

# Mindfulness, Mental Toughness, and Motivation as Correlates of College Students' Sports Involvement: Basis for a Proposed Guide for School Administrators

Raymond M. Anselmo, PhD and Ronald S. Go, PhD

Manila Central University, School of Graduate Studies, Edsa, Caloocan City, Philippines

*Abstract: This research determined the correlation between the mindfulness, mental toughness, and motivation of 770 first year and second year college students and their sports involvement in one of the oldest private higher education institutions in the City of Manila. A researcher-made questionnaire was validated and pilot-tested prior to the conduct of the study. The results revealed that most of the respondents were 17 to 19 years old (75.06%) and they described their mindfulness in terms of attention and awareness as "Very High"; their mental toughness in terms of rebound ability, ability to handle pressure, concentration and confidence as "Very High"; their intrinsic motivation as "Very High"; their extrinsic motivation as "High"; their sports involvement in terms of power and performance as "High"; and their sports involvement in terms of pleasure and participation as "Very High."*

**Keyword:** college students; school; sports involvement

## 1. INTRODUCTION

There are factors that hinder college students from participating and getting involved in sports. Critics ascertained that involvement in sports may cut down the time available for studying and learning (Rees & Sabia, 2010).

Students may have difficulty in managing their time because of their hectic schedule, sports involvement, and heavy load of academic subjects' requirements (Montecalbo & Cardenas, 2015).

Barriers in sports involvement such as time, long commutes, and the feeling like there are just not enough hours in the day to accomplish all the school requirements to be done are some of the reasons why college students do not engage in sports (Nemeth, 2019). In addition to these, Millennial students have lower sports involvement due to the emergence of the digital age which is very evident among 21st century learners (Jonasson & Thiborg, 2016).

In this light, the researcher was motivated to conduct a study which determined the relationship between mindfulness, mental toughness, and motivation of college students and their sports involvement. The results of the study would be used as a basis for a proposed guide for school administrators that may lead to the formulation of policies to support the promotion of sports and to strengthen the sports involvement of college students. Statement of the Problem

This study sought to determine the correlation between the mindfulness, mental toughness, and motivation of college students and their sports involvement in a selected private higher education institution in the City of Manila.

Specifically, this study sought to answer the following research questions:

1. How may the mindfulness of the first year and second year college students during sports activities be described in terms of:

2.1. Attention; and

2.2. Awareness?

2. How may the mental toughness of the first year and second year college students during sports activities be described in terms of:

3.1. Rebound Ability;

3.2 Ability to Handle Pressure;

3.3. Concentration Ability; and

3.4. Confidence?

3. How may the motivation of the first year and second year college students to get involved in sports activities be described in terms of:

4.1 Intrinsic Motivation; and

4.2 Extrinsic Motivation?

4. How may the sports involvement of the first year and second year college students be described in terms of:

5.1 Power and Performance; and

5.2 Pleasure and Participation?

## Scope and Limitations

The conduct of the study was limited to one (1) of the oldest private higher education institutions in the City of Manila offering Physical Activities Towards Health and Fitness (PATH-FIT) 1, 2, 3, and 4 for their Physical Education courses for seven hundred seventy (770) first year and second year college students. It was done on the First Term of Academic Year 2019-2020 between November and December 2019.

The instrument used was a researcher-made questionnaire adapted and modified from the Mindful Attention and Awareness Scale (MAAS) by Brown and Ryan (2003),

Mental Toughness Inventory (MTI) by Taylor and Francis (2011), Situational Motivation Scale (SIMS) by Deci (1985) and Ryan (1991), and Sports Participation Model Questionnaire (SPMQ) by Aicinema and Eldgridge (2003).

### **Theoretical Framework**

Psychologist John Watson developed the theory of behaviorism. In his theory, Watson suggested that an objective, natural science, one that studies the public, observable behavior should be considered. Watson suggested a method to be used by psychologists: study the observable behavior of others, and to explain it; given the stimulus, predict the response; given the response, predict the stimulus. Watson's Behaviorism refers to a psychological approach which emphasizes scientific and objective methods of investigation. The approach is concerned with observable stimulus-response behaviors which are learned through the interaction with the environment. Watson believed that the goal of psychology must be to study something that is definable and observable. Watson thought that behaviorism which aims to observe, predict, and control behavior in humans and animals was the appropriate system for such an endeavor (Craighead & Nemeroff, 2001).

## **2. REVIEW OF RELATED LITERATURE**

### **2.1 Mindfulness**

Mindfulness is characterized by bringing attention and choosing to be present in the events being experienced at present moment (Kabat-Zinn 2004). The term "mindfulness" has been used to refer to a psychological state of awareness, a practice that promotes this awareness, a mode of processing information, and character trait (Brown, et al., 2007; Germer, Siegel, & Fulton, 2005; Kostanski & Hased, 2008; Siegel, 2007). The word mindfulness originally comes from the Pali word *sati*, which means having awareness, attention, and remembering (Bodhi, 2000). Mindfulness can simply be defined as moment-by-moment awareness (Germer, et al., 2005) or as a state of psychological freedom that occurs when attention remains quiet and limber without attachment to any point of view (Martin, 1997).

In sports, mindfulness has been found to have a strong association with enhanced levels of flow and aspects of sport confidence (Kaufman, et al., 2009). An individual's level of mindfulness is associated with task concentration, sense of control, and lower levels of self-consciousness (Gardner & Moore, 2004; Kee & Wang, 2008). A higher level of mindfulness leads to becoming more open, aware of, and accepting of one's experiences and colleagues (Bishop, et al., 2004). Based on this notion, enhancing an athlete's level of mindfulness may help them accept any worries and anxiety they are experiencing under pressure, without letting it become a distraction or detriment on their performance (De Petrillo, et al., 2009).

Mindfulness is defined as the nonjudgmental observation of the present moment including internal and external thoughts, emotions, and feelings (Kabat-Zinn, 1994). The core components of mindfulness are awareness and acceptance, encouraging individuals to embrace their thoughts and feelings non-judgmentally as they occur, rather than ignoring them altogether (Hayes, et al., 2004). When individuals are mindful, they can accept their thoughts and able to stay focused on task relevant cues. Mindfulness is theorized to have general effects on human functioning and behavior. The influence of mindfulness on mental health and well-being, physical health, self-regulation, and interpersonal behavior is very noticeable. According to Deci and Ryan (2000), the reasons why individuals choose to participate, exert effort, and persist in an activity can be classified along a continuum of self-determined behavior like mindfulness.

#### **2.1.1 Attention**

Attention is a broad term that is best defined as a set of sub-processes that collectively govern a person's ability to observe the innumerable stimuli in his environment (Didonna, 2009). It is notice taken of someone or something, the concerning of someone or something as interesting or important.

#### **2.1.2 Awareness**

Awareness is having knowledge or perception of a situation or fact. It means being concerned and well-informed about a particular situation or development

### **2.2 Mental Toughness**

Mental toughness is about the capability to comprehend that change is normal and can conduct to self-development (Duckworth, et al. 2007). The most essential component of mental toughness for the obtainment and presence was control of life. Life control talks about the extent to which individuals hold a belief that they are persuasive in producing their own future (Connaughton, et al. 2008).

Mental toughness is how athletes motivate themselves to train harder (Crust 2008). Mentally tough performers accept, embrace, and even challenge the elements of the training that are considered obstacles to become better. Knowing one's limitations and realistic goals can be successfully accomplished which in turn prove new goals leading to further success and evolving mental toughness. Motivation in the form of desire and determination also involves as being of particular importance to the mentally tough athlete (Jones & Issroff, 2007).

Mentally tough people have a high sense of self-belief and unshakable faith that they control their destiny. These individuals can remain unaffected by competition and adversity (Clough, et al., 2002).

