

Campus Wellness Program Evaluation: Effectiveness of a Brief Psychoeducation Intervention for Wellness Promotion

James Beauchemin, PhD, LCSW
Boise State University

Michelle Ihmels, PhD
Boise State University

Danya Krueger, MSW
University of North Carolina, Chapel Hill

Christopher McGrath, MS
Long Island University

ABSTRACT

Background: College students are experiencing high levels of stress and compromised well-being, compounded by sedentary lifestyle and risky behaviors. In response to these challenges, college campuses are offering a variety of wellness programming intervention opportunities.

Aim: This research study examined the effectiveness of a brief psychoeducational intervention on perceptions of stress, wellness, mental health, and life satisfaction.

Methods: The study utilized a longitudinal, explanatory mixed methods design, with random assignment. To augment quantitative data, brief, semi-structured interviews were completed with 13 study participants post-intervention.

Results: Results of repeated-measures analysis of variance (RM-ANOVA) demonstrated no significant between-group differences. Intervention group pair-wise comparisons revealed positive trends across time for several outcome variables. Applied Thematic Analysis (ATA) revealed four primary themes including: stress-reduction benefits of relaxation techniques, improved knowledge of health impacts of alcohol, increased intentionality regarding nutrition habits, and need for increased accessibility of wellness programming.

Conclusions: This study provides insight into the strengths and limitations of brief psychoeducation interventions in facilitating lifestyle change among college students. Implications for campus wellness programming are discussed.

Submitted 7 September 2023; accepted 2 February 2024

Keywords: wellness, psychoeducation, college students, holistic



BACKGROUND

Research demonstrates that college students continue to experience significant mental health and wellness challenges (Gorman et al., 2021), and an increasing number of students are seeking help (Lipson et al., 2022). Many college students experience compromised wellness due to sedentary behavior such as sitting in classrooms, studying, and video gaming, coupled with engaging in risky health behaviors such as tobacco and alcohol use, poor nutrition, and risky sexual behaviors (Birmingham et al., 2023; Firkey et al., 2022). Studies have demonstrated a significant decrease in physical activity during the transition from adolescence into adulthood (Winpenney et al., 2020), and students are at risk for making poor dietary choices that can result in decreased academic or physical performance and cause significant health problems (Abraham et al., 2018). These unhealthy lifestyle trends and resulting outcomes can be exacerbated by stress, which can decrease students' levels of subjective well-being and compromise academic performance (Karaman et al., 2019). Lack of healthy coping strategies may result in unhealthy behaviors in college students, including alcohol abuse, thereby perpetuating a cycle of compromised health and well-being. These trends are particularly concerning when considering that many lifestyle habits are formed during this transitional period in life and may persist into adulthood.

In response to these health and wellness-related challenges, many colleges and universities have implemented campus wellness centers and wellness programming, offering services designed to provide education and support related to lifestyle, health, and wellness-enhancing behaviors. Programs and services designed to enhance the well-being of students, faculty, and staff have become a priority at many institutions, indicating an increased awareness of the challenges experienced by this population (Travia et al., 2022). However, little research has examined the effectiveness of specific programming, content, and delivery methods of college wellness services.

Psychoeducation is a common approach to facilitation of wellness-related change among college student populations, and can be conceptualized as a systematic, structured approach to providing didactic information on specific challenges, etiology, progression, consequences, prognosis, treatment, and alternatives (Srivastava & Panday, 2016). Psychoeducational interventions have been utilized in a variety of settings as primary or adjunctive treatment, and in prevention-focused programming (Moreno-Peral et al., 2020), reflecting a paradigm shift to a more holistic and competence-based approach that stresses health, collaboration, coping, and empowerment (Dixon, 2001). For example, psychoeducation interventions have demonstrated effectiveness in reducing stress (Van Daele et al., 2012) and in improving physical activity levels and dietary habits (Aldcroft et al., 2011). While there is evidence supporting both in-person and online psychoeducation interventions (Taylor-Rodgers & Batterham, 2014), findings related to improving help-seeking attitudes or intentions are inconclusive (Han et al., 2018; Taylor-Rodgers & Batterham, 2014).

