

Ursidae: The Undergraduate Research Journal at the University of Northern Colorado

Volume 6
Number 2 *McNair Special Issue*

Article 10

April 2019

Relationships Between Goal-Setting, Motivational Traits, and Job Performance

Charissa Samaniego

University of Northern Colorado, sama7820@bears.unco.edu

Follow this and additional works at: <https://digscholarship.unco.edu/urj>

Part of the [Psychology Commons](#)

Recommended Citation

Samaniego, Charissa (2019) "Relationships Between Goal-Setting, Motivational Traits, and Job Performance," *Ursidae: The Undergraduate Research Journal at the University of Northern Colorado*: Vol. 6 : No. 2 , Article 10.

Available at: <https://digscholarship.unco.edu/urj/vol6/iss2/10>

This Article is brought to you for free and open access by Scholarship & Creative Works @ Digital UNC. It has been accepted for inclusion in Ursidae: The Undergraduate Research Journal at the University of Northern Colorado by an authorized editor of Scholarship & Creative Works @ Digital UNC. For more information, please contact Jane.Monson@unco.edu.

Relationships Between Goal-Setting, Motivational Traits, and Job Performance

Charissa Samaniego

Mentor: Michael M. Phillips, Ph.D., Psychological Sciences

Abstract: Ensuring employees are and remain motivated is an important issue for organizations. One problem regarding employee motivation is not everyone is motivated in the same way, thus affecting performance. Goal setting has shown to increase performance when specific and difficult goals are set. Moreover, newer research concerning motivational traits has sought to explain individual differences in motivation. This trait framework shows potential, but research on the relationship between job performance, goal-setting and motivational traits has not been clearly established. The goals of this correlational study were to (1) determine if a relationship exists between motivational traits and job performance, (2) if a relationship between motivational traits and goal setting exists, and (3) to examine goal setting as a mediator between motivational traits and job performance. Participants were recruited to complete a goal-setting activity and the Motivational Traits Questionnaire (MTQ) short-form; supervisors evaluated their job performance. Competitive excellence (an MTQ subscale) positively predicted higher job performance, but goal setting did not have a mediating effect. Further research on this potential connection would need to be expanded into different workplaces to be more generalizable.

Keywords: *motivation, job performance, goal-setting*

Job performance is a factor used for many decisions in the workplace, such as promotions and wage increases, and since motivation relates to employee performance, employers must understand the relationship between motivation and job performance. Therefore, understanding how to ensure employees are motivated and performing at an adequate level is a concept companies should understand. Job performance measures vary with different positions within a company and across similar jobs in different corporations, but within the research many motivational concepts have been correlated to job performance (Donovan, Bateman, & Heggstad, 2013). For example, goal setting, a self-regulatory skill, has been shown to increase performance within many different workplaces when specific and difficult goals are set (Locke & Latham, 2013). Motivation tends to be a multifaceted construct that is influenced by the individual and how the environment is structured, what has been thought of as a reciprocal relationship (Bandura, 1978). Trait frameworks are one approach researchers have used to explore theories that explain individual differences in how humans will act within different environments. From a trait framework, the complex psychological construct of individual motivational orientations has been

decomposed into different facets. Within motivation research, the motivational trait framework has shown potential, but there is no research in the mediating effect of motivational traits to motivational skills, such as goal-setting (Donovan, Bateman, & Heggstad, 2013). This research seeks to (1) determine if a relationship exists between motivational traits and job performance, (2) if a relationship between motivational traits and goal setting exists, and (3) to examine goal setting as a mediator between motivational traits and job performance.

Performance

Performance is a multi-dimensional concept; accordingly, job performance in the workplace has been conceptualized in different ways by various researchers. This process began with the general wisdom that job performance is the behaviors employees engage in that contribute towards organizational goals (Campbell, 1990). This foundation is helpful because it is not as restrictive as defining job performance in terms of task performance, because many behaviors within task performance do not contribute to organizational goals. On the other hand, it is more specific than defining performance as all behaviors that employees engage in at work (Jex, 1998).