### 2.2.1 Rebound Ability

Rebound ability is the ability of a person to stand tall in the times of trouble, hardship, difficulty, distress, disaster, misadventure, and all other faces of adversity and being able to rebound from something that happens that delay or prevents a process from developing and downfall. The best participants in sports are capable to rebound from defeat and adversity they face before and during participations (Mladenovic & Trunic, 2019).

### 2.2.2 Ability to Handle Pressure

The ability to handle pressure is essential to achieve goals in various realms of life including sports involvement. Handling pressure is being able to deal with different external and internal circumstances that may increase a feeling of pressure (Baric, 2011).

### 2.2.3 Concentration Ability

Athletes, coaches, and sport psychologists regard attention skills such as concentration or the ability to focus effectively on the task at hand while ignoring distractions as necessary prerequisites of success in sports. This assertion is backed and supported by both descriptive and experimental evidence (Moran, 2017).

### 2.2.4 Confidence

Confidence has been recognized to be present in various aspects of the society. Confidence, when it comes to sports, can be associated with mental toughness. It is constantly used when describing someone who is successful. Recent research has shown that success has affected the level of confidence and that confidence can affect success (Covassin & Pero, 2004; Hays, Maynard, Thomas, & Bawden, 2007; Hays, Thomas, Maynard, & Bawden, 2009). Top athletes have revealed that confidence affects their performance through their thoughts, behaviors, and feelings (Hays, et al., 2009).

A study by San Diego (2013) involving one hundred (100) selected sports players (as samples) analyzed the competitive orientation and level of confidence of the composite group of forty-five (45) female and fifty-five (55) male players of De La Salle College of St. Benilde. The study utilized the Traits Sports Confidence Inventory (TSCI) and the Competitive Orientation Inventory (COI). The F-ratios of Analysis of Variance (ANOVA) showed no significant difference between competitive orientation and level of confidence in terms of type of sports, type of events, and players' gender. The study revealed that the level of confidence was relatively independent and may probably predict players' performance.

## 2.3 Motivation

Motivation is an essential element of human personality, and it directs a person's activity that makes it dynamic (Khan & Haider 2011). Motivation is influenced by an individual's psychological needs as explained in the Self Determination Theory by Deci and Ryan in 1985 (Lippit, 2012).

Furthermore, the Self Determination Theory, a multi-dimensional theory which states that in addition to competence the fulfillment of these needs which are the need for activity, to be proactively chosen the need for social connection and belonging leads to a high-quality form of motivation, effective functioning, enhanced performances, and well-being (Dahl, 2012).

Motivation includes a variety of beliefs, perceptions, values, interests, and actions that are all closely related. And as a result, different approaches to motivation can focus on cognitive behaviors (such as monitoring and strategy use), non-cognitive aspects (such as perceptions, beliefs, and attitudes), or both (Lai, 2011).

Pecson (2008) conducted a study on the academic and athletic motivations of selected sports participants of the Polytechnic University of the Philippines (PUP) using the Student Athletic Motivations towards Sports and Academic Questionnaire. The study involved fifty-seven (57) male and forty-nine (49) female respondents between the ages of sixteen (16) and eighteen (18). The results showed that there was a significant difference between male and female respondents in terms of their levels of motivation in academic, varsity, and career.

### 2.3.1 Extrinsic Motivation

The reasons why individuals participate in sports can be explained by the levels the factors of motivation, which is first, the extrinsic motivation which pertains to a wide variety of behaviors that are engaged in to an end and not for the individual's own sake (Pelletier, et al, 1995). This is best described as being driven by outside stimuli like rewards and pressure. This type of motivation also involves social acceptance and connectedness (Lippit, 2012). Extrinsic Motivation stems from the idea that external and tangible rewards in the form of money, food, sticker, stamps, or grades, will elicit desired behavior or outcome. Self-determined extrinsically motivated behaviors are characterized by choice (Dahl, 2012).

An undergraduate study by Aseron (2004) investigated the effect of external rewards on intrinsic motivation of novice basketball players. It determined whether controlling rewards affect intrinsic motivation. The Intrinsic Motivation Inventory (IMI) was utilized to assess the participants' subjective experience while shooting ten (10) free throws. Significant differences between the experimental and control groups were found in the four (4) subscales used in the study in intrinsic motivation (interest/enjoyment, perceived competence, effort/importance, and tension/pressure).

### 2.3.2 Intrinsic Motivation

Intrinsic motivation is the driving force that comes from within (Cando & Villacastin, 2014). Intrinsic motivation is a motivation that is animated by personal enjoyment or

satisfaction. Being able to increase intrinsic motivation in individuals could increase sport retention rates and consequently increase physical activity levels in individuals. Because of intrinsic motivation, activities which allow individuals to experience feelings of competence and self-determination will be engaged in (Pelletier, et al., 1995). Feeling of competence, relatedness, and autonomy lead to intrinsic and extrinsic motivation (Lippit, 2012). What tends to happen as athletes advance through levels of competition is that their motivation shifts toward extrinsic rewards such as trophies, scholarships, money, celebrity, or approval. Participation stops being only about the joy of partaking in the sport, a change that most of the time brings a lot of added pressure with (Weinberg & Gould, 2011).

## 2.4 Sports Involvement

Involvement in sports is said to help appreciate teamwork, duty, sacrifice, and dedication. Sports build character and engender the values of good sportsmanship (Sitkowski, 2008). The involvement in sports and related Physical Education activities provide opportunities for students to learn the values of teamwork and the opportunity to apply academic skills in other arenas as part of a well-rounded education. The promotion of sports as a path towards maturity is supported by studies which claim that participation in extracurricular activities affect academic performance, attachment to school, and social development (NHSAW, 2001).

Sports have been broadly recognized as a great foundation for developing one's character. Positive character traits such as personality and social responsibility are believed to be taught and learned in sport and physical activity setting (Parker & Stiehl, 2004).

Sports involvement and physical activity are known to have many benefits. Some of these are increased self-esteem, self-confidence, social development, cognitive development, and academic achievement (Bailey, 2006). Physical activity also reduces stress, anxiety, depression, and improves learning and memory. These factors lead to higher academic performance (Bailey, 2006; Chomitz, et al., 2009). The setting of sport is seen as a context in which youth can gain experiences and develop competencies which can be used in daily activities (Haudenhuyse, et al., 2013). It is believed that the development of these competencies through sport can lead to positive youth development (Fraser-Thomas, et al., 2005) and positive health outcomes in youth (Gould & Carson, 2008; Holt, 2007).

### 2.4.1 Power and Performance

Sport is commonly socially organized around institutionalized competitive sporting events with a higher degree of professional regulations and well-defined stakeholder roles such as athletes, coaches, and fans. Although basketball, volleyball, and baseball/softball are considered as the most popular sports among Filipinos (Antolihao, 2009), newly introduced sports events are also noticeable such as

koriball, floorball, handball, pickleball, etc.

The capacity to bring about relatively high forces against large resistances and to produce a high work rate or power is important for numerous sports. As such, resistance training has become an integral component of the physical preparation for enhancement of sports performance, and strength and conditioning training has become a specialization within sports training, achieving the greatest gains in performance for a given amount of work effort. Therefore, the concept of maximizing the transfer of training to performance is predominant (Young, 2006).

### 2.4.2 Pleasure and Participation

Sports are also leisure-time physical activities that have organized formal or informal rules, which are marked by competition against an opponent or oneself (Kilpatrick, et al. 2005). Sports belong to physical activities that one is getting involved in during free time, which is most known as leisure-time physical activity (Biddle & Mutrie, 2008). The satisfaction attained by individuals also positively influences the involvement in sports activities (Standagr, et al., 2005).