Existing wellness-related challenges faced by college students, as well as the need for examination of the effectiveness of campus wellness interventions, particularly those provided using a psychoeducation approach, guided the current research study. The purpose of this research study was to examine the effectiveness of a brief psychoeducation intervention approach on perceptions of stress, wellness, life satisfaction, and mental health. Study hypotheses were:

1. Participation in four brief (60 minute) psychoeducational interventions will result in improved perceptions of stress, wellness, life satisfaction, and mental health among undergraduate college students.
2. Intervention participation will demonstrate significant improvement among treatment group members as compared to a no-treatment control group.

METHODS

Study Design

This study utilized a longitudinal, explanatory mixed methods design, with random assignment to the control or treatment group. Quantitative data was collected pre-and-post-intervention and at a 3-month follow-up. Qualitative semi-structured interviews were conducted after intervention completion to augment quantitative findings and illuminate student experiences. A brief survey was administered via email to all university faculty and staff who have direct interactions with the student population to gain information about faculty and staff awareness and understanding of the student wellness programming.

Participants

Upon Institutional Review Board (IRB) approval, forty-four undergraduate students were recruited from a large Western university. An attrition analysis revealed no significant differences across all baseline variables between those who completed the study and those who dropped out, nor was there any significant between-group differences for the intervention and control groups. In addition, thirteen ($n = 13$) intervention group members participated in semi-structured post-intervention qualitative interviews. Finally, three hundred and ninety-five ($N = 395$) staff and faculty members were recruited for a brief online survey related to their awareness and understanding of campus wellness programming.

Intervention

Participants in the intervention group attended four, 60 minute, predetermined educational seminars facilitated by wellness program staff. The seminars focused on dimensions of wellness including physical activity/exercise, nutrition, substance use, and stress management/mental health. Topics were chosen based on literature indicating the prevalence of challenges in these areas (Abraham et al., 2018; Karaman et al., 2019), and were designed to be representative of the primary educational services that the campus wellness center provides. Each module included information about the impacts of these components on overall wellness, as well as practical strategies to improve health and well-being. The seminars were offered at multiple times within the study timeframe to provide flexibility and increase participation.

Measures

Perceived Stress Scale 4 (PSS-4)

The PSS-4 (Cohen, et al., 1983) is a four-item (0 = *never*, 4 = *very often*) psychological instrument designed to assess perceptions of stress. The PSS-4 has demonstrated substantial validity and internal and test-retest reliability across both clinical and non-clinical populations (Lee, 2012). Moreover, the PSS-4 has exhibited strong internal consistency reliability ($> .70$) across populations and languages (Ramirez & Hernandez, 2007).

Perceived Wellness Survey (PWS)

The PWS (Adams et al., 1998) is a multidimensional measure of perceived wellness perceptions across physical, spiritual, psychological, social, emotional, and intellectual dimensions. Each dimension is represented by 6 Likert scale items ranging from 1 to 6 with higher scores indicating greater wellness. The PWS has demonstrated strong factorial and construct validity, as well as internal consistency reliability ($\alpha = .91$).

Patient Health Questionnaire-4 (PHQ-4)

The PHQ-4 is a 4-item inventory representing two items of the Generalized Anxiety Disorder-7 scale (GAD-7) and two items from the Patient Health Questionnaire-8 (PHQ-8), two valid and reliable measures of mental health. The PHQ-4 is designed to be a brief measure specific to depression and anxiety where higher scores indicate heightened levels of distress. The PHQ-4 demonstrates adequate internal reliability, construct validity, and factorial validity (Kroenke, et al., 2009).

Satisfaction with Life Scale (SWLS)

The SWLS is a 5-item measure designed to assess an individual's satisfaction with their life as a whole. The SWLS utilizes a 7-point Likert scale with possible aggregate scores ranging from 5 to 35. The scale has shown test-retest reliability and has a high internal consistency (Useche & Serge, 2016).

