2019) studied

only aspects of mental toughness and athlete happiness. Wandik et al. (2021) studied only athletes' happiness. Guntoro & Putra (2022) researched athletes' religiosity, anxiety, and happiness. So far, we have not found any studies that comprehensively explore mentality aspects, religiosity, and happiness in athletes based on different sports, genders, and school levels.

The construct of mental toughness can be defined as a collection of values, attitudes, emotions, and cognitions that are attached to a person and influence that person in responding to and assessing pressure, challenges, and difficulties faced to achieve their goals (Gucciardi et al., 2009). However, by Gucciardi (2017) the definition was updated and stated as "as a state-like psychological resource that is purposeful, flexible, and efficient in nature for the enactment and maintenance of goal-directed pursuits." In general, mental toughness is considered a multidimensional construct and is often associated with unshakable self-confidence, the ability to bounce back after defeat/failure (resilience), never giving up, being able to deal with difficulties and pressure effectively, and being able to maintain concentration despite many experiences. potential disruption (Liew et al., 2019). In the world's largest multi-sport event, the Olympics, Gould et al. (2002) state that the factor that most determines the results of matches and athletes' achievements on the field is mentality. This may happen because the physical and technical factors, at the world elite level, are relatively the same in light of the fact that the athletes have been trained with varieties of training programs and cutting-edge methods (Maksum, 2022). Therefore, at this level, athletes' mentality factors are believed to make a major contribution to the field (Maksum, 2007).

In line with the argument above, an American professional tennis player, Alexandra Stevenson stated that mental toughness was 90 percent of the game (Lauer et al., 2010). In relation to this, the Australian swimming legend, Elka Graham, said that in training, everyone focused on 90% physical and 10% mental, but in the races, it was 90% mental because very little separated the athletes physically at the elite level (Karageorghis & Terry, 2011). In line with this, other experts say that failure in a competition is often caused by mental symptoms in the athlete (Tangkudung & Mylsidayu, 2017). Even though it has the biggest effect on the outcome of a match, unfortunately, mental training is often forgotten (read: ignored).

There has been a rapid increase in studies related to religion, psychology, and sports recently (Watson & Parker, 2013; Sarkar et al., 2014; Jirásek, 2015) because the view that religion plays an important role in the lives of athletes has emerged (Storch et al., 2001). Even though they have been widely studied (see for example: (Howe & Parker, 2014; Najah et al., 2017; Storch et al., 2003; Nikbakhsh, 2021; Gonçalves et al., 2015; Watson & Czech, 2005; Park, 2000; Hagan, 2021), we see that there are limitations in previous studies. Francis & Lester (1997) studied religiosity with happiness but not in the context of sport. The dimension of happiness is in fact found to give contribution

to athletes' performance on the field (Goswami & Sarkar, 2016; Calleja-gonzález et al., 2018; Savardelavar & Arvin, 2012). Even though sport and religiosity have been examined from various perspectives (Ellis & Weir, 2020), research that reveals the relationship between religiosity/spirituality and athletes' life happiness is still limited (Sarkar et al., 2014). Another shortcoming is that, generally, studies have been carried out in America and Europe, whereas in Asia, especially in Indonesia, this has not been revealed much (Qorihah, 2018) and we consider the perspective from the East (Asia) be crucial to know in order to get a more comprehensive picture regarding the issue of religiosity and sports.

The term 'religiosity' has been interpreted variously by experts (Guntoro & Putra, 2022). This is not surprising because religiosity is a difficult term to be defined (Gill et al., 2010). Sholihin et al. (2022) stated that this happens because the definition given will tend to depend on the assumptions that it is according to the religious perspective adopted. That is the reason why there are several different views commonly known. According to Holdcroft (2006), there are two reasons as to why religiosity becomes difficult to define: (1) the uncertainty of the meaning of the root word of religiosity, particularly in English and (2) the approach to religiosity, which is multi- and even inter-disciplinary because of the significant interests of scholars in studying religiosity across academic fields. These two factors also become the markers for why the dimensions of religiosity differ. Because there are various definitions of religiosity, there have been extensive studies on this subject. In more specific contexts, such as in sports, explanations given by Dillon & Tait (2000) are significantly helpful, that is, spirituality or religiosity in sports can be defined as experiencing the presence of a power, a force, an energy or a God close to the athletes. However, in more general contexts, the authors agree with what Abdel- Khalek and Lester (2017) stated that religiosity refers to a system of personal beliefs, values and various religious practices.