Education has a big role in helping students develop skills, in motivating them to participate in activities, and in building competition. The intrinsic motivation and extrinsic standards of sports activities are positively related to sports enjoyment of students (Piipari, et al., 2012). Teachers should provide a positive and challenging environment that allows adolescents to perceive and be interested to actively take part in sports (Fitzgerald, et al, 2012). Well-designed sports activities allow people to feel satisfied when they get involved in it. Thus, they extend their sports involvement and feel pleasure, joy, sense of challenge, or spiritually rested (Deci & Ryan, 2008).

## 3. METHODOLOGY

Descriptive research was used in this study to provide information about the sports involvement of the college students and their mindfulness, mental toughness, and motivation.

Specifically, this study was a quantitative research since it involved turning the data from words into numbers.

Hence, the design of documentation and survey gave the researcher the opportunity to illustrate how mindfulness, mental toughness, and motivation as correlates of college students' sports involvement may be used in designing a proposed guide for school administrators.

For this study, the main tool for the data gathering was a survey questionnaire.

With the stated purpose of the study, the researchers believed that the descriptive survey was an ideal method that was suited to the nature and the objective of the study.

### Respondents of the Study

The respondents of the study consisted of first year and second year college students who were currently enrolled in one private higher education institution in the city of Manila

offering Physical Activities Towards Health and Fitness (PATH-FIT) 1, 2, 3, and 4. The study was conducted on the First Term of Academic Year 2019-2020 between the months of November and December 2019.

**Sampling Technique**

In obtaining samples for the study, the stratified random sampling technique was employed in selecting the student-respondents using the Slovin's Formula.

The respondents were seven hundred seventy (770) first year and second year college students who were currently enrolled in PATHFIT 1, 2, 3, and 4 classes during the First Term of Academic Year 2019-2020.

**Research Instrument**

This study utilized an adapted and modified researcher-made questionnaire with a 4-point rating scale for the construct of mindfulness during sports activities, mental toughness during sports activities, motivation to get involved in sports, and sports involvement.

Part I was for the construct of mindfulness during sports activities. The instrument used was adapted and modified from the Mindful Attention Awareness Scale (MAAS) by Brown and Ryan (2003).

Part II was adapted and modified from the Mental Toughness Inventory (MTI) by Taylor and Francis (2011). Some items were drawn from the test's pool of sixty-item scale which was applicable to the intended setting of the study.

Part III which ascertained the respondents' motivation was adapted and modified from the Situational Motivation Scale (SIMS) of Deci (1985) and Ryan (1991) for the motivation construct of the study.

Part IV was adapted and modified from the Sports Participation Model Questionnaire (SPMQ) by Aicinema and Eldgridge (2003). It was administered to determine the predominant orientation and commitment towards sports involvement, and to determine whether a power and performance perspective or a pleasure and participation affinity was operative on the individual. Items corresponded to each orientation and were randomly placed in the questionnaire.

The corresponding rating scale for the responses in all four parts of the instrument had a 4-point rating scale:

3.26 – 4.00	Strongly Agree (SA) / Very high
2.51 – 3.25	Agree (A) / High
1.76-2.50	Disagree (D) / Low
1.00-1.75	Strongly Disagree (SD) / Very Low

Modifications were made for statistical consideration and cultural sensitivity. The generic or universal features of the research instruments were specifically aligned to suit the needs and demands of this study.

The questionnaires were validated by four experts consisted of a Physical Education Director, a Service P.E. Moderator, an Athletics Moderator, and a psychometrician. The research instruments were tested for reliability through pilot testing. The pilot testing was conducted among twenty (20) student-respondents of the First Term of Academic Year 2019-2020. Their responses were excluded from the actual study. The Cronbach's Alpha of 0.84 indicated that the research instruments were reliable.

**Data Gathering Procedures**

The researcher first wrote a formal letter of request to administer the study in the selected higher education institution. The letter was submitted to the Director of the institution. The data gathering procedures were discussed and clarified upon the approval of the letter of permission.

The number of PATH-fit 1, 2, 3, & 4 classes in the selected higher education institution was sought from the school registrar. The sample size was determined from the total population.

The class schedules of PATH-fit 1, 2, 3, and 4 students were verified first before administering the questionnaires. Instructions as to the accomplishment time and schedule of retrieval were given by the researcher. The accomplished questionnaires were retrieved, and data tabulation and analysis followed.

**Statistical Treatment of Data**

To facilitate the analysis and interpretation of the data obtained in the study, the results were tabulated and statistically treated using the following formulae:

- Percentage was used to describe the relationship of a part to its whole. This was used in interpreting the profile of the respondents in relation to their age, sex, year level, and extent of involvement in sports.

Formula:  $P = \frac{f}{N} \times 100$

Where:  
 P = Percentage  
 f = number of responses  
 N = total number of respondents

- Weighted Mean served as the treatment in determining the mindfulness, mental toughness, motivation, and sports involvement of college students with their specific categories and corresponding weights.

Scale used:  
 3.26-4.00 – Strongly Agree (SA) / Very High Level  
 2.51-3.25 – Agree (A) / High Level  
 1.76-2.50 – Disagree (D) / Low Level  
 1.00-1.75 – Strongly Disagree (SD) / Very Low Level

Formula:  $\bar{X} = \frac{\sum fx}{N}$

Where:  
 X̄ = weighted mean  
 Σfx = sum of the product of frequency and unit weight  
 N = total number of respondents

4. RESULTS

**Table 1:** Percentage Distribution of the Age of College Students

AGE	FIRST YEAR		SECOND YEAR		TOTAL	
	f	%	f	%	f	%
17-19 years old	375	97.40	203	52.73	578	75.06
20-22 years old	10	2.60	182	47.27	192	24.94
TOTAL	385	100.00	385	100.00	770	100.00

Table 1 presents the frequency and percentage distribution of the age of college students. Out of the total seven hundred seventy (770) student-respondents, five hundred seventy-eight (578) or 75.06% belonged in the 17- 19-year-old age bracket, while those that belonged in the 20- 22 years old age bracket were one hundred ninety-two (192) college students or 24.94%. The data on age implies that majority of the respondents were in the adolescence stage but there were also those who were in the young adult stage already mainly because of the impact of the full implementation of the K to 12 Program, since 2-year had been added for Senior High School to be able to go to college.

**Table 2:** Percentage distribution of the year level of the college students

YEAR LEVEL	FIRST YEAR		SECOND YEAR		TOTAL	
	f	%	f	%	f	%
	385	50.00	385	50.00	770	100.00

As shown in Table 2, an equal number of respondents were obtained for both freshmen and sophomore students of the study with three hundred eighty-five (385) apiece.

**Table 3:** Mindfulness of the First Year and Second Year College Students During Sports Activities in Terms of Attention

ATTENTION	FIRST YEAR		SECOND YEAR	
	Numerical Interpretation	Verbal Interpretation	Numerical Interpretation	Verbal Interpretation
1. I pay full attention to the sports activity while playing the game	3.63	SA	3.48	SA
2. I am mindful of the rules of the game	3.57	SA	3.52	SA
3. I mentally concentrate on the game while engaging in it	3.52	SA	3.43	SA
4. I carefully pay attention to what I experience during the game	3.54	SA	3.47	SA
5. I find it easy to stay focused on what's happening in the game	3.38	SA	3.29	SA
Average	3.53	SA	3.44	SA

Strongly Agree (SA) 3.25-4.00; Agree (A) 2.81-3.25; Disagree (D) 1.75-2.80; Strongly Disagree (SD) 1.05-1.75

The mindfulness of the student-respondents of the study is summarized therein Table 3. In all five (5) items pertaining to mindfulness in terms of attention, both freshmen (3.53) and sophomore (3.44) respondents had a verbal interpretation of “Strongly Agree.” The results imply that the students have a high level of mindfulness in terms of awareness. A higher level of mindfulness leads to becoming more open, aware of, and accepting of one’s experiences and colleagues (Bishop, et al., 2004). This means that it leads to a more focused and highly concentrated individual.