In organizations, knowing how job performance is defined determines how evaluations and appraisals are structured. In order to assess performance, an understanding about what is expected within the job and acceptable levels of performance is needed. Campbell (1990) also suggested that multiple dimensions of job performance can be examined through various tasks, critical incidents, and job analyses. Although no consensus has been reached on which of the different dimensions affect job performance the most, the dimensions have been shown to be positively correlated with individual job performance (Viswesvaran & Ones, 2000). Campbell (1990) began first by examining the relationship between the actual scaled behavior that is being performed (an action) and whether or not that behavior is linked to organizational goals (an outcome). Even though researchers agree that these two aspects need to be differentiated, there is not a consensus on which aspect is actual performance (Sonnetag, Volmer, & Spsychala, 2008).

Action vs. Outcome

Sonnetag and Frese (2002) stated that when conceptualizing job performance, it is important to differentiate between the action and outcome aspect of performance. A crucial component that defines the action component is the actual behavior an individual exhibits within a certain situation. This behavior has to be scaled, or counted, in order for it to be considered as performance (Campbell et al., 1993). For example, behaviorally anchored rating scales (BARS) are common when rating performance because these scales divide performance into different behavioral dimensions on which employees can then be rated. BARS is suggested due to the complexity of behaviors shown in most jobs (Jacobs & Zedeck, 1980). The concept of the action aspect of performance only describes the behavior which the organization hires the employee to do well, that is goal-oriented behavior (Campbell et al., 1993).

If that behavior is relevant for organizational goals, then it tends to be an outcome upon which

performance can be judged (Sonnetag & Frese, 2002). For example, if an organizational goal is exceptional service, the behaviors performed (e.g. smiling, professional voice, understanding and helpfulness) are the actions. Customer service can be measured through surveys and feedback from the customers. In this example, when the behavior is directed towards giving excellent service, the behavior is the outcome aspect. Although these actions and outcomes are related, they do not completely overlap due to the fact that outcomes can be affected by factors other than the behavior (Sonnetag, Volmer, & Spsychala, 2008). For example, imagine a sales associate with excellent customer service ratings (action) who does not actually meet his monthly quota of sales (outcome). Since there is this overlap, most researchers follow the suggestion of Campbell and colleagues (1993) and focus on the behavioral aspect of performance. This process can be accomplished through examining task and contextual performance because these distinguish actions that are only associated towards organizational goals.

Task Performance and Contextual Performance

When examining whether behavior is linked to organizational goals and if that behavior contributes to those goals, both task and contextual performance can be examined. Task performance is when an individual is proficient in the actions performed towards an organizational goal (Sonnetag & Frese, 2002). Campbell (1990) proposed a theory of job performance with five aspects pertaining to task performance: job-specific task proficiency, non-job-specific task proficiency, supervision of the task, management of task, and written/oral communication proficiency. Generally, task performance refers to actions that are part of the job description and are objectives given to employees in order to receive some sort of reward (e.g. salary or bonus). Continuing with the sales associate example, task performance would be the activities the sales associate performs in order to make a sale (e.g. knowing where the products are, ensuring the products are displayed properly, knowing how to

operate the cash register, interaction with the customer).

Task performance is specific to one job, whereas contextual performance can be generalized to more than one. Contextual performance is connected to one's personality and task performance is mainly ability (Sonnetag, Volmer, & Spychala, 2008). Contextual performance includes an individual's actions that are performed in relation to the organization's physical, psychological and social environment (Sonnetag & Frese, 2002). This performance can be thought of as an employee going above and beyond what is stated in the job description to achieve organizational goals. For the sales associate, this could mean volunteering to stay later than needed when more customers are in line or redesigning his section of products in the hope that it will bring in more customers.

