



The Psychology Of Student Wellness: Relationships, Detractors And Exam Anxiety

By: **Thomas Mueller** and **Gregory Perreault**

Abstract

Recent reports on university student wellness expose a disturbing trend. Students indicate heightened depression and anxiety, with a decrease in healthy lifestyle behaviors. The most significant inhibitors to wellness were related to university activities, in conjunction with low levels of motivation. Melnyk, Hoying, Slevin, and McGovern (2015) conducted baseline studies among health science students in graduate school: one quarter (25.6%) reported symptoms of depression, 4.3% had suicidal ideation, and 22.6% perceived elevated anxiety. Students suffer through a confluence of stressors such as full-time jobs, rigorous college courses, family issues, lack of academic preparedness, and financial issues (Barefoot, 2004). Each stressor can affect overall quality of life, academic performance, student retention, quality of relationships, and health. An increasing proportion of the student population reach out for counseling, many reporting an increasing number of issues and higher severity of mental and emotional repercussions. Understanding the underlying perception of wellness has influenced the delivery of services in university communities (Prince, 2015).

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The Psychology of Student Wellness: Relationships, Detractors and Exam Anxiety

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Recent reports on university student wellness expose a disturbing trend. Students indicate heightened depression and anxiety, with a decrease in healthy lifestyle behaviors. The most significant inhibitors to wellness were related to university activities, in conjunction with low levels of motivation. Melnyk, Hoying, Slevin, and McGovern (2015) conducted baseline studies among health science students in graduate school: one quarter (25.6%) reported symptoms of depression, 4.3% had suicidal ideation, and 22.6% perceived elevated anxiety.

Students suffer through a confluence of stressors such as full-time jobs, rigorous college courses, family issues, lack of academic preparedness, and financial issues (Barefoot, 2004). Each stressor can affect overall quality of life, academic performance, student retention, quality of relationships, and health. An increasing proportion of the student population reach out for counseling, many reporting an increasing number of issues and higher severity of mental and emotional repercussions. Understanding the underlying perception of wellness has influenced the delivery of services in university communities (Prince, 2015).

Exploring the affective and cognitive predictors of wellness provides a deeper understanding of psychological, physical, sexual, and socio-cultural factors. Bingham (2015) suggested that to assure well-being, contemporary university counseling must incorporate foundational theories and underlying principles, a protracted educational process, ethical standards and a culture of service. To be successful in embracing student wellness, it is necessary to assess the socio-psycho state of the student population. University counselors, housing administrators, building directors, and residential curriculum developers can benefit from a greater understanding of the complexities within the student wellness construct.

To better understand the psychological dimensions that predict student perception of wellness, this study contributes to wellness study literature with a new measure, the Student Wellness Motivation Scale. In-depth focus groups leading to survey development and quantitative data is a useful approach for understanding the complexities and intricacies of student health decisions (Boyce & Neale, 2006). A deeper understanding of the student wellness experience will support higher education administrators in building a positive culture. Supporting wellness results in an environment where students perform better, have fulfilling lives, reduce anxiety, lessen stress, thereby creating a higher overall satisfaction.

Literature Review

Perception of wellness has been defined through a variety of measures and models. Wellness was initially scrutinized through successful behavioral attributes, such as interpersonal relationships. The psychological dimensions were labeled perception of

belonging and purpose, satisfaction of existence, and control over fate (Cowen, 1994). Benjamin and Looby (1998) later proposed six dimensions of wellness, that of the social, occupational, spiritual, mental, emotional and physical. The researchers concluded that a balance of personal and spiritual connection within each of the dimensions was necessary of peak wellness.

Diener, Suh, Lucas, and Smith (1999) examined early theory related to the psychological factors of wellness and found it related to life satisfaction, pleasant affect, and unpleasant affect. Compton (2001) suggested that a wellness model can be comprised of measures for personal growth, subjective wellness and style of religiosity tied to centeredness. There is also an indication that wellness was comprised of perception of positive outcomes to circumstances of life events, sometimes referred to as dispositional optimism. Positive perception of wellness was identified through six dimensions in a study conducted by Snyder et al. (2002). The scale was comprised for measures of personal growth, life purpose, autonomy, control of environment, self-acceptance and positive relationships.