**Table 4:** Mindfulness of the First Year and Second Year College Students During Sports Activities in Terms of Awareness

AWARENESS	FIRST YEAR		SECOND YEAR	
	Numerical Interpretation	Verbal Interpretation	Numerical Interpretation	Verbal Interpretation
6. I am aware of my emotions during the game	3.33	SA	3.38	SA
7. I am focused on what I am doing and not necessarily on winning during the game	3.37	SA	3.25	SA
8. I go to playing positions and know why I go there	3.37	SA	3.30	SA
9. I am focused on the present game and not on the future games or the past games	3.56	SA	3.41	SA
10. I do my task purposefully by being aware of what I am doing	3.56	SA	3.51	SA
Average	3.44	SA	3.39	SA

Strongly Agree (SA) 3.25-4.00; Agree (A) 2.81-3.25; Disagree (D) 1.75-2.80; Strongly Disagree (SD) 1.05-1.75

In measuring mindfulness in terms of awareness during sports activities as shown in Table 4, the first-year college students bested the sophomore respondents in four (4) out of five (5) survey items. Only in item number six (6) did the first-year respondents score less than the sophomores. In item number 6 which states that “I am aware of my emotions during the game,” their mean scores were 3.33 (Strongly Agree) for the first year and 3.38 (Strongly Agree) for the second year. But still overall both year levels got a verbal interpretation of “Strongly Agree,” which means that these students had a high level of mindfulness in terms of awareness.

The core components of mindfulness are awareness and acceptance, encouraging individuals to embrace their thoughts and feelings non-judgmentally as they occur, rather than ignoring them altogether (Hayes, et al., 2004). When an individual is mindful, he can accept his thoughts and able to stay focused on task relevant cues thus helping him to perform well in the activities he is in to.

**Table 5:** Mental Toughness of the First Year and Second Year College Students During Sports Activities in Terms of Rebound Ability

REBOUND ABILITY	FIRST YEAR		SECOND YEAR	
	Numerical Interpretation	Verbal Interpretation	Numerical Interpretation	Verbal Interpretation
1. I know I will perform well because of my experience.	3.37	SA	3.27	SA
2. I bounce back from a defeat and am not discouraged to join again.	3.36	SA	3.33	SA
3. I normally finish strong at the end of the game even if I start the game with some playing errors.	3.36	SA	3.29	SA
Average	3.36	SA	3.30	SA

\*Strongly Agree (SA) 3.25-4.00; Agree (A) 2.51-3.25; Disagree (D) 1.75-2.50; Strongly Disagree (SD) 1.00-1.75

Table 5 shows the mental toughness of the respondents in terms of rebound ability wherein the mean average of the first-year student-respondents was 3.36 (Strongly Agree) which was slightly higher than the sophomore student respondents' mean average of 3.30 (Strongly Agree). Item number 2, "I bounce back from a defeat and am not discouraged to join again," exemplifies what a person with high level of mental toughness in terms of rebound ability is. Given the high weighted mean average of the respondents, they may stand tall in the times of trouble, hardship, difficulty, distress, and all other faces of adversity and being able to rebound from something that happens that delays or prevents a process from developing and downfall.

**Table 6:** Mental Toughness of the First Year and Second Year College Students During Sports Activities in Terms of Ability to Handle Pressure

ABILITY TO HANDLE PRESSURE	FIRST YEAR		SECOND YEAR	
	Numerical Interpretation	Verbal Interpretation	Numerical Interpretation	Verbal Interpretation
4. I stay optimistic even when the game is getting difficult.	3.44	SA	3.33	SA
5. I still believe in myself no matter what the pressure in the game is.	3.39	SA	3.36	SA
6. I still believe in my skills no matter what the criticism is.	3.32	SA	3.25	A
Average	3.38	SA	3.31	SA

\*Strongly Agree (SA) 3.25-4.00; Agree (A) 2.51-3.25; Disagree (D) 1.75-2.50; Strongly Disagree (SD) 1.00-1.75

The handling of pressure as manifestation of mental toughness by the student-respondents is summarized in Table 6. The first-year student-respondents in the study scored higher in all three (3) survey items on ability to handle pressure over the sophomores.

However, in the item which states that "I still believe in my skills no matter what the criticism is," the disparity between the mean scores of freshmen and sophomore respondents was quite high. The equivalent verbal interpretation for the freshmen mean scores was "Strongly

Agree" (3.32), while that of the sophomores' 3.25 was only "Agree." This finding suggests adapting a study of Jensen and Wrisberg of strategies that could help an individual regulate perceived demands in an important moment which could enhance an individual's ability to handle pressure (Jensen & Wrisberg, 2014). Thus, one's ability to perform under pressure may be improved by developing availability of coping strategies, increasing coping flexibility, developing knowledge of when to utilize different strategies (Duhachek & Kelting, 2009).

**Table 7:** Mental Toughness of the First Year and Second Year College Students During Sports Activities in Terms of Concentration Ability

CONCENTRATION ABILITY	FIRST YEAR		SECOND YEAR	
	Numerical Interpretation	Verbal Interpretation	Numerical Interpretation	Verbal Interpretation
7. I consider it important to have done the best I can in every game that I play.	3.65	SA	3.56	SA
8. I focus on the task without getting distracted.	3.39	SA	3.48	SA
9. I am satisfied when I know I have done my best.	3.56	SA	3.45	SA
Average	3.53	SA	3.50	SA

\*Strongly Agree (SA) 3.25-4.00; Agree (A) 2.51-3.25; Disagree (D) 1.75-2.50; Strongly Disagree (SD) 1.00-1.75

Concentration ability as an expression of mental toughness was assessed in three (3) survey items (7-9) that are presented in Table 7. The 3.53 (Strongly Agree) mean average of the first-year respondents was higher than the 3.50 mean average of the sophomore respondents. Though both scores were verbally interpreted as "Strongly Agree," it was only in item 8 which states, "I am satisfied when I know I've done my best," that the sophomores' mean scores of 3.48 bested the freshmen respondents with 3.39.

**Table 8:** Mental Toughness of the First Year and Second Year College Students During Sports Activities in Terms of Confidence

CONFIDENCE	FIRST YEAR		SECOND YEAR	
	Numerical Interpretation	Verbal Interpretation	Numerical Interpretation	Verbal Interpretation
10. I am mentally strong in the sports activities I am involved in.	3.38	SA	3.41	SA
11. I excel because of my mental strength.	3.34	SA	3.26	SA
12. I believe in myself in all situations.	3.18	A	3.19	A
Average	3.30	SA	3.29	SA

\*Strongly Agree (SA) 3.25-4.00; Agree (A) 2.51-3.25; Disagree (D) 1.75-2.50; Strongly Disagree (SD) 1.00-1.75

Confidence during sporting activities as an aspect of mental toughness is appraised in items 10 to 12 as shown in Table 8. The mean score average in all three (3) items (10-12), 3.30 (Strongly Agree) for the freshmen and 3.29 (Strongly Agree) for the sophomores. A Master's thesis by Sand Diego (2013) which utilized a Traits Sports Confidence Inventory

(TSCI) indicated that the level of confidence may probably predict players' performance.