In an attempt to find the level of distinction between contextual and task performance, Motowidlo and Van Scotter (1994) analyzed supervisory ratings of over 400 Air Force mechanics and found that both task and contextual performance contributed independently to overall performance, meaning that these two types of performance are distinct. Further demonstration that contextual performance is connected to personality and not ability was seen through the results that contextual performance was more highly correlated with personality variables in accordance with employee expectations.

Motivation

There are several theories regarding the nature of motivation and what serves to motivate individuals to perform at a higher level. Dunnette (1976) first described performance in the work place as a function of ability multiplied by motivation. Over the years, the definition of performance evolved from being a simple relationship between ability and motivation to the relationship between an individual's aptitude, skill, understanding of the task, choice to expend effort, intensity of effort, choice to persist, and other conditions that an individual has no control over (e.g. organizational climate, structure of the

work). As opposed to mathematically attempting to determine what motivates a person, motivation can be stated clearly as whether an individual wants to initiate effort, to persist with that effort over time, and how much effort is actually being used and in which direction (Thierry, 1998). In connection to the workplace, companies need to ensure employees are motivated on tasks needed for organizational success in order for the tasks to be completed on time and within quality requirements. Many individual factors can influence one's level of motivation and these have been examined through various points of view (i.e. different goals set by employees or differences in goal orientation towards tasks).

Goal Setting Theory

Drawing on over 300 studies dating back to the 1960s, Locke and Latham (2013) proposed a theory that focuses on how goal setting affects performance. Based on this foundational work, a goal has been defined as the aim of behavior that is usually completed within a specific time (Locke & Latham, 2002). During the development of this theory, performance was described as units of dollars, time and production/quality (Locke & Latham, 1984). Latham (1986) determined that when units of dollars, time and production/quality could not be used to describe performance, various behavioral measures in connection to the job were recommended. For example, when someone works with people, performance could be determined by customer service ratings. They found that the relationship between goal difficulty and performance is a linear relationship and that a combination of difficult and specific goals can lead to higher performance. Specific goals have an internal referent and allow a wider range of acceptable performance level, which lowers ambiguity in what needs to be accomplished and therefore reduces variation in performance (Locke & Latham, 2002).

Locke and Latham (2013) also note that people can attempt to achieve multiple goals at the same time and that self-set goals are just as effective in increasing performance as goals that have been assigned. There are also four aspects

that influence how a high goal leads to high performance: direction, effort, persistence and knowledge/task strategy (Locke & Latham, 2002). Goals direct behavior and attention towards achieving relevant goal activities and away from irrelevant activities. When a goal is high, more effort is needed to achieve that goal. High goals that include a time frame for participants enable them to control the time and effort put forth. High goals also enable people to use what knowledge they already have, discover new knowledge and use different strategies to achieve the goal (Locke & Latham 2013). Competition and goal decision-making participation also affect job performance, but only to the extent that they lead to a specific and high goal. Goal commitment, including importance and self-efficacy, and feedback have also been to moderate the relationship between the goals set and the performance achieved (Locke & Latham, 2002). It can be seen that if an individual has a goal that is optimally challenging to achieve and is specific to their job, then their job performance increases; but on that individual basis, there has been limited research on how differences in motivational patterns can affect the goal-setting process (Locke & Latham, 2013).

Motivational Traits

Heggestad and Kanfer (2001) developed the motivational trait questionnaire (MTQ), which breaks the complex psychological construct of motivation into different motivational facets that are focused on traits of the individual. From two common motives, achievement and anxiety, Heggestad and Kanfer (2001) found that three distinct motivational traits emerged: personal mastery, competitive excellence and achievement anxiety. Personal mastery describes an individual's need to achieve more knowledge and new skills, and seeking continued improvement driven by internal motives rather than external motives rather than external incentives. Competitive excellence is defined as an individual's tendency to compare his or her performance to others in order to outperform them. Achievement anxiety is a combination of an individual's tendency to worry about the

evaluation of performance and the emotions associated with these performance evaluations.