World Health Organization Five Well-Being Index (WHO-5)

The WHO-5 is a five-item self-report measure of mental well-being. It uses a six-point Likert scale in which respondents indicate the frequency of feelings or experiences within the past two weeks, ranging from *at no time* to *all of the time*. The WHO-5 has demonstrated adequate construct validity as a unidimensional scale assessing well-being (Topp et al., 2015).

Analysis

Based on the study design, the primary analysis included a repeated-measures analysis of variance (RM-ANOVA) to assess between-group differences and changes among intervention participants over time. Statistical analyses were performed using IBM SPSS Statistics (Version 24). Post-hoc pairwise comparisons were conducted to assess differences between time points across all outcome variables. Due to the small sample size and low statistical power to detect significant within-group differences, tests of statistical significance as well as measures of effect size were included to measure the magnitude of differences between group means. In addition, qualitative data gathered via semi-structured interviews conducted one to two weeks post-intervention were transcribed and analyzed to identify themes using an Applied Thematic Analysis (ATA; Braun & Clarke, 2006; Guest et al., 2012). Research team members repeatedly reviewed transcriptions to increase familiarization with data, generated a codebook, and identified initial codes. Potential codes were then sorted into candidate content themes and collaboratively reviewed until consensus was reached and

themes were finalized. Consensus validation by peer reviewers was employed in an effort to finalize the specific themes and enhance the credibility of the data (Braun & Clarke, 2006).

RESULTS

The initial sample included: 37 students aged 18, six aged 19, and one aged 20 years; 29 participants identified as female, while 15 identified as male; 32 participants identified as Caucasian/White, three Asian, four Latino/a, one African American, and four indicated “Other”; 27 were in-state students, and 17 were out-of-state students (Table 1). Of the initial sample, 10 students were lost to attrition resulting in $n = 16$ intervention and $n = 18$ control group participants.

Table 1

Sample Characteristics

	Frequency (percent)	Cumulative Percent
Age		
18	37(84)	84
19	6(14)	98
20	1(2)	100
Gender		
Male	15(34)	34
Female	29(66)	100
Race		
African American	1(2)	2
Asian	3(7)	8
Caucasian	32(73)	82
Latino/a	4(9)	92
Other	4(9)	100
In-State Status		
In-State	27(61)	56
Out of State	17(39)	100

Quantitative

RM-ANOVA revealed significant between-group differences for perceived stress, $F(2, 29) = 14.56, p < .05$, demonstrating intervention effectiveness for stress reduction. However, no significant between group differences were identified for any other wellness-related outcome variables. For Repeated Measures Multivariate Analysis of Variance (RM-MANOVA) results see Table 2.

Table 2

Repeated Measures Multivariate Analysis of Variance (RM-MANOVA)

<i>Variable</i>	<i>Df</i>	<i>Value</i>	<i>F</i>	<i>Significance</i>
Perceived Wellness (PWS)	2, 32	.101	1.63	.214
Perceived Stress (PSS)	2, 32	.233	4.56	.019
Mental Health (PHQ)	2, 32	.968	.480	.624
Life Satisfaction (SWLS)	2, 32	.132	2.35	.112
Well-being (WHO)	2, 32	.086	1.41	.259

A follow-up analysis among participants in the intervention group across three time points was conducted. Despite a small sample size ($n = 16$), these analyses yielded important results that may impact future wellness-focused programming. Results of RM-ANOVA demonstrated significant change over time ($p = .006$) with a large effect size ($\eta_p^2 = .638$) for perceived stress (PSS). Pairwise comparisons indicated that although no change was indicated between pre- and post-intervention, significant differences were detected between pre-intervention and three-month follow-up ($p = .002$), as well as between post-intervention and follow-up ($p = .013$). Similarly, changes in mental health (PHQ) were significant ($p = .020$; $\eta_p^2 = .542$), with pairwise comparisons indicating significant difference between post-intervention and follow-up. Although RM-ANOVA results for life satisfaction (SWL) and perceived wellness (PWS) were not significant (SWL $p = .145$; PWS $p = .076$), there were again significant differences between post-intervention and follow-up (SWL $p = .044$; PWS $p = .025$). Conversely, while RM-ANOVA results of the World Health Organization Five Well-Being Index (WHO-5) were not significant, a significant difference was detected between pre and post-intervention ($p = .035$). For complete results of Repeated Measures Analysis of Variance (RM-ANOVA) for the intervention group see Table 3.

