GRITTINESS OF ADOLESCENT RESIDENTIAL FRONTLINE STAFF

by

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ABSTRACT

There are an estimated 48,000 adolescents residing in U.S. residential facilities (Office of Juvenile Justice and Delinquency Prevention [OJJDP], 2019). While this is a 50% reduction in the last two decades (Sickmund, Sladky, Kang, & Puzzanchera, 2017), adolescent residential facilities are housing extremely violent and emotionally disturbed adolescents. Because of the violent nature of these adolescents, turnover rates of staff in this field are as high as 70% (Seti, 2008). There is an abundance of literature assessing burnout, emotional exhaustion, and compassion fatigue in this area but a gap in the literature exists examining individual protective factors, such as grit, of employees who choose to stay despite difficulties associated with the job. Duckworth (2016) describes individuals with high grit as being resilient, tenacious, and having the ability to overcome significant setbacks with high levels of self-control. The aim of this project was to reduce the literature gap and supplement present literature by evaluating grittiness of frontline staff working in an adolescent residential facility as well as determine usefulness of pre-screening future candidates with the use of the Grit Scale.

Employees of a Midwest adolescent residential facility who remained in a frontline staff position for greater than one year completed a12-item Grit Scale (Duckworth, 2016) and a demographics questionnaire. Overall, results showed that participants were ‘very gritty’ with an average grit score of 4.3, falling in the 80th percentile of a large group of adult Americans (Duckworth, 2016). The results of this project are promising and could be used as a foundation for practice change and future research with a larger sample.

INTRODUCTION

Background and Significance

Turnover of frontline staff working in adolescent residential facilities is substantially higher than any other human services field (Aarons & Sawitzky, 2006). Frontline staff, also known as youth leaders, youth counselors, or mental health technicians/specialists, spend more time with youth receiving treatment in residential facilities than therapists, nurses, or providers. Reasons for adolescent placement vary significantly but most adolescents have experienced significant psychological or physical traumas (De Figueiredo et al., 2014) and are broadly defined as being "seriously emotionally disturbed" (OJJDP, 2011, p. 1).

Staff working with residential youth are at a high risk of experiencing secondary traumas, burnout, and emotional exhaustion (Seti, 2008). Protective factors of frontline staff turnover include being married, older age (Connor et al., 2003), having stable personality traits (Lakin et al., 2008), and an increased sense of safety (Sichel et al., 2019). Frontline staff are frequently required to intervene when youth are displaying violent behaviors including aggression toward staff or peers, suicide attempts, or other self-harming behaviors such as cutting or head banging (Seti, 2008). Depending on the facility and locale, frontline staff turnover ranges between 40% and 70% (Aarons & Sawitzky, 2006; Leon, Visscher, Sugimura, & Lakin, 2008). Reasons for high turnover rates such as burnout and compassion fatigue have been identified, but there are very few studies addressing employee characteristics associated with those who remain employed at adolescent residential facilities. Despite the difficulties of working in

adolescent residential facilities, 30-60% of these employees remain in frontline positions (Aarons & Sawitzky, 2006; Leon et al., 2008).

History of Residential Facilities

The development of adolescent residential facilities was first noted in the early 1920s after the 1919 encephalitis epidemic (Zimmerman, 1990). These newly developed facilities admitted adolescents with significant behavioral or aggression problems resulting from encephalitis as well as those who were experiencing psychosis or considered delinquent (Zimmerman, 1990). The delinquent adolescents referred by court systems were due to behaviors such as fire setting, sexual offenses, truancy, running away, and murder (Zimmerman, 1990). Supervision of adolescents was primarily geared toward safety. It was not until 1938 that medical supervision became incorporated into the standards of adolescent residential care (Zimmerman, 1990).

Adolescent residential facilities today provide care for the same concerns that arose in the 1920s, but now also include care for youth that are homeless, in need of temporary foster care, have substance use disorders, or are referred by courts for long-term placement in a secured correctional facility (OJJDP, 2011). There have been several initiatives to reduce adolescent residential placement implemented at both the state and federal levels (OJJDP, 2011; Sickmund, et al., 2017), thus increasing the acuity of care provided in adolescent residential facilities (Sickmund, et al., 2017).

Residential facility costs per state equate to roughly $7.1 million per day (OJJDP, 2011) and there is mixed evidence regarding long-term benefits of adolescent residential placement. Adolescent long and short-term outcomes are highly variant and

depend upon reasons for admission and specialized treatments provided by each facility (OJJDP, 2011, 2017; Zimmerman, 1990). Concerns of adolescent residential facilities include further traumatization caused by youth being removed from home, family, and friends as well as increased exposures to deviant behaviors (OJJDP, 2017). Current adolescent residential placement data, available through 2015, shows greater than a 50% reduction in placement since 1997 (105,055) with current rates at 48,043 (Sickmund, Sladky, Kang, & Puzzanchera, 2017). While these statistics are encouraging, a greater proportion of extremely disturbed and violent adolescents are living in residential facilities (Sickmund et al., 2017).

Introduction to the Problem

With an increase in the number of extremely disturbed and violent adolescents living in residential facilities, staff retention is a substantial problem for both residential operations and the overall well-being of youth (Ginka et al., 2017). Immediate effects of turnover on adolescents include decreased stability, quality, and consistency of care (Levin, & Decker, 2008). Long-term success of adolescents treated in residential facilities heavily relies on consistent staff behaviors and therapeutic milieus (Connor et al., 2003). High staff turnover negatively impacts the adolescent residents and staff morale, leading to decreased staff productivity (Seti, 2008), increased costs, and overall poorer work-team performance (Aarons & Sawitzky, 2006)

Common reasons for lower staff satisfaction include a lack of employee recognition programs, proper supervision, training, professional development opportunities, financial compensation, and recognition of burnout (Hanson, 2015; Lakin,

Leon, & Miller, 2008; Levin & Decker, 2009; Ochoa, 2012). Grittiness, a combination of passion and perseverance, has been identified as a positive predictor of turnover in several fields (Duckworth, 2016), but there is a gap in the literature with few research studies evaluating positive factors of frontline staff retention and none to date assessing grittiness of frontline staff working in residential facilities. Front line staff can begin to fill that literature gap and provide evidence for possible staffing strategies.

Purpose

The aim of this project was to evaluate grittiness levels of frontline staff who have remained at a Midwest adolescent residential facility for greater than one year. The results of this project may provide further insights on how to increase staff retention levels and facilitate screening of future candidates applying for frontline staff positions. This project also aimed to reduce the literature gap by addressing positive attributes of frontline staff who remain employed within adolescent residential facilities.

Significance of the Study to Nursing

The emotional toll staff working in adolescent treatment facilities endure may be damaging and could ultimately compromise patient care. Most adolescent residential facilities will have more frontline staff than nurses, but this may vary depending on facility protocol, state legislations, or patient acuity levels. Nurses work closely with frontline staff to ensure patients are appropriately monitored based on needs and reasons for admissions. The frontline staff rely heavily on nurses to provide necessary information (such as a history of sexual assault or tendencies to become

violent), medications, and supervision of overall patient care with special consideration for youth requiring physical interventions.

Frontline staff and nurses are at the highest risk of turnover in mental health sectors and are more likely to leave their job based on the likelihood of getting assaulted (Aarons & Sawitzky, 2006). Emotionally distraught frontline staff may not be as capable of verbally de-escalating patients and could further increase the likelihood of violent youth behaviors requiring nurses to intervene. The organizational climate, or organizational culture, plays a crucial role in overall turnover rates (Aarons & Sawitzky, 2006). In the literature review that follows, evidence is presented that describes adolescent residential facilities and grit as a potential mediator for front line staff longevity.