Due to the fact that the MTQ showed three motivational traits from the original framework, a short-form MTQ was developed to continue to examine those motivational traits. In order to assess construct validity of the short form MTQ, further research was conducted and the same three traits as before were found to have high correlations of construct validity on the scales used to measure similar constructs (Kanfer & Ackerman, 2001). Since substantial correlations were found between the scales used to measure similar constructs, convergent validity was also shown that the scales are related to the original motivational trait found. Hinsz and Jundt (2005) used the short form MTQ in goal-setting situations in their research and found that these motivational traits, in connection to task performance, are related to the overall constructs of personal goals and self-efficacy. Their study also suggested personal goals and self-efficacy mediated some of the relationships between the MTQ scales and task performance, but that this mediation is not complete. This study also found motivational traits within task performance depend on personal goals, but the task can change and then the traits no longer influence the task. The researchers focused on specific task performance, not overall performance, which is not very generalizable to performance within work situations, since an individual can have many tasks within a job.

Given the abundance of research regarding how we approach tasks, researchers have come up with many different ways to essentially address this issue, and other theories and constructs have been formulated. Similarities can be seen within the terminology used between motivational traits and achievement goal orientation theory. In connecting goal-setting theory to attributions about success/failure, effort and ability, researchers turned to achievement goal theory in an attempt to further explore how goals influence motivation and performance. Achievement goals are general ways of orienting toward goals with a twofold concept that represent the aim to improve

competence and mastery of the task, as well as demonstrating performance and relative ability in doing better than others (Pintrich, Conley, & Kempler, 2003). Further research conducted by Elliot and McGregor (2001) created a 2 X 2 framework for goal orientation. This framework divided achievement goals into mastery vs. performance and avoidance vs. approach, creating a goal framework of: mastery-avoidance, mastery-approach, performance-avoidance and performance-approach. It was found that for all four goal categories, goals sharing a competence dimension (either definition or valence) were positively related to each other, and those without were unrelated. Results also showed that each goal had a set of antecedent variables and that each goal predicated a pattern of processes and outcomes that were achievement-relevant.

Goal orientation and motivational traits have very similar terminology in how the four different goal orientations are defined and how the three different motivational traits emerged from achievement and avoidance motives. Personal mastery could connect to the mastery-approach and mastery-avoidance goal orientation; competitive excellence could connect to the performance-approach and performance-avoidance goal orientations. The motivational trait of anxiety avoidance could be connected to whether or not an approach or avoidance orientation is taken. Goal orientation can be seen as more of an individualistic approach to understanding how goals and motivation can affect performance, but this concept has mainly been used in educational settings (Elliott, 2001). Within organizational research, goal orientation has been seen to relate to job performance. Within a Dutch energy supplier, Janssen and Van Yperen (2004) found mastery orientation was positively correlated to job performance and performance orientation negatively correlated to job performance. Examining salespeople, Porath & Bateman (2006) found that performance-approach goal orientation was positively correlated to sales performance and performance-avoidance negatively predicted performance.

In order to discover what motivates individual employees, there is a need to understand how motivational traits and individual differences affect job performance. Furthermore, based on goal-setting theory, there is an established relationship between goal setting and performance within the workplace setting, but the mediating effects of setting goals in connection to motivational traits has not been examined. The contribution of the present study focuses on whether goal setting mediates the role between motivational traits and job performance. I anticipate competitive excellence traits (an MTQ subscale) will positively correlate with higher job performance. In addition, I expect that with goal setting as a mediator, personal mastery will correlate with higher job performance. Discovering how differences in individual motivational traits affect the way an individual performs will attempt to explain how workers are more or less motivated to work.

METHOD

Participants

The participants were recruited from Housing and Residential Education (HRE) at a mid-sized public university in the Rocky Mountain region. In this environment, Resident Assistants (RA's) are the employees and Hall Directors (HD's) are the supervisors. Permission from the Assistant Director of HRE to conduct this research was obtained as well as IRB approval.