The construct of happiness, which is often understood as a positive emotional condition (feeling), has been the object of discussion by philosophers, writers, and religionists for centuries (Layard, 2005). Life satisfaction might be defined as a feeling of happiness and becoming satisfied with life (Maddux 2018). There are two keywords in the definition of life satisfaction, namely, 'happiness' and 'well-being'. Individuals who are considered satisfied with life feel happiness and a sense of well-being. Correspondingly, Sholihin et al. (2022) stated that individual life satisfaction can be described as the feeling of happiness possessed by individuals when they achieve the desired level of well-being. Maksum & Indahwati (2021) mentioned that the variable 'life satisfaction' refers to the extent to which individuals feel happy and free from the pressures of life that cannot be controlled. In general, Huebner (2004) stated that life satisfaction has two models: unidimensional and multidimensional. The unidimensional model reveals the satisfaction of

a person's life is more general. In unidimensional measurements, the items used are free of context so that the measure of satisfaction is more global. In contrast, in the multidimensional model, the assessment of the satisfaction of life is carried out on several dimensions such as the dimensions of family, friends and living environment.

Although the study of happiness has developed (Diener et al., 2002; Rakhmat, 2008), this construct has not been widely linked to the sports context (Guntoro & Putra, 2022). In fact, there is scientific evidence showing that happy people tend to have stronger immune systems and are more resistant to stress (anxiety) (Calleja-gonzález et al., 2018) which has an effect on a person's achievement (Goswami & Sarkar, 2016). When athletes have positive feelings (happy), they will be able to show their best performance (Calleja-gonzález et al., 2018). Scientific evidence shows that the happiness level of athletes who win is actually higher when compared to those who lose before the match or competition begins (Savardelavar & Arvin, 2012). For this reason, the 2016 Ultramarathon world champion, Kaci Lickteig, once said that if she ran happy, she ran well. Positive psychology experts say that happiness has indicators of positive emotions such as joy and calm (Carr, 2004). When feelings of joy and calm reside within an athlete, he or she tends to enjoy the competition so that he or she can display his or her best performance.

Based on our best knowledge to date, research partially shows that the dimensions of mental toughness, religiosity, and happiness are constructs that play an important role in relation to athlete performance on the field. However, there have been no studies that provide comprehensive information about the interrelationships between these variables based on differences in gender, type of sport, and school level. Therefore, to fill this gap, the aim of this study is to explore athlete's mental toughness, religiosity, and life happiness based on athletes' gender, type of sport, and school level. To achieve this goal, elite youth athletes at the Papua Province Regional Student Education and Training Center (PPLP/D) were involved in this study because (1) they were in a training dormitory, (2) all their needs were relatively met, (3) the teenagers athletes are considered as potential athletes whose psychological condition is still relatively unstable.

Material and methods

Participants

The participants in this study were elite youth athletes who were members of the Papua Province Regional Student Education and Training Center (PPLP/D). A total of 25 athletes were included in the team sports category (volleyball and football) while 72 athletes were in individual sports (e.g. athletics, rowing, judo, karate, archery, swimming, cycling, taekwondo, boxing, and tennis). The average training age of athletes was 5.5 years (youngest 3.8, oldest 6.4). Athletes train intensively every morning and afternoon at the training ground at PPLP/D with a training time range

of 60 – 120 minutes. Based on gender, there were 36 female athletes and 61 male athletes. These athletes were students at the junior high school (n=41) and high school (n=56). In this study, all participants signed an informed consent form and this study was approved by the health research ethics committee of our institution with number: 065/KEPK-FKM UC/2023.

Instruments

This study uses three instruments that have been tested and have become international standard measuring tools in scientific publications. The first instrument is the Mental toughness Index (MTI) developed by Gucciardi et al. (2014), to reveal athletes' mental toughness. There are seven dimensions contained in MTI, namely self-belief, attention regulation, emotion regulation, successful mindset, context knowledge, buoyancy, and optimism. The results of MTI testing on athletes and non-athletes found that MTI version 8 had a very good factor loading ($\lambda = .56 - .80$) and composite reliability moved between $.86 - .89$ which is very high (Gucciardi et al., 2014). In the Indonesian version, the MTI has a very good loading factor value ($\lambda = .56 - .76$). Meanwhile, the internal consistency reliability of MTIid is excellent ($CR = .86; \alpha = .86$) (Putra, Kurdi, et al., 2024; Putra, Sutoro, et al., 2024).