REVIEW OF LITERATURE

Summary of Evidence

Attributes of frontline staff who experience burnout may include emotional exhaustion, depersonalization, and feelings of a lack of accomplishment. Emotional exhaustion is defined as a "depletion of emotional energy and a feeling that one's emotional resources are inadequate to deal with the situation" (Cooper, Dewe, & O'Driscoll, 2002, p. 83). Depersonalization may be seen when an individual responds in harsh, negative ways and is too detached from the youth they provide care for (Lakin et al., 2008; Seti, 2008). Lack of personal accomplishment is also frequently reported by frontline staff who are unable to reach personal goals leading to feelings of incompetence (Lakin et al., 2008; Seti, 2008). The final attribute associated with staff turnover relates to compassion fatigue, which is sometimes confused with burnout. Compassion fatigue develops more abruptly than burnout and can be more closely compared to post-traumatic stress disorder (PTSD) (De Figueiredo et al., 2014; Hanson, 2015; Seti, 2008),

Although personality traits such as anxiety, depression, and hostility are positively correlated with higher rates of burnout, there are certain personality traits that are negatively correlated with turnover, such as extraversion (Lakin et al., 2008). Characteristics of extraversion may include increased social interactions, self-confidence, excitement seeking, maintenance of a positive affect, and possession of leadership skills (Lakin et al., 2008). Other hypothesized protective factors of frontline staff turnover include use of non-violent resistance (NVR) as a form of de-escalation, levels of staff

confidence, and perceptions of adequate and consistent training (Connor et al., 2003; Ginka et al., 2017).

Individuals who work with troubled adolescents are usually passionate about their jobs. Little is known why some individuals remain in the field and a significant proportion of others quit within the first year. Connor et al. (2003) performed a three-and-a-half-year study evaluating turnover and summarized the effects of turnover on youth:

> Stability among staff in children's residential treatment centers is crucial to consistency in program implementation and in establishing a consistent therapeutic milieu. Increasingly, children and adolescents admitted to residential treatment centers have high rates of serious emotional disturbances. These may include complex neuropsychiatric diagnoses, multiple attachment disruptions, chronic traumatic experiences, multiple changes of caregivers, and multiple placements. Many referred youths are suspicious and defensive about the therapeutic encounter, and a long time in a stable environment with consistent staff is often necessary to establish a working therapeutic alliance (p. 44).

Grit

Grit has been at the forefront of behavioral psychology research since psychologist Angela Duckworth, a former teacher, began her research and published her first book, "Grit: The Power of Passion and Perseverance" (Duckworth, 2016). Dr. Duckworth describes individuals with high grit as being resilient, tenacious, emotionally stable, and having the ability to overcome significant setbacks with high levels of self-control (Duckworth, 2016). Grit does not measure intelligence quotients or physical abilities, but rather a combination of social and psychological attributes harvested by nature and nurture with a "tendency to sustain interest in and effort toward very long-term goals" (Duckworth, 2020, p.1). Grit has been positively correlated with higher levels of overall life satisfaction, self-esteem (Li et al., 2018), higher academic achievements

(Jiang et al., 2019), better stress management skills, and self-regulation skills (Kannangara et al., 2018; Light & Nencka, 2019).

There are currently three versions of the Grit Scale; 12-item Grit Scale, 8-item Grit Scale, and the 8-item Grit Scale for children (Duckworth, 2020). Versions of the Grit Scale are currently being utilized by the Mayo Clinic and Cleveland Clinic in order to develop a culture of "organizational grittiness" by screening candidates for grittiness during the hiring process (Lee & Duckworth, 2018).

Grit in Education

Teachers are at an unusually high risk of experiencing burnout. Roughly 40% of all teachers and nearly 65% of teachers in urban schools will leave their positions within their first few years of teaching (Robertson-Kraft & Duckworth, 2014). Student success is heavily dependent upon consistent and efficient teaching, similar to efficacious treatment of emotionally disturbed adolescents being reliant on provisions of consistent and quality care.

Both children and teachers are being pushed harder than ever to meet the high demands of standardized testing, new and ever-changing technologies, and less and less funding (Fitchett, Mccarthy, Lambert, & Boyle, 2018). Mental health awareness for teachers is becoming increasingly important as suicide was the second leading cause of death in children aged 15-19 in 2017 (Centers for Disease Control [CDC], 2019). Teachers are frequently the first to identify behavioral and emotional concerns and are routinely confronted with behavioral problems such as violence, bullying, and constant disruptions in the classroom. Decades of research assessing the alarming turnover rates

identified several etiologies, but most are extrinsic factors that coincide with fluctuating variables such as funding, perceived support, or salary. Studies evaluating intrinsic factors such as personality traits of teachers ultimately found that there was not one conclusive trait capable of predicting turnover accurately (Klassen, Perry, & Frenzel, 2012; Lakin et al., 2008).

Recently, a more stagnant intrinsic variable, grittiness, was evaluated and compared to rates of teachers who left their position within the first year (Robertson-Kraft & Duckworth, 2014). In this study, the initial evaluation of a teacher's grittiness was collected prior to starting a teaching career. Robertson-Kraft and Duckworth (2014) reported grittiness as the only valid predictor of teacher retention when compared to teacher demographics, college GPA or SAT scores, school assignment location, or leadership ratings. "When controlling for leadership, teachers who were one standard deviation higher in grit were more than twice as likely to be retained over the course of the year than their less gritty peers" (Robertson-Kraft & Duckworth, 2014, p. 10).

Grit at West Point

West Point is a United States military academy that has an extremely low acceptance rate (9-10%) and is very well known for vigorous vetting procedures (United States Military Academy [USMA], 2019). Applicants to West Point should be within the top 10^{th} percentile of their graduating high school class, have above-average SAT and ACT scores, and an average GPA greater than 3.6 (USMA, 2019). In addition to academic requirements, applicants must also be physically fit and pass a pre-screening test that includes push-ups, pull-ups, running, and several other athletic ability challenges

(USMA, 2019). All applicants must submit their application along with a Congressional recommendation letter, and each candidate must meet the minimum requirements for recommendations of "one Representative, two Senators, plus the Vice President" (USMA, 2019, p.1). Collectively, each applicant is given a Whole Candidate Score, which serves as the primary predictor of acceptance (Duckworth et al., 2007).

There are roughly 14,000 annual applicants who begin their endeavor to apply to West Point in their Junior year of high school; 1,200 of those applicants will be offered a place at this prestigious academy (Duckworth, 2016). After spending nearly two years gaining admission, roughly one in five cadets will drop out (Duckworth, 2016). This phenomenon has been studied from various angles since 1955, with several failed attempts to identify methods of reducing attrition.

Previously studied variables include academics, physicality, Freudian-like psychological tests, and the individualized Whole Candidate Score components of academic GPA, military performance scores, SAT scores, leadership potential scores, and physical aptitude scores (Duckworth, 2016; Duckworth et al., 2007). Not one of the variables studied over decades could successfully predict who would drop out of West Point (Duckworth, 2016). Duckworth et al. (2007) performed a study evaluating grittiness levels of West Point cadets accepted in 2004 and 2006. The researchers found that cadet grittiness levels were able to accurately predict those who would drop out at a higher rate than any other variable analyzed (Duckworth et al., 2007).

The data were analyzed via a binary logistic regression model where retention was the dichotomous dependent variable. The correlation between grit and retention (β =

0.44, $p < 0.01$) was much higher than the Whole Candidate Score ($\beta = 0.11$, *ns*) in the 2004 study (Duckworth et al., 2007). A replicated 2006 study had similar results where grit was significantly correlated with retention ($\beta = 0.39$, $p < 0.03$) and the Whole Candidate Score was again found not to be statistically significant ($\beta = 0.04$, *ns*) (Duckworth et al., 2007).