One area of research developed a psychological construct related to wellness. Myers and Sweeney (2005) formulated a wellness measure to represent the “Indivisible Self.” The authors factored the 17 dimensions of the Wellness Evaluation of Lifestyle scale, then identified five second-order factors described as Creative, Coping, Physical, Essential and Social. The scale was representative of strength-based wellness in that healthy behaviors reflect specific choice in lifestyle decisions. Gropp, Geldenhuys and Visser (2007) suggested that wellness was identified through the domains in life—such as spirituality, satisfaction and happiness—and perception of self. Psychology remained an important dimension in wellness while life circumstance related to the earlier measure of life satisfaction.

Magano (2016) continued the explication of wellness in a study with juvenile offenders. He suggested the attainment of wellness is associated with interdependence and harmony in society. Well-being was initially measured to incorporate modest aspirations associated with happiness. Another study focused on adolescents indicated wellness was perceived through lack of illness, healthy living, nutritious foods, exercise, and self-care (Ahanonu & Jooste, 2016). An affective component in this model was related to spirituality.

Earlier research studies have been conducted specific to student wellness. Adams, Bezner and Steinhardt (1997) found that the affective nature of wellness was unidimensional and inter-related throughout the scale, linking positive emotions and perceived wellness. This indicated a psychological well-being, quality of life, and a holistic sense of wellness. The Perceived Wellness Survey (PWS)—the precursor to the Perceived Wellness Model—was tested and validated using a mixed respondent group that included undergraduate students (Adams et al., 1997). The PWS was the precursor to the Perceived Wellness Model. The PWS scale factored into the physical, spiritual, intellectual, psychological, social, and emotional. Subscale measures indicated a high alpha for internal consistency ($\alpha = .88$ to $.93$). Harari, Waehler and Rogers (2005) determined that the PWS was psychometrically sound and that it produced results like other psychometric mental health measures. A revised 33-item scale explained enough variance in depression and anxiety, as related to other scales that were standardized for comparison. The researchers collected two university samples to explore the psychometrics of the Perceived Wellness Survey (PWS) to explore student balance of multiple life activities as part of well-being.

However, the researchers found that the PWS did not require subscales. This refuted earlier analysis by Adams, Bezner, and Steinhardt (1997), where the scale remained multidimensional.

Dolan and Anderson (2015) suggested PWS collected the factor of spiritual wellness. The authors conducted an experiment with 29 graduate students. Fifteen students were assigned to an eight-week mindfulness stress reduction program, while 14 were assigned to a control group. The meditation group showed increased spiritual coping skills and a decrease in self-blaming as a coping mechanism. Regression analysis from 155 undergraduate students indicated a relationship between long- and short-term psychological well-being (Hermon & Hazler, 1999). The dimensions most pertinent were work identity, friendships, and the discipline to self-regulate. External factors and group relationships complete that wellness model. Granello (1999) reported a significant relationship between the size of social networks and perceived social support. Once again, the factor of happiness was identified as essential to perceived wellness.

Hermon and Davis (2004) explored perceptions among traditional and non-traditional university students. The two groups, most differentiated by age, indicated a significant difference in measures of self-care, sense of control, levels of exercise and realism of beliefs. The research indicated traditional students search for identity through random exploration, in turn finding their preferences. Non-traditional students exercised less but engaged in a higher level of self-care. Non-traditional students were found to be in a process of re-evaluation, finding personal fulfillment in higher education, satisfaction in the workplace and through family relationships. Across gender, non-traditional females were more highly engaged in self-care, than were traditional aged males. Milroy, Orsini, D'Abundo, and Sidman (2013) concluded that perceived wellness was higher for non-traditional students enrolled in online and hybrid courses, rather than in face-to-face classroom learning.

Undergraduate college students often face stressors specific to their extracurricular activities. For example, student athletes often feel that the “dual nature of being both a student and an athlete” are in conflict (Lightfoot, 2014, p. 34). They also often feel like they are combating stereotypes associated with being athletes that they are “dumb jocks” and “over their head in an academic setting” (p. 35). Lightfoot suggests a “Ten Commandments” for college students that includes a focus on class attendance, proper nutrition, adequate sleep, time management and making use of “to-do” lists (p. 32).