The second instrument is the Spirituality in Sports Test (SIST) developed by Dillon & Tait (2000) and then revised in 2014 by Spittle & Dillon (2014). It was used to reveal athletes' religiosity. SIST consists of 10 statements with six alternative answers using a six-point Likert scale, ranging from never (1) to always (6). One example of a statement in SIST is "I use spirituality or religiosity to help deal with pressure that arises, such as from coaches, teammates, administrators, or parents." SIST has been adapted for language and tested in the Indonesian context by Putra (2022) and has a factor loading value of $.56-.83$ with a reliability value of $.81-.91$. In a previous study, the proponent also used SIST to reveal the condition of athletes' religiosity (Guntoro & Putra, 2022).

The third instrument is the Satisfaction with Life Scale (SWLS) developed by Diener et al. (1985). It was used to reveal the construct of life satisfaction. The SWLS consists of five statements (e.g.: I am satisfied with my life) with seven alternative answers (Diener et al., 1985), but in the Indonesian version, this is simplified to five answer choices, ranging from very unsuitable (1) to very suitable (5) (Akhtar, 2019). The validity value of the Indonesian version of the SWSL is $.55-.69$ with a reliability level of $.83$ (Afiatin et al., 2016).

Statistical analysis

The first analysis is the descriptive analysis of average value, standard deviation, minimum value, maximum value, percentage, median, and medium. Through this analysis, athletes' mental health, religiosity, and life satisfaction is illustrated. After that, regression analysis was employed

to determine the relationship between mental health, religiosity, and athlete life satisfaction. To determine differences in mental health, religiosity, and life satisfaction based on gender and type of sport, the researchers used an analysis of variance. All analyses in the study were carried out with the IBM SPSS version 26 program.

Results

Table 1. Results of analysis of variance based on gender, type of sport, and school level (n=97)

Variable	Gender		F	Type of sports		F	School		F
	Male (n=61)	Female (n=36)		Individual (n=72)	Team (n=25)		SMP (n=41)	SMA (n=56)	
Mentality	43.10±6.85	44.44±6.84	.874	43.65±7.12	43.44±6.12	.018	43.73±5.84	43.5±7.54	.027
Religiosity	43.41±9.99	46.92±9.28	2.936	44.68±10.6	44.8±7.94	.003	41.88±9.56	46.79±9.59	6.212**
Satisfaction	15.28±2.31	15.42±2.55	.075	15.32±2.53	15.36±1.98	.005	15.12±2.08	15.48±2.6	.534

**p ≤ .01; SMP: Junior High School; SMA: Senior High School.

The results of the correlation test between variables presented in Table 2 show that mental toughness in athletes has a significant relationship with religiosity ($r = .343$; $p \leq .01$) and happiness in life ($r = .340$; $p \leq .01$). Apart from that, it also appears that religiosity has a significant relationship with happiness in life ($r = .475$; $p \leq .01$) and athlete age is significantly correlated with religiosity ($r = .233$; $p \leq .05$). The correlation coefficient value shows that the direction of the relationship is positive.

Table 2. Correlation results between variables

Variable	Min	Max	M±SD	Correlation coefficient (r)		
				Age	Mentality	Religiosity Satisfaction
Age	13	18	15.22±1.34	1	.103	.233*
Mentality	26	54	43.60±6.84		1	.343**
Religiosity	16	60	44.71±9.84			1
Satisfaction	9	20	15.33±2.39			

*p ≤ .05; **p ≤ .01

The results of path analysis in this study show that the mental toughness variable has a direct relationship with religiosity and satisfaction and an indirect relationship with the religiosity variable (Figure 1). The age variable has a direct relationship only to the religiosity variable but not to satisfaction (Figure 1). The R-square value of the satisfaction variable is .266, which means that the satisfaction variable can be explained by the mentality and religiosity variables by 26.6%. Testing the model shows that the model fits the data. Several parameters show values above .90, and this indicates that the resulting model fits the data (GFI = .996, AGFI = .962, NFI = .984).

