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

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### Abstract

Nursing education and professional work involve stressful circumstances that may 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 Deci and Ryan's self-determination theory and uses an online survey data collection and convenience sampling. Measures include: motivation, emotional regulation, psychological well-being (burnout; inauthenticity), and academic performance (GPA), and will be measured using Deci and Ryan's scale, the Emotion Regulation Questionnaire, and the Burnout and Inauthenticity in the Student Role scale. Pearson correlation analysis will be used to determine relationships between types of motivation, emotional regulation, psychological well-being, and academic performance.

## 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). This burnout among nurses can be related to the individual's work overload, conflict among employees, and lack of job resources (van der Walt, 2014). This burnout can lead to psychological and physical effects for the person, but also can 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, stress level of nurses drives them to leave the profession, and a lack of nursing school faculty restricts enrollments (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 (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 level of stress can lead individuals to drop out of the program (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 be indicative of 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 range from intrinsic, extrinsic, and prosocial sources (Gagne & Deci, 2005). Intrinsically motivated behavior occurs because the individual enjoys 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 experience extrinsic or intrinsic motivation 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.

The type of motivation people experience 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). The expectation that nurses must be altruistic and loving is all too common. Students begin learning their roles in this 'caring' profession as early as their first clinical experience (Bolton, 2000). However, offering extra emotion and more of themselves to patients and their families turns out to be very costly to the nurse

and nursing student. 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). The 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). For further information on the literature used see appendix A.

### **Theoretical Framework**

Deci & Ryan's self-determination theory (see appendix B) is a mega-theory comprised of six mini-theories explaining motivationally-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 will be 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 will study 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: Intrinsic motivation will be negatively correlated with burnout.

H5: Intrinsic motivation will be negatively correlated with inauthenticity.

H6: Intrinsic motivation will be positively correlated with academic performance.

H7: Expressive suppression will be positively correlated with burnout.

H8: Expressive suppression will be positively correlated with inauthenticity.

H9: Expressive suppression will be negatively correlated with academic performance (GPA).

H10: Cognitive reappraisal will be negatively correlated with burnout.

H11: Cognitive reappraisal will be negatively correlated with inauthenticity.

H12: Cognitive reappraisal will be positively correlated academic performance (GPA).

## **Methods**

### **Design**

The design is a non-experimental, correlational study. We will measure the sample only one time, making it a cross-sectional study, as well. The investigation will use 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 will not be compensated for their time. IRB approval will be attained in the fall of 2015, followed by online recruitment and data collection.

### **Setting and Sample**

The setting is 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 tradition baccalaureate (BSN) (468), RN to BSN,

accelerated, and LPN to BSN (The University of Akron, 2015)

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

### **Sampling and Data Collection Procedures**

In order to recruit participants and construct a convenience sample, a total of three emails will be sent to all sophomore and senior level baccalaureate students. These emails will inform the population about the project, what the study will measure, and how long the questionnaire should take to complete. They will be informed that participation is voluntary and their participation will remain anonymous. Their human subject rights will remain protected and if they feel uncomfortable at any point of taking the survey, they can stop taking it. An academic advisor will work with a college-level office of student success, which will initiate 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 will be sent over a 15 day period. To support recruitment and promote protection of human subject rights, this time frame and online data collection aim to provide participants enough time to take the questionnaire, reminders to participate, and privacy during data collection. Participation is voluntary and this information will be disclosed with the informed consent form prior to each participant beginning the survey. Informed consent will be determined by having the participant read an electronic consent form before taking the questionnaire. If they agree to the terms they will continue with the questionnaire, with questionnaire submission indicating informed consent. An example of the consent form can be seen in appendix C.

The data for this investigation will be collected in the fall of 2015 using an online survey

service, such as Qualtrics or Survey Monkey. To promote interval validity and respect human subject rights, the questionnaire will remain short, and the consent form will inform the participants how long the survey will take, making it more likely for participants to complete the survey. The use of an online survey will allow individuals to answer honestly because they will not feel pressure from others. The participants will also be 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 will be 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 will have access to the data, which will be stored in password-protected computers. No identifying information will be collected and all findings will be 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 D.