Measures

Goal-Setting Activity

RAs were asked to complete a goal-setting activity that required them to set goals in connection to two areas of their job position: academic support/retention and individual resident relationships (see Appendix A). The researcher for this study created this activity. Within setting a goal for academic support and retention, participants were asked to describe their action plan to achieve the goal they stated. Each goal was individually rated by two researchers on a scale of one to four on the dimensions of

difficulty, measurability and specificity (See Appendix C).

Motivational Trait Questionnaire-Short Form

RA's were also asked to complete the MTQ-Short Form questionnaire. For the MTQ-Short Form, each of the three distinct motivational traits have been broken down and measured via subscales with a total of 48 items. Within the personal mastery trait, one subscale measures the desire to learn with eight items and another measures mastery goals with eight items. The MTQ competitive excellence subscales include a measure of competition seeking with six items and a measure of other reference goals with seven items. For the achievement anxiety motivational trait, one-subscale measures worry with 10 items and another measures emotionality with 9 items.

Performance Evaluation

The HDs were asked to complete a job performance evaluation for each participating RA that they oversee. The performance evaluation used within this study was adapted from the evaluation already being used by HRE. This adapted version contained five main performance categories rated on a scale of 1-4 based on how developed a staff member seems to be, 1 "being not developed" and 4 "being well-developed". The five categories are community and leadership development, administrative responsibilities, professionalism, academic support/retention and individual resident relations. A sample item asks the HD to rate RA's on how well they encourage student connection to the university through campus events and leadership opportunities (see Appendix B).

Procedure

Eight HD's were recruited through a staff meeting and individual follow-up. At the staff meeting, an explanation of the study was given as well as what was required of the HD's. Questions and concerns were addressed and then I met alone with seven of the eight HD's who agreed to participate in order for each to sign a consent form. The HD's were sent a reminder email on the 7th of March, and on the 11th of March a Qualtrics

survey link containing the job performance evaluation was sent.

Once the HD's agreed to participate in the study, the RA participants were recruited. I went to individual staff meetings to explain the proposed study and what was required through participation. HD's were asked to briefly leave the room during recruitment of the RA's. RA participants were informed that their information was not anonymous since their survey answers had to connect to their job evaluation, but their supervisors would not have access to their survey responses. I also provided an explanation of their right to withdraw at any time and that their confidentiality would be maintained to the fullest extent. As soon as their responses were connected to their performance evaluation, any identifying information was removed and replaced with a unique identifier. All RA's received a link in their email containing a Qualtrics survey to participate in the study within 24 hours. The survey asked RA participants to set two goals for the upcoming semester, complete the MTQ and enter demographic information via the Qualtrics survey. Based on the literature, online survey responses have a 33% response rate (Nulty, 2008). The entire population of RA's was approached and reminder emails were used in order to ensure the highest response rate and thus attempt to have a higher sample size. Both RA's and HD's were informed that all participants were entered into a drawing for five \$5 gift cards.

RESULTS

Of the thirty-six RA's approached to participate, sixteen participants (7 female, 8 males and 1 other) responded to the employee survey, equaling a 44% response rate. Average age was 20.56 (SD=1.21) years, ranging from 19-23. The median as well as the mode was 20 years old. Class standing ranged from 1-5 years, 6.25% being first year students, 6.25% being second year students, 50% being third year students, 25% being fourth year students and 12.5% being fifth year students. The average time employed within HRE was 3 semesters (SD=1.5).