Table 3

Repeated Measures Analysis of Variance (RM-ANOVA): Intervention Group

<i>Variable</i>	<i>Df</i>	<i>F</i>	<i>Significance</i>	<i>Partial Eta Sq.</i>
Perceived Wellness (PWS)	2, 14	3.37	.076	.402
Perceived Stress (PSS)	2, 14	.233	.006	.638
Mental Health (PHQ)	2, 14	5.91	.020	.542
Life Satisfaction (SWLS)	2, 14	2.36	.145	.320
Well-being (WHO)	2, 14	2.83	.107	.361

Frequencies were calculated for faculty and staff survey responses on four Likert scale items. In response to a question about familiarity with campus wellness programming, 114 indicated *not familiar*, 150 *somewhat familiar*, 58 *familiar*, and 29 *very familiar*. When asked about perceptions of the wellness programming, six indicated that it was *not beneficial*, 75 *somewhat beneficial*, 127 *beneficial*, while 31 indicated *very beneficial*. Regarding accessibility, eight faculty and staff indicated “*not accessible*”, 56 “*somewhat accessible*”, 86 “*accessible*”, and 23 “*very accessible*”. When asked if they had encouraged students to participate in campus wellness programming, 94 indicated “*yes*” and 258 “*no*”.

Qualitative

Qualitative data was gathered through 13 semi-structured telephone interviews. ATA generated 66 initial codes, revealing four primary themes: (1) stress-reduction benefits of relaxation techniques, (2) improved knowledge of health impacts of alcohol, (3) increased intentionality regarding nutrition habits, and (4) need for increased accessibility of wellness programming.

Stress-Reduction Benefits of Relaxation Techniques

Participants identified that relaxation techniques were particularly beneficial aspects of the intervention. Consistent with the literature illustrating high levels of stress among college students, participants identified stress management as an

important component of their well-being and reported benefits of the strategies introduced during the intervention sessions. For example:

Basically being able to realize that any moment if I'm stressed out to take a deep breath. I mean I already knew that but going through that and going through the moments and everything kinda reminded me I need to do that. And uh also, it reminds me that I can also do better in school if I am relaxed vs not.

I used to be like really bad at managing stress. And I got stressed out like really easily. And I had a lot of physiological effects from getting stressed out and I think that, that has improved because I am not experiencing as much anxiety when trying to like be academically successful.

Improved Knowledge of Health Impacts of Alcohol

Participants identified that information specific to drink size, different kinds of alcohol, and impacts of alcohol consumption contributed to new knowledge:

I pay closer attention to how much alcohol I'm drinking if I am liking pouring it into a cup or someone else is pouring it for me. I tend to be a little more aware yeah of how much alcohol I'm taking.

That meeting in particular I felt like I learned a lot. Like I had no idea that alcohol ruined your blood content. It continues to rise after you have had alcohol. But I really didn't know any of that.

Change in Hydration and Nutrition Habits

Another theme that emerged from the qualitative data related to increased water intake and enhanced awareness of nutrition associated with lifestyle changes according to participants:

With the nutrition I have been eating a lot healthier I have found good substitutes. I have been drinking more water so that's good.

I made some changes to my eating habits. Just trying to be more mindful. I have done that in the past. I realize more that college has dramatically shifted my relationship with eating.

Wellness Modules were Positive and Educational

Overall, participants felt that the wellness programming was beneficial to their understanding of healthy lifestyle choices. They indicated that given the stress of college, more students should have access to wellness programming:

I think that almost every college student should be in these courses. Cause they were super simple and they were not like a long lecture or anything. And they are super helpful, just like basic information that college students don't really get.

