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Aryene C. Delgado

The University Of Akron, aca23@zips.uakron.edu

Douglas Garner


The University Of Akron

Nicole Langhals

The University Of Akron

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Relationship among Motivation, Emotion Regulation, and Psychological Well-being of Sophomore and

Senior Level Baccalaureate Nursing Students

Aryene Delgado, Doug Garner, and Nicole Langhals

The University of Akron

Author Note

Aryene Delgado, Doug Garner, and Nicole Langhals, School of Nursing, The University of Akron. This paper is in partial fulfillment of Honors Students Requirements in Honors College and School of Nursing. May 6, 2016. Sponsor: Chris Heifner Graor, RN, PhD.

Abstract

Nursing education and professional work involve stressful circumstances that may indirectly lead to attrition, which can further contribute to the projected nursing shortage. This study examines the relationships between motivation, emotional regulation, psychological well-being and academic performance in baccalaureate sophomore and senior level nursing students at a Midwest urban university in the United States. The non-experimental, correlational study is guided by the self-determination theory (Deci & Ryan, 2000) and uses online survey data collection and convenience sampling. Motivation, emotional regulation, psychological well-being (burnout; inauthenticity), and academic performance (GPA) are measured respectively with Deci and Ryan's scale, the Emotion Regulation Questionnaire, and the Burnout and Inauthenticity in the Student Role scale. Pearson correlation analysis was used to determine relationships between types of motivation, emotional regulation, psychological well-being, and academic performance. Findings support that students who were extrinsically motivated were more likely to suppress their emotions, experience feelings of inauthenticity, and have lower GPAs. Furthermore, students who regulated their emotions using expressive suppression were also more likely to experience feelings of inauthenticity and have lower GPAs. Intrinsic motivation was positively associated with cognitive reappraisal; however, neither of these two variables was correlated with burnout, inauthenticity, or GPA. There was no significant relationship between pro-social motivation and burnout, inauthenticity, or GPA.

Relationship among Motivation, Emotional Regulation, and Psychological Well-being of Sophomore and Senior Level Nursing Students

It is well established in the literature that nursing is a stressful and emotionally challenging profession because of high demands, rapidly changing circumstances, and dealing with dying patients (Watson, Deary, Thompson, & Li, 2008). While these challenges are typically attributed to the interaction with clients, they may also stem from the work itself, contributing to the epidemic of burnout among nurses (Van der Walt, 2014). Burnout among nurses can be related to the individual's work overload, conflict among employees, and lack of job resources and it can lead to psychological and physical distress for the person, affect their work quality, and have an impact on the company (Van der Walt, 2014). As a result, burnout may lead to low productivity, absenteeism, and many leaving their jobs (Van der Walt, 2014). According to Buerhaus, Auerbach and Staiger (2009), the United States nursing shortage is projected to reach 260,000 registered nurses by the year 2025. Factors associated with the increasing demands for nurses and the subsequent shortages include: retirement of the baby boomers, nurses leaving the profession secondary to stress, and lower enrollment in schools of nursing due to faculty shortages (AACN, 2014). The looming issue of insufficient primary healthcare providers can be traced to similar issues of attrition rates within nursing training programs.

With 169,125 nursing students enrolled in entry-level baccalaureate nursing programs in the United States, nursing faculty are also becoming concerned with burnout as university nursing programs report an average attrition rate of approximately 67% (AACN, 2012). In academia, nursing is a highly competitive and rigorous area of study that presents students with a significant number of demands, including high academic standards and long clinical practices. Such high stakes may be overwhelming for many of the prospective healthcare professionals, resulting in more negative psychological outcomes beyond that of burnout (Watson, Deary, Thompson, & Li, 2008). When combined with poor emotion regulation skills, individuals can start to feel emotionally exhausted and may show physical signs of stress (Van der Walt, 2014). When a person is stressed, the fight-or-flight

response is activated with high levels of cortisol being excreted (Van der Walt, 2014). The negative effects of long term cortisol release include: an increased risk of cardiovascular disease, sleep disturbances, fatigue, and immune compromise (Van der Walt, 2014). This accumulated stress and physical consequences of stress may contribute to individuals dropping out of nursing programs (Watson, Dreary, Thompson, & Li, 2008). Unless the antecedent issue of nursing student attrition is addressed, then the subsequent shortage of experienced and capable nurses is likely to grow. Furthermore, if students are not excelling during their training, this may contribute to later inadequacies in nurses' ability to provide quality health care (Watson, Dreary, Thompson, & Li, 2008). Failure to intervene may put both students and patients at risk.