## **Measures**

**Motivation.** Motivation will be 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 D). Extrinsic motivation is motivation driven by external rewards such as salary, benefits, or other's expectations and will be 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 will be 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 will equal higher extrinsic motivation. The scores will then be summed which will make extrinsic motivation be measured at the interval level. The scores will range from 3-15. Researchers have reported inter-item reliability

Cronbach alpha rating of .71, suggesting adequate tool reliability.

Similarly, intrinsic motivation will be 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 D). The items are about motivation from interest or enjoyment of the work. For example, participants will be 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 will equal higher intrinsic motivation. The scores will then be summed which will make intrinsic motivation be measured at the interval level. The scores will range from 3-15. Researchers have determined inter-item reliability of alpha rating of 0.72, which is adequate reliability.

Pro-social will be 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 D). Pro-social motivation is related to the desire to benefit others. For example, participants will be 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 will equal higher pro-social motivation. The scores will then be summed which will make pro-social motivation be measured at the interval level. The scores will range from 3-15.

**Emotion regulation.** Expressive suppression will be measured on an ordinal level using 4 items based on the Emotion Regulation Questionnaire (ERQ) adapted from Gross and John (2003). Participants will be 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 D). Researchers reported alpha ratings between 0.68 and 0.76 (Gross and John, 2003). Higher scores will equal higher expressive suppression. The scores will then be summed which will make expressive suppression be measured at the interval level. The total sum will range from 4-20.

Cognitive reappraisal will be measured using 6 items also adapted from Gross and John (2003)

study which reported alpha ratings of between .75 and .82. Participants will be 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 D). Higher scores will equal higher cognitive reappraisal. The scores will then be summed which will make cognitive reappraisal be measured at the interval level. The total sum will range from 6-30.

**Psychological well-being.** Psychological well-being will be 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 will be asked to respond to a 4-point Likert scale (for more information see appendix D). Higher scores will equal higher burnout or inauthenticity. The scores will then be summed and measured at the interval level. The total sum will range from 0-32. Academic performance will be measured by interval level measurement of grade-point average (GPA) reported on the survey. This will be measured on a 4-point grading scale. The total will range from 0-4.

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

### **Data Analysis Plan**

Online data will be imported into SPSS 21, where descriptive statistics will be used to describe the sample and variables, i.e., determine percentages, means, and standard deviations, depending on levels of measure. The analysis to test the hypotheses will be Pearson correlational statistical procedures to determine the relationships between different types of motivation, emotion regulation, and psychological well-being. The level of statistical significance will be set at  $<0.05$ . Specifically, we will be testing the following hypotheses:

H1: Extrinsic motivation will be positively correlated with burnout.

H2: Extrinsic motivation will be negatively correlated with academic performance (GPA).

H3: Intrinsic motivation will be negatively correlated with burnout.

H4: Intrinsic motivation will be positively correlated with academic performance.

H5: Expressive suppression will be positively correlated with burnout.

H6: Expressive suppression will be negatively correlated with academic performance (GPA).

H7: Cognitive reappraisal will be negatively correlated with burnout.

H8: Cognitive reappraisal will be positively correlated academic performance (GPA).

### **Time Line of Project Completion**

We intend to submit our Honors Research project to the Honors College and to the UA IRB in the beginning of fall semester 2015. We will enroll in the seniors honors project independent study in the fall of 2015. In spring 2016, we will present our project at the University of Akron Student Innovation Symposium (UASIS). We will begin collecting data after receiving approval from the IRB. We will then analyze this data and write our results and discussion section at the end of the fall semester. For this project, our sponsor is Dr. Christine Heifner Graor. Our readers will include Dr. Rebecca Erickson and Ms. Kathryn Morgan.