Table 1. Means and standard deviations for goal ratings

		Specific	Measurable	Difficult
Goal 1	Mean	1.18	1.08	1.05
	SD	0.28	0.23	0.15
Goal 2	Mean	1.59	1.53	1.38
	SD	0.56	0.72	0.66

Table 2. Means and standard deviations for the MTQ

	Mean	Standard Deviation
Overall MTQ	4.16	0.36
Personal Mastery	4.77	0.52
Mastery Goals	4.58	0.68
Desire to Learn	4.96	0.56
Competitive Excellence	3.99	0.87
Other Referenced Goals	3.96	0.93
Competition Seeking	4.01	0.99
Motivational Anxiety	3.71	0.91
Worry	3.86	0.87
Emotionality	3.55	1.07

Goal Setting

The goal-setting activity showed that all participants set goals that were at a low level for all three of the following criteria: specific, measurable and difficult (see Table 1). To see if variability was reduced in order to correlate goal setting to both the motivational traits and job performance, a total goal score was calculated by combining the ratings of both goals on the three criterion. This resulted in a goal total rating ranging from 6-24, with an average of 7.90 (SD=1.88). Cohen's K was run to determine agreement between the two goal rater's

judgements of each goal. The agreement for each goal ranged from .321 to .887, indicating fair to very high agreement.

Motivational Traits Questionnaire

The RA participants scored highest on the personal mastery trait, followed by competitive excellence and motivational anxiety (see Table 2). There were 2 subscales for each of the three factors, the mastery goals subscale consisted of 8 items ($\alpha=.81$), the desire to learn subscale consisted of 8 items ($\alpha=.78$), the other referenced goals subscale consisted of 7 items ($\alpha=.80$), the

Table 3. Job performance correlations to MTQ

	Personal Mastery	Mastery Goals	Desire to Learn	Competitive Excellence	Other Referenced Goals	Competition Seeking	Motivational Anxiety	Worry	Emotionality	Job Performance
Personal Mastery	1	.87**	.80**	-.12	-.272	.04	-.42	-.55*	-.26	-.06
Mastery Goals	-	1	.41	.08	-.04	.18	-.52*	-.57*	-.42	.072
Desire to Learn	-	-	1	-.32	-.46	-.14	-.14	-.320	.03	-.12
Competitive Excellence	-	-	-	1	.90**	.92**	-.13	-.04	-.192	.61*
Other Referenced Goals	-	-	-	-	1	.65**	-.10	.07	-.23	.54*
Competition Seeking	-	-	-	-	-	1	-.14	-.13	-.27	.56*
Motivational Anxiety	-	-	-	-	-	-	1	.92**	.95**	-.25
Worry	-	-	-	-	-	-	-	1	.73**	-.21
Emotionality	-	-	-	-	-	-	-	-	1	-.25
Job Performance	-	-	-	-	-	-	-	-	-	1

Note: * $p < 0.05$

competition seeking subscale consisted of 6 items ($\alpha=.85$), the worry subscale consisted of 10 items ($\alpha=.77$) and the emotionality subscale consisted of 9 items ($\alpha=.90$).

No correlation was found among the three motivational traits. The correlation between personal mastery and competitive excellence was not significant ($r = -.13, p > .05$), as well as the correlation between personal mastery and motivational anxiety ($r = -.416, p > .05$), and between motivational anxiety and competitive excellence, the correlation was not significant as well ($r = .109, p > .05$). The motivational traits were also not correlated to the goal total rating. The correlation between personal mastery and the goal total rating was not significant ($r = -.28, p > .05$), as well as the correlation between competitive excellence and the goal total rating was not significant ($r = .15, p > .05$) and between motivational anxiety and the goal total rating, the correlation was not significant as well ($r = -.21, p > .05$).

Job Performance

From the supervisors' ratings of job performance for the 16 employee participants, the

mean was 50.13 out of 65 (SD = 6.15). The total goal rating was not correlated to the supervisors' job performance ratings ($r = .06, p > .05$).

Predicting Job Performance

In order to examine whether or not a relationship existed between motivational traits and job performance, a Pearson's correlation was calculated. The significant correlations were between competitive excellence and job performance; other referenced goals and job performance; and competition seeking and job performance (see Table 3).

