



THE PREDICTIVE ROLE OF MINDFULNESS AND SOCIAL SUPPORT ON SUBJECTIVE VITALITY OF STUDENT-ATHLETES

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Abstract:

The dual roles of student-athletes pose some threats to their subjective vitality and overall well-being as they struggle to balance the dual responsibilities. This unique population requires substantial physical and mental energy to balance the competing demands, as prolonged exposure to stressors may lead to burnout and diminished vitality. However, the present study examined the predictive roles of mindfulness and social support on the subjective vitality of student-athletes. A total of 287 student-athletes [male, n=167 (52.8%); female, n=120 (41.8%)] from two public universities in South-west Nigeria participated in the study. The age range was between 16 and 31 years. The measures completed by the participants were the Mindful Attention Awareness Scale (MAAS), the Perceived Available Support in Sport Questionnaire (PASS-Q) and the Subjective Vitality Scale (SVS). Descriptive statistics were employed to determine the demographic characteristics of the participants. The multiple regression analyses revealed that both mindfulness ($\beta = .055$, $t = 3.031$, $p < .05$) and social support ($\beta = .242$, $t = 7.668$, $p < .05$) independently and jointly ($F_{(2,284)} = 36.413$, $p < 0.05$) predicted subjective vitality in student-athletes, with social support emerging the most potent predictor. It was further indicated that mindfulness and social support combined accounted for a 19.8% variation in the prediction of subjective vitality. The findings provide insight into understanding the significant predictive roles of mindfulness and social support of student-athletes. The findings emphasized the need for educational institutions and athletic programs to implement mindfulness training and enhance social support systems for student-athletes in order to improve subjective vitality.

Keywords: mindfulness, social support, subjective vitality, student-athletes

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1. Introduction

Improving sport performance and overall well-being of student-athletes remains the significant focus of researchers in sports settings worldwide, as this unique population struggle to balance the demands of athletics and academics. The struggling of this population often leads to compromised physical and mental health outcomes (Nemeth, 2019; Gustafsson et al., 2017). Subjective vitality is defined as a positive conscious feeling of being alive, energetic, enthusiastic and mentally robust (Ryan & Frederick, 1997). Subjective vitality is regarded as an integral part of eudaimonic and physical well-being (Gunnell et al., 2017), deemed to provide self-sufficient energy to cope, adapt and function maximally, as well as providing motivation to handle daily pursuits (Rozanski & Cohen, 2016). It is a vital psychological resource for student-athletes who face momentous physical, psychological and academic demands. Student-athletes often require balancing rigorous physical training programs with academic demands, which in turn lead to stress, exhaustion, burnout and mental fatigue (Egan, 2019; Jaiyeoba, 2017; Gustafsson et al., 2017; Cosh & Tully, 2015). Examining the predictive factors of subjective vitality in student-athletes is necessary to improve their performance and overall well-being.

Mindfulness is defined as a state of consciousness that occurs from paying attention to the present moment, without judgment, and being fully aware of the unfolding of each experience moment by moment (Kabat-Zinn, 2003). Mindfulness has been found to contribute immensely to enhanced physiological and psychological well-being (Kabat-Zinn, 2003). Studies have demonstrated that mindfulness helps to reduce stress, enhance emotion regulation, self-efficacy, promote resilience and maintain focus during tense competitive situations in athletes (Oguntuase & Sun, 2022; 2021; Josefsson et al., 2019; Gross et al., 2018). Mindfulness promotes consciousness that enables individuals to process their experiences more adaptively, which is significant to managing the dual responsibilities of academics and athletics. Numerous studies indicated a positive relationship between mindfulness and subjective vitality (Oguntuase et al., 2021; Carlson & Brown, 2005; Brown & Ryan, 2003). For instance, Brown and Ryan (2003) indicated that a higher degree of mindfulness predicts greater subjective vitality, which was mediated by reduced stress and improved psychological need satisfaction. Josefsson et al. (2019) indicated mindfulness is associated with improved focus, reduced anxiety and enhanced performance. Also, mindfulness aids emotion regulation and facilitates recovery from both physical and mental fatigue (Goodman et al., 2014). Baltzell and Akhtar (2014) demonstrated that mindfulness practices reduced performance-related anxiety and facilitated overall well-being. These accrued benefits are critical for maintaining optimal subjective vitality among student-athletes, as mindfulness enables effective response to stress and adapt well rather than reacting impulsively, thereby promoting their energy and well-being.