I feel more educated on what my mind and my body have in connection to fitness. Every time I went to a session I talked to my roommates and friends about it afterwards. And just kind of told them what I learned and things like that it was pretty cool.

DISCUSSION

This study provides insight into the benefits and limitations of psychoeducational wellness programming offered in a university setting. Because of the unique nature of wellness interventions and services offered across universities, the generalizability of the findings is limited. However, the components targeted in this intervention are common among college-level program efforts to improve the well-being of students and, therefore, may have utility in tailoring programs to meet the specific needs of the college student population.

A significant difference was identified between the intervention and control group for perceptions of stress, indicating intervention effectiveness for reduction of stress. In addition, longitudinal examination of the intervention group revealed some significant changes for wellness-related variables. For example, RM-ANOVA indicated a significant change for mental health (PHQ-4; $p < .05$), and while participant self-reports trended in a positive direction between pre- and post-intervention, a significant increase in scores between post-intervention and follow-up reflected higher reported anxious and depressive symptoms. The positive trends between pre- and post-intervention, as well as the significant negative change when the intervention was removed may demonstrate some short-term wellness-related intervention benefits.

Based on the current findings, utilization of a brief psychoeducational approach was useful in reduction of perceived stress yet did not have a significant impact on participant perceptions of other wellness-related variables. To maximize benefits for college students, alternative approaches to enhancing wellness may be beneficial; for example, individualized coaching sessions may allow for more personalized wellness and lifestyle goal attainment, and the integration of specific coaching approaches (e.g. solution-focused coaching, motivational interviewing) may prove more effective than psychoeducation-only approaches. In addition, to facilitate lasting change, interventions should consider dose effects. The brief nature of the intervention (four, one hour sessions) may have limited effectiveness, particularly with regard to changes in trait wellness. Shorter, more frequent sessions may increase retention of information and increase understanding. Booster sessions after intervention completion may assist in maintenance of wellness-related changes.

Although no quantitative measures were utilized to specifically assess change in alcohol usage or nutrition and diet, qualitative data indicated that these psychoeducation wellness modules were particularly beneficial. Given the potential benefits of stress-reduction and mental health-focused intervention components, coupled with qualitative data related to lifestyle change such as diet and alcohol use, integration of a combination of psychoeducation topics specific to lifestyle, and implementable strategies that can be utilized for immediate relief may be ideal. Depending on available resources, wellness programming with the college student population would ideally offer opportunities beyond

psychoeducation-only interventions for engagement in multiple formats including individualized support to address unique student needs and strategies that may be beneficial in addressing immediate concerns such as stress.

Implementation of wellness-focused offerings may serve as cost-effective programming options for prevention while minimizing some of the negative health and lifestyle impacts often associated with the transition to college life for young adults. In addition to offering a range of wellness programming, increasing utilization and accessibility should be prioritized. The current study findings reflect a limited awareness of wellness programs among faculty and staff, a primary source for potential student referrals. Nearly a third of staff surveyed reported that they were unaware of wellness programming, and only 24% had encouraged students to utilize these services. Increasing awareness and understanding of wellness program offerings among both students and staff is critical. Marketing efforts should be prioritized, barriers to access should be minimized, and referral processes should be easily navigable. For example, ensuring that staff not only understand the utility of wellness programs, but have knowledge of the process in supporting students to access and utilize as well.

Limitations

A number of limitations that may have had a potential impact on outcomes and should be addressed in future study. The small sample size and resulting lack of statistical power limits the ability to draw causal conclusions. Additionally, there are several potential threats to internal validity (e.g., hypothesis guessing, testing bias, maturation) that should be considered. While the intervention group trends are a useful indicator of potential programming benefits over time, they should be interpreted with caution, as there was not a significant difference from the no-treatment control group for many of the outcomes of interest. Finally, universities have variable sizes, missions, resources, and priorities related to student wellness, thus, these findings should be considered within that context and may not be generalizable dependent on these factors.