A simple linear regression was calculated to predict job performance based on the competitive excellence trait. A significant regression was found ($F [1, 14] = 8.141, p < .013$), with an R^2 of .368. The results of the regression showed that this trait does predict job performance ($\beta=.606, p < .05$) and explained 37% of the variance in job performance.

DISCUSSION

In discovering if a relationship existed between motivational traits and job performance and whether or not goal setting mediates that relationship, this study found support that one

motivational trait, competitive excellence, is related to job performance in this setting. On the other hand, the motivational traits were not related to the goals set within this study. Since this relationship was not present, it signified that there was not a mediating relationship present for this sample. A number of factors could explain the lack of support for the hypothesis that goal setting mediates the relationship between the motivational traits and job performance. First, the way goals were measured for this study did not allow for a finer analysis between individuals. There was little to no variation between the goals set on an individual level, meaning that no differences could be seen in connection to job performance or the motivational traits. Second, it is possible that these variables are not related for this particular type of work setting. Examining each construct separately and then discovering what was different in this environment than past studies can help to explain why or why not relations were found between them.

Goal setting has been shown to be effective when the goals set are specific and difficult (Locke & Latham, 2002), but the goals rated in this study were not found to have these qualities. Therefore, it is understandable that the goals were not related to job performance, but it is still unclear why the goals set were not specific and difficult goals. There could be a number or reasons for this, some potentially related to past literature, others perhaps not. One explanation for this is within the goal-setting theory of Locke and Latham (2013) because goal commitment, including self-efficacy and importance, moderates the relationship between the goals set and the performance observed. If the participants did not believe that the outcomes of their goals were important or that they had the ability to achieve them, then their performance is not going to be increased by setting goals. Another possible reason why the goals set were not correlated to job performance could be because the participants did not know how to set goals that were specific and difficult on their own. Latham and Kinne III (1974) found that training in goal setting can lead to an increase in production. In more recent

findings with a population of nurses, those who received training in goal setting had higher self-efficacy and individual effectiveness than those who did not (Gibson, 2001). Furthermore, within goal-setting theory, it has been seen that participative goal setting is more effective than having managers set goals for employees; therefore, maybe if the participants had more guidance while setting goals, then the goals could be rated as more specific and difficult (Locke & Latham, 2002).

Another possible reason why goal setting was not correlated to job performance could have been because in this work environment job, performance is measured on a developmental basis and not by outcomes. Many positions can be evaluated in a summative format by comparing employees' job performance to a set standard (i.e. targeted monthly sales or target production). In this work environment, job performance is more formative and relies heavily on feedback from the supervisors in order for the student staff member to continue to develop as an employee. Therefore, perhaps when job performance is being behaviorally measured on a developmental continuum, goal setting may not have as much of an impact.

This study has shown that motivational traits can have an impact within a workplace environment. Because competitive excellence was correlated to higher job performance, there are some practical applications that can be seen from this study. Organizations can screen for individuals with higher competitive excellence scores and foster their competitive nature through their job experience (i.e. bonuses for higher achievements). Further research would be needed to know if the other motivational traits could be connected to the workplace environment in order to have workers that score higher on personal mastery and motivational anxiety increase their job performance. The internal consistency coefficients in this study were very close to those obtained by the original developers of the MTQ short-form, further supporting that the measure is reliable.

The internal validity of the MTQ is shown to be strong and the results of this study add to the growing support for the motivational traits framework and how work motivation research could be addressed. It should be noted that the present study is limited, in that the sample size was small and the population used was specific to one work environment, limiting generalizability to other work populations. There were also many supervisors to the amount of employees; an environment with less variability between job performance ratings might display different results. In the immediate setting, there are a couple of applied recommendations for the future, including looking into a more operationalized definition of job performance within this work environment and a goal setting training.