Grit in Nursing

Nursing is a physically, mentally, and emotionally challenging role. Nurses work long hours, have heavy caseloads, remain at the forefront for patient and family customer service, and must maintain an extremely high attention to detail while administering medications and completing tedious documentation requirements.

The field of psychiatric nursing is especially impacted by physical and emotional behaviors of patients they provide care for, which leads to high overall turnover rates (Iozzino, Ferrari, Large, Nielssen, & de Girolamo, 2015). It is estimated that nearly 75% to 100% of psychiatric nurses working in behavioral health have been assaulted at least once (Iozzino et al., 2015), and with each assault, the likelihood of turnover increases (Redknap, Di, Rock, & Towell, 2015).

Although grittiness of psychiatric nurses specifically has been understudied, there have been several similar multi-factorial psychological constructs evaluated—one of which is resilience. The resilience of psychiatric nurses has previously been positively associated with lower levels of burnout, turnover, post-traumatic stress disorder (PTSD), and a higher level of overall life-satisfaction (Foster et al., 2019).

Organizational grit in healthcare is a recently developed construct but has already been implemented in several world-renowned hospitals such as the Mayo Clinic and Cleveland Clinic (Lee & Duckworth, 2018). An important aspect of providing direct face-to-face patient care is that the healthcare team provides a synchronous team-driven approach to providing care. Turnover can especially impede a team's effort to providing this type of care. In a Harvard Business Review, Lee & Duckworth (2018) describe gritty teams as collectively having "the same traits as gritty individuals do: a desire to work hard, learn, and improve; resilience in the face of setbacks; and a strong sense of priorities and purpose" (p. 5).

Developing Grit

The four key aspects of high performing gritty individuals are interest, practice, purpose, and hope (Duckworth, 2007). In the essence of interest in grit, persevering during setbacks is difficult if one has no underlying interest. Duckworth (2007) recommends finding a passion and being logical in choices. For example, one may enjoy playing videogames, but not many can make a successful life fulfilling career out of playing video games. Thus, this would not be a logical choice. The second is practice, lots of practice. Through Dr. Duckworth's research, she has found that gritty individuals practice significantly more, and longer than their counterparts. In the younger population, this could be studying for an upcoming exam or practicing an instrument every day after school for an upcoming recital. In the more mature populations, this may be taking the time to learn about a new model of care to enhance one's ability to perform in a role. The third gritty element is purpose. Dr. Duckworth describes purpose as "the intention to

contribute to the well-being of others" (Duckworth, 2007, p. 146). Purpose can be tied back to interest, where the example of playing video games all day doesn't usually lead to a successful fulfilling career but becoming a gaming engineer can. Finding purpose in one's interest enhances grittiness as the likelihood of accomplishing goals is higher when one maintains interest and passion. If one has interest in video games, a logical purpose may be to develop video games and allow others to experience the pleasure of playing. This would be a logical life sustaining career choice in a field that one is passionate about. Maintaining hope and a positive attitude are critical characteristics of gritty individuals as well. Despite having a really bad day, rather than giving up, gritty individuals will develop a plan to reduce the risks of another bad day happening tomorrow.

From an organizational perspective, grit can be developed from the outside in by setting high expectations, establishing norms, and exhibiting values that align with those of the organization. Leaders can foster resilience in a demanding but supportive nature with encouragement to simply do better – be better. Gritty organizations tend to be distinct from other organizations (Duckworth, 2007) in that they are usually innovative, agile, and stand out in terms of success rates. Dr. Duckworth states "If you want to be grittier, find a gritty culture and join it. If you're a leader, and you want the people in your organization to be grittier, create a gritty culture" (p. 245).

Summary

Grit is a measure of one's ability to persevere through challenges and setbacks of personal goal achievement. Grit is a newer construct that has been studied in several

clinical and non-clinical settings. In the cases of three populations, including cadets, teachers, and nurses, grit was one of the few measurements amongst decades of research that could successfully predict who would remain in their position (Duckworth, 2007). The results of these studies provide a promising foundation to reducing turnover of front life staff in adolescent residential facilities. The basis of grit, individual abilities to endure through challenging setbacks, is fitting for this setting as the majority of individuals who work in adolescent residential institutions have a passion to do so. The underlying theoretical framework of this project is the Hierarchical Goal Framework developed by Duckworth and Gross (2014). This framework emphasizes one's power and passion to continue working towards a goal despite intervening obstacles.

Search Methods and Results

Three data bases were searched, specifically PsycINFO, PsycARTICLES, and CINAHL, which were queried for peer-reviewed articles published between 2000 and 2020 using a combination of the keywords "frontline staff", "adolescent", "residential", "turnover", and "burnout". Articles were reviewed for applicability and those with subjects primarily pertaining to the juvenile justice system, foster homes, or short-term substance abuse treatment programs were excluded from use. Articles containing "acute", "inpatient psychiatry", or "mental health", within the subject were reviewed for content and included if the content contained a combination of "adolescent", "residential", and/or "facility". Fourteen articles met the inclusion criteria related to adolescent residential facilities and staff turnover. The Easy Access to the Census of Juveniles in Residential

Placement (EZACJRP) was utilized to identify current and historical statistics of juveniles placed in residential facilities (OJJDP, 2017).

The topic of grit was searched within PsycINFO, PsycARTICLES, and CINAHL with the following criteria; “grit*” AND “Duckworth”. Subject line results were manually reviewed for applicability. Research pertaining to the categories of teachers, West Point cadets, and nursing were included for further review. One article contained “grit” AND “adolescent” AND “residential”; however, this study of grit evaluated grittiness of adolescents, not staff. No articles were found evaluating grittiness of frontline staff working in adolescent residential facilities, further highlighting the timeliness of this project.

THEORETICAL FRAMEWORK

Hierarchical Goal Framework

Duckworth & Gross (2014) describe the Hierarchical Goal Framework as a framework that outlines an individual's ability to endure through blocked goals and overcome obstacles to achieving goals. This may be obtained through avoidance of competing short-term goals (i.e., study for an exam tomorrow or watch a favorite television show), or by way of revising or creating new shorter-term goals (Duckworth & Gross, 2014). The Hierarchical Goal Framework is one that emphasizes abilities to set a hierarchy of goals, revise goals as needed, and achieve superordinate goals despite setbacks (Duckworth & Gross, 2014). Within this framework, there is a distinction between domains of life when evaluating grittiness. For instance, one may do extremely well when organizing and re-organizing career goals but may not do as well when prioritizing health or relationship aspects of life.

Grittiness is sometimes used interchangeably with self-control, and although these two are correlated in terms of success, one does not predict the other (Duckworth & Gross, 2014). Within the framework, one can have several lower order goals leading to a superordinate goal, as depicted in Figure 1 (Duckworth & Gross, 2014). Grittiness plays a role when there is a competing goal creating conflict, or if a short-term gain has superseded one's original goal. One's ability to persist through challenges to goal achievement is the basis of grit. Grit is generally considered innate but can change over time with the incorporation of new experiences and knowledge assimilations (Duckworth et al., 2007).

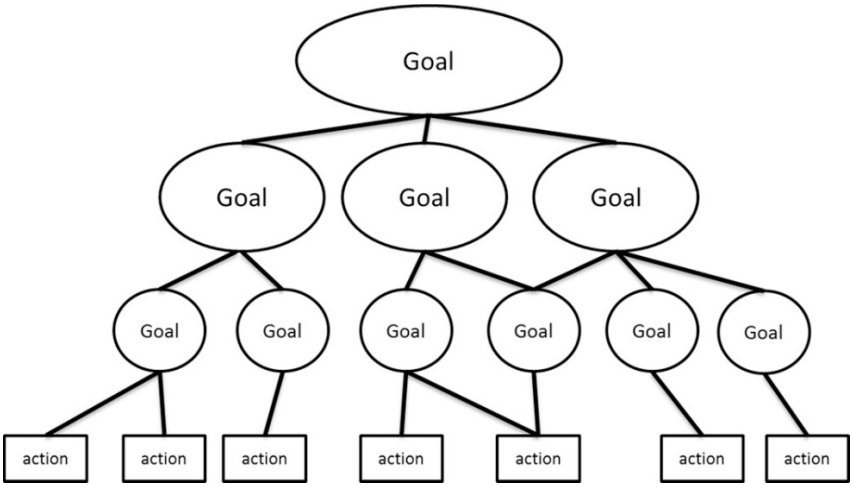


Figure 1. Hierarchical goal structure (Duckworth, 2016. Grit: The Power of Passion and Perseverance. [Kindle version]. Retrieved from Amazon.com).