CONCLUSION

This study provides insight into wellness program offerings and utility for college students. Findings illustrate that a brief (four, 60-minute sessions) psychoeducation intervention model was effective in reducing stress, as well as increasing understanding of lifestyle-related choices such as nutrition and substance use. The focus of the intervention sessions was representative of challenges experienced by many undergraduate college students as illustrated in prior research (VanKim, & Nelson, 2013; Abraham et al., 2018). Thus, given the literature supporting psychoeducation as an effective approach, future studies should examine intervention duration and frequency to better understand intervention dose necessary to facilitate wellness change. Alternative approaches such as individual or group coaching sessions may be beneficial in tailoring lifestyle change to the specific goals and needs of the individual. In addition, the lack of awareness and engagement with the campus wellness programming among faculty and staff highlights a need for marketing efforts to all campus stakeholders.

REFERENCES

- Abraham, S., Noriega, B. R., & Shin, J. Y. (2018). College students eating habits and knowledge of nutritional requirements. *Journal of Nutrition and Human Health*, 2(1), 13-17. <https://doi.org/10.35841/nutrition-human-health.2.1.13-17>
- Adams, T., Bezner, J., Garner, L., & Woodruff, S. (1998). Construct validation of the perceived wellness survey. *American Journal of Health Studies*, 14(4), 212.
- Aldcroft, S. A., Taylor, N. F., Blackstock, F. C., & O'Halloran, P. D. (2011). Psychoeducational rehabilitation for health behavior change in coronary artery disease: a systematic review of controlled trials. *Journal of Cardiopulmonary Rehabilitation and Prevention*, 31(5), 273-281. <https://doi.org/10.1097/HCR.0b013e318220a7c9>
- Birmingham, W. C., Wadsworth, L. L., Lassetter, J. H., Graff, T. C., Lauren, E., & Hung, M. (2023). COVID-19 lockdown: Impact on college students' lives. *Journal of American College Health*, 71(3), 879-893. <https://doi.org/10.1080/07448481.2021.1909041>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24(4), 385-396. <https://doi.org/10.2307/2136404>
- Dixon, L., McFarlane, W. R., Lefley, H., Lucksted, A., Cohen, M., Falloon, I., Mueser, K., Miklowitz, D., Solomon, P., & Sondheim, D. (2001). Evidence-based practices for services to families of people with psychiatric disabilities. *Psychiatric Services (Washington, D.C.)*, 52(7), 903-910. <https://doi.org/10.1176/appi.ps.52.7.903>
- Firkey, M. K., Sheinfil, A. Z., & Woolf-King, S. E. (2022). Substance use, sexual behavior, and general well-being of US college students during the COVID-19 pandemic: A brief report. *Journal of American College Health*, 70(8), 2270-2275. <https://doi.org/10.1080/07448481.2020.1869750>
- Gorman, K.S., Bruns, C., Chin, C., Fitzpatrick, N., Koenig, L., LeViness, P., & Sokolowski, K. (2021). AUCCCD Association for University and College Counseling Center Directors Annual Survey: 2021. <https://www.aucccd.org/assets/2020-21%20Annual%20Survey%20Report%20Public%20Survey.pdf>.
- Guest, G., MacQueen, K.M., & Namey, E.E. (2012). *Applied Thematic Analysis*. Sage. <https://doi.org/10.4135/9781483384436>
- Han, J., Batterham, P. J., Calcar, A. L., Wu, Y., Xue, J., & van Spijker, B. A. (2018). Development and pilot evaluation of an online psychoeducational program for suicide prevention among university students: A randomized controlled trial. *Internet Interventions*, 12, 111-120. <https://doi.org/10.1016/j.invent.2017.11.002>
- Karaman, M. A., Lerma, E., Vela, J. C., & Watson, J. C. (2019). Predictors of academic stress among college students. *Journal of College Counseling*, 22(1), 41-55. <https://doi.org/10.1002/jocc.12113>
- Kroenke, K., Spitzer, R. L., Williams, J. B., & Löwe, B. (2009). An ultra-brief screening scale for anxiety and depression: the PHQ-4. *Psychosomatics*, 50(6), 613-621. [https://doi.org/10.1016/S0033-3182\(09\)70864-3](https://doi.org/10.1016/S0033-3182(09)70864-3)
- Lee, E. H. (2012). Review of the psychometric evidence of the perceived stress scale. *Asian Nursing Research*, 6(4), 121-127. <https://doi.org/10.1016/j.anr.2012.08.004>

