Subjective Well-Being, Perceived Stress, and Social-Connectedness in Collegiate Athletes

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Abstract

While being an athlete is associated with lower levels of depressive symptomatology, it does not necessitate higher levels of subjective well-being (SWB). This study had two purposes: (1) to determine if athletes within a given sample would display average or above average levels of SWB and (2) to determine if stress and social connectedness are respectively negatively and positively correlated with SWB on a significant level as opposed to their relationship with depression, which is respectively positive and negative. This was a correlational study involving 49 students (32 females, 17 males) at Milligan College, TN, USA. Each filled out an online questionnaire administered through email which included the following measures: the Perceived Stress Scale (PSS), the Social Connectedness Scale-Revised (SCS-R), and the Oxford Happiness Questionnaire (OHQ). Data was collected through qualtrics and analyzed by input to a Pearson's Correlation Coefficient calculator. The results supported that athletes within the sample displayed average levels SWB. Additionally, stress and social connectedness were negatively and positively correlated with SWB, and negatively correlated with each other on the significant level. These results suggest the two factors could have moderated SWB, resulting in average levels. There is also the possibility that other individual factors come into play with moderating SWB, as is also the case with depression. Limitations to the study included a relatively small sample size and that it was cross-sectional rather than longitudinal.

***Keywords*: Subjective Well-being, Happiness, Social Connectedness, Stress, Athletes, Depression, College Students**

Introduction

Collected evidence supports that a large group which displays prevalence for depression is the population of college students. Research supports an average of 32% of college students within the United States display depressive symptoms and the rates are rising. (American College Health Association, 2009). Depression, according to the American Psychiatric Association's DSM-5 (2013) is a syndrome, meaning it is defined by its symptoms. Characterized by persistent feelings of sadness or hopelessness and a loss of interest in once enjoyable activities. Emotional issues often accompanied by physical symptoms such as chronic pain, digestive difficulties, or insomnia. This definition is followed by a list of various symptoms of which at least five must be present for a period longer than two weeks. A risk factor for depression is stress, and it is within groups of college students that experience higher stress levels, such as medical, pre-med, nursing students and athletes. Some of these groups such as athletes possess a greater identification with a group and higher levels of social support or self-esteem, but are still prone to numerous mental health issues (Armstrong, S. & Oomen-Early, J. 2009; Horgan, A., Sweeney, J., Behan, L., & McCarthy, G. 2016). One of the major challenges to adjusting to college life is social integration, low levels of which are associated with low SWB and college drop-out (De Coninck, Matthijs, & Luyten, 2019). Listed possibilities for higher levels of depression in athletes include fear of occupational forthcoming, ambiguousness in occupational career, and physical or somatic stress associated with training programs and vigorous exercise (Demirel, 2016). These results conflict with the study conducted by Armstrong and Oomen-Early (2009). Using the CES-D, Rosenberg Self-Esteem Scale (RSES), and the Social Connectedness Scale-Revised (SCS-R), the study displayed that on average, athletes possess greater self-esteem, social connectedness, and lower depression levels. Because of this, it

may be observed that studies conflict over whether stressful conditions or social support have a more prominent influence on mental health.

A study by Crutcher, Moran, and Covassin (2018) observed the relationship between depression and social support satisfaction in athletic training students, the majority of which were also athletes. Using the Perceived Stress Scale (PSS), the CES-D, and the Social Support Questionnaire (SSQ6), the results of the study showed that stress possessed a negative correlation with social support satisfaction, putting the two factors at odds with one another. Miller and Hoffman (2009) distinguish participation in group versus individual sports. The study, which focused on athlete identity, supported the claim that team sports participants display lower levels of depression. Ostensibly because it encourages more social connections among teammates. In Byrom's experimental study (2018), assessment of peer support intervention groups is observed. The study's overall purpose would be to assess what demographics are drawn to intervention groups, how well an intervention program would be accepted, and its effects upon student well-being. Data results showed a linear increase in mental well-being, with those that had lower well-being scores at the start more likely to complete the course. These results support the consistent findings on the benefits of peer support (Byrom, 2018). Goldring (2012) suggests that a contributor to symptoms of depression is the number of external stressors that result from the college system such as time pressure, extracurricular activities, and exams. These events vary in intensity throughout the school semester or year, resulting in potential shifts in subjective well-being (SWB) throughout the academic year. Goldring (2012) also identifies social support as a possible predictor of SWB.