Because psychological well-being and academic performance are necessary for a future with qualified health care providers, we examined two large bodies of literature that have been linked to these outcomes among nurses: work-related motivation and emotional regulation. Understanding student motivation for enrolling in the nursing program may offer substantive insight into student experiences during the program, as well as the subsequent emotional regulation necessary to be successful. This study aims to reveal the relationships between motivation, emotional regulation, psychological well-being, and academic performance in baccalaureate sophomore and senior level nursing students. Hypotheses are advanced in the Theoretical Framework section of this document and tested during analysis.

Review of Literature

Stress in nursing students is related to burnout and attrition (Tourangeau, Cummings, Cranley, Ferron, & Harvey, 2009). In a Taiwanese meta-analysis, Yin and Yang (2002) found that high workload and stress was the second most frequent reason why nurses leave their jobs. Perceived burnout is due to several factors including individual personality traits and coping strategies (Watson, Dreary, Thompson, & Li, 2008). Within other professional contexts, perceived stress and burnout were found to be related to different types of motivation (Brummelhuis, Hoeven, Bakker, & Peper, 2011).

Motivation

According to Deci and Ryan's self-determination theory (SDT), motivation for completing tasks may be intrinsic, extrinsic, or prosocial (Gagne & Deci, 2005). Intrinsically motivated behavior is rooted in the individual's enjoyment of the task itself. For example, a student reads an article because they find the subject matter interesting or exciting. Past research indicates that intrinsic motivation is linked to positive psychological adjustments and outcomes (Brummelhuis et al., 2011). Intrinsically motivated people are better equipped with coping strategies, meaning they will be able to handle stress in more effective ways (Brummelhuis et al., 2011).

Extrinsically motivated people, those who are motivated by external rewards such as money, deal with stress passively, leading to accumulative stressors becoming present (Brummelhuis et al., 2011). Pro-social individuals are those motivated by altruism and by a willingness to help others. Dill, Erickson, and Diefendorff (2014) studied hospital nurses and found that nurses who are extrinsically or intrinsically motivated have better perceived health, lower burnout, and less chance to leave their job compared to those who are motivated pro-socially. Pro-social motivation is important to consider because this type of motivation is reported in nursing students as the reason they enter into nursing programs; however, it may also contribute to increased likelihood of burnout in nursing students (Newton, Kelly, Kremser, Jolly, & Billet, 2009). Nesje (2014) studied nurses and found that pro-social motivation is important in identifying with the nursing profession but does not necessarily reflect on their personal involvement with the job.

A person's motivation for behavior is important to study because it may affect work outcomes in which intrinsically motivated persons may have higher job performance levels, compared with extrinsically motivated persons (Moran, Diefendorff, Kim, & Liu, 2012). It is generally expected that nurses must be altruistic and loving in the performance of their role. Students begin learning their roles in this 'caring' profession as early as their first clinical experience (Bolton, 2000). However, engaging emotionally with patients and their families can be costly to the nurse and nursing student if they

struggle with emotional regulation. Most of the time, while nurses are expected to empathize with patients, they also have to maintain a professional face at the expense of being perceived as emotionally detached (Bolton, 2000). Because nurses work so hard to regulate their emotions, they are often subjected to an array of negative psychological outcomes (Bolton, 2000).

Emotion Regulation

Reappraisal and suppression are two different types of emotional regulation strategies. Reappraisal is trying to change how you think about something before emotion occurs, and suppression is hiding the emotion. Both are thought to affect one's well-being (English & John, 2013). Although people try to regulate their emotions in order to facilitate social interactions on a regular basis, emotional regulation does not always bring a positive impact on the individual (English & John, 2013). These strategies are also frequently employed to complete academic endeavors (Gross & John, 2003). For example, students experiencing frustration, worry, or other negative emotions, that are brought on by an assignment, must regulate emotions to concentrate on the work at hand (Gross & John, 2003). By taking on a more positive attitude, reappraisers tend to experience more positive emotions. On the other hand, suppressors take action in a later stage of the “emotion-generative process,” and experience more negative emotions therefore, concealing their true feelings and finding themselves being inauthentic (Gross & John, 2003).

Theoretical Framework

Deci & Ryan's SDT (see appendix A) is a mega-theory comprised of six mini-theories explaining motivation-based phenomena (Gagne & Deci, 2005). In general, the mega-SDT describes people's inherent growth tendencies and innate psychological needs as they relate to the performance of work and other duties (Ryan & Deci, 2000). These tendencies and needs are seen as the basis for motivation and personality assimilation (Ryan & Deci, 2000). For the purposes of this study three distinct types of motivation were analyzed: intrinsic, extrinsic, and prosocial motivation. Intrinsic motivation is characterized by doing something out of genuine interest, and because one wants to

achieve a goal, while extrinsic motivation, is characterized by doing something to attain a reward such as good salaries and benefits (Moran, Diefendorff, Kim, & Liu, 2012). Prosocial motivation is based on performing an action with the intention to benefit others (Gagne & Deci, 2005).