Howell and Buro (2015) surveyed 478 undergraduate students and factored ten measures of human values to represent flourishing, positive feelings and negative feelings. This study documented the distinction between eudemonic (happiness and personal welfare) and hedonic (pleasant or unpleasant sensation). Self-transcendence and conservation values were predictors wellness behavior as related to psychometric properties of the scale.

An emerging dimension of student wellness includes perception of sexuality and related behaviors. Daugherty et al. (2017) incorporated the dimension of sexual awareness in a recent study utilizing 216 college students. Healthy sexual engagement was valued, memorable, and a significant contributor to mental health and the psychosocial interaction within overall wellness. The practice of mindfulness was also tested as a precursor to elevated wellness perceptions.

Today's university life requires a balance between work, school and life activities. Various models, definitions, and sample groups indicate wellness is in most cases multi-dimensional, a complex system of cross function and balance. When imbalance occurs, student retention can be affected. Students who achieve a higher state of wellness are most likely to continue academics, earn higher grades, and produce better career results (Botha, 2012).

With this in mind, the present study seeks to address the following questions:

RQ1: What are the psychological predictors of university student wellness?

RQ2: Which variables predict perception of wellness during exam periods?

Methodology

In order to address these questions, the methodology followed the approach of Soh, Reid and King (2009), who used qualitative responses to build a quantitative model representing the construct “trust.” For this study, a focus group was assembled, comprised of 24 students in a general education health science class. Scripting was designed to prompt a targeted discussion related to the student’s opinions on their current state of wellness. Predominant themes in the wellness experience were recorded as insights and later operationalized into ten distinct statements.

The ten themed statements comprised the Student Wellness Motivation Scale. Statements were measured through a 7-point Likert scale response set to 1 as “strongly disagree” and to 7 as “strongly agree.” Descriptive survey items included age, gender, source of university funding, GPA, classification (i.e. freshman, sophomore), urban or rural home setting, ethnic heritage, and number of hours per week engaged in non-academic activities. Data was collected through an electronic survey questionnaire, which included informed consent language that met requirements for Institutional Review Board (IRB) accreditation. Respondents were predominantly former campus housing residents, now living off campus at a southeastern state university. After removing incomplete cases, 208 useable responses were generated.

Both exploratory (EFA) and confirmatory (CFA) factor analysis were used to develop the student wellness dimensional model, using the methodology developed by Gerbing and Anderson (1988). The proposed model was confirmed through a split-half method. One half of the randomized data was used to perform EFA while the other half of the data was used for CFA. After acceptable reliability was confirmed, Student Wellness Scale items were collapsed to serve as a dependent variable for ANOVA testing among categorical demographic variables. Correlation analysis tested the ten scale variables for significant relationships.

University exams present a crucial period. Exams play a “key role in assessing the learning of college students” (Thomas & Thomas, 2017, p. 7). Instructors consider exams necessary as preparation for the kinds of routine assessments employees can expect in work-based settings (Deanley et al., 2013). In those settings, employers may need to differentiate between employees who will “succeed and those who might struggle in a particular job” (Thomas & Thomas, 2017, p. 22). Furthermore, exams affect what Weiner and Potepan (1970) refer to as an “achievement orientation” in that two motives are at stake: the opportunity for success and the “motive to avoid the threat of failure” (p.144). Weiner and Potepan (1970) note that as the date of an exam crawls closer student fears increase, fears that at times can make the difference between “excelling and failing students” (p. 150). To better understand exam fatigue, the exam variable was tested as dependent variable in linear regression analysis, with the nine remaining measures in the wellness scale used as independent predictor variables.

Results

Wellness survey data was skewed regarding gender (83% female, 17% male). Predominant ages were 20 (24%), 21 (23%) and those over 24 (20%). Most were either junior (39%) or senior (41%) classification at university. Regarding financial status, 37% indicated that their

tuition was family funded. Most (81%) resided in off-campus housing. Forty-four (44) percent originated from an urban background, while 56% came from a rural background.

Fifty-nine (59) percent of students matriculated at four-year university, while 41% transferred from another institution. There was an inverse pattern in out-of-classroom activities. The more hours committed, the fewer students who participated. The largest group participated in less than one hour per week (24%) followed by 21% at 1-2 hours, 18% at 3-4 hours, 10% of 5-6 hours, and 11% at more than six hours. The survey group was 92% Non-Hispanic White or Euro-American.

