

Mindfulness, Mental Toughness, and Motivation as Correlates of College Students' Sports Involvement:

Basis for a Proposed Guide for School Administrators

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Abstract: *This research determined the correlation between the mindfulness, mental toughness, and motivation of seven hundred seventy 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 seventeen to nineteen years old 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.*

Keywords—sports; sports involvement; college students.

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).

This study 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

STATEMENT OF THE PROBLEM

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:

- 1.1. Attention; and
- 1.2. Awareness?

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

- 2.1. Rebound Ability;
- 2.2. Ability to Handle Pressure;
- 2.3. Concentration Ability; and
- 2.4. 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:

- 3.1 Intrinsic Motivation; and
- 3.2 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?

METHODOLOGY

Respondents of the study

In obtaining samples for the study, the stratified random sampling technique was employed in selecting the student-

respondents. Using the Slovin's Formula given as $n/1 + N(e)^2$

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.

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, 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.

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 Percentage in interpreting the profile of the respondents with the formula: $P = \frac{f}{N} \times 100$, where P is Percentage, f is the number of responses and N is the total number of responses.

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 with the formula: $X = \frac{\sum fw}{N}$, where: X is the weighted mean, $\sum fw$ is the sum of the product of frequency and unit weight and N is the total number of respondents.

Results

Table 1: Percentage Distribution of the Age of College

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

Students

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%.

Table 2: Percentage distribution of the year level of the

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

college students

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) 3.26-4.00; Agree (A) 2.51-3.25; Disagree (D) 1.76-2.50; Strongly Disagree (SD) 1.00-1.75

The mindfulness of the student-respondents of the study is summarized in 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	3.35	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) 3.26-4.00; Agree (A) 2.81-3.25; Disagree (D) 1.76-2.50; Strongly Disagree (SD) 1.00-1.75

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.

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

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 win 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) 3.26-4.00; Agree (A) 2.81-3.25; Disagree (D) 1.76-2.50; Strongly Disagree (SD) 1.00-1.75

Rebound Ability

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) 3.26-4.00; Agree (A) 2.81-3.25; Disagree (D) 1.76-2.50; 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.”

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

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) 3.26-4.00; Agree (A) 2.81-3.25; Disagree (D) 1.76-2.50; Strongly Disagree (SD) 1.00-1.75

Concentration Ability

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	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) 3.26-4.00; Agree (A) 2.51-3.25; Disagree (D) 1.76-2.50; Strongly Disagree (SD) 1.00-1.75

Confidence

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 San 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

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

*Strongly Agree (SA) 3.26-4.00; Agree (A) 2.51-3.25; Disagree (D) 1.76-2.50; Strongly Disagree (SD) 1.00-1.75

Terms of Intrinsic Motivation

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 freebies I get.	3.08	A	3.17	A
9. I engage in a sports activity because of social recognition.	2.85	A	2.86	A
10. I engage in a sports activity because of the grade incentive.	2.67	A	2.69	A
11. I engage in a sports activity to be exempted in some activities.	2.70	A	2.75	A
12. I engage in a sports activity because I really love collecting trophies and medals.	2.74	A	2.89	A
Average	2.86	A	2.94	A

*Strongly Agree (SA) 3.26-4.00; Agree (A) 2.51-3.25; Disagree (D) 1.76-2.50; Strongly Disagree (SD) 1.00-1.75

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

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.	2.88	A	2.88	A
2. I avoid losing since it is a painful experience.	2.87	A	3.08	A
3. I believe that my opponents should not be in the way of my achievement of success.	2.87	A	2.88	A
4. I have a great skill in sports activity.	3.22	A	3.14	A
5. I push/strive 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

*Strongly Agree (SA) 3.26-4.00; Agree (A) 2.51-3.25; Disagree (D) 1.76-2.50; Strongly Disagree (SD) 1.00-1.75

Second Year College Students During Sports Activities in terms of Power and Performance

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 really 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).

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	3.23	A
12. I believe that I should be given an opportunity to play in any sports activity.	3.62	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) 3.26-4.00; Agree (A) 2.51-3.25; Disagree (D) 1.76-2.50; Strongly Disagree (SD) 1.00-1.75

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).

Discussions

1. The mindfulness of the 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.

2. In terms of awareness during sports activities, the first-year college students bested the sophomores in four out of five survey items.
3. Only in item number six 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.
4. 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).
5. 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.
6. 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.
7. 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.
8. 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).
9. 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).

Conclusions

From the foregoing findings, the following conclusions were drawn:

1. 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.
2. 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 respondents’ ability to handle pressure and confidence may still be enhanced.

3. 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.
4. 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.

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.
2. The Commission on Higher Education may add provisions for sporting activity opportunities for students, they may support more of interscholastic sporting competitions to provide more opportunities for students to get involved in sports, as sporting involvement also contributes with character development.
3. Future researchers may conduct a similar study involving other institutions particularly from public schools. Future researchers may conduct a qualitative type of research of the same topic.

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