- Lipson, S. K., Zhou, S., Abelson, S., Heinze, J., Jirsa, M., Morigney, J., Patterson, A., Singh, M. & Eisenberg, D. (2022). Trends in college student mental health and help-seeking by race/ethnicity: Findings from the national healthy minds study, 2013–2021. *Journal of Affective Disorders*, 306, 138-147. <https://doi.org/10.1016/j.jad.2022.03.038>
- Moreno-Peral, P., Bellón, J. Á., Huibers, M.J.H., Mestre, J. M., García-López, L. J., Taubner, S., Rodriguez-Morejon, A., Bolinski, F., Sales, C.M.D. & Conejo-Ceron, S. (2020). Mediators in psychological and psychoeducational interventions for the prevention of depression and anxiety. A systematic review. *Clinical Psychology Review*, 76, 101813. <https://doi.org/10.1016/j.cpr.2020.101813>
- Ramírez, M. T. G., & Hernández, R. L. (2007). Factor structure of the Perceived Stress Scale (PSS) in a sample from Mexico. *The Spanish Journal of Psychology*, 10(1), 199-206. <https://doi.org/10.1017/S1138741600006466>
- Srivastava, P., & Panday, R. (2016). Psychoeducation an effective tool as treatment modality in mental health. *The International Journal of Indian Psychology*, 4(1), 123-130. <https://doi.org/10.25215/0401.153>
- Taylor-Rodgers, E., & Batterham, P. J. (2014). Evaluation of an online psychoeducation intervention to promote mental health help seeking attitudes and intentions among young adults: randomized controlled trial. *Journal of Affective Disorders*, 168, 65-71. <https://doi.org/10.1016/j.jad.2014.06.047>
- Topp, C. W., Østergaard, S. D., Søndergaard, S., & Bech, P. (2015). The WHO-5 Well-Being Index: a systematic review of the literature. *Psychotherapy and Psychosomatics*, 84(3), 167-176. <https://doi.org/10.1159/000376585>
- Travia, R. M., Larcus, J. G., Andes, S., & Gomes, P. G. (2022). Framing well-being in a college campus setting. *Journal of American College Health*, 70(3), 758-772. <https://doi.org/10.1080/07448481.2020.1763369>
- Useche, S., & Serge, A. (2016). The satisfaction with life scale (SWLS): Psychometric properties and observed scores in university students. *Mental Health*, 14, 34.
- Van Daele, T., Hermans, D., Van Audenhove, C., & Van den Bergh, O. (2012). Stress reduction through psychoeducation: A meta-analytic review. *Health Education & Behavior*, 39(4), 474-485. <https://doi.org/10.1177/1090198111419202>
- VanKim, N. A., & Nelson, T. F. (2013). Vigorous physical activity, mental health, perceived stress, and socializing among college students. *American Journal of Health Promotion*, 28(1), 7-15. <https://doi.org/10.4278/ajhp.111101-QUAN-395>
- Winpenny, E. M., Smith, M., Penney, T., Foubister, C., Guagliano, J. M., Love, R., Astbury, C., van Sluijs, E., & Corder, K. (2020). Changes in physical activity, diet, and body weight across the education and employment transitions of early adulthood: A systematic review and meta-analysis. *Obesity Reviews*, 21(4), e12962. <https://doi.org/10.1111/obr.12962>

Address author correspondence to:

James Beauchemin, PhD, LCSW
jamesbeauchemin@boisestate.edu

Author's Note

The author has no conflicts of interest to disclose.