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## Appendix A

## Review of Literature Table

APA formatted reference	Problem. Research Purpose &/or Research Question	Theoretical Framework	Design of study, Level of evidence, Site, Population, Sampling Method. Sample Size.	Variables and measures/tools. Reliability and validity of measures/tools	Findings Conclusions	Implications	Limitations of findings
1) Brummelhuis, L. L., Hoeven, C. L., Bakker, A. B., & Peper, B. (2011). Breaking through the loss cycle of burnout: The role of motivation. <i>Journal Of Occupational &amp; Organizational Psychology, 84</i> (2), 268-287. doi:10.1111/j.2044-8325.2011.02019.x  Primary Source Quantitative Methods	<b>Problem:</b> Burnout is a stress syndrome characterized by emotional exhaustion and cynicism. Burnout produces considerable negative consequences for both employees and employers  <b>Purpose Statement:</b> To examine burnout as process overtime and investigate whether intrinsic job motivation and externally regulated job	Conservation of Resources: what people do when confronted by a stressful situation. This helps explain the process of work-related burnout.  Intrinsic and Extrinsic Motivation: How motivation affects the loss cycle of burnout.	<b>Design:</b> Nonexperimental: longitudinal  <b>Level of Analysis:</b> Level VIII  <b>Site:</b> Dutch subsidiary of an international financial consultancy firm  <b>Population:</b> employees at the firm  <b>Sampling Method:</b> a Dutch web-based questionnaire administered in 2005 and 2007  <b>Sample Size:</b> 352 employees  <b>Power Analysis:</b> No	<b>Independent Variable and tool:</b> Job demands and resources- Job Content Questionnaire Intrinsic motivation- Bakker's intrinsic motivation subscale of the work-related flow inventory Extrinsic motivation- Work-Family Culture Scale <b>V&amp;R of tools:</b> All valid and reliable  <b>Dependent Variable and tool:</b> burnout/ Maslach Burnout	The study revealed support for the loss cycle of burnout. Employees experiencing burnout in 2005 gathered more job demands and lower job recourses over two years. Also, employees who do not have a positive mood or lack energy will have less effective coping skills, leading to an increase in job demands. Intrinsic motivated people have	Employees are able to break through the loss cycle when they are intrinsically motivated at their jobs. It is important to accommodate the work environment with low to moderate extrinsic regulation and design jobs that use intrinsic motivation.	Self reports may have led to bias, low response rate, convenience sampling, lack of power analysis

	<p>motivation attenuated or aggravated the loss cycle.</p> <p><b>Research Question:</b> Does burnout foster future resource loss and demand accumulation, resulting in increased levels of future burnout? Does employees' type of motivation (intrinsic vs. extrinsic) moderate the loss cycle of burnout?</p>			<p>Inventory – General Survey</p> <p><b>V&amp;R of tool:</b> Valid and reliable</p>	<p>more active coping skills and seek resources to help handle with stressful situations. Extrinsically motivated people coping skills are seen as passive leading to more stressors. The findings support the view that an increase in demands resulting from burnout was greater among employees scoring high on external regulation by the company. However, the results showed that intrinsically motivated employees were able to improve their job resources, but not to diminish their job demands. A possible explanation</p>		
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					for this unexpected finding is that job demands are to a great extent prescribed by the company.		
2) Moran, C., Diefendorf, J., Kim, T., & Liu, Z. (2012). A Profile Approach to Self-Determination Theory Motivations at Work. <i>Journal Of Vocational Behavior</i> , 81(3), 354-363.	<p><b>Problem:</b> not stated</p> <p><b>Purpose Statement:</b> to determine how different types of motivation are linked to outcome in the work setting.</p> <p><b>Research Question:</b> does taking a person-centered approach to SDT predict more variants than a variable-centered approach, and how?</p>	Psychological theory of work related self-determination	<p>Design: Non-experimental</p> <p>Level of evidence: VII</p> <p>Site: China: Wuhan , Shanghai, and Guangzhou.</p> <p>Population: 12 large Chinese organizations, 1 hospital, 2 financial securities companies, 3 manufacturing companies, 1 service company, 2 real estate companies, 1 energy company, 2 government agencies.</p> <p>Sampling method: cluster sampling</p> <p>Sample size: 226</p>	Variables: motivation, social support, job characteristics, In-role performance , psychological need satisfaction.	The presence or absence of intrinsic motivation in motivation profiles has a significant association with work related outcome, while the presence or absence of extrinsic motivation does not.	People who have greater self determined motivation versus extrinsic motivation tend to have more positive outcomes in terms of work performance and well being.	Use of one new motivation subscale.