Frontline staff working in adolescent residential facilities have usually chosen this career path. Underlying passions may stem from personal experiences of childhood, experience with one's own child, or to fulfill a rewarding career helping those in need. An example of a higher order goal may be to change the trajectory of youth who are heading down the wrong path or to prevent youth suicide. A lower order goal may be to build rapport and trust with youth exhibiting challenging behaviors after being abused by adult caregivers. Adolescents who have been abused or neglected frequently exhibit challenging behaviors and are suspicious of adults. This is unfortunately a common experience with youth living in adolescent residential facilities and the facility this project was performed at was no exception.

PROJECT DESIGN

Introduction to Setting

This project was conducted at a Midwest secured adolescent residential facility; a subsidiary of a national organization with over 40 facilities operating in 20 states. Special employee programs include chef-prepared meals to all employees free of charge, flexible 8- or 12-hour shift scheduling, and opportunities for advancement. All staff are trained in trauma informed care (TIC), active shooter response, de-escalation procedures, and physical hold and restraint processes.

METHODS

Sample

The Director of Human Resources provided a list of individuals currently employed at the facility, along with date of hire, title, and department. Inclusion criteria included being in a frontline staff position for greater than one year. One year is the most common timeframe used for assessing employee turnover rates (Aarons & Sawitzky, 2006; Connor et al., 2003; Fitchett et Al., 2018; Robertson-Kraft & Duckworth, 2014). A power analysis was not completed as all staff who met inclusion criteria were invited to participate. Anticipated sample size was greater than fifty. Exempt Institutional Review Board (IRB) approval was obtained from Montana State University (MSU) (Appendix A). The adolescent residential facility does not have its own IRB, and accepted approval from MSU.

Design Overview

Front-line staff employed at a Midwest adolescent residential facility for greater than one year were asked to complete a demographics questionnaire (Appendix B) as well as the 12-Item Grit Scale (Appendix C). There were three visits to the facility on each of the three eight-hour shifts, 0700-1500 (1st), 1500-2300 (2nd), and 2300-0700 (3rd). A notice was posted one week in advance on each unit's bulletin board. The notice stated the following:

> For those of you who have worked here greater than one year, I will be visiting your unit in the following weeks requesting five minutes of your time to complete a short anonymous survey. The goal of this research is to

> further understand factors related to turnover of this facility. Thank you for your time.

Forty-two of the original fifty employees provided in the Human Resources list were still employed at the facility. At the time the project began, six of the remaining 42 were no longer employed and one individual chose not to participate ($N = 35$). Participation was voluntary and participants could withdrawal at any time without repercussion. This information was provided in both verbal and written form (Appendix A). Consent for participation was obtained through the completion of the provided forms. To ensure information collected could not be traced back to specific individuals, age and level of education data were collected categorically and summarized prior to analysis. Potential benefits of participation included abilities to accurately identify staff to recruit and train, thus reducing turnover rates and increasing staff morale.

Each participant was approached as unit acuity was highly varied and staff were not able to leave the unit on their assigned shifts. Each participant was provided details of the project goals, voluntary aspects of participation, and information related to seeking support if needed (Appendix A). Once the consent had been signed, participants were asked to complete demographic information including highest level of education, age, current title, length of time in current position, shift normally worked, and primary unit assignment (Appendix B).

Participants then completed the standard 12-Item Grit Scale developed by Duckworth (2007) (Appendix C). An open ended question was included at the end of the scale in an effort to assess unique constructs not evaluated by the Grit Scale: “Please

provide any additional comments below (benefits of working here, barriers to working here, or anything else you would like to discuss)".

Procedures

Participants were individually approached during one of nine visits to the facility. Three visits were made on each shift (1st, 2nd, 3rd) over a one-month period. Prior to the start of each shift, I gathered the minimum forms necessary based on the number of employees who were scheduled for that shift. If consenting participants were unable to leave the unit, either due to short staffing or higher unit acuity, individuals were able to remain on the unit to complete the forms. I remained with the participants during form completion, facing away from them as to not risk intimidation. Once the forms had been completed, the participant placed the form in a folder facing down. No identifying information was included on the forms to ensure anonymity of participants. Once all completed forms had been accounted for, they were entered into an electronic spreadsheet at the end of each visit, and paper forms were immediately shredded.

The 12-item grit scoring analysis (Appendix E) was used to calculate grittiness. Predetermined points were automatically assigned to employee responses once entered in Excel. Drop-down selections for responses were created to reduce the risk of error and VLOOKUP functions (data extraction techniques) were utilized for calculations based on scoring criteria (Appendix E). The mean scores of even-numbered questions were calculated for passion and the mean of odd-numbered grit scores for perseverance scores.

Results

Primary employee age groups were between 26-34 and 35-49 years of age. There were no individuals employed greater than one year in the 18-25 age group. There were only two individuals greater than 50 years of age (Figure 2). Data were analyzed with Excel Data Analysis ToolPak. Descriptive statistical measures include standard deviation, variance, range, average, median, mode of grit scores, and tenure in current role.

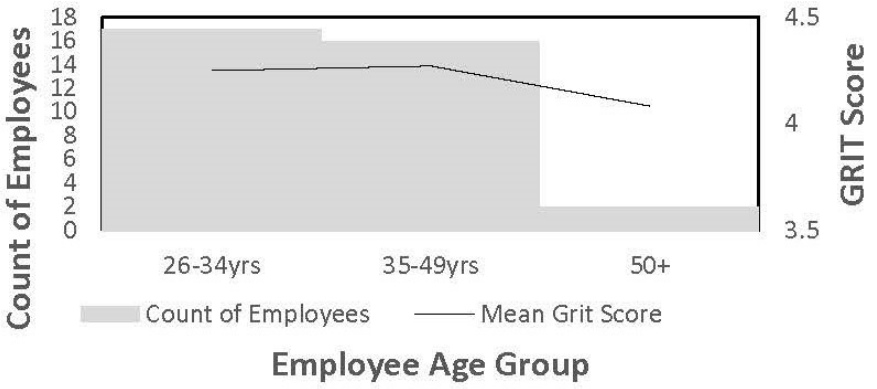


Figure 2. Sum of age groups and mean grit scores.

In addition to descriptive statistics, a multiple linear regression analysis between grit scores and employee age and level of education were analyzed. Results of the multiple linear regression indicated that there was not a collective significant effect between age groups (Figure 2) ($p > .05$, R2 = .04) or level of education (Figure 3) ($p > .05$, R2 = .04) and grit scores. The results of these findings are consistent with the literature in other fields (Eskreis-Winkler et al., 2014), with no statistically significant correlations between grit scores, age and general intelligence.