The 10 statement Student Wellness Motivation Scale (Table 1) was tested for associations using correlation analysis. Results of the Pearson correlation indicated that increased stress held a significant positive association with status of relationships ($r = .26, p < .001$), financial issues ($r = .30, p < .001$) and exams ($r = .28, p < .001$).

Table 1. Student Wellness Motivation Scale

	Mean
When I am in a good state of wellness it makes me feel appealing.	6.10
When stress increases, wellness suffers.	5.72
Working outside of school negatively affects my wellness.	3.35
In order to achieve wellness, I must have relaxation and rest.	6.10
My wellness has suffered when peer pressure affected my decisions.	4.00
When my relationships are going well, it enhances my overall wellness.	6.33
When I have positive emotions, my wellness increases.	6.41
My financial situation affects overall wellness.	5.64
If I don't listen to my body my wellness will suffer.	6.02
Midterm exams and final exams decrease my overall feeling of wellness.	5.35

Note: Scale anchored on 7-point measure strongly disagree (1) to strongly agree (7). The variable "listen to my body" was confounded in factoring and was not included in the structural model.

Exploratory factor analysis with Varimax rotation indicated three clusters within the 10-item scale, using the first split half dataset, with a cut off with Eigen values greater than one (Table 2). The three-factor solution explained 50.32% of the variance. The KMO (Kaiser-Meyer-Olkin) measure for sampling adequacy tested at .68, above the acceptable limit of .6. The Barlett's test of sphericity held statistical significance. The clusters were named to indicate latent themes and were identified as "Recharge" (3 items, Eigen value 2.01) "Academic Detractors" (4 items, Eigen value 1.77) and "Tough Tests" (2 items, Eigen value 1.26).

Table 2. Factor analysis for Student Motivation of Wellness

	<i>Recharge</i>	<i>Academic Detractors</i>	<i>Tough Tests</i>
Relaxation	0.73		
Relationships	0.74		
Emotions	0.77		
Stress		0.53	
Work effect		0.58	
Peer pressure		0.66	
Financial		0.49	
Appeal			0.83
Exams			0.62

The second split half dataset was utilized to test Confirmatory Factor Analysis based on the 3-factor EFA solution (Figure 1). Sufficient reliability existed within the clusters while discriminant validity was evident among the clusters. Results indicated a marginal but acceptable fit $\chi^2 = 332.26$, $df = 117$, $p < .001$. CMIN/DF = 2.86, CFI = .80, Root Mean Square Error of Approximation (RMSEA) = .10.

Results of the multiple linear regression indicated that there was a collective significant effect from stress ($t = 2.04$, $p = .04$), effects of working ($t = 2.47$, $p = .01$), peer pressure ($t = 3.16$, $p = .002$) and financial issues ($t = 2.09$, $p = .04$) on the student exam experience ($F(9, 199) = 4.87$, $p < .001$, $R^2 = .18$).