			employees and 62 supervisors				
			Power analysis:				
3) Bolton, S. (2000). Who cares? Offering emotion work as a 'gift' in the nursing labour process. <i>Journal Of Advanced Nursing</i> , 32(3), 580-586. doi:10.1046/j.1365-2648.2000.01516.x	<p><b>Problem:</b> Nursing work is emotionally complex and needs to be better understood.</p> <p><b>Purpose statement:</b> nursing work is emotionally complex and may be better understood by utilizing a combination of Hochschild's concepts</p> <p><b>Research question:</b> Is nursing work better understood by utilizing a combination of Hochschild's concepts?</p>	Theoretical : Emotional labour	<p>Design: Single qualitative study</p> <p>Level of evidence: X</p> <p>Site: England</p> <p>Population: group of gynecology nurses in an English National Health Service [NHS] Trust hospital.</p> <p>Sampling method: purposive</p> <p>Sample size: not specified</p> <p>Power analysis:</p>	Variables: emotional work	Result: Offering patients extra emotional involvement resulted in more emotional and stressful situations.	Implications: It is important to further look at emotional involvement to further research emotional well-being.	Limitations: Subjective weakness, closed group with its own characteristics and familiarities. Methods weakness, only analyzed the gynecology nurses, may not be applicable to other areas of nursing.
4) Watson, R., Deary, I. Thompson, D. & Li,	<b>Problem:</b> stress in nursing students may be	The interactive or transactional model of	Design: nonexperimental, correlational	Research variables: personality, stress, coping, and	Students suffered greater levels of psychological	Undertaking a nursing program leads to increased	Lack of power analysis, one site study,

<p>G. (2008) A study of stress and burnout in nursing students in Hong Kong: A questionnaire survey. <i>International Journal of Nursing Studies</i>, 45(10), 1534-1542.</p> <p>Primary Quantitative data</p>	<p>related to attrition from nursing programs and lead to a shortage of nurses entering clinical careers.</p> <p><b>Purpose Statement:</b> to study the interrelationship between a range of psychological variables including personality, stress, coping and burnout</p> <p><b>Research Question:</b> Is there a relationship between personality, stress, coping, and burnout?</p>	<p>stress by Lazarus. These nursing students will all be individuals taking into their programs a range of personality types and coping strategies providing responses to stressful situations; therefore, the interaction between their circumstances and their responses are of interest. In the case of nursing students, the kind of stress resulting from this transaction between stimuli and responses is classified as occupational or work related stress</p>	<p>Level of evidence: VIII</p> <p>Site: university school of nursing in Hong Kong</p> <p>Population: nursing students entering the nursing program</p> <p>Sampling method: questionnaire</p> <p>Sample size: 147 students</p> <p>Power analysis: no</p>	<p>burnout</p> <p>Tools: NEO Five factor inventory, general health questionnaire, Maslach Burnout Inventory, Coping Inventory for Stressful Situations, Stress in Nursing students</p> <p>R&amp;V: all tools have proven to be reliable and valid</p>	<p>al morbidity and burnout at the second time wave and this was largely explained by the personality trait of Neuroticism . Stress also increased and this was largely explained by Emotion oriented coping.</p>	<p>level of stress, burnout and psychological morbidity and this is largely related to individual personality and coping traits. Programs to reduce this stress should be carried out.</p>	<p>baseline data not measured , convenience sampling</p>
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<p>5) Nesje, K. (2014). Nursing students' prosocial motivation : Does it predict professional commitment and involvement in the job? <i>Journal of Advanced Nursing</i>, 71(1), 115-125.</p> <p>Primary Quantitative data</p>	<p><b>Problem:</b> Prosocial behavior is both associated with positive rewards for the helper, but can also be experienced as taxing.</p> <p><b>Purpose Statement:</b> how prosocial motivation reported by nursing students relates to career commitment and job involvement three years after graduation</p> <p><b>Research Question:</b> does prosocial motivation relate to career commitment and job involvement</p>	<p>No theoretical framework given</p>	<p><b>Design:</b> nonexperimental, descriptive</p> <p><b>Level of Evidence:</b> VIII</p> <p><b>Site:</b> large university</p> <p><b>Population:</b> nursing students entering their career after graduation</p> <p><b>Sampling Method:</b> survey with a longitudinal design</p> <p><b>Sample size:</b> 160 nurses</p> <p><b>Power analysis:</b> no</p>	<p><b>Research variable:</b> prosocial motivation</p> <p><b>Tool:</b> career commitment scale, job involvement questionnaire</p> <p><b>R&amp;V:</b> the tools have been tested to be reliable and valid</p>	<p>The results showed that prosocial motivation measured in their last academic year was related to career commitment three years after graduation, but unrelated to job involvement .</p>	<p>The results indicated that prosocial motivation is important in identifying with the profession but not necessarily for personal involvement in the job. The study gives important knowledge on how a commonly reported motivation for entering nursing relates to the nurses' attitudes about their work life.</p>	<p>One-site study, lack of power analysis, convenience sampling</p>
<p>6) English, T., &amp; John, O. (2013). Understanding the social effects of</p>	<p><b>Problem:</b> Differences in emotion regulation strategies can differentiall</p>	<p><b>Theoretical framework:</b> Emotional regulation</p>	<p><b>Design:</b> Non experimental – correlational and regression</p> <p><b>Level of Evidence:</b></p>	<p><b>Independent variable and tool:</b> Suppression , reappraisal</p> <p><b>V&amp;R of</b></p>	<p><b>Findings Conclusion</b></p> <p>In our day to day lives we often try</p>	<p><b>Implications</b></p> <p>Suppression of our real emotions</p>	<p><b>Limitations</b></p> <p>The study hypothesized causal</p>