**Table 9:** Motivation of the First Year and Second Year College Students to Get Involved in Sports Activities in Terms of Intrinsic Motivation

INTRINSIC MOTIVATION	FIRST YEAR		SECOND YEAR	
	Numerical Interpretation	Verbal Interpretation	Numerical Interpretation	Verbal Interpretation
1. I engage in a sports activity because it is interesting	3.58	SA	3.46	SA
2. I engage in a sports activity because it is fun	3.71	SA	3.58	SA
3. I engage in a sports activity because it fills my need for belongingness	3.01	A	3.15	A
4. I engage in a sports activity for my own good	3.35	SA	3.32	SA
5. I engage in a sports activity because it improves my playing performance	3.42	SA	3.32	SA
6. I engage in a sports activity because I feel good doing it	3.50	SA	3.39	SA
Average	3.43	SA	3.37	SA

Table 9 shows the intrinsic motivation of the respondents. The mean score average of 3.43 of the freshmen was higher than the sophomores' 3.37. All items were given a verbal interpretation of "Strongly Agree," except for Item 3, "I engage in a sports activity because it fills my need for belongingness," which was verbally interpreted as "Agree" by the two groups of respondents. This may mean that they are joining sports not because they want to be part of a group, rather it is more of personal enjoyment or satisfaction. As posited by Pelletier, et al. (1995), being able to increase intrinsic motivation among individuals could increase sport retention rates and consequently increase physical activity levels in individuals. Because of intrinsic motivation, activities which allow individuals to experience feelings of competence and self-determination will be engaged in.

**Table 10:** Motivation of the First Year and Second Year College Students to Get Involved in Sports Activities in Terms of Extrinsic Motivation

EXTRINSIC MOTIVATION	FIRST YEAR		SECOND YEAR	
	Numerical Interpretation	Verbal Interpretation	Numerical Interpretation	Verbal Interpretation
7. I engage in a sports activity because of scholarship	3.12	A	3.25	A
8. I engage in a sports activity because of the freedom I get	3.98	A	3.17	A
9. I engage in a sports activity because of social recognition	2.88	A	2.88	A
10. I engage in a sports activity because of the athletic instruction	2.67	A	2.88	A
11. I engage in a sports activity to be exempted in some activities	2.70	A	2.74	A
12. I engage in a sports activity because I really love collecting trophies and medals	3.74	A	2.88	A
Average	3.06	A	3.04	A

Table 10 shows the extrinsic motivation of the respondents. The mean score average of 2.86 of the freshmen was lower than the sophomores' 2.94. All items were given a verbal interpretation of "Agree." The results imply that the respondents were also extrinsically motivated but to a lesser extent as compared to their intrinsic motivation in joining sports activities.

**Table 11:** Sports Involvement of the First Year and Second Year College Students During Sports Activities in terms of Power and Performance

POWER AND PERFORMANCE	FIRST YEAR		SECOND YEAR	
	Numerical Interpretation	Verbal Interpretation	Numerical Interpretation	Verbal Interpretation
1. I get involved in sports because winning is the most significant measure of success in the sport experience	2.98	A	2.98	A
2. I avoid losing since it is a painful experience	2.97	A	3.08	A
3. I believe that my opponents should not be in the way of my achievement of success	2.87	A	2.98	A
4. I have a great skill in sports activity	3.22	A	3.14	A
5. I play so active to play like a professional	3.12	A	3.01	A
6. I have the capacity to work very hard during sports activity	3.32	SA	3.31	SA
7. I believe that the greatest measure of success in sports experience is winning	2.98	A	2.98	A
Average	3.06	A	3.07	A

Table 11 shows the sports involvement of the first year and second year college students during sports activities in terms of power and performance. First year respondents gave an average rating of 3.06 (Agree). While second year respondents gave an average rating of 3.07 (Agree). The results suggest that the student-respondents were not after winning when they were involved in sports as seen in Item 7, "I believe that the greatest measure of success in sports experience is winning." This item was the lowest rated for both groups of respondents. This finding supports the findings of the study of Cumming, Smoll, Smith, and Grossbard where it was found that winning was not everything, but it was clearly associated with certain outcome variables (Cumming, et al., 2007).

Among the 7 items in Table 12, the items "I want to have fun during sports activities" and "I believe that even poorly skilled students deserve the right to play," got the highest mean scores for both first year and second year respondents. First year respondents gave the highest mean scores of 3.79 (Strongly Agree) in both items 8 and 9, while the second-year respondents gave the highest mean score of 3.75 in item 9 followed by the mean score of 3.71 for item 8 (Strongly-Agree). Thus, playful forms of exercise and sport conceived as an end themselves have more potential to enhance well-being as compared to competitive sports (Jetzke & Mutz, 2019).



**Table 12:** Sports Involvement of the First Year and Second Year College Students During Sports Activities in Terms of Pleasure and Participation.

PLEASURE AND PARTICIPATION	FIRST YEAR		SECOND YEAR	
	Numerical Interpretation	Verbal Interpretation	Numerical Interpretation	Verbal Interpretation
8. I want to have fun during sports activities.	3.79	SA	3.71	SA
9. I believe that even poorly skilled students deserve the right to play.	3.79	SA	3.75	SA
10. I consider the enjoyment I get during sports activity as the greatest measure of my success.	3.70	SA	3.61	SA
11. I get involved in sports because my opponents are my friends.	3.20	A	3.25	A
12. I believe that I should be given an opportunity to play in any sports activity.	3.52	SA	3.44	SA
13. I get involved in sports because I enjoy winning.	3.02	A	2.98	A
14. I get involved in sports because my competitors and I both get the feeling of success after each game.	3.35	SA	3.28	SA
Average	3.48	SA	3.43	SA

\*Strongly Agree (SA) 3.28-4.00; Agree (A) 2.51-3.25; Disagree (D) 1.76-2.50; Strongly Disagree (SD) 1.00-1.75

## 5. SUMMARY, CONCLUSIONS & RECOMMENDATIONS

### 5.1 Summary of findings

The findings of the study are as follows:

- In terms of age, most of the respondents belonged to the 17-19 age bracket (75.06%). There was an equal number of student-respondents obtained for both freshmen and sophomore students, three hundred eighty-five (385) apiece.
- The mindfulness of first year and second year college students during sports activities in all five (5) aspects pertaining to attention focus during sports engagement showed that the freshmen respondents scored higher than the sophomores with a mean-average of 3.53 for freshmen and 3.44 for sophomores. In terms of awareness during sports activities, the first-year college students bested the sophomores in four (4) out of five (5) survey items. Only in item number six (6) did the first-year respondents score less than the sophomores. Their mean scores for the said item were 3.33 (Strongly Agree) for the first year and 3.38 (Strongly Agree) for the second year.
- As to the mental toughness of the respondents in terms of rebound ability, the mean average of the first-year students was 3.36 (Strongly Agree) which was slightly higher than the sophomore students' mean average of 3.30 (Strongly Agree). As to handling of pressure as a manifestation of mental toughness by the student-respondents, the first-year students scored

higher than the sophomores in all three (3) survey items on ability to handle pressure. As to the concentration ability as an expression of mental toughness, the results showed a mean average of 3.53 (Strongly Agree) for the first-year student-respondents which was higher than the 3.50 mean average of the sophomore respondents. In terms of confidence during sporting activities as an aspect of mental toughness the average mean scores were 3.30 (Strongly Agree) for the freshmen and 3.29 (Strongly Agree) for the sophomores.

- As to the intrinsic motivation of the respondents, the average mean score was 3.43 for the freshmen which was higher than the sophomores' 3.37. All items were given a verbal interpretation of "Strongly Agree," except for Item 3. In terms of extrinsic motivation, the average mean score was 2.86 for the freshmen which was lower than the sophomores' 2.94. All items were given a verbal interpretation of "Agree."
- As to sports involvement, during sports activities in terms of power and performance, the first-year respondents had an average rating of 3.06 (Agree), while the second-year respondents had an average rating of 3.07 (Agree). In terms of pleasure and participation, the first-year respondents had an average rating of 3.48 (Strongly Agree), while the second-year respondents gave an average rating of 3.43 (Strongly Agree).