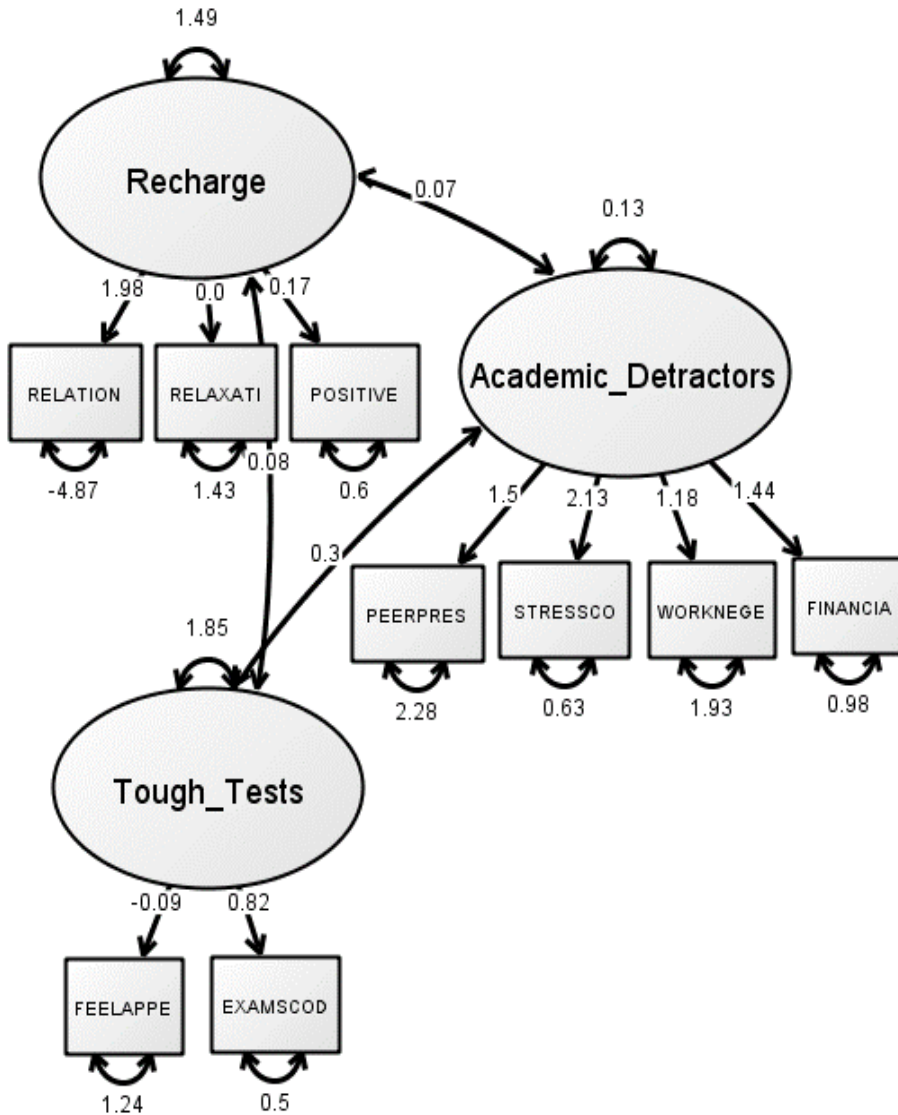
The wellness scale was collapsed into a grand mean variable, which served as the dependent variable for differentiation of means testing among categorical groups. One-way ANOVA indicated age, source of university funding, GPA, classification, urban or rural home setting, and number of hours per week engaged in non-academic activities were not significant. There was a statistically significant difference among gender [$F(1, 204) = 8.44$, $p = .004$].

Discussion

Mental health is essential if students are to function in a challenging environment (Winterrowd, Priniski, Achter, & Abhold, 2016). Positive shifts in mental health and social function are key indicators of success. Student satisfaction is best understood through ongoing measurement. This study presents new tools and assessment that colleges and universities can utilize to assess student motivations related to holistic wellness.

Wellness measures and a satisfaction-based approach to counseling builds on wellness model theory. The “Indivisible Self” model proposed by Myers and Sweeney (2005) captured Creative, Coping, Physical, Essential and Social. The physical dimension in “Recharge” and the social implications of wellness within the “Academic Detractors” factor. The Benjamin and Looby (1998) model captured mental and emotional items, aspects that are distributed within this model through positive attitude, peer pressure, stress and the need to feel appealing. When

Figure 1. 3-factor psychological model for student wellness



Adams et al. (1997) examined the Perceived Wellness Survey, dimensions identified were physical, intellectual, psychological, social, and emotional. The Student Wellness Motivation Scale indicates similar results in the cluster of physical attributes in “Recharge” and the cluster capturing the psycho-socio-emotion component within both Detractors and Exam factors. However, Harari et al. (2005) suggested the PWS did not require subscales. This study indicates the items factor and subscales test as significant.

There is a direct association between the Ahanonu and Jooste (2016) study and this study’s proposed model. Ahanonu and Joost presented a factor that collected a physical component through lack of illness and items reflecting healthy living, nutritious foods, exercise, and self-

care, which directly relate to this model's "Recharge." Several early scales captured happiness, pleasant or non-pleasant perceptions (Gropp et al., 2007), (Magano, 2016). The progression of research indicates these constructs are now identified within more complicated affective and cognitive processing.