Subjective well-being is defined by Yulan & Luo (2018) as a, "Positive state in which the personal, relational, and collective needs and aspirations of individuals and communities are

fulfilled". According to Yulan and Luo (2018), more optimistic individuals tend to be goal setters that stick to their goals and consistently believe they are achievable. Goal related results in particular contribute to self-efficacy. When these individuals consistently achieve goals, it reinforces self-efficacy which in turn develops subjective well-being. This serves as a possible explanation for why some students under considerably more stress experience lower depressive symptoms and higher SWB in some cases. The same may be similar with athletic goals. The findings of Yulan and Luo (2018) were consistent with similar studies in regards to Self-Efficacy, Dispositional Optimism, and SWB or depressive symptoms.

The introduction of subjective well-being into the conversation of depression brings about its own questions. Yulan and Luo (2018) postulate that the relationship between depression and SWB is negative. However, lower levels of depressive symptoms in athletes does not necessitate high levels of subjective SWB. A person may lack depressive symptoms and still display a level of happiness (SWB) that is below average. Therefore, this study hypothesizes that (1) Both social connectedness and perceived stress will have a statistically significant relationship with subjective well-being (to explore the validity of previous findings) and (2) that the athlete sample will display average levels of subjective well-being, based on the Oxford Happiness Questionnaire's standard for average levels of subjective well-being. Hypothesis 1 will also explore the question of which factor is more influential for college athletes mental health: stress or social connectedness

Methods

Study Hypotheses:

H1: Both social connectedness and perceived stress will have a statistically significant relationship with subjective well-being.

H2: The athlete sample will display average levels of subjective well-being, based on the Oxford Happiness Questionnaire's standard for average levels of subjective well-being.

Participants

A total of 49 participants (32 females) aged 17 to 24 were recruited. All were students at a single college in Tennessee, USA. Participants were recruited as volunteers through the dispersion of an email announcing the study and containing a link to a consent form and online questionnaire utilized in the study.

Design

The study was correlational in design, meant to measure the relationship between perceived stress, social connectedness, and subjective well-being. To accomplish this, three separate measures were compiled into a single questionnaire measure for these factors. The first was Perceived Stress Scale (PSS, $\alpha = .72$), a well known scale for measuring stress which is valid according to multiple articles through factorial analysis (Lee, 2012). The second was the Social Connectedness Scale-Revised (SCS-R, $\alpha = .92$), which has a validity supported by correlations with multiple criteria in previous studies (Lee, R., Draper, M., & Lee, S., 2001). The final measure was the Oxford Happiness Questionnaire (OHQ, $\alpha = .84$), which has had its content

validity supported by variable correlation and factorial analysis (Hadinezhad, H., & Zaree, F., 2009).

Procedure

As stated the measures were distributed through a link in an email. Upon clicking the link, volunteers were given access to an IRB approved consent form. Upon reading and signing the consent, the volunteers were presented with the questionnaire, beginning with the collection of basic demographic data. Upon completion, the results were sent to and analyzed through qualtrics.

Results

Pearson's Correlation Coefficient (PCC) was used to analyze the data. The resulting coefficient provided evidence that there were statistically significant correlations between all 3 of the measured variables. There was a significant correlation between perceived stress and subjective well-being ($r = -.595$, $p < .01$. See fig. 1), as perceived stress had an inverse relationship with subjective well-being. The inverse relationship between perceived stress and social connectedness was weaker ($r = -.334$, $p < .05$. See fig. 2), though still significant. Finally, the relationship between social connectedness and subjective well-being was also found to be significant ($r = .754$, $p < .01$. See fig. 3). This relationship was positive, supporting that as levels of social connectedness increased, so did levels of subjective well-being.

In this sample the overall average score for subjective well-being was 4.062 (SD = 0.7436) on a scale ranging from 1 to 6. Based on the Oxford Happiness Questionnaire's standards for happiness, the estimated average score for someone in a culture like the United States' would be a solid 4, with a standard deviation of up to .5. According to the 2020 World

Happiness Report, the United States average happiness level on a 1 to 10 scale is 6.9396 (SE = .0473) (Helliwell, Huang, Wang, & Norton, 2020). This statistic, when converted to a 6 point scale to compare to the OHQ is 4.1638 (SE = .0284).