The SDT explains that the type of motivation an individual experiences can affect the person behaviorally, cognitively, and affectively (Ryan & Deci, 2000). In this study, we studied intrinsic, extrinsic, and prosocial motivation with outcomes of well-being (burnout; inauthenticity) and academic performance (GPA). The theory suggests that extrinsically motivated people will have a decreased performance when compared to intrinsically motivated individuals (Ryan & Deci, 2000). Based on this theory, we hypothesize that intrinsically motivated nursing students will have a better GPA and less burnout compared to extrinsically motivated nursing students.

The mini-theory of Basic Psychological Needs Theory (BPNT) forms the basis of the SDT (Gagne & Deci, 2005). BPNT describes basic psychological needs and their relationship to well-being. It explains that well-being is based on autonomy, competence, and relatedness (Gagne & Deci, 2005). Competence is defined as the need to be effective in dealing with the environment (Gagne & Deci, 2005). In this study, emotional regulation is one type of competence because persons use emotional regulation skills to effectively manage emotions and the environment. The theory suggests that the degree of competence affects the motivation, which in return, will have an impact on psychological well-being and performance, represented in this study by burnout and grade point average (GPA) (Gagne & Deci, 2005). Therefore, we hypothesize that the more competence or emotionally regulated a person is, the less burnout they will experience and the better their GPA will be. By using the SDT, we expect positive correlations between emotional regulation (competence), motivation (extrinsic and intrinsic), and well-being and GPA (enhanced performance). In summary, the following hypotheses are advanced:

H1: Extrinsic motivation will be positively correlated with burnout.

H2: Extrinsic motivation will be positively correlated with inauthenticity.

H3: Extrinsic motivation will be negatively correlated with academic performance (GPA).

H4: Extrinsic motivation will be positively correlated with expressive suppression (ER).

H5: Intrinsic motivation will be negatively correlated with burnout.

H6: Intrinsic motivation will be negatively correlated with inauthenticity.

H7: Intrinsic motivation will be positively correlated with academic performance.

H8: Intrinsic motivation will be positively correlated with cognitive reappraisal (ER).

H9: Pro-social motivation will be positively correlated with burnout.

H10: Pro-social motivation will be negatively correlated with inauthenticity.

H11: Pro-social motivation will be negatively correlated with academic performance (GPA).

H12: Expressive suppression will be positively correlated with burnout.

H13: Expressive suppression will be positively correlated with inauthenticity.

H14: Expressive suppression will be negatively correlated with academic performance (GPA).

H15: Cognitive reappraisal will be negatively correlated with burnout.

H16: Cognitive reappraisal will be negatively correlated with inauthenticity.

H17: Cognitive reappraisal will be positively correlated academic performance (GPA).

Methods

Design

The design is a non-experimental, correlational study. We measured the sample only one time, making it a cross-sectional study, as well. The investigation used online survey data collected from sophomore and senior level baccalaureate nursing students to examine relationships between self-motivation, emotion regulation, psychological well-being, and academic performance. Participants were not compensated for their time. IRB approval was attained in the fall of 2015, followed by online recruitment and data collection.

Setting and Sample

The setting was in a baccalaureate nursing program at a large urban public university in the

Midwest of the United States. The total number of students at university for 2014 was 25,865. The number of students in school of nursing in 2013 was about 1,000 including undergraduate and graduate. There are about 400 graduate students in the nursing program; the types of nursing programs for graduate students are PhD, CRNA, and DNP programs. The undergraduate students make up about 600 students and the undergraduate programs include traditional baccalaureate (BSN) (468), RN to BSN, accelerated, and LPN to BSN (The University of Akron, 2015).

The population sampled was comprised of sophomore and senior level nursing students enrolled in a baccalaureate nursing program. All participants were required to be over the age of 18 years old and indicated informed consent form prior to beginning the survey. The participants were enrolled as undergraduates in a baccalaureate nursing program. This includes part-time and full-time students. The sample did not include graduate students. No participants were excluded related to gender, ethnicity, or age, as long as they met age inclusion criteria.