In regards to RQ 1, this study was addressed through identifying factors within the psychological process in self-perception of wellness. The authors found that relationships and positive emotions are most strongly associated with each other in student wellness—in other words, negative or positive relationships will have a direct effect on state of emotion. Wellness, for the students in this case, is a state of well-being, where there is a perceived component of external appeal; self-awareness is necessary to prompt rest, relaxation and positive emotions; when emotions are positive, relationships improve, which enhances overall wellness.

RQ 2 was addressed through associations among variables in correlation testing and linear regression modeling. The authors found that, in this model, exam anxiety loaded into the least powerful factor. Nevertheless, university examinations are preceded by increased stress, complicated through external work commitments and influenced by peer pressure, perhaps related to study time vs. social activities. Exams hold a significant relationship to financial issues and state of relationships.

This study reveals the complex existence of students approaching and engaging midterm and final exams. Higher education administrators might consider how to best support students in the critical exam process, where external jobs needed to quell financial issues compete for time, and peer pressure prompts stress and cognitive dissonance. Per this study, students who are judicious in allocating time for physical care, proper eating and moderate exercise will hold the highest motivation to achieve wellness. It is the fragile balance of performing well, while retaining resilience so that self-appeal does not transition to self-loathing. The amount of proper sleep and rest can either positively or negatively affect stress and illness.

University administrators, counselors and housing managers can employ the Student Wellness Motivation Scale to test and analyze unique and heterogeneous populations. Rest and relaxation, human perception of issues, and self-care during exam periods should be scrutinized through scale responses and statistical testing. Organizational results will raise awareness of issues and prompt discussions on the progression of physical health, to emotional stability, to state of relationships, to holistic wellness. Personal wellness is self-defined, but it serves the student well when university officials demonstrate care and concern for self-actualized wellness.

In conclusion, all of this together indicates the degree to which out-of-class activities have repercussions for in-class activities. Students' out-of-class experience in relationships, sleep, physical activity and personal happiness are material to their class performance and their self-perception. Often instructors strive to streamline class materials, update examples and the like, yet what might be more important to improving exam performance might be talking a student through financial issues or instances of bullying. This study builds on prior research by indicating the wellness impact from factors like family issues, college courses, or work outside of the university (Barefoot, 2004). Furthermore, the study demonstrates how university counseling would do well to integrate an understanding of psychological, sexual, physical, and socio-cultural factors into their work with students (Bingham, 2015).

This study indicates physical attributes of wellness, directly affect the psychological state of being. The external is operationalized through relationships and social interaction. The quality of the external prompts the internal, which is cognitive through a mental state of self-

esteem and confidence. Universities can refer to the results of this research is helping students comprehend how lifestyle issues are tied, possibly subliminally, to adaptation in attitude.

The progression of serving students, using the weighted factors of this scale in a step-by-step analysis, has the potential to increase student satisfaction and positive word of mouth. Student affairs leaders are encouraged to use the methodology, model and scale to collect data for their own proprietary measures. Many universities collect data that assist in early intervention measures. The ten item Student Wellness Motivation Scale will provide administrators with current data. A custom model can be designed for that specific university and student population.

A future opportunity for university wellness is through smart phone applications. Ng, Dunstone, and Reid (2016) reported more than 97,000 health related apps are on the market, but download rates remain low at 10%, with a high dropout rate of approximately 74%. The authors suggest more study is necessary to better understand app effectiveness if they are to prompt positive health decisions. In this case, a wellness app might be branded as both an input tool and feedback mechanism for motivation and wellness studies. Such research also would also be reflexive of college student experience where smartphone use is nearly ubiquitous.

Limitations

The responses for this study came from students who predominantly resided in off-campus university housing. Future testing of the Student Wellness Motivation Scale would benefit a university population if the survey were targeted specific to students living on-campus in residence halls. It would also be useful to include students who are enrolled in distance education Internet mediated learning. Future research using this methodology might assemble a diverse student audience, representative of social and ethnic status. The survey sample set in this study is racially biased. A representative student sample will be more authentic as part of the wellness measure. Gender was not differentiated to reflect alternate identities. It is recommended future student wellness studies collect data across a diverse array of gender communities.

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