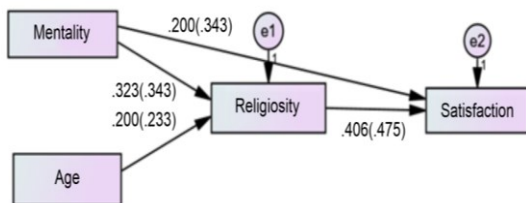


Figure 1. Path analysis results show that there is a correction in the coefficient values between variables. The figure in the bracket is the correlation coefficient value.

Discussion

The results of the study showed that significant differences were found only in the athlete's religiosity variable based on school level ($F = 6.212$, $p \leq .01$) while based on gender and type of sport there were no significant differences (Table 1). For athletes' mentality and happiness in life based on gender, type of sport, and school level, no significant differences were found (Table 1).

This study aims to explore athletes' mental toughness, religiosity, and life happiness based on the athlete's gender, type of sport, and school level. To our knowledge, this study is the only one that comprehensively investigates the above variables involving youth elite athletes. In general, the findings of this study can be summarized into two categories, (1) the results of comparative analysis of athletes' mental toughness, religiosity, and life happiness based on gender, type of sport, and school level, and (2) results of the correlation between age, mental toughness, religiosity, and the happiness of athletes' lives. The results of the first analysis show that a significant difference was found only in the athlete's religiosity variable based on school level ($F = 6.212$, $p \leq .01$). Through this study, it appears that high school level athletes have a higher average religiosity score compared to middle school level athletes. This indicates that the higher the athlete's age, the greater the athlete's level of religiosity. For other variables such as athletes' mental toughness and happiness in life, no significant differences were found based on gender, type of sport, or school level.

The results above indicate that athletes in PPLP/D Papua have relatively the same quality of mental toughness. As explained in the "participants" section, the athletes in this study are elite youth-level athletes, and they are referred to as the future athletes of the Indonesian nation (Guntoro et al., 2022). Coaching and training for athletes are carried out in a planned and serious manner using nationally standardized parameters (Candra & Rumini, 2014). This is done so that the quality of athletes, including physical, technical, and mental aspects, can be maintained and improved periodically (Surono et al., 2020). That is why providing training to athletes involves not only the physical and technical aspects but also the mental aspects. Apart from that, sports psychology experts and coaches also believe that the mental toughness dimension is a crucial and determining aspect in achieving athletes' achievements (Sutoro et al., 2023). That is why psychological interventions are often carried out to form mental toughness in athletes. With these facts, it is not surprising that in this study it was found that there were no differences in the quality of mental toughness in athletes based on gender, type of sport, and school level.

In the athlete's life happiness variable, this study found that there were no statistically significant differences, whether based on gender, type of sport, or school level. As is known, all athletes who are members of PPLP/D Papua are placed in national standard athlete dormitories, namely former dormitories for athletes who competed in the 2021 National Sports Week (PON) (Kogoya et al., 2022). Even though the funding sources for PPLP/D athletes come from two sources, namely the local government budget (APBD) and the national budget (APBN) (Candra & Rumini, 2014), all athletes' needs, including food, drink, daily money, school, and other needs are met and taken care of by the government through the sports and youth services of Papua Province. This means that the needs of athletes have been facilitated and guaranteed by the government. With these facts, it is not surprising that athletes' happiness conditions are relatively high and there are no significant differences.

Correlation analysis shows that mental toughness in athletes has a significant relationship with religiosity ($r = .343$; $\rho = .322$; $p \leq .01$) and happiness in life ($r = .340$; $\rho = .200$; $p \leq .01$). These results were confirmed in path analysis. Even though the path analysis coefficient value corrects the correlation coefficient value, this study provides us with information that athletes' mental toughness correlates directly and indirectly with athletes' happiness in life through religiosity. Apart from that, it also appears that religiosity has a significant relationship with happiness in life ($r = .475$; $\rho = .406$; $p \leq .01$), and athlete age is significantly correlated with religiosity ($r = .233$; $\rho = .200$; $p \leq .05$). These results are in line with previous research which found that there was a correlation between religiosity and athlete happiness (Guntoro & Putra, 2022). If we look at the coefficient values produced in this study, it appears that the direction of the relationship is positive. This indicates that an increase in exogenous variables is followed by an increase in endogenous variables, and vice versa.