Sampling and Data Collection Procedures

In order to recruit participants and construct a convenience sample, a total of three emails were sent to all sophomore and senior level baccalaureate students. These emails informed the population about the project, what the study was measuring, and how long the questionnaire should take to complete. They were informed that participation was voluntary and their participation remained anonymous. Their human subject rights remained protected and if they felt uncomfortable at any point of taking the survey, they could stop taking it. An academic advisor, who works with a college-level office of student success, initiated the distribution of recruitment emails because they have access to the emails of all nursing students. To enhance recruitment efforts and promote internal validity, three emails were sent over a 15-day period. To support recruitment and promote protection of human subject rights, this time frame and online data collection aimed to provide participants enough time to take the questionnaire, reminders to participate, and privacy during data collection. Participation was voluntary and this information was disclosed with the informed consent form prior to each participant

beginning the survey. Informed consent was determined by having the participant read an electronic consent form before taking the questionnaire. If they agreed to the terms they then continued with the questionnaire, with questionnaire submission indicating informed consent. An example of the consent form can be seen in appendix B.

The data for this investigation was collected in the fall of 2015 using an online survey service, such as Qualtrics. To promote interval validity and respect human subject rights, the questionnaire remained short, and the consent form informed the participants how long the survey would take, making it more likely for participants to complete the survey. The use of an online survey allowed individuals to answer honestly because they did not feel pressure from others. The participants were also informed of the importance of this study, how it relates to them, and what the findings may indicate. Because the survey is online, anonymity is protected. Human rights were protected by offering the participants the option to not respond to items, by offering the ability to process forward or backward in the survey, offering the ability to change an answer, and by offering the ability to choose to submit the survey once it is completed. Only the research advisor and co-investigators had access to the data, which was stored in password-protected computers. No identifying information was collected and all findings were reported in aggregate form. Data will be destroyed after 5 years to ensure the safety of the information obtained and in compliance with university institutional review board. An example of the questionnaire can be seen in appendix C.

Measures

Motivation. Motivation was measured based on Deci and Ryan's (2008) work and a modified version of the scale in Moran, Diefendorff, Kim, and Liu's work (2012) (see Appendix C). Extrinsic motivation is motivation driven by external rewards such as salary, benefits, or other's expectations and was measured on an ordinal level with 3 items adopted from Deci and Ryan's (2008) self-determination theory. Using a five-point likert scale, participants were asked to indicate to which degree they agree or disagree with statements, e.g., 1=Strongly Disagree; 2=Somewhat Disagree;

3=Neither Agree Nor Disagree; 4=Somewhat Agree; 5=Strongly Agree. Items are about motivation from rewards or fear of punishment; examples are: “I enrolled in the Nursing program because... as a Nurse, I will get paid well.” Therefore, higher scores corresponded to higher levels of extrinsic motivation. The scores were then summed, measuring extrinsic motivation at the interval level. The scores ranged from 3-15. Cronbach’s alpha for extrinsic motivation was 0.69.

Similarly, intrinsic motivation was measured on an ordinal level with 3 items on a five point likert scale based on Deci and Ryan’s work (2008) (for more information see appendix C). The items measured motivation from interest or enjoyment of the work. For example, participants were asked to what degree they agree or disagree with the following statement: “I enrolled in the Nursing program because... I find the work interesting/enjoyable.” Therefore, higher scores corresponded to higher levels of intrinsic motivation. The scores were then summed, measuring intrinsic motivation at the interval level. The scores ranged from 3-15. Cronbach’s alpha for intrinsic motivation was 0.77.

Pro-social was measured on an ordinal level with 3 items on a five point likert scale based on Deci and Ryan’s work (2008) (for more information see appendix C). Pro-social motivation is related to the desire to benefit others. For example, participants were asked to what degree they agree or disagree with the following statement: “I enrolled in the nursing program because... I care about benefiting others through my work.” Therefore, higher scores corresponded to higher levels of pro-social motivation. The scores were then summed, measuring pro-social motivation at the interval level. The scores ranged from 3-15.

Emotion regulation. Expressive suppression was measured on an ordinal level using 4 items based on the Emotion Regulation Questionnaire (ERQ) adapted from Gross and John (2003). Participants were asked to respond to items on a 5-point likert scale to indicate to what degree they agree or disagree with questions about how often they hide or suppress their emotions (for more information see appendix C). Cronbach’s alpha for expressive suppression was 0.773. Higher scores corresponded to more frequent use of expressive suppression. The scores were then summed,

measuring expressive suppression at the interval level. The total sum ranged from 4-20.

Cognitive reappraisal was measured using 6 items also adapted from Gross and John (2003) study which reported alpha ratings of between 0.75 and 0.82. Cronbach's alpha for cognitive reappraisal was 0.82. Participants were asked to respond to items on a 5-point likert scale to indicate to what degree they agree or disagree with questions about how often they hide or suppress their emotions (for more information see appendix C). Higher scores corresponded to more frequent use of cognitive reappraisal. The scores were then summed, measuring cognitive reappraisal at the interval level. The total sum ranged from 6-30.