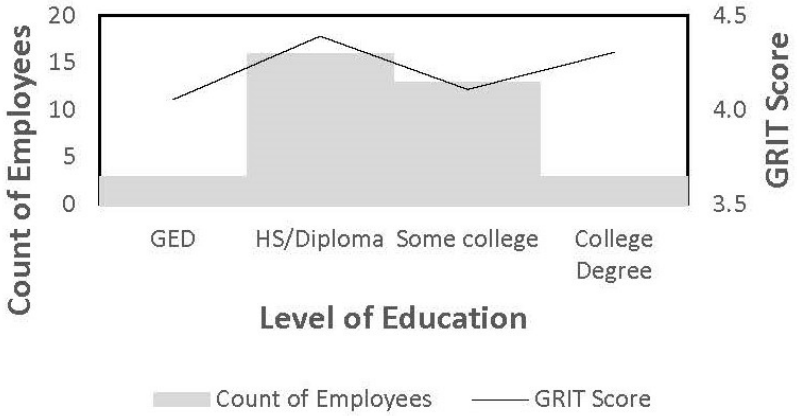


Figure 3. Levels of education and mean grit scores.

The overall results of employee grittiness (Figure 4) indicate this population subset of frontline staff has a high level of grittiness. The mean grit score of 4.3 falls in the 80th percentile of American adults. The lowest grit score was 3.3, falling in the 30th percentile. The highest grit score was 4.8, falling between the 95th and 99th percentile. Passion (M = 4.12, SD = 0.91) and perseverance scores (M = 4.38, SD = 0.75) were not surprising given the overall high grit scores. The high grittiness levels of this employee subset provide a foundation to future analysis in this area as there is no available evidence to support this finding in the present literature.

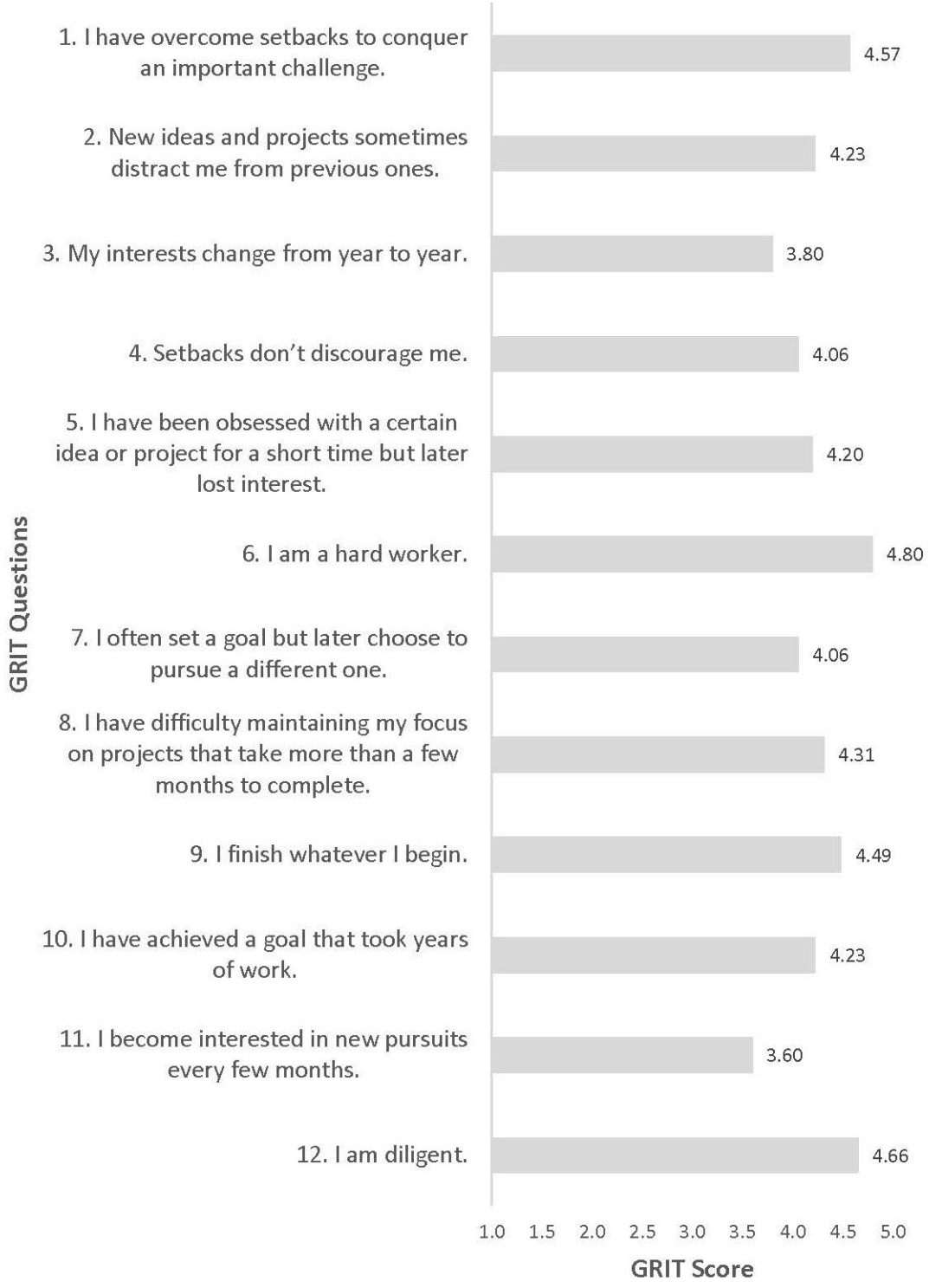


Figure 4. Mean of respondent grit scores.

In order to keep participants anonymous, only a summary of qualitative comments will be discussed, and direct quotations will not be provided. Comments were provided by 26 of the 35 participants and they fell into common themes; safety and short staffing, inconsistent rules and enforcement of those rules from management, as well as compensation rates and a need for a higher starting salary (Table 1). Consistent with the project results of highly passionate employees (Grit), the most frequent comments were related to personal experiences leading to this career choice and the satisfaction of helping troubled youth (Table 1).

Table 1. Common Themes

Common themes	% of themes found in comments
Positive Influence on youth	68.8%
Inconsistent rules	50.0%
Safety and short staffing	43.8%
Lack of support	43.8%
Low pay	31.3%
Lack of training	12.5%

DISCUSSION AND LIIMITATIONS

The aim of this project was to explore grittiness levels of frontline staff working in a Midwest adolescent residential facility to address a gap in the literature and explore the utilization of the Grit Scale as a future pre-employment screening tool. The results indicate a high level of grittiness is currently present in a small subset of employees who have remained in their position for greater than one year. Consistent with the literature reviewed, "gritty people typically stick with their commitments longer than others" (Duckworth, 2016, p. 117) and remain in their positions longer than their counterparts (Lee & Duckworth, 2018; Stoffel & Cain, 2018). Also consistent with the literature, age and level of education were not found to be a statistically significant predictor of grit (Credé, Tynan, & Harms, 2017).

While these findings are exciting and can have a broad impact on hiring practices, the project is not without limitations. As with many pilot projects, the sample size (which comprised the population of the facility) was small. Because of the small sample size, the ability to generalize to other samples is limited. The initial sample size was to be greater than 50 participants; however, there were a total of 18 front-line staff who either voluntarily left or were asked to leave their position during the design phase of the project. The impact of these employees leaving left the remaining employees feeling overwhelmed, which was evidenced by the qualitative analysis of employee commentary.

I was a prior employee of the acute psychiatric hospital located within the facility which is a separate unit from the residential facilities. During the project, several employees verbally expressed concerns as to why they were being requested to complete

the 12-Item Grit Scale as well as the questionnaire. Rapport and assurance of anonymity were likely driving factors in all but one employee participating in the project.

One recommendation for future research might include multi-site evaluations providing a larger sample size. A larger sample with a comparative analysis of employee grit scores who left their position prior to one year would greatly increase generalizability and provide a larger foundation for addressing turnover in this field.