<p>emotion regulation: The mediating role of authenticity for individual differences in suppression. <i>Emotion</i>, 13, 314-329.</p>	<p>y influence social outcomes.</p> <p><b>Purpose statement:</b> To understand social effects of emotional regulation</p> <p><b>Research question:</b> Does suppression lead to more negative social outcomes?</p>		<p>level 8</p> <p><b>Site:</b> East Asia <b>Population:</b></p> <p><b>Sampling Method:</b> convenient</p> <p><b>Sample Size:</b> Study 1: 157 students enrolled in introduction to psychology courses at a public university. Study 2: 114 undergraduate students at a university in mainland China. Study 3: 106 women born in the late 1930's.</p> <p><b>Power Analysis:</b> No</p>	<p><b>tool:</b></p> <p><b>Dependent Variable and tool:</b> social outcome</p>	<p>to regulate our emotions to facilitate smooth interactions but emotional regulation may not always have a good impact on social functioning.</p>	<p>results in inauthenticity.</p>	<p>effects but could not provide evidence of them, another limitation was its reliance on self-report.</p>
<p>7) Gross, J., &amp; John, O. (2003). Individual differences in two emotion regulation processes: Implications for affect, relationships, and well-being. <i>Journal of Personality</i></p>	<p><b>Problem:</b> To examine the consequences of emotion regulation strategies</p> <p><b>Research question:</b> Do individuals differ in their use of emotion regulation</p>	<p><b>Theoretical framework:</b> Process model of emotional regulation</p>	<p><b>Design:</b> Non Experimental - correlational <b>Level of Evidence:</b> 8</p> <p><b>Population:</b> undergraduate students</p> <p><b>Sampling Method:</b> convenient</p> <p><b>Sample Size:</b> participants</p>	<p><b>Independent variable and tool:</b> Expressive Suppression, cognitive reappraisal</p> <p><b>Dependent Variable and tool:</b> Well-being, life satisfaction, affect,</p>	<p><b>Findings Conclusion</b> Reappraisers experience more positive emotions and less negative emotions than suppressors.</p>	<p><b>Implications</b> Reappraisers should have greater life satisfaction and well-being.</p>	<p><b>Limitations</b> Reliance on self-report</p>

<p><i>y and Social Psychology</i>, 85, 348-362.</p>	<p>strategies? If so, do these differences have important implications for adaptations?</p>		<p>were drawn from four undergraduate samples with a total sample N=1,483</p> <p><b>Power Analysis:</b> No</p>	<p>relationships.</p>			
<p>8) Tourangeau, A.E., Cummings, G., Cranley, L.A., Ferron, E.M., &amp; Harvey, S. (2009). Determinants of hospital nurse intention to remain employed: Broadening our understanding. <i>Journal of Advanced Nursing</i>, 66(1), 22-32.</p> <p>Primary source Qualitative data</p>	<p><b>Problem:</b> Worsening shortage of nurses means that efforts must be made to promote retention of nurses.</p> <p><b>Purpose Statement:</b> to identify nurse reported determinants of intention to remain employed and to develop a model explaining determinants of hospital nurse intention to remain employed.</p> <p><b>Research Question:</b> what are the determinants for nurse</p>	<p>Theory of reasoned action: suggests that attitudes affect decisions and ultimately behavior</p> <p>Accordingly, nurse attitudes about work affect their decisions (intentions) to remain employed and ultimately their actions (retention or termination).</p>	<p>Design: Non-experimental, descriptive</p> <p>Level of Evidence: VIII</p> <p>Site: six hospitals</p> <p>Population: RN working on medical, surgical, or critical care hospital areas</p> <p>Sampling Method: Focus groups</p> <p>Sample Size: 78 RNs</p> <p>Power Analysis: no</p>	<p>Research variable: nurse intention to remain employed</p> <p>Tool: semi-structured question guide</p> <p>V&amp;R: questionable</p>	<p>Focus group data yielded eight thematic categories of factors influencing hospital nurse intention to remain employed: relationships with co-workers, condition of the work environment, relationship with and support from one's manager, work rewards, organizational support and practices, physical and psychological responses to work, patient relationships and job content, and</p>	<p>To promote retention of hospital nurses, focus should be placed on modifying work environment and organization characteristics rather than on modifying nurses and nurse behaviors.</p>	<p>Small sample, one-site study, lack of power analysis, tool may be not valid or reliable</p>