Psychological well-being. Psychological well-being was measured on an ordinal level using 12 items based on the Burnout and Inauthenticity in the Student Role scale adapted from Erickson and Ritter (2001). Participants were asked to respond to a 4-point Likert scale (for more information see appendix C). Higher scores equal higher burnout or inauthenticity. The scores were then summed and measured at the interval level. The total sum ranged from 0-32. Academic performance was measured as an interval level measurement of grade-point average (GPA) reported on the survey. This was measured on a 4-point grading scale. The total ranged from 0-4. Cronbach's alpha for burnout was 0.84 and 0.87 for inauthenticity.

Demographic variables include age, gender, level of education, ethnicity, marital status, and grade point average (GPA).

Data Management

Data were coded, cleaned, and assessed for significant associations using Stata 13.0: Data Analysis/Statistics Software. 98 responses were recorded; however, 12 cases were removed prior to analysis due to having 2 or more missing entries. Among the remaining cases, 6 were missing a single response item. These 6 cases were retained by substituting missing values with the corresponding variable means, resulting in a final sample size of $n = 86$. All case removals and mean substitutions were conducted prior to the creation of scale variables and subsequent analyses. Due to

the relatively small sample, the aforementioned correlational hypotheses were assessed using Pearson's bivariate correlation (two-tailed) at $\alpha < 0.10$ level of significance.

Results

The demographic composition of the sample ($N=86$) was 86 percent females to 14 percent males. 90 percent of the sample was White, 4 percent African-American, 2 percent Hispanic, and 4 percent other. 86 percent of the sample was between the ages of 19 and 22 (table 1). 62 percent were in sophomore level and 38 percent were senior nursing students. No significant associations between demographic variables and variables of interest were observed.

Hypotheses Testing

Extrinsic Motivation. Four hypotheses were advanced about the relationship between extrinsic motivation, psychological well being dimensions, and GPA:

H1: Extrinsic motivation will be positively correlated with burnout (PWB).

H2: Extrinsic motivation will be positively correlated with inauthenticity (PWB).

H3: Extrinsic motivation will be negatively correlated with academic performance (GPA).

H4: Extrinsic motivation will be positively correlated with expressive suppression (ER).

Beginning with motivation, we generally expected to encounter two distinct paths, with (a) intrinsic motivation associated with cognitive reappraisal and positive outcomes, and (b) extrinsic motivation associated with expressive suppression and negative outcomes. With the exception of hypothesis 1 about extrinsic motivation and burnout, the first set of hypotheses was generally supported (see Table 2). There were marginally significant relationships between extrinsic motivation and inauthenticity ($r = .32, p < .10$), extrinsic motivation and GPA ($r = -.18, p < .10$), and extrinsic motivation and expressive suppression ($r = .26, p < .10$). These findings suggest that the more students were motivated to become nurses by external rewards or punishment, the more likely they were to have suppress/hide their emotions, experience feelings of inauthenticity, and have lower grade point

averages.

Intrinsic Motivation.

Four hypotheses were advanced about the relationship between intrinsic motivation, psychological well being dimensions, and GPA:

H5: Intrinsic motivation will be negatively correlated with burnout (PWB).

H6: Intrinsic motivation will be negatively correlated with inauthenticity (PWB).

H7: Intrinsic motivation will be positively correlated with academic performance.

H8: Intrinsic motivation will be positively correlated with cognitive reappraisal (ER).

From Table 2, one can see that intrinsic motivation and cognitive reappraisal were marginally and moderately positively correlated ($r = .27, p < .10$), supporting hypothesis 8. However, there were no significant relationships between outcome variables (inauthenticity, burnout, GPA) and intrinsic motivation; therefore hypotheses 5 through 7 were not supported.

Pro-social motivation.

H9: Pro-social motivation will be positively correlated with burnout.

H10: Pro-social motivation will be negatively correlated with inauthenticity.

H11: Pro-social motivation will be negatively correlated with academic performance (GPA).

Hypothesis 9, 10, and 11 were not supported, as there was no significant relationship between pro-social motivation and burnout, inauthenticity, or GPA.

Emotional Regulation.

H12: Expressive suppression (ER) will be positively correlated with burnout (PWB).

H13: Expressive suppression (ER) will be positively correlated with inauthenticity (PWB).

H14: Expressive suppression (ER) will be negatively correlated with academic performance (GPA).

Hypothesis 12 was not supported, as there was no significant relationship between expressive suppression and burnout. Expressive suppression was, however at marginal significance, positively

correlated with inauthenticity ($r = .321, p < .10$) and negatively correlated with GPA ($r = -.295, p < .10$), suggesting that nursing students who suppressed/hide their emotions were more likely to feel inauthentic in the BSN program and have lower GPA's.

Cognitive Reappraisal

H15: Cognitive reappraisal (ER) will be negatively correlated with burnout (PWB).