### 5.2 Conclusions

From the foregoing findings, the following conclusions were drawn:

- The respondents were mostly 17 to 19 years old. Freshmen and sophomores were equally represented in the study.
- The respondents' mindfulness in terms of awareness and attention during sports activities was consistently given a verbal interpretation of "Strongly Agree." The results imply that the students had a very high level of mindfulness in terms of awareness and attention.
- The respondents' mental toughness in terms of rebound ability and concentration ability during sports activities was consistently given a verbal interpretation of "Strongly Agree." The results suggest that the students had a very high level of mental toughness in terms of rebound ability and concentration ability. Nevertheless, in terms of ability to handle pressure and confidence, the respondents had a verbal interpretation ranging from "Agree" to "Strongly Agree." This means that the respon-

dents ability to handle pressure and confidence may still be enhanced.

4. The respondents' intrinsic motivation during sports activities was given a verbal interpretation ranging from "Agree" to "Strongly Agree." The results revealed that the students may have a high level of intrinsic motivation, but this may still be further developed. In terms of extrinsic motivation, the respondents consistently gave a verbal interpretation of "Agree," which implies that even though they had a high level of extrinsic motivation, this was not the main reason they were involved in sports.
5. The respondents' sports involvement in terms of power and performance and pleasure and participation during sports activities were given a verbal interpretation ranging from "Agree" to "Strongly Agree." The results mean that the students had a high level of sports involvement in terms of power and performance and pleasure and participation, but this can still be improved.

### 5.3 Recommendations

1. School administrators may come up with student-centered activities to sustain the very high level of mindfulness and mental toughness in terms of rebound ability and concentration ability. They may come up with student-centered activities to enhance the students' level of mental toughness in terms of ability to handle pressure and confidence. They may also come up with student-centered activities to enhance the level of motivation of the students which may increase the sports involvement of the students. Furthermore, school administrators may revisit their policy pertaining to sports facilities and equipment that may promote the sports involvement of students.
2. Physical Education (P.E.) teachers may consider crafting programs that may enhance the level of mental toughness, motivation and sports involvement of the students and sustain their very high level of mindfulness.
3. The Commission on Higher Education may add provisions for sporting activity opportunities for students. The Commission may support more of

interscholastic sporting competitions to provide more opportunities for students to get involved in sports because sports involvement also contributes to character development.

4. Future researchers may conduct a similar study involving other institutions particularly from public schools. Future researchers may also conduct a qualitative type of research of the same topic

### ACKNOWLEDGMENT

The researchers would like to their appreciation and gratitude to all the people who helped them in many ways to make this study possible. To their families and To God Almighty, for all his blessings, Thank you...

### REFERENCES

- [1] Babbie, E. (2010). The practice of social research. 12th Edition, Wadsworth, Belmont.
- [2] Biddle, S.J.H. and N. Mutrie. (2008). Psychology of Physical Activity: Determinants, Wellbeing and Interventions, 2nd edition, Routledge, London, U.K.
- [3] Blythe, W. (2006). To hate like this is to be happy forever: A thoroughly obsessive, intermittently uplifting, and occasionally unbiased account of the Duke-North Carolina basketball rivalry. New York, NY, US: HarperCollins Publishers.
- [4] Bodhi, B. (2000). A comprehensive manual of Adhidhamma. Seattle: BPS Pariyatti.
- [5] Corbin, C.B, Lndsey, R., Welk, Corbin, W.R. (2002). Concepts of Fitness and Wellness. New York, NY 10020.
- [6] Craighead, & C.B. Nemeroff, (2001), The Corsini encyclopedia of psychology and behavioral science. New York, NY: Wiley.
- [7] Parker, M., & Stiehl, J. (2004). Personal and social responsibility. In D. Tannenhill, & J. Lund (Eds.). Standards based curriculum. Boston, MA: Jones and Bartlett.
- [8] Weinberg, R. S., & Gould, D. (2011). Foundations of sport and exercise psychology. Champaign, Human Kinetics.
- [9] Amazona R., Allegado, J. (2018). Fewer School kids Interested in Sports. Philippine News Agency. retrieved from: <https://www.pna.gov.ph/articles/1024775>
- [10] Ajisafe, M. O. (2009). The role of sport in a developing country. Benin-City: Headmark Publishers.
- [11] Ansar, Astin, Arifin, Yudith J., Dengo (2017). The Influence of School Culture on the Performance of High School English Teachers in Gorontalo Province. International Journal of Education and Research. Vol. 5 No. 10
- [12] Baer, R.A. (2003) Mindfulness Training as a Clinical Intervention: A Conceptual and Empirical Review.

- Clinical Psychology: Science and Practice, 10, 125-143.  
<http://dx.doi.org/10.1093/clipsy.bpg015>
- [13] Bailey, R. (2006). Physical Education and Sport in Schools: A Review of Benefits and Outcomes. *Journal of School Health*.
- [14] Baric, R. (2011). Psychological pressure and Athletes Perception of Motivational Climate in Team Sports. *Review of Psychology*.
- [15] Bernier, M., Thienot, E., Codron, R., & Fournier, J. F. (2009). Mindfulness and acceptance approaches in sport performance. *Journal of Clinical Sport Psychology*, 3, 320- 333.
- [16] Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N. D., Carmody, J., & Devins, G. (2004). Mindfulness: A proposed operational definition. *Clinical psychology: Science and practice*.
- [17] Brown SA. Measuring perceived benefits and perceived barriers for physical activity. *Am J Health Behav*. 2005;29(2):107-16
- [18] Brown, K. W., Ryan, R. M., & Creswell, J. D. (2007). Mindfulness: Theoretical foundations and evidence for its salutary effects. *Psychological Inquiry*, 18, 211–237. doi:10.1080/10478400701598298
- [19] Cando, J.M. and Villacastin L. (2014). Motivation for Physical Activity Participation of Cebu Institute Technology – University Students. *International Journal of Sciences: Basic and Applied Research, (IJSBAR)* 16 (2); 97-104.
- [20] Chomitz V.R., Slining, M., McGowan R., J., Mitchell S., E., Dawson, G. F., & Hacker K., A., (2009). Is There Relationship Between Physical Fitness and Academic Achievement? Positive Results from Public School Children in Northeastern United States *Journal of School Health*.
- [21] Clough, P. J., Earle, K., & Sewell, D. (2002). Mental Toughness: The Concept and Its Measurement. In I. Cockerill (Ed.), *Solutions in Sport Psychology* (pp. 32-46). London: Thomson Learning.
- [22] Coalter, F. (2001). *Realising the potential: the case for cultural services: sport* (London, Local Government Association).
- [23] Connaughton, D., Wadley, R., Hanton, S., & Jones, G. (2008). The Development and Maintenance of Mental Toughness: Perceptions of Elite Performers. *Journal of Sports Sciences*.
- [24] Côté, J., & Fraser-Thomas, J. (2007). Youth involvement in sport. *Introduction to Sport Psychology: A Canadian Perspective*, 266-294.
- [25] Coulter T, Mallett C, Singer J. (2010). A subculture of mental toughness in an Australian University of Arizona Football League club. *Psychol Sport Exerc* 2016; 22:98113. [<http://dx.doi.org/10.1016/j.psychsport.2015.06.007>]
- [26] Crust L. (2008). A review and conceptual re- examination of mental toughness: Implications for future researchers.
- [27] Cumming, Sean & Smoll, Frank & Smith, Ronald & Grossbard, Joel. (2007). Is Winning Everything? The Relative Contributions of Motivational Climate and Won-Lost Percentage in Youth Sports. *Journal of Applied Sport Psychology - J APPL SPORT PSYCHOL*. 19. 322-336. 10.1080/10413200701342640
- [28] Dahl, K. E., (2012). Motivation in Elite Athletes; A Study on What Makes a Set of Female Swimmers Perform Above or under their Expected Potential.
- [29] Deci, E., & Ryan, R. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian Psychology*, 49 (3), 182e185.
- [30] De Petrillo, L. A., Kaufman, K. A., Glass, C. R., & Arnkoff, D. B. (2009). Mindfulness for Long-Distance Runners: An Open Trial Using Mindful Sport Performance Enhancement (MSPE). *Journal of Clinical Sport Psychology*.
- [31] Didonna, F. (2009). *Clinical handbook of mindfulness*. New York, NY: Springer
- [32] Diehl, K., Fuchs, A. K., Rathmann, K., & Hilger-Kolb, J. (2018). Students' Motivation for Sport Activity and Participation in University Sports: A Mixed-Methods Study. *BioMed Research International*, 2018, 1–7. doi:10.1155/2018/9524861
- [33] Din, F.S. (2005). Sport Activities Versus Academic Achievement for Rural High School Students. *National Forum of Applied Educational Research Journal-Electronic Volume 18, Number 3, 2005*.
- [34] Duckworth, Angela & Peterson, Christopher & Matthews, Michael & Kelly, Dennis. (2007). Grit: Perseverance and Passion for Long-Term Goals. *Journal of personality and social psychology*. 92. 1087-101. 10.1037/0022-3514.92.6.1087.
- [35] Fitzgeralda, A., Fitzgeraldb, N., & Aherne, C. (2012). Do peers matter? A review of peer and/or friends' influence on physical activity among American adolescents. *Journal of Adolescence*, 35(4), 941–958.
- [36] Fraser-Thomas, J. L., Côté, J., & Deakin, J. (2005). Youth sport programs: An avenue to foster positive youth development. *Physical Education and Sport Pedagogy*.
- [37] Fredricks, J & Eccles, I. (2006). Is extracurricular participation associated with beneficial outcomes? Concurrent and longitudinal relations. *Developmental Psychology*, 42(4), 698-713.
- [38] Gardner, F.L., & Moore, Z.E. (2004). A Mindfulness-Acceptance-Commitment (MAC) based approach to performance enhancement: Theoretical considerations. *Behavior Therapy*, 35, 707–723.
- [39] Gardner, F.L., & Moore, Z.E. (2006). *Clinical sport psychology*. Champaign, IL: Human Kinetics.