	to remain employed?				external factors.		
9) Yin, J. C. T., & Yang, K. P. A. (2002). Nursing turnover in Taiwan: a meta-analysis of related factors. <i>International Journal of Nursing Studies</i> , 39 (6), 573	<p><b>Problem:</b> With the shrinking health care budget, constrained human resources, and consumer demands for a more effective health care system in Taiwan, the instability of nursing workforce has become of major concern to nurse managers</p> <p><b>Purpose statement:</b> The results of this study merit attention by nursing administrators in order to develop strategies for stabilizing the nursing work force</p> <p><b>Research Question:</b></p>	<p><b>Theoretical Framework:</b> A total of 4032 subjects were selected for the study. Data were integrated by estimation of parametric correlation coefficients, and analyzed using Friedman’s two-way analysis of variance by ranks following weight adjustment of sample size and estimation of correlation effect on size of variables.</p>	<p><b>Design:</b> meta-analyses</p> <p><b>Level of Evidence:</b> level 7</p> <p><b>Site:</b> Taiwanese hospital</p> <p><b>Population:</b> Nurses</p> <p><b>Sample Size:</b>69-725</p> <p><b>Power Analysis:</b></p>	<p><b>Independent variable and tool:</b></p> <p><b>V&amp;R of tool:</b> Friedman two way analyses</p> <p><b>Dependent Variable and tool:</b> nursing turnover</p>	<p><b>Findings Conclusion:</b> Taiwanese health care environment, it is crucial to address those factors that affect the stability of nursing workforce, quality of patient care and nurses’ work life.</p>	<p>The results of this study merit attention by administrators in order to develop useful retention strategies. As health care systems undergo significant changes, cost containment efforts and restructuring have resulted in cutbacks in RN positions</p>	<p><b>Limitations:</b> Organizational factors such as financial compensation, leadership styles, and staffing</p>

	<p>A meta-analytic study was conducted to investigate the causal relationships among individual, organizational and environmental factors related to nurses' intention to stay at or leave their jobs in Taiwanese hospitals.</p>						
<p>10) Newton, J. M., Kelly, C. M., Kremser, A. K., Jolly, B., &amp; Billett, S. (2009). The motivations to nurse: an exploration of factors amongst undergraduate students, registered nurses and nurse managers. <i>Journal of Nursing Management</i>, 17(3),</p>	<p><b>Problem:</b> Recruitment and retention of nurses is a worldwide concern that is associated with several compounding factors, primarily the high attrition of its new graduates and an ageing workforce</p> <p><b>Purpose statement:</b></p>	<p><b>Theoretical Framework:</b> This paper presents initial interview data from a longitudinal multi method study with 29 undergraduate student nurses, 25 registered nurses (RNs), six Nurse Unit Managers (NUMs) and four Directors of Nursing</p>	<p><b>Design:</b> Quasi-experimental  <b>Level of Evidence:</b> Level 7  <b>Site:</b>  <b>Population:</b> 2 and 3 year Nursing students</p> <p><b>Sample Size:</b> 42</p> <p><b>Power Analysis:</b> no</p>	<p><b>Independent variable and tool:</b> Environment salary position</p> <p><b>V&amp;R of tool:</b></p> <p><b>Dependent Variable and tool:</b> attrition rate</p>	<p><b>Findings Conclusion:</b> These themes represented individuals' motivation to enter nursing and sustain them in their careers as either nurses or managers</p>	<p><b>Implications:</b> Managers need to be cognizant of nurses' underlying values and motivators in addressing recruitment and retention issues. Strategies need to be considered at both unit and organizational levels to ensure that the desire to care does not</p>	<p><b>Limitations:</b> Motivational factors were limited</p>