H16: Cognitive reappraisal (ER) will be negatively correlated with inauthenticity (PWB).

H17: Cognitive reappraisal (ER) will be positively correlated with academic performance (GPA).

Finally, hypotheses 15, 16, and 17 involving cognitive reappraisal and burnout, inauthenticity, and GPA were not supported. These results suggest that cognitive reappraisal may be a neutral emotion regulation strategy, practiced no more frequently among students experiencing negative outcomes than students with positive outcomes.

Discussion

In terms of motivation, intrinsic motivation, which was hypothesized to be correlated with positive outcomes, was not significantly correlated with any outcome variables in the sample of sophomore and senior level nursing students. In contrast, extrinsic motivation was moderately correlated with expressive suppression and negative outcomes in the sample. Cognitive reappraisal, which was hypothesized to be correlated with positive outcomes, was not significantly correlated with any of the outcome variables, including burnout, inauthenticity, and GPA. Expressive suppression was associated with indicators of poor psychological well-being and lower levels of role-performance, as indicated by GPA, which was hypothesized. Thus, it is possible that some of the stressors typically attributed to the occupational roles of nurses are introduced earlier on during the training/education process. In summary, students who were extrinsically motivated were more likely to suppress their emotions, experience feelings of inauthenticity, and have lower GPAs. Students who regulated their emotions using expressive suppression were also more likely to experience feelings of inauthenticity

and have lower GPAs.

In regards to prior research in the two bodies of research about emotion management and motivation, the data revealed mixed results. Past emotion management research indicated that expressive suppression has been associated with poor outcomes (Brummelhuis et al., 2011). This was consistent with our findings. However, past research also found that cognitive reappraisal led to less burnout and positive outcomes (Gross & John, 2003). These findings were not consistent with the findings of this study because cognitive reappraisal was not significantly correlated with any of the outcome variables. Also, previous literature has shown intrinsic motivation correlated with positive outcomes and extrinsic motivation correlated with negative outcomes (Brummelhuis et al., 2011). However, based on this study's results, intrinsic motivation was not significantly correlated with any outcomes variables. Extrinsic motivation did show some correlation with negative outcomes, showing similarity with previous studies. Considering the findings for both extrinsic motivation and expressive suppression, these results indicate a larger question: Is expressive suppression a characteristic of maladaptation due to extrinsic motivation? The purpose of this inquiry was to determine whether the emotion management patterns found among RNs are limited to those in the workplace, or are they detectable at earlier stages, such as the training process. Likewise, does motivation—a theoretically static and antecedent variable—reveal similar patterns?

Deci and Ryan's self-determination theory formed the basis for the construction of the hypotheses. The theory indicated that extrinsically motivated individuals would have a decreased performance when compared to intrinsically motivated individuals (Ryan & Deci, 2000). From the results of this study, the data about extrinsic motivation align with Ryan and Deci's theory, warranting further scientific inquiry in the psychological and professional ramifications of excessive extrinsic motivation. Also, Ryan and Deci's theory is made up of the Basic Psychological Needs Theory explaining that the more competent or emotionally regulated a person is, the less burnout they will experience and the better their GPA will be (Gagne & Deci, 2005). Our findings supported expressive

suppression and outcome results, and future research should focus on examining extrinsic motivation as a causal factor of expressive suppression.

Conclusion

The conclusions that can be drawn from present investigation were limited in several ways. For instance, the small sample restricted the ability to make generalizations about the larger population of nursing students. Additionally, the cross sectional design of the study created limitations to determining causality. Future research should focus on implementing designs and more elaborate models to address these issues. In these regards, longitudinal design and larger samples are necessary to obtain more substantive results. Satisfying these conditions is imperative for researchers who wish to employ complex statistical techniques in the future.

In practical terms, baccalaureate programs might benefit by considering further study of the influence of these factors in nursing education, curriculum planning, and policy decisions. Equipped with a greater understanding of the emotion regulation and motivation that brings students into the nursing program, as well as how these factors may relate to student well being and academic performance, nursing faculty and administration can begin to target related issues. For example, the college of nursing might consider inquiring about applicants' motivation for entering the program, and filtering out students who exhibit high levels of extrinsic motivation. As previously discussed, students reporting higher levels of extrinsic motivation for entering the program were more likely to experience inauthenticity. Both inauthenticity and extrinsic motivation were significantly associated with lower GPAs. Therefore, by filtering out these applicants, students who have greater chances of succeeding in the program will be preferred, enhancing UA's graduation rate from the nursing program, as well as the quality of professionals introduced into the field of nursing. However, before any clear courses of action can be justified, further research must be conducted to specify causal factors leading up to these psychological processes.