Relevance of Findings to DNP Essentials

Essential 1, "Scientific Underpinnings for Practice" (American Association of Colleges of Nursing [AACN], 2006, p. 8) closely aligns with the designs of this project. AACN (2006) describes an element of this essential as recognizing the health or wholeness of an individual and the continuous relationship with the environment. Frontline staff who are unable to cope with the demands of the job frequently abandon their positions, leaving the remaining employees overwhelmed and understaffed. Employees who are emotionally exhausted and overwhelmed negatively affect the organizational culture and can lead to more and more turnover. By examining grittiness of frontline staff, this project adds to nursing science and highlights the importance of using evidence to improve the lives of staff and residents alike.

Organizational and Systems Leadership connections of this project are aligned with the Doctor of Nursing Practice (DNP) "Essential II: Organizational and Systems Leadership for Quality Improvement and Systems Thinking" (AACN, 2006, p. 11). The ability to understand and retain staff is pivotal in providing consistent quality care. The financial impacts of turnover can significantly affect organizational operations if

concerns are not identified and rectified. All but one of the areas for improvement identified through the project's qualitative analysis are related to administrative and leadership responsibilities. The quality improvement component of this project addresses the concerns from a preventative standpoint through the evaluation of using the 12-item Grit Scale in pre-screening future candidates.

The final essential aligning with this project is "Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes" (AACN, 2006, p. 15). Physicians, nurse practitioners, and nursing staff work directly with front line staff to develop and revise care plans as needed. It is important that each level of the organization, especially leadership, identify and value the perspectives of frontline staff in order to enhance and encourage collaboration with the end goal of improving patient and population care. Frontline staff are the eyes and ears of operations and spend more time with youth than any of the other disciplines. Patient care is severely compromised if frontline staff do not show up to work every day feeling as if they are a valued and respected member of the team.

CONCLUSION

The majority of adolescents in residential facilities have lived in several foster homes or residential facilities, have a lengthy history of abuse and neglect, and are in need of consistent care and support. The frontline staff are closely engaged with adolescents and provide necessary assessment data to nurses, physicians, facility administrators. High rates of frontline staff turnover impact the collaborative care environment, leading to poor treatment outcomes, reduced productivity, reduced job satisfaction, higher rates of burnout and emotional exhaustion, and a poor overall organizational climate (Aarons, Sommerfeld, Hecht, Silovsky, & Chaffin, 2009).

Grit is at the forefront of behavioral psychology and is a newer psychological construct but has been heavily studied in many areas (Credé et al., 2017; Duckworth, 2016; Duckworth & Gross, 2016; Duckworth et al., 2007). Grit has been identified as one of few successful predictors of turnover in teaching (Robertson-Kraft & Duckworth, 2014), military cadet retention (Duckworth et al., 2007), nursing (Lee & Duckworth, 2018), and several other disciplines. Prior research assessing turnover of frontline staff working in residential facilities identified protective factors as being married, older age (Connor et al., 2003), having stable personality traits (Lakin et al., 2008), and an increased sense of safety (Sichel et al., 2019). While these protective factors are relevant, they are not usually malleable. Grittiness can be an innate factor but is also something that can be developed over time. Duckworth (2016) states “you can grow your grit from the inside out” or “from the outside in” (p. 269).

In summary, the findings of this project are predominantly consistent with other studies evaluating grit. This project may lay the groundwork for future studies that address turnover in this field. Based on the high levels of grittiness found at this facility, use of the Grit Scale for pre-screening future employment candidates is a viable option to decreasing turnover rates of frontline staff positions.

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APPENDICES

APPENDIX A

IRB EXEMPTION

MONTANA STATE UNIVERSITY

INSTITUTIONAL REVIEW BOARD
For the Protection of Human Subjects
FWA 00000165

2155 Analysis Drive
c/o Microbiology & Immunology
Montana State University
Bozeman, MT 59718
Telephone: 406-994-4706
FAX: 406-994-4303
E-mail: cherylj@montana.edu

Chair: Mark Quinn
406-994-4707
mquinn@montana.edu
Administrator:
Cheryl Johnson
406-994-4706
cherylj@montana.edu

MEMORANDUM

TO: Jessica Clark and Alice Running

FROM: Mark Quinn Mark Quinn CMJ
Chair, Institutional Review Board for the Protection of Human Subjects

DATE: August 28, 2019

RE: *"Grittiness of Adolescent Residential Front-line Staff" [JC082819-EX]*

The above research, described in your submission of August 28, 2019, is exempt from the requirement of review by the Institutional Review Board in accordance with the Code of Federal regulations, Part 46, section 101. The specific paragraph which applies to your research is:

____ (b) (1) Research conducted in established or commonly accepted educational settings, involving normal educational practices such as (i) research on regular and special education instructional strategies, or (ii) research on the effectiveness of or the comparison among instructional techniques, curricula, or classroom management methods.

__X__ (b) (2) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures or observation of public behavior, unless: (i) information obtained is recorded in such a manner that human subjects can be identified, directly or through identifiers linked to the subjects; and (ii) any disclosure of the human subjects' responses outside the research could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation; and (iii) the information obtained is recorded by the investigator in such a manner that the identity of the human subjects can readily be ascertained, directly or through identifiers linked to the subjects, and an IRB conducts a limited IRB review to make the determination required by section 16.111(a)(7).

____ (b) (3) Research involving the use of educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior that is not exempt under paragraph (b)(2) of this section, if: (i) the human subjects are elected or appointed public officials or candidates for public office; or (ii) federal statute(s) without exception that the confidentiality of the personally identifiable information will be maintained throughout the research and thereafter.

____ (b) (4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available, or if the information is recorded by the investigator in such a manner that the subjects cannot be identified, directly or through identifiers linked to the subjects.

____ (b) (5) Research and demonstration projects, which are conducted by or subject to the approval of department or agency heads, and which are designed to study, evaluate, or otherwise examine: (i) public benefit or service programs; (ii) procedures for obtaining benefits or services under those programs; (iii) possible changes in or alternatives to those programs or procedures; or (iv) possible changes in methods or levels of payment for benefits or services under those programs.

____ (b) (6) Taste and food quality evaluation and consumer acceptance studies, (i) if wholesome foods without additives are consumed, or (ii) if a food is consumed that contains a food ingredient at or below the level and for a use found to be safe, or agricultural chemical or environmental contaminant at or below the level found to be safe, by the FDA, or approved by the EPA, or the Food Safety and Inspection Service of the USDA.

Although review by the Institutional Review Board is not required for the above research, the Committee will be glad to review it. If you wish a review and committee approval, please submit 3 copies of the usual application form and it will be processed by expedited review.

Full Committee Review ☐
Expedited Review X

MONTANA STATE UNIVERSITY
Institutional Review Board Application for Review
(revised 06/01/15)

Exempt

THIS AREA IS FOR INSTITUTIONAL REVIEW BOARD USE ONLY. DO NOT WRITE IN THIS AREA
Application Number:
Disapproved:
Approval Date: 8/28/19
IRB Chair's Signature: Mark I. Quinn

Date: 05/16/2019

I. Investigators and Associates (list all investigators involved; application will be filed under name of first person listed)

NAME: JESSICA L. CLARK
DEPT: GRADUATE STUDENT
TITLE: STUDENT PMHNP/DNP
PHONE #: 740-644-1009
Complete Department and/or Home Address (where you want the approval letter sent):
E-MAIL ADDRESS: JCLARK1@MCCN.EDU
161 ALYSSA DRIVE. PICKERINGTON, OH 43147
DATE TRAINING COMPLETED: 10/6/2017 *[Required training: CITI Training; see website for link]*
SIGNATURE (PI or ADVISOR): Alice Running

NAME: ALICE RUNNING
DEPT: COLLEGE OF NURSING
TITLE: Professor, PhD, APRN
PHONE #: (406) 994-7505
COMPLETE ADDRESS:
E-MAIL ADDRESS: alice.running@montana.edu
DATE TRAINING COMPLETED: 7-12-16 *[Required training: CITI Training; see website for link]*

(repeat for additional investigators if needed; or delete extra if not necessary)

Do you as PI, any family member or any of the involved researchers or their family members have consulting agreements, management responsibilities or substantial equity (greater than $10,000 in value or greater than 5% total equity) in the sponsor, subcontractor or in the technology, or serve on the Board of the Sponsor? ____ YES __X__ NO

If you answered Yes, you will need to contact Kellie Peterson, Legal Counsel-JD at 406-994-3480.