Social support, defined as an exchange of resources between at least two persons perceived by the provider or the recipient to be intended to improve the well-being of the

recipient (Shumaker & Brownell, 1984, p. 13), can influence the subjective vitality of student-athletes. The supports can be in different forms, which include informational, emotional and instrumental support, and are rendered by family, coaches, teammates, athletic trainers, or significant others. Social support serves as a defense mechanism against stressors on well-being through enhanced coping strategies, which facilitate and increase one's ability to cope with challenging situations (Van Raalte et al., 2015). This can also help to cope with dual pressures associated with academics and athletics. Studies have indicated the positive influence of social support on mental health, which includes reduced depression, stress and enhanced life satisfaction (Sullivan et al., 2020; Freeman & Rees, 2008). For instance, Sullivan et al. (2020) found that athletic tangible support from coach, teammate and trainer was the most potent predictor of depression; as inadequate support was reported to relate to increased symptoms of depression. Moreover, Uchino (2009) indicated that social support facilitates emotional support, practical assistance and a sense of belonging, which contribute to subjective vitality. Jowett and Lavalley (2007) demonstrated that the social environment created by both coaches and teammates influenced student-athletes' perceptions, emotional states and energy levels. A supportive environment can help student-athletes navigate the dual roles efficiently.

This present study is based on the postulation of self-determination theory, which emphasizes the influence of fulfilling psychological needs in enhancing intrinsic motivation and well-being (Deci & Ryan, 2000). Within this background, both mindfulness and social support can be identified as means to predict satisfaction of basic psychological needs (i.e., autonomy, competence and relatedness) of student-athletes, in order to improve their subjective vitality. Both mindfulness and social support autonomously offer unique perspectives to subjective vitality, while their joint relationship could further intensify and yield greater benefits. Mindfulness has been shown to enhance self-regulation and internal coping mechanisms, while social support offers external resources that promote well-being (Lakey & Orehek, 2011). The concurrent influence of these factors can create a joint predictor that helps student-athletes to effectively manage stress, preserve energy and maintain overall well-being. Carson et al. (2004) indicated that mindfulness practices promote self-awareness and emotion regulation, which can directly enhance interpersonal relationships that promote social support. On the other hand, social support from significant others may influence the adoption of mindfulness by individuals by creating a nurturing environment that facilitates subjective vitality in student-athletes to thrive in their dual roles of students and athletes. Studies have shown that mindful individuals perceived social support as being helpful to cope with challenging situations and improve subjective vitality (Goleman & Davidson, 2017).

University student-athletes represent a unique population that juggles between the dual demands' role of students and athletes. This population often experiences increased levels of stress, performance pressures, fatigue, time constraints, emotional difficulties and inadequate social support as a result of rigorous sport training, competitions, expected regular class attendance and overburdened class assignments

than their non-student-athletes colleagues. As a result, the student-athletes population requires maximum physical and mental energy to improve both academic and sport performance and as well as maintain optimal well-being.

Understanding the association between mindfulness, social support, and subjective vitality is essential. Therefore, this study examined the predictive roles of mindfulness and social support on the subjective vitality of student-athletes in Nigerian tertiary institutions.

The study hypothesized that:

- 1) mindfulness would predict the subjective vitality of student-athletes,
- 2) social support would predict the subjective vitality of student-athletes
- 3) there would be a combined predictive power of mindfulness and social support on the subjective vitality of student-athletes.

2. Methods

2.1 Participants

A total of 287 student-athletes (male, $n=167$, female, $n=120$) with ages ranging between 16 and 31 years old were recruited for this study using a convenient sampling technique. The participants were selected from two public universities in South-west, Nigeria. All levels of undergraduate student-athletes were represented (100L, $n=47$; 200L, $n=66$; 300L, $n=79$; 400L, $n=74$; and 500L, $n=21$). The participants were representatives of various sports (Athletics, $n=63$; Racket, $n=44$; Ball, $n=127$; Combat, $n=27$; others, $n=27$). Training periods included two times ($n=78$), three times ($n=117$), four times ($n=75$) and others ($n=17$).