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Tables

Table 1

Means and Standard Deviations on Motivation, Emotion Management Strategies, Well-being, and Grade Point Averages in Nursing Students (n=86).

Variable	M	SD	Min	Max
Extrinsic Motivation	8.2	3.1	3	15
Intrinsic Motivation	13.4	1.6	8	15
Expressive Suppression	14.4	4.1	6	21
Cognitive Reappraisal	18.3	3.4	7	25
Inauthenticity	10.7	4.5	6	24
Burnout	19.1	4.8	8	28
GPA	3.6	.32	2.79	4

Table 2

Correlation matrix of motivation, emotion regulation, psychological well-being, and grade point average.

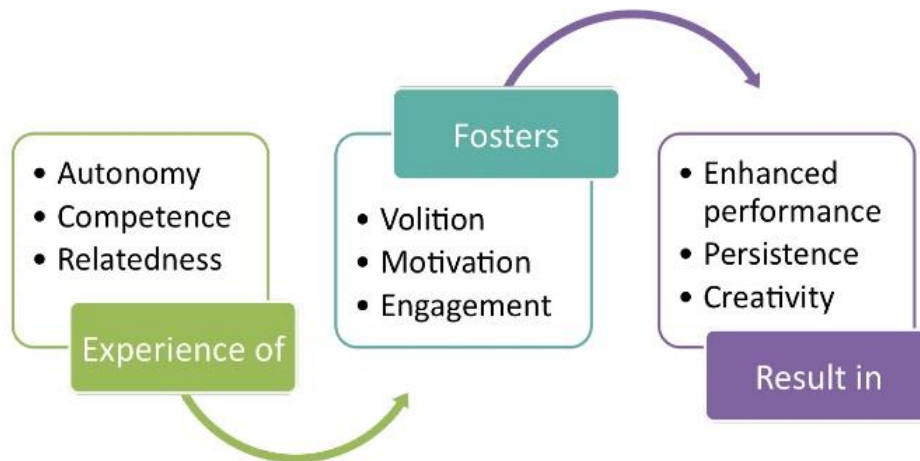
	1	2	3	4	5	6	7
1. Extrinsic Motivation	1						
2. Intrinsic Motivation	-.174	1					
3. Expressive Suppression	.258*	.068	1				
4. Cognitive Reappraisal	.202*	.271*	.273*	1			
5. Inauthenticity	.317*	.011	.321*	-.044	1		
6. Burnout	.083	-.051	.021	-.086	.481*	1	
7. GPA	-.180*	-.072	-.295*	-.064	-.227*	-.031	1

* correlation is significant at the 0.1 level (two-tailed).

Appendix A

Self-Determination Theory (SDT)

(Ryan & Deci, 2000)



Appendix B

Consent Form

Title of Study: Relationship among motivation, emotional regulation, and psychological well being of sophomore and junior level nursing students

Introduction: You are invited to participate in a research project being conducted by Aryene Delgado, Doug Garner, and Nicole Langhals, nursing students in the College of Health Professions, School of Nursing at The University of Akron.

Purpose: The purpose of this project is to study the relationship between motivation, emotional regulation, and psychological well being of sophomore and junior level nursing students.

Procedures: If you volunteer to participate in this study, you will be asked to complete a short, online survey about what motivated you to go to nursing school, as well as how you felt when facing certain experiences. It will take less than 10 minutes to complete the survey. Additionally, you will be asked to give some information about your age, gender, level of education, ethnicity, marital status, and grade point average (GPA). You will not be asked to give any identifying information at any time.

You are eligible to participate in the study if you are enrolled in traditional undergraduate nursing program and at least 18 years old. You are not eligible if you are an accelerated nursing student or a student in the RN/BSN, LPN/RN, or graduate nursing programs. No persons will be excluded based on gender, ethnicity, race, sexual orientation, marital status, or age as long as they are 18 years or older.

Benefits and Risks: You will receive no direct benefit from your participation in this study, but your participation may help us better understand the relationship between motivation, emotional regulation, and psychological well being in undergraduate nursing students. You will complete the survey at your leisure and in a comfortable, secure, and private environment. In case you feel the need to talk with a counselors and health care provider after completing this survey, please contact: (1) The Counseling Center, Simmons Hall 306, Phone: 330-972-7082, Website: <http://www.uakron.edu/counseling/> and/or (2) Student Health Services, Student Recreation and Wellness Center, Suite 260, Phone: 330-

972-7808 Website: <http://www.uakron.edu/healthservices/>

Right to refuse or withdraw: Participation is voluntary. Refusal to participate or withdraw from the study at any time will involve no penalty. Failure to participate in no way affects your academic standing.

Anonymous and Confidential Data Collection: No identifying information will be collected, and your anonymity is further protected by not asking you to sign and return the informed consent form.