II. Title of Proposal: *Grittiness of adolescent residential front-line staff*

III. Beginning Date for Use of Human Subjects: 06/01/2019

IV. Type of Grant and/or Project (if applicable)
Research Grant: **n/a**
Contract: **n/a**
Training Grant:
Classroom Experiments/Projects:
Thesis Project:
Other (Specify):

- ok as exempt
- survey of residential staff
- Little/no risk
- No concerns

MQ
8/28/19

V. Name of Funding Agency to which Proposal is Being Submitted (if applicable): **n/a**

VI. Signatures

Submitted by Investigator
Typed Name: JESSICA CLARK
Signature: Jessica L. Clark

Date: 05/16/2019

Faculty sponsor (for student)
Typed Name: ALICE RUNNING
Signature:
Date: 07/16/2019

VII. Summary of Activity. Provide answers to each section and add space as needed. Do not refer to an accompanying grant or contract proposal.

- A. RATIONALE AND PURPOSE OF RESEARCH. **Do higher levels of grittiness correlate with longevity of adolescent residential front-line staff?**

B. RESEARCH PROCEDURES INVOLVED. Provide a short description of sequence and methods of procedures that will be performed with human subjects. Include details of painful or uncomfortable procedures, frequency of procedures, time involved, names of psychological tests, questionnaires, restrictions on usual life patterns, and follow up procedures. **If you are planning on posting flyers, posters, etc. anywhere on Campus, you must check with the building managers and/or departments located in MSU buildings and obtain their approval prior to the posting.**

- The **purpose** of this project is to evaluate grittiness levels of front-line staff who have remained at the facility for greater than one year. This data may be used to facilitate screening of future candidates to ultimately increase staff retention levels.
- **Methods**: Human resources will provide me with a list of individuals who have been employed at Sequel Pomegranate Health Systems (Columbus, OH) greater than one year, as well as their shift, and unit assignments.
  - A notice will be posted on each unit's bulletin board at least one week in advance:
    - "In the following weeks, I will be visiting your unit and requesting five minutes of your time to complete a short anonymous survey. The goal of this research is to further understand factors related to turnover of our facility. Thank you for your time." Jessica C., RN BSN
  - Demographic information collected will include age, gender, tenure, level of education, usual shift assignment, and primary unit placement.
  - Once forms are completed, I will place them in a locked cabinet within the human resources office.
- **Analysis**: Statistical measures to include descriptive statistics (standard deviation, variance, range, average, median, and mode of both GRIT scores and time in current role)
  - Results will be presented to the DON (Jessica Burchett) and CEO (Angela Nickell)
  - Disseminate results of data to participating staff (participants will be notified via a statement within the questionnaire. i.e. "Results of this survey will be disseminated to shift supervisors upon completion of the project".)
  - Provide educational hand-out for increasing GRIT levels based on Duckworth (2016). This will be dependent upon the results of the study (if my hypothesis that higher levels of GRIT equate to longer tenure). The educational handout will educate staff who may have scored lower (or even those who scored high) of what GRIT is and how it contributes to veracity and tenacity. This information will be provided with the results of the analysis and provided to shift supervisors at the completion of the project.
    - Increasing personal GRIT through 5 key steps & how to teach others, including adolescents, to develop GRIT

C. DECEPTION - If any deception (withholding of complete information) is required for the validity of this activity, explain why this is necessary and attach debriefing statement.

N/A

D. SUBJECTS
1. Approximate number and ages

How Many Subjects: Roughly 40
Age Range of Subjects: 18-65
How Many Normal/Control: N/A
Age Range of Normal/Control: N/A

2. Criteria for selection: Employed at facility for greater than one year within a 'floor staff' role (i.e. direct care provider).

3. Criteria for exclusion: Employed at facility for less than one year or not in a 'floor staff' role.

4. Source of Subjects (including patients): List provided by HR

5. Who will approach subjects and how? Explain steps taken to avoid coercion.
   - The researcher will individually approach each staff member to complete the GRIT scale as unit acuity is highly variable and staff will not be able to leave the floor on their assigned shift.
   - While employees are completing the form, the researcher will be available for questions, but will face away from staff to reduce risks of intimidation.

6. Will subjects receive payments, service without charge, or extra course credit? Yes or **No**
   (If yes, what amount and how? Are there other ways to receive similar benefits?)

7. Location(s) where procedures will be carried out.
   SEQUEL-Pomegranate Health Systems
   765 Pierce Dr, Columbus, OH 43223

E. RISKS AND BENEFITS (ADVERSE EFFECTS)

1. Describe nature and amount of risk and/or adverse effects (including side effects), substantial stress, discomfort, or invasion of privacy involved.

   Participants will be notified of rights to refuse participation via the following statement on the questionnaire...

   "Your participation in this research study is voluntary. You may choose not to participate. If you decide to participate in this research survey, you may withdraw at any time. If you decide not to participate in this study or if you withdrawal from participating at any time, you will not be penalized."

2. Will this study preclude standard procedures (e.g., medical or psychological care, school attendance, etc.)? If yes, explain.

   No

2. Describe the expected benefits for individual subjects and/or society.

   The intended outcome is to reduce turnover by analyzing employee longevity with levels of grittiness for future prescreening procedures.

F. ADVERSE EFFECTS

1. How will possible adverse effects be handled?
There are no adverse effects applicable – employees will be completing an anonymous form. The researcher will 'mark off' employees who have either completed the form or refused participation via a checklist. There will be no coding or names associated with the forms.
   By investigator(s):
   Referred by investigator(s) to appropriate care:
   Other (explain):

2. Are facilities/equipment adequate to handle possible adverse effects? Yes or No
(If no, explain.) N/A

3. Describe arrangements for financial responsibility for any possible adverse effects.
MSU compensation (explain):
Sponsoring agency insurance:
Subject is responsible:
Other (explain): There are no financial risks to participants involved – participants are employed by Sequel Pomegranate and risks associated with working at this facility (violent or aggressive patients) are covered by the liability insurance of SPHS.

G. CONFIDENTIALITY OF RESEARCH DATA

1. Will data be coded? Yes or **No** – employees will be completing an anonymous form. The researcher will 'mark off' employees who have either completed the form or refused participation via a checklist. There will be no coding or names associated with the forms.

2. Will master code be kept separate from data? Yes or No **N/A**

3. Will any other agency have access to identifiable data? Yes or **No**
(If yes, explain.)

4. How will documents, data be stored and protected?
Locked file: within HR office – the director of HR and one HR associate will have access to this file.
Computer with restricted password: Data will be stored on paper files located within HR. The analysis of results will be computed on the researcher's personal laptop. Again, there will be no identifiable information within the data stored on the personal laptop, just the data analysis.
Other (explain):

VIII. Checklist to be completed by Investigator(s)

A. Will any group, agency, or organization be involved? **Yes** or No
(If yes, please confirm that appropriate permissions have been obtained.)

Angela Nickell, CEO of Sequel Pomegranate has reviewed the project proposal and agreed to research beginning June 1st, 2019.

B. Will materials with potential radiation risk be used (e.g. x-rays, radioisotopes)? Yes or **No**

1. Status of annual review by MSU Radiation Sources Committee (RSC). Pending or Approved
(If approved, attach one copy of approval notice.)