- [40] Gardner, F. L., & Moore, Z. E. (2007). The psychology of enhancing human performance: The mindfulness-acceptance-commitment (MAC) approach. Springer Publishing Company.
- [41] Germer, C. K., Siegel, R. D., & Fulton, P. R. (2005). Mindfulness and psychotherapy. New York: Guilford Press.
- [42] Gordon, S. (2001). Reflections on providing sport psychology services in professional cricket. In G. Tenenbaum (Ed.), *The practice of sport psychology* (pp. 17-36). Morgantown, WV: FIT.
- [43] Gould, D., & Carson, S. (2008). Life skills development through sport: current status and future directions. *International Review of Sport & Exercise Psychology*.
- [44] Gravetter, F. J., & Forzano, L. B. (2012). *Research Methods for the Behavioral Sciences* (4th ed.). Belmont, CA: Wadsworth.
- [45] Gredler, M.E., Broussard, S.C., and Garrison, M.E.B. (2004) The Relationship between Classroom Motivation and Academic Achievement in Elementary School Aged Children. *Family and Consumer Sciences Research Journal*.
- [46] Guay, F., Chanal, J., Ratelle, C. F., Marsh, H. W., Larose, S., & Boivin, M. (2010). Intrinsic, identified, and controlled types of motivation for school subjects in young elementary school children. *British Journal of Educational Psychology*, 80 (4), 711–735.
- [47] Gucciardi D. F., Sandy Gordon & James A. Dimmock (2009) Evaluation of a Mental Toughness Training Program for Youth-Aged Australian Footballers: I. A Quantitative Analysis, *Journal of Applied Sport Psychology*, 21:3, 307-323, DOI:10.1080/10413200903026066
- [48] Duckworth, Angela & Peterson, Christopher & Matthews, Michael & Kelly, Dennis. (2007). Grit: Perseverance and Passion for Long-Term Goals. *Journal of personality and social psychology*. 92. 1087-101. 10.1037/0022-3514.92.6.1087. *School Health*, 75, 214- 218.
- [49] Hair, J. F. (2011). *Essentials of business research methods* (2nd ed.). Armonk, NY: M.E. Sharpe
- [50] Hays, K., Thomas, O., Maynard, I., Bawden, M. (2009). The role of confidence in world class sport performance. *Journal of Sport Sciences*, 27 (11), 1185-1199.
- [51] Harter, S. (1978). Effectance motivation reconsidered toward a developmental model. *Human Development*, 21(1), 34-64.
- [52] Harter, S. (1981). A model of intrinsic mastery motivation in children: Individual differences. *Human Development*.
- [53] Heilman, C. (2012). A mixed methods approach examining alpine ski racing as a context or positive youth development. *Dissertation Abstracts International*, 72, Retrieved August 9, 2012, from: PsycINFO, Ipswich, MA.
- [54] Haudenhuyse, R., Theeboom, M., & Nols, Z. (2013). Sports-based interventions for socially vulnerable youth: Towards well-defined interventions with easy-to follow outcomes? *International Review for the Sociology of Sport*.
- [55] Hayes, S.C., Wilson, K.G., Bissett, R., Gifford, E.V., Piaseki, M, Batten, S., et al. (2004). A Preliminary Trial of Twelve-step Facilitation and Acceptance and Commitment Therapy with Polysubstance Abusing Methadone-Maintained Opiate addicts.
- [56] Jackson, S.A., & Csikszentmihalyi, M. (1999). Flow in sports: The key to optimal experience and performances. Champaign, IL: Human Kinetics.
- [57] Jensen P.R., Wrisberg C.A. (2014) Performance under acute stress: A qualitative study of soldiers' experiences of hand-to-hand combat. *International Journal of Stress Management* 21, 406-423.
- [58] Jetzke, M., Mutz, M. (2019). Sport for Pleasure, Fitness, Medals or Slenderness? Differential Effects of Sports Activities on Well-Being. *Applied Research Quality Life*.
- [59] Jonasson, K., & Thiborg, J. (2010). Electronic sport and its impact on future sport. *Sport in Society*, 13(2), 287–299. doi:10.1080/17430430903522996
- [60] Jones, A., & Issroff, K. (2007). Motivation and Mobile Devices: Exploring the Role of Appropriation and Coping Strategies. *Alt-f, Research in Learning Technology*, 15, 247-258.
- [61] Kaufman, K. A., Glass, C. R., & Arnkoff, D. B. (2009). Evaluation of Mindful Sport Performance Enhancement (MSPE): a new approach to promote flow in athletes. *Journal of Clinical Sport Psychology*.
- [62] Kabat-Zinn, J. (1994). *Wherever you go, there you are: Mindfulness meditation in everyday life*. New York, NY: Delacorte.
- [63] Kee, Y. H., & John Wang, C. K. (2008). Relationships between mindfulness, flow dispositions and mental skills adoption: A cluster analytic approach. *Psychology of Sport and Exercise*, 9.
- [64] Khan, Z., Haider, Z Ahmad N. and Khan, S., (2011). Sports Achievement Motivation and Sports Competition Anxiety: A Relationship Study. *Journal of Education and Practice*, Vol.2, No. 4, 2011
- [65] Khan, M.Y., Jamil, A., Khan, U.A., and Kareem, U. (2012). Association between Participation in Sports and Academic Achievement of College Students. *International Journal of Academic Research in Business and Social Sciences*, August 2012, Vol. 2, No. 8.
- [66] Kilpatrick, M., E. Hebert, and J. Bartholomew. (2005). College students' motivation: Differentiating men's and women's motives for sport participation and exercise. *Journal of American College Health* 54: 87-94