fig. 1

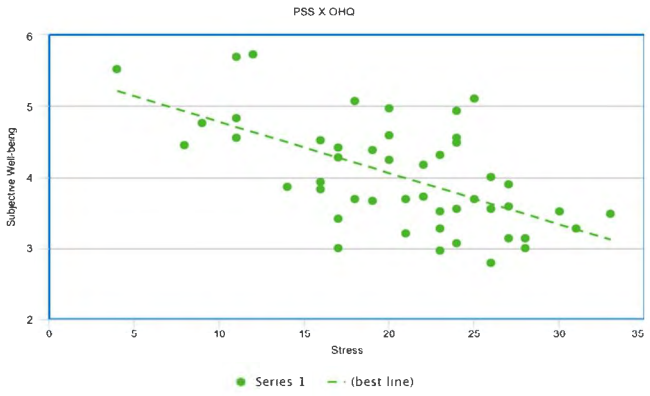


fig. 2

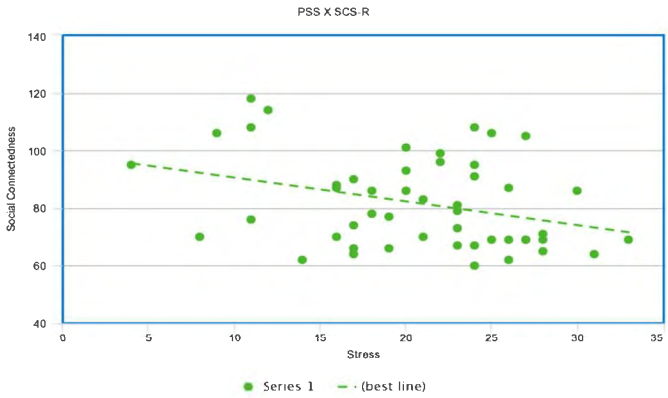
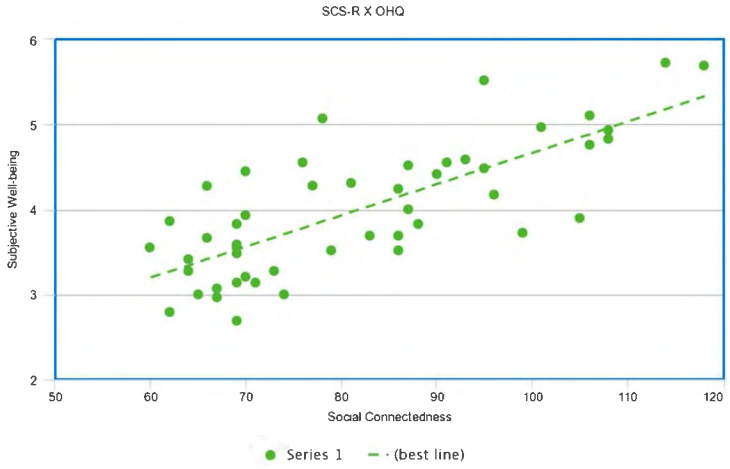


fig. 3



Discussion

Principal findings

The results of the Pearson Correlation Coefficient test supports the first hypothesis that perceived stress and social connectedness both have a significant relationship with subjective well-being. This supports the first hypothesis. It also suggests that while this sample of athletes

possesses a great amount of stress, they also possess a large amount of social connectedness. In addition to this, results for the OHQ suggest that most athletes in this sample possess a subjective well-being level which is average. This supports the second hypothesis. Since levels of stress and social connectedness were high and subjective well-being was average, it is a plausible prediction that each factor prevented the other from causing a significant increase or decrease in happiness that would deviate from the average. However, it is notable that between the stress-SWB and the social-connectedness-SWB relationships, the latter relationship had a much greater correlation than the former, with an effect size of 34.44% and 56.82%, respectively. In regards to the debate of which factor is greater in influencing SWB, this would suggest that social-connectedness outweighs perceived stress.

Within the context of improving subjective well-being in college athletes and college students, colleges could place promoting social-connectedness, over general stress management. This would promote SWB and also in itself act as a form of stress management. If these findings can be replicated in other college athlete populations, therefore increasing generalizability, then this promotion of social-connectedness would be applicable to said populations. Additionally, these findings can have practical implications for regular college students who are dealing with severe stress, showing that this can be counteracted by engaging in social connections. In seeking to improve the well-being of students, college campuses should focus more on encouraging students to engage socially, rather than only promoting stress management techniques. For athletes, coaches should encourage their teams to view each other members as a family or cohesive social group. Doing so could potentially increase the already present levels of social-connectedness and subjective well-being. Finally, it must be noted there is also the possibility

that other individual factors influenced levels of subjective well-being, as is also the case with depression.

Limitations

The survey used to collect data for this study was dispersed among a convenience sample of college students at a single private college. Therefore, the results relate specifically to the athlete population of the college campus in question. Because of this, the results cannot be generalized to the national population of college athletes. This limitation may be combated by similar studies that can be carried out at other colleges. Additionally this study was cross-sectional in design and therefore only provides data on these athletes perceived stress, social connectedness, and happiness at a single point in time.

Conclusion

While the collected data supports both hypotheses it should be noted this was a small convenience sample. As noted in limitations, similar studies should be carried with larger samples to confirm or deny generalizability of findings. The findings themselves suggest that the effects of factors on subjective well-being interact with one another and moderate its levels. As such, there may also be other factors that must be considered. This has particular implications for studies of depression in athletes, in which more individual factors may come into play rather than only exercise, stress, social connectedness, or self-esteem.

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