2. Title of application submitted to MSU RSC (if different).

C. Will human blood be utilized in your proposal? Yes or **No**
(If yes, please answer the following)

1. Will blood be drawn? Yes or **No**
(If yes, who will draw the blood and how is the individual qualified to draw blood?
What procedure will be utilized?)

2. Will the blood be tested for HIV? Yes or **No**

3. What disposition will be made of unused blood? **N/A**

4. Has the MSU Occupational Health Officer been contacted? Yes or No **N/A**

D. Will non-investigational drugs or other substances be used for purposes of the research? Yes or **No**

Name:
Dose:
Source:
How Administered:
Side effects:

E. Will any investigational new drug or other investigational substance be used? Yes or **No**
[If yes, provide information requested below and one copy of: 1) available toxicity data; 2) reports of animal studies; 3) description of studies done in humans; 4) concise review of the literature prepared by the investigator(s); and 5) the drug protocol.]

Name:
Dose:
Source:
How Administered:
IND Number:
Phase of Testing:

F. Will an investigational device be used? Yes or **No**
(If yes, provide name, source description of purpose, how used, and status with the U.S. Food and Drug Administration FDA). Include a statement as to whether or not device poses a significant risk. Attach any relevant material.)

G. Will academic records be used? Yes or **No**

H. Will this research involve the use of:
Medical, psychiatric and/or psychological records Yes or **No**
Health insurance records Yes or **No**
Any other records containing information regarding personal health and illness Yes or **No**

If you answered "Yes" to any of the items under "H.", you must complete the **HIPAA worksheet**.

I. Will audio-visual or tape recordings or photographs be made? Yes or **No**

J. Will written consent form(s) be used? (Yes or No. If no, explain.) (Please use accepted format from our website. Be sure to indicate that participation is voluntary. Provide a stand-alone copy; do not include the form here.)

By completing the following forms, you are agreeing to participate in the research described below.

The purpose of this research project is to assess characteristics of paraprofessional, floor staff members who have remained employed at this facility for greater than one year. This research project being conducted by Jessica Clark, a Doctor of Nursing Practice Student at Montana State University. You are invited to participate in this research project because you have been employed at Sequel Pomegranate Health Systems for greater than one year.

Your participation in this research study is voluntary. You may choose not to participate. If you decide to participate in this research survey, you may withdraw at any time. If you decide not to participate in this study or if you withdrawal from participating at any time, you will not be penalized.

The procedure involves completing the survey below, and the GRIT scale on the following page. This will take approximately 5 minutes. Your responses will be confidential, and I will not be collecting any information that will personally identify you.

All data is stored in a locked cabinet. The results of this study will be used in my course work at Montana State University, and could be submitted for publication once data has been analyzed. Again, you will not be identified in any of these actions.

If you have any questions about the research study, please contact Jessica Clark at jclark1@mccn.edu. This research has been approved by the Montana State University Internal Review Board. This Board is responsible for safeguarding all research participants.

What is your current title?

_____

How long have you worked in your position?

_____

What is the primary unit you are assigned to work on?

_____

Please circle the shift you normally work.

1st 2nd 3rd

Please circle your highest level of education.

GED HS/Diploma Some college College Degree

Please circle your age group.

18-25yrs 26-34yrs 35-49yrs 50+yrs

12- Item Grit Scale

Directions for taking the Grit Scale: Please respond to the following 12 items. Be honest – there are no right or wrong answers!

1. I have overcome setbacks to conquer an important challenge.
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

2. New ideas and projects sometimes distract me from previous ones.*
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

3. My interests change from year to year.*
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

4. Setbacks don't discourage me.
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

5. I have been obsessed with a certain idea or project for a short time but later lost interest.*
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

6. I am a hard worker.
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

7. I often set a goal but later choose to pursue a different one.*
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

8. I have difficulty maintaining my focus on projects that take more than a few months to complete.*
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

9. I finish whatever I begin.
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

10. I have achieved a goal that took years of work.
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

11. I become interested in new pursuits every few months.*
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

12. I am diligent.
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

APPENDIX B

HANDOUT PROVIDING VOLUNTARY ASPECTS OF PROJECT PARTICIPATION

Handout providing voluntary aspects of project participation.

By completing the following forms, you are agreeing to participate in the project described below.

The purpose of this research project is to assess characteristics of paraprofessional, floor staff members who have been employed at this facility for greater than one year. This research project being conducted by Jessica Clark, a Doctor of Nursing Practice Student at Montana State University. You are invited to participate in this research project because you have been employed at this facility for greater than one year.

Your participation in this research study is voluntary. You may choose not to participate. If you decide to participate in this research survey, you may withdraw at any time. If you decide not to participate in this study or withdrawal from participating at any time, you will not be penalized.

The procedure involves completing the demographics survey below as well as the 12-item GRIT scale on the following page. This will take approximately 5 to 10 minutes. Your responses will be confidential, and I will not be collecting any information that will personally identify you.

The results of this study will be used in my course work at Montana State University and could be submitted for publication once data has been analyzed. Again, you will not be identified in any of these actions.

If you have any questions about the research study, please contact Jessica Clark at jclark1@mccn.edu.

APPENDIX C

DEMOGRAPHICS QUESTIONNAIRE

Demographics questionnaire.

What is your current title?

_____

How long have you worked in your position?

_____

What is the primary unit you are assigned to work on?

_____

Please circle the shift you normally work.

1st 2nd 3rd

Please circle your highest level of education.

GED HS/Diploma Some college College Degree

Please circle your age group.

18-25yrs 26-34yrs 35-49yrs 50+yrs

Please provide any additional comments below (benefits of working here, barriers to working here, or anything else you would like to discuss)

_____

_____

_____

_____

_____

APPENDIX D

12-ITEM GRIT SCALE

12-Item GRIT Scale (Duckworth, 2016)

12- Item Grit Scale

Directions for taking the Grit Scale: Please respond to the following 12 items. Be honest – there are no right or wrong answers!

1. I have overcome setbacks to conquer an important challenge.
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

2. New ideas and projects sometimes distract me from previous ones.*
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

3. My interests change from year to year.*
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

4. Setbacks don't discourage me.
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

5. I have been obsessed with a certain idea or project for a short time but later lost interest.*
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

6. I am a hard worker.
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

7. I often set a goal but later choose to pursue a different one.*
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

8. I have difficulty maintaining my focus on projects that take more than a few months to complete.*
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

9. I finish whatever I begin.
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

10. I have achieved a goal that took years of work.
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

11. I become interested in new pursuits every few months.*
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

12. I am diligent.
- ❑ Very much like me
- ❑ Mostly like me
- ❑ Somewhat like me
- ❑ Not much like me
- ❑ Not like me at all

APPENDIX E

GRIT SCORE PERCENTILE RANKINGS FOR LARGE SAMPLE OF AMERICAN ADULTS

GRIT score percentile rankings for large sample of American adults (Duckworth, 2017).

Percentile	*GRIT Score*
0%	2.5
20%	3.0
30%	3.3
40%	3.5
50%	3.8
60%	3.9
70%	4.1
80%	4.3
90%	4.5
95%	4.7
99%	4.9

APPENDIX F

12-ITEM GRIT SCORING ANALYSIS

12-item GRIT scoring analysis.

Scoring:

1. For questions 1, 4, 6, 9, 10 and 12 assign the following points:
   5 = Very much like me
   4 = Mostly like me
   3 = Somewhat like me
   2 = Not much like me
   1 = Not like me at all

2. For questions 2, 3, 5, 7, 8 and 11 assign the following points:
   1 = Very much like me
   2 = Mostly like me
   3 = Somewhat like me
   4 = Not much like me
   5 = Not like me at all

Add up all the points and divide by 12. The maximum score on this scale is 5 (extremely gritty), and the lowest scale on this scale is 1 (not at all gritty).