- [67] Lai, E. (2011). Motivation: A Literature Review. Retrieved from: [https://images.pearsonassessments.com/images/tmrs/Motivation\\_Review\\_final.pdf](https://images.pearsonassessments.com/images/tmrs/Motivation_Review_final.pdf).
- [68] Lippit, E., (2012). Motivation Need Support and Need Satisfaction in Youth Soccer Players. Retrieved from: <https://digitalcommons.georgiasouthern.edu/etd/1013/>.
- [69] Mangan, J. A. (2011). Definition of Sports in Latin American: Past and present. *Journal of American Society*.
- [70] Martin, J. R. (1997). Mindfulness: A proposed common factor. *Journal of Psychotherapy Integration*, 7, 291–312. doi:10.1023/B: JOPI .0000010885. 18025.bc
- [71] Mazaulan M., Abdul Rahim M.R. (2014) Relationship Between Mental Toughness and Sport Performance Among Contact and Non-contact Sport Athletes. In: Adnan R., Ismail S., Sulaiman N. (eds) *Proceedings of the International Colloquium on Sports Science, Exercise, Engineering and Technology 2014 (ICoSSEET 2014)*. Springer, Singapore.
- [72] Merriam, S. (2009). *Qualitative Research: A Guide to Design and Implementation*. San Francisco, CA: John Wiley & Sons.
- [73] Mladenovic, Marijana & Trunic, Nenad. (2019). Goal Orientation and Mental Toughness of Young Serbian Basketball Players. XXII Scientific Conference “FIS COMMUNICATIONS 2019” in physical education, sport and recreation, University of Nis, Serbia.
- [74] Montecalbo, R.C. and Cardenas, R.C. (2015). Nutritional Knowledge and Dietary Habits of Philippine Collegiate Athletes. *International Journal of Sports Sciences*, 2015 5(2): 45-50.
- [75] Moran, Aidan. (2017). Attention and Concentration Training in Sport. 10.1016/B978-0-12-809324-5.05476-6.
- [76] Nemeth, J. (2019). Overcoming Barriers to Participation in Sports. Retrieved from: <https://study.com/academy/lesson/overcoming-barriers-to-participation-in-sports>
- [77] Nicholls A, Polman R, Levy A, Backhouse S (2009). Mental toughness in sport: Achievement level, gender, age, experience, and sport type differences.
- [78] NHSAW (2004). The Case for High School Activities. National High School Activities Week.
- [79] O’Connor, Melissa & Paunonen, Sampo. (2007). Big Five Personality Predictors of Post-Secondary Academic Performance. *Personality and Individual Differences*. 43. 971-990. 10.1016/j.paid.2007.03.017.
- [80] Parker, M., & Stiehl, J. (2004). Personal and social responsibility. In D. Tannenhill, & J. Lund (Eds.). *Standards based curriculum*. Boston, M.A: Jones and Bartlett.
- [81] Pelletier, L. Tuson, K., Fortier, M., Vallerand, K. and Briere, N. 1995. Toward a New Measure of Intrinsic Motivation, Extrinsic Motivation, and Amotivation in Sports: The Sport Motivation Scale (SMS). *Journal of Sport and Exercise Psychology*, 1995, 17, 35-53.
- [82] Piipari, S. Y., Wang, C-K., & Jaakkola, T. (2012). Examining the growth trajectories of physical education students’ motivation, enjoyment, and physical activity: A person-oriented approach. *Journal of Applied Sport Psychology*, 24(4), 401- 417.
- [83] Rasmussen, K. (2000). The Changing Sports Scene. *Educational Leadership*, 57(4), 26-29.
- [84] Ravizza, K. (2002). A philosophical construct: A framework for performance enhancement. *International Journal of Sport Psychology*, 33, 4–18.
- [85] Rees, D.I. and Sabia, J.J. (2010). Sports participation and academic performance: Evidence from the National Longitudinal Study of Adolescent Health. *Economics of Education Review* 29 (2010) 751–759.
- [86] Rojiani, R., Santoyo, J. F., Rahrig, H., Roth, H. D., & Britton, W. B. (2017). Women Benefit More Than Men in Response to College-based Meditation Training. *Frontiers in Psychology*.
- [87] Rooks, J., Morrison, A. B., Goolsarran, M., Rogers, S. L., & Jha, A. P. (2017). “We Are Talking About Practice”: The influence of mindfulness vs. relaxation training on athletes’ attention and well-being over high-demand intervals. *Journal of Cognitive Enhancement*, 1(2), 141-153. doi:10.1007/s41465-017- 0016-5.
- [88] Shores, K., Becker, C.M., Moynahan, R., Williams, R., & Cooper, N. (2015). The Relationship of Young Adults’ Health and Their Sports Participation. *Journal of Sports Behavior*.
- [89] Siegel, D.J. (2007). *The mindful brain: Reflection and Attunement in the cultivation of well-being*. New York: W.W. Norton & Company.
- [90] Sitkowski, L. (2008). The Effects of Participation in Athletics on Academic Performance among High School Sophomores and Juniors.
- [91] Standage, M., Duda, J. L., & Ntoumanis, N. (2005). A test of self-determination theory in school physical education. *British Journal of Education Psychology*, 75, 411- 433.
- [92] Stephens, L. J., & Schaban, L. A. (2002). The effect of interscholastic sports participation on academic achievement of middle school students, *NASSP Bulletin*.
- [93] Taras, H. (2005). Physical Activity and Student Performance at School. *Journal of School Health*.
- [94] Thibault, V., Guillaume, M., Berthelot, G., Helou, N. E., Schaal, K., Quinquis, L., Nassif, H., Tafflet, M., Escolano, S., Hermine, O., & Toussaint, J. F. (2010). Women and Men in Sport Performance: The Gender Gap has not Evolved since 1983. *Journal of sports science and medi-*

cine, 9(2), 214–223.

- [95] Wechsler, H., Devereaux, R., Davis, M., & Collins, J. (2000). Using the school environment to promote physical activity and healthy eating. *Preventive Medicine*, 31, S121–S137.
- [96] Young, W. B. (2006). Transfer of Strength and Power Training to Sports Performance. *International Journal of Sports Physiology and Performance*, 1(2), 74–83. doi:10.1123/ijsp.1.2.74
- [97] Antolihao, L.A. 2009. Can the subaltern play? Post-colonial transition and the making of basketball as the national sports in the Philippines. PhD Dissertation, National University of Singapore
- [98] Aseron, D. (2004). Effect of External Rewards on Intrinsic Motivation of Elementary Basketball Students. Master's Thesis, College of Human Kinetics, University of The Philippines, Diliman Quezon City.
- [99] Cole, A.R. (2014). Sports Participation and Academic Achievement: Does Self-Efficacy Play a Role? University of Arizona.
- [100] Montecalbo-Ignacio, Rona & Iii, Rodolfo & Buot, Merites. (2017). Academic Achievement as Influenced by Sports Participation in Selected Universities in the Philippines. *Education*. 2017. 53-57. 10.5923/j.edu.20170703.03.
- [101] Pecson, K. (2008). Academic and Athletic Motivation of Selected Athletes at the Polytechnic University of the Philippines. Master's Thesis, Polytechnic University of the Philippines.
- [102] San Diego, V. (2013). Competitive Orientation and Level of Sports Confidence of Selected Varsity Players. University of the Philippines Diliman, Quezon City.
- [103] Wilson, N (2009). Impact of Extracurricular Activities on Students. University of Wisconsin-Stout, Menomonie, WI