<p>392-400.</p>	<p>To identify what motivates individuals to engage in a nursing career.</p> <p><b>Research Question:</b></p>	<p>(DoNs) from four hospitals across a healthcare organization in Australia</p>				<p>become lost.</p>	
<p>11) Dill, J., Erickson, R.J., &amp; Diefendorf, J.M. (2014). Motivation in caring labor: Implications for the well-being and employment outcomes of care workers. Manuscript submitted for publication .</p>	<p><b>Problem:</b> gendered assumptions that altruistic motivations are the “right” reasons for being a nurse and lead to the best outcomes for workers and patients</p> <p><b>Purpose statement:</b> For nurses and other caregivers there is a strong emphasis on prosocial forms of motivation, or doing the</p>	<p><b>Theoretical Framework:</b> how motivations influence care workers’ experience of work, their well-being, and their commitment to their employer</p>	<p><b>Design:</b> experimental  <b>Level of Evidence:</b> Level 7  <b>Site:</b> Midwestern U.S.  <b>Population:</b></p> <p><b>Sample Size:</b> 730 acute care hospital nurses</p> <p><b>Power Analysis:</b> no</p>	<p><b>Independent variable and tool:</b> Intrinsic motivation factors and extrinsic</p> <p><b>V&amp;R of tool:</b></p> <p><b>Dependent Variable and tool:</b> nursing attrition rates</p>	<p><b>Findings Conclusion:</b> Our findings suggest that nurses who have high intrinsic and extrinsic motivation actually have better perceived health and employment outcomes (i.e., less likely to say that they will leave, lower burnout, fewer negative physical symptoms) than those with high prosocial motivation, who are more likely to report job burnout.</p>	<p><b>Implications:</b> Workers with high intrinsic and extrinsic motivations for working in nursing are also significantly more committed to their jobs</p>	<p><b>Limitations:</b></p>

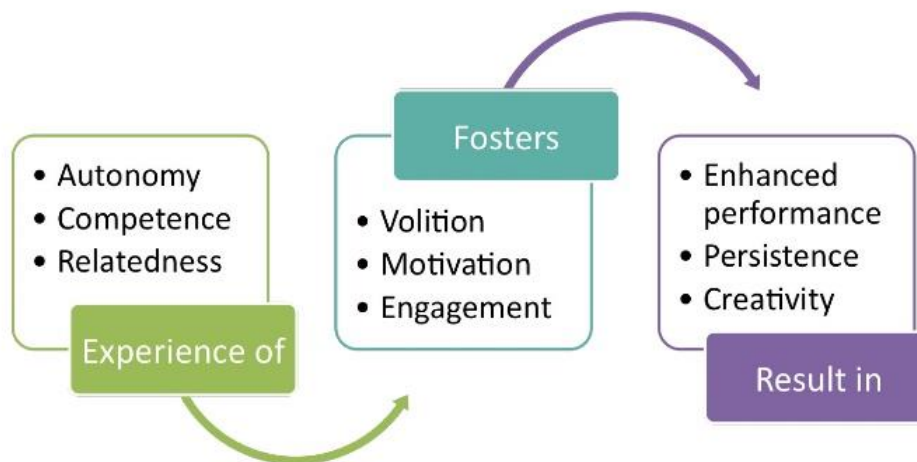
	<p>job because you want to help others, even in formal, institutionalized care settings</p> <p><b>Research Question:</b>          why people choose a career that involves providing care in a formal context typically focuses on whether individuals are motivated by “love or money”</p>						
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## Appendix B

## Self-Determination Theory (SDT)

(Ryan & Deci, 2000)

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## Appendix C

## 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](mailto:aca23@zips.uakron.edu)), Doug Garner ([dg62@zips.uakron.edu](mailto:dg62@zips.uakron.edu)), and Nicole Langhals ([nel22@zips.uakron.edu](mailto:nel22@zips.uakron.edu)), or Christine Heifner Graor, PhD (Advisor) at (330) 972-6422 or [graor@uakron.edu](mailto: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 D  
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)