Religiosity is believed to make an important contribution to the lives of athletes (Storch et al., 2001), especially in mental health and mental toughness. Mental health is an essential aspect in the personal development of athletes (Aditya et al., 2024) while mental toughness is a psychological dimension that is very important concerning athletes' achievements on the field (Sutoro et al., 2023). From the results of this research, we are of the view that when athletes have good religiosity, it will be easier for them to control things that bother them and even threaten them in achieving their goals. This happens because athletes with high religiosity will rely on God for what they experience so that the disturbances, pressures, and threats they experience do not have a relatively serious impact. This is in line with athletes who have high mental toughness. They are resistant to various pressures, disturbances, and threats and can focus on achieving goals (achievements). It turns out that these two dimensions are closely related to athletes' life happiness. Athletes with high levels of religiosity and mental toughness will tend to have high levels of happiness too. This happens because these three

variables are positive constructs. That is why, in this study, it was found that there was a positive relationship between the variables mental toughness, religiosity and happiness.

The findings of this study confirm other partially conducted studies. Dagnall et al. (2019) in their study reported that the mental toughness construct has a high and positive correlation with life happiness. Other studies conducted on athletes are also in line and show that the mental toughness dimension is closely related to athlete happiness (Gucciardi & Jones, 2012). Guntoro & Putra (2022) found that there was a direct correlation between athletes' religiosity and happiness. Another study strengthens this and finds that the construct of religiosity has a strong relationship with a person's happiness (Moreira-Almeida et al., 2006). Although this study is in line with other studies, the results of this study are the world's leading information in examining the constructs of mental toughness, religiosity, and happiness of adolescent athletes together and based on differences in gender, sport, and athlete education level.

Even though this study has attempted to reveal in depth the variables of mental toughness, religiosity, and satisfaction based on gender, type of sport, and school level, we see that there are several limitations in this research. First, this study uses only the instrument in the form of a questionnaire to collect data in the field. There is no follow-up to confirm the findings from the instrument, for example, by conducting interviews. We consider that conducting follow-up or deepening study results is important and interesting because there is bias in the data collection process resulting from the questionnaire. Second, the comparative analysis based on the type of sport is only based on two categories as carried out by Guntoro & Putra (2022) and Putra & Guntoro (2022), namely individual sports and team sports. Another study (see Putra et al., 2021) categorizes it more comprehensively by dividing it into four categories measured, precision, game, and martial arts. By categorizing based on sports characteristics, we think it will be much more useful. Third, we see that technical aspects or athletes' physical capacity (Guntoro et al., 2023) are not measured even though they are a very important part of the relation to sports performance (Kusuma et al., 2024). In addition, this study did not explore the characteristics of athlete families. In fact, the family environment is believed to be a dimension that has a lot of influence on the growth and development of athletes.

Based on the limitations above, we propose three suggestions for future research. (1) It is suggested that future research integrate quantitative and qualitative approaches or what is usually called mixed methods (Creswell, 2014). According to Putra (2017), combining the two approaches simultaneously or alternately will be very useful in understanding complex sports phenomena. (2) The division of sports categories needs to be considered based on the characteristics of the type of sport, such as measurement, precision, game, and martial arts. (3) The athlete's physical and technical capacity needs to be considered in further investigations so that the information produced is more in-depth.

(4) investigate the athlete's family characteristic variables to be related to the athlete's mental toughness, religiosity, and life happiness variables. (5) testing in athletes with disabilities (Santana et al., 2022) could be an alternative to broader testing in future studies.

Conclusions

Athletes' mental toughness has a significant relationship directly to satisfaction and indirectly through religiosity. The athlete's age was found to be significantly correlated with religiosity and this study shows that the higher the athlete's age, the greater the athlete's level of religiosity. That is why the results of the analysis of differences based on gender, type of sport, and school level found that only the religiosity variable had significant differences based on school level, while for the other variables, there were no significant differences. The implication of these findings is that these three constructs (mental toughness, religiosity, and happiness) are interrelated with each other and play an important role in competitive sports, so psychological interventions to improve each construct need to be provided by coaches.

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Conflicts of interest

All authors declare that they have no conflicts of interest with any person, company, or institution.

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