2.2 Measures

2.2.3 The Mindful Attention Awareness Scale (MAAS)

The Mindful Attention Awareness Scale (MAAS), designed by Brown and Ryan (2003), was utilized to assess the core mindfulness disposition of the participants based on present occurrences. This comprised 15 items (e.g., "I find it difficult to stay focused on what's happening in the present", "I tend not to notice feelings of physical tension or discomfort until they really grab my attention") questionnaire rated on a 5-point Likert scale ranging from 1= almost always to 6= almost never. The overall score of MAAS ranges from 15 to 90. The higher score indicates a higher level of mindfulness among the participants. The reported internal consistency of MAAS in the present study was .81.

2.2.4 The Perceived Available Support in Sport Questionnaire (PASS-Q)

The Perceived Available Support in Sport Questionnaire (PASS-Q) was employed to assess the participants' perceived social support for sport participation (Freeman et al., 2011). The PASS-Q is a 16-item questionnaire which comprised four subscales with 4 items each, these include emotional support (e.g., "when you play sports, to what extent would parents, peers/teammates, or coaches care for you"), esteem support (e.g., "when you play sports, to what extent would parents, peers/teammates, or coaches instill you

with the confidence to deal with pressure”), informational support (e.g., “when you play sports, to what extent would parents, peers/teammates, or coaches give you advice when you’re performing poorly”) and tangible support (e.g., “when you play sports, to what extent would parents, peers/teammates, or coaches help with travel to training and matches”). The PASS-Q is rated on a 5-point Likert scale ranging from 0 = ‘not at all’ to ‘extremely so.’ A higher mean score indicates a higher perception of social support by the participants. Good reliability with an alpha value of .93 was reported by Atkinson and Martin (2020), and the present study reported an .84 alpha value.

2.2.5 Subjective Vitality Scale (SVS)

Subjective vitality of the participants was assessed using the Subjective Vitality Scale (SVS) (Ryan and Frederick, 1997). SVS is a 7-item questionnaire with a 7-point Likert scale that ranges from 1 = “not at all” to 7 = “very true”. The overall score ranges from 7 to 49, with a higher score indicating stronger subjective vitality. SVS has two versions, which are trait level (individual difference) and state level. The individual difference version was used in this present study for participants to indicate the extent to which the items are applicable to them in general (e.g., “sometimes I feel so alive I just want to burst”). Ryan and Frederick (1997) reported SVS to have a Cronbach’s alpha of .84, while SVS in the present study reported .78 Cronbach's alpha value

2.3 Procedure

Permission to conduct the study was sought from the authorities and coaches of various sports from the two universities in order to have access to the participants, after which data was collected. Upon securing informed consent from the participants, the researchers met with them before their usual training periods to administer the questionnaire. The purpose of the study was clarified to the participants, and that participation in the study was voluntary. Administration of the questionnaire followed immediately. Anonymity of the participants was assured, and their responses were guaranteed for research purposes. The filling of the questionnaire was between 15-20 minutes.

2.4 Data Analysis

Descriptive statistics were utilized to analyze data collected on demographic characteristics of the participants. Inferential statistics of multiple regression analysis were performed to determine the predictive role of mindfulness and social support on subjective vitality among student-athletes. Statistical Package for Social Sciences (SPSS) (version 24.0, IBM, New York, US) was used to perform the analysis.

3. Results

The results in Table 1 showed that mindfulness ($\beta = .055$, $t = 3.031$, $p < .05$) and social support ($\beta = .242$, $t = 7.668$, $p < .05$) were found to be significant predictors of the subjective

vitality of student-athletes. The β value of .055 and .242 indicates that a unit increase in mindfulness and social support will result in a 5.5% and 24.2% increase in subjective vitality. The significant t-values indicate that both mindfulness and social support were predictors of subjective vitality, as social support was the most potent predictor.

The results of hypothesis three on Table 2 revealed a significant joint predictive role of mindfulness and social support on subjective vitality; $F_{(2,284)} = 36.413$, $p < 0.05$. The results yielded a multiple regression coefficient of $R = 0.452$ and a multiple $R^2 = 0.204$. The Adj. $R^2 = 0.198$, which implied that mindfulness and social support combined accounted for a 19.8% variation in the prediction of subjective vitality.