Confidentiality of Records: Data are collected with an online survey. The survey is loaded into Qualtrics or Survey Monkey, both electronic survey software programs. You will complete the survey electronically and at your own convenience. Electronic survey completion means that data are automatically entered into a data set. Disconnecting participants from their surveys is also related to protection of human participants. Data may be made available for future research purposes; however, no identifying information would be collected nor distributed during this or any other stage of the research process.

Who to Contact with Questions: If you have any questions about this study, you may contact Aryene Delgado (aca23@zips.uakron.edu), Doug Garner (dg62@zips.uakron.edu), and Nicole Langhals (nel22@zips.uakron.edu), or Christine Heifner Graor, PhD (Advisor) at (330) 972-6422 or graor@uakron.edu. This project has been reviewed and approved by The University of Akron Institutional Review Board. If you have any questions about your rights as a research participant, you may call the IRB at (330) 972-7666.

Acceptance & Signature: I have read the information and voluntarily agree to participate in this study. My completion and submission of this survey will serve as my consent. I may print a copy of this consent statement for future reference.

Now, begin to complete the survey!

Appendix C

Questionnaire

Burnout and Inauthenticity in the Student Role

Adapted from Erickson, R. J. and Ritter, C. (2001). Emotional labor, burnout, and inauthenticity: Does gender matter? *Social Psychology Quarterly* 64,146-163.

Thinking about your experiences in the school of nursing program so far, to what extent have you experienced the following?

0 Not at all

1 A little

2 Somewhat

3 A lot

I feel emotionally drained. (BO)

I feel used up at the end of the day. (BO)

I dread getting up in the morning and having to face another school day. (BO)

The BS/MD program really puts a lot of strain on me (BO)

I feel burned out from the program. (BO)

The BS/MD program puts too much stress on me. (BO)

I feel I work too hard in this program. (BO)

To get through the program, I feel like I have to become mechanical or robot-like. (IA)

During my time in the nursing program, I have become unsure of what my 'real' feelings are. (IA)

I worry that this job is hardening me emotionally. (IA)

I don't feel like I can be myself when interacting with others related to the nursing program. (IA)

I have to fake how I really feel when interacting with others in the nursing program. (IA)

I basically have to become a different person to get through the nursing program. (IA)

“Why are you motivated to become a physician?” (Based on Deci & Ryan’s work and Grant [2008]; modified version of the scale in Moran, C. M., Diefendorff, J. M., Kim, T., & Liu, Z. (2012). A profile approach to self-determination theory motivations at work. *Journal of Vocational Behavior*, 81, 354-363.)

1	2	3	4	5
Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree

Why are you motivated to become a registered nurse?

1. Because other people in my life expect it. (Extrinsic)
2. Because I would get paid well. (Extrinsic)
3. Because others would be let down if I did not become a nurse . (Extrinsic)
4. Because I would feel guilty if I did not. (Introjected)
5. Because I would feel ashamed if I did not. (Introjected)
6. Because I would feel bad about myself if I did not. (Introjected)
7. Because I believe the work is valuable. (Identified)
8. Because the work is important. (Identified)
9. Because I value the work. (Identified)
10. Because I think the work would be interesting. (Intrinsic)
11. Because I think the work would be fun. (Intrinsic)

12. Because I think I would find the work engaging. (Intrinsic)
13. Because I care about benefiting others through my work. (Prosocial)
14. Because I want to help others through my work. (Prosocial)
15. Because I want to have a positive impact on others. (Prosocial)

Emotion Regulation Questionnaire (ERQ) – Gross & John, 2003

Gross, J.J., & John, O.P. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. *Journal of Personality and Social Psychology*, 85, 348-362.

1	2	3	4	5
Strongly Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Strongly Agree

Suppression and Reappraisal Items:

- a. I control my emotions by changing the way I think about the situation I'm in. (reappraisal)
- b. When I am feeling negative emotions, I make sure not to express them. (suppression)
- c. When I want to feel more positive emotion (such as joy or amusement), I change what I'm thinking about. (reappraisal)
- d. I keep my emotions to myself. (suppression)
- e. When I want to feel less negative emotion (such as sadness or anger), I change what I am thinking about. (reappraisal)
- f. When I'm faced with a stressful situation, I make myself think about it in a way that helps me stay calm. (reappraisal)
- g. When I want to feel more positive emotion (such as joy or amusement), I change the way I'm

thinking about the situation. (reappraisal)

h. I control my emotions by not expressing them. (suppression)

i. When I want to feel less negative emotion (such as anger or sadness), I change the way I'm

thinking about the situation. (reappraisal)

j. When I am feeling positive emotions, I am careful not to express them. (suppression)