Table 1: Multiple regression model summary showing the relative contribution of mindfulness and social support on subjective vitality

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	20.068	2.073		9.682	.000
Mindfulness	.055	.018	.161	3.031	.003
Social Support	.242	.32	.408	7.668	.000

Table 2: Multiple regression model summary showing the joint contribution of mindfulness and social support on subjective vitality

R=.452 R ² =.204 Adj. R ² =.198 Std. Error=4.145					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1251.371	2	625.686	36.413	.000 ^b
Residual	4879.932	284	17.183		
Total	6131.303	286			

a. Dependent Variable: Vitality

b. Predictors: (Constant), Social Support, Mindfulness

4. Discussion

The present study revealed significant predictive roles of mindfulness and social support in predicting the subjective vitality of student-athletes in Nigerian tertiary institutions. This coincides with findings of previous studies (Josefsson et al., 2019; Gross et al., 2018; Sullivan et al., 2020). Mindfulness significantly predicted the subjective vitality of student-athletes, which indicated that mindfulness would facilitate the student-athletes' ability to be present in the moment and manage both competitive stressors and academic demands, which in turn could lead to enhanced mental energy and zeal to fully involve themselves in their pursuits. This is consistent with prior findings that mindfulness enhanced a range of psychological benefits, which include focus, resilience, emotion regulation and reduced stress (Oguntuase & Sun, 2022; Josefsson et al., 2019). Baltzell and Akhtar (2014) found that mindfulness practices reduced performance-related anxiety and

facilitated the overall well-being of the participants. The processes through which mindfulness facilitates subjective vitality could relate to its enhancement of self-awareness and adaptive coping skills. Kabat-Zinn (2003) noted that mindfulness fosters consciousness of experiences without judgment, which would permit student-athletes to process stressors more effectively. This present study supports the findings of Brown and Ryan (2003) that increased mindfulness led to greater subjective vitality through reduced stress and improved psychological need satisfaction.

Furthermore, the present findings found that social support was the most potent predictor of subjective vitality. This indicated a significant role of social support in the subjective vitality of student-athletes. This corroborates with previous findings (Sullivan et al., 2020; Uchino, 2009). Sullivan et al. (2020) demonstrated that social support, especially from the coach, trainer and teammates, predicted depression. The lower the social support received, the higher the increased symptoms of depression. Van Raalte et al. (2015) asserted that social support provides defense mechanism against adversities experienced by student-athletes. The dual responsibilities which mount pressures on student-athletes require a supportive network to help navigate the stressors associated with these roles. The findings support the assertion that social support can mitigate feelings of isolation and stress, which indirectly contribute to enhancing psychological functioning. The emotional, esteem, informational and tangible supports provided through social connections can not only serve as a buffer against stressors, but also enhance the sense of belonging, which paves the way for enhanced subjective vitality.

In addition, the findings of this present study revealed that mindfulness and social support jointly predicted the subjective vitality of student-athletes. This indicates that the two factors can collectively influence subjective vitality. The results are grounded in self-determination theory (Deci & Ryan, 2000), which emphasizes that fulfilling basic psychological needs (i.e., autonomy, competence and relatedness) is critical to enhancing intrinsic motivation and well-being. This present study found that mindfulness, which promotes self-awareness and emotion regulation, can complement social support by facilitating better interpersonal relationships and enhancing the perception of available resources to manage stressors effectively in student-athletes (Carson et al., 2004). In another way, social support from significant others can enhance the adoption of mindfulness, which may result in creating an enjoyable atmosphere that supports optimal subjective vitality in student-athletes to thrive in their dual roles as students and athletes.

This study has some limitations. First, this study adopted a cross-sectional research design through which data were collected, thereby limiting the robust inferential causal relationships. Future research that adopts a longitudinal design to determine the causal relationship should be conducted. Second, the use of a convenient sampling technique may limit the representativeness of the sample, particularly in relation to certain sports, thereby affecting the results and generalization of the findings. Future studies should consider employing sampling methods that ensure a more representative distribution across specific sport populations.

5. Conclusion

This present study examined the predictive role of mindfulness and social support on the subjective vitality of student-athletes. It was demonstrated that mindfulness and social support relatively predicted subjective vitality. Also, the study found that mindfulness and social support jointly predicted the subjective vitality of student-athletes.

The findings of this present study emphasized the need for educational institutions and athletic programs to implement mindfulness training and enhance social support systems for student-athletes in order to have an improved subjective vitality. Mindfulness intervention programs should be inculcated into the regular training schedules of the student-athletes. The university and the Ministry of Education should collaborate to create a policy and curriculum that specifically addresses the needs of student-athletes, and a supportive community, which includes different significant others, should be fostered to enhance emotional and practical resources available to student-athletes in order to improve their subjective vitality.

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Conflict of Interest Statement

The authors declare no potential conflicts of interest with respect to the research, authorship, and /or publication of this article

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