Looking to the future, implementing a goal training within this same environment or even within a different work setting with more manipulation of the goal setting aspect (i.e. participative goal setting between employer and employee) may result in different evidence and support for mediation. Further exploration of motivational traits within the workplace should be examined to discover if more relationships could be found. Furthermore, focus should continue to be spent on how different environments, such as an educational setting, relate to motivational traits and how different motivational skills affect the relationships found here and in prior research. One interesting path would be to compare motivational traits to goal orientation research since there is such an overlap in the constructs between the two frameworks, and to investigate whether any new relationships occur in different environments.

REFERENCES

Acevedo, S. F. (2012). Why, after chemotherapy, is it necessary to assess memory using translational testing? *Breast Cancer: Basic and Clinical Research*, 6, 181-190.

Ahles, T. A. (2012). Brain vulnerability to chemotherapy toxicities. *Psycho-Oncology*, 21, 1141-1148. doi: 10.1002/pon.3196

Ahles, T. A., & Saykin, A. J. (2007). Candidate mechanisms for chemotherapy-induced cognitive changes. *Nature Reviews Cancer*, 7, 192-201. doi: 10.1038/nrc2073

American Cancer Society. (2014). Cancer facts and figures 2014. Retrieved from <http://www.cancer.org/research/cancerfactsstatistics/cancerfactsfigures2014>

Arnold, R., Rinke, A., Schmidt, Ch., & Hofbauer, L. (2005). Chemotherapy. *Best Practice & Research Clinical Gastroenterology*, 19, 649-656.

Baker, F., Denniston, M., Smith, T., & West, M. M. (2005). Adult cancer survivors: how are they faring? *Cancer*, 104, 2565-2576.

Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry*, 4, 561-571.

Belvoir Media Group, LLC, (2010). Chemotherapy. *Harvard Health Publication, Health Topics A-Z*.

Conroy, S. K., McDonald, B. C., Smith, D. J., Moser, L. R., West, J. D., Kamendulis, L. M.,... & Saykin, A. J. (2013). Alterations in brain structure and function in breast cancer survivors: effect of post-chemotherapy interval and relation to oxidative DNA damage. *Breast Cancer Research and Treatment*, 137, 493-502.

Courneya, K. S. & Karvinen, K. H. (2007). Exercise, aging, and cancer. *Applied Physiology, Nutrition, and Metabolism*, 32, 1001-1007.

Ferrans, C. E. & Powers, M. J. (1985). Quality of life index: development and psychometric properties. *Advances in nursing science*, 8(1), 15-24.

Grady, C. L. (2008). Cognitive neuroscience of aging. *Annals of the New York Academy of Sciences*, 1124, 127-144.

Hsieh, C. C., Sprod, L. K, Hydock, D. S., Carter, S. D., Hayward, R., & Schneider, C. M.

- (2008). Effects of a supervised exercise intervention on recovery from treatment regimens in breast cancer survivors. *Oncology Nursing Forum*, 35, 909-915.
- Jackson, A. S., & Pollock, M. L. (1978). Generalized equations for predicting body density of men. *British Journal of Nutrition*, 40, 497-504.
- Jackson, A. S. & Pollock, M. L. (1980). Generalized equations for predicting body density of women. *Medicine and Science in Sports and Exercise*, 12, 175-181.
- Jemal, A., Center, M. M., DeSantis, C., & Ward, E. M. (2010). Global patterns of cancer incidence and mortality rates and trends. *Cancer Epidemiology Biomarkers & Prevention*, 19, 1893-1907.
- Koppelmans, V., de Ruiter, M. B., van der Lijn, F., Booger, W., Seynaeve, C., van der Lugt, A., & Schagen, S. B. (2011). Global and focal brain volume in long-term breast cancer survivors exposed to adjuvant chemotherapy. *Breast Cancer Research and Treatment*, 132, 1099-1106.
- Mackenzie, L. J., Carey, M. L., Sanson-Fisher, R. W., & D'Este, C. A. (2013). Psychological distress in cancer patients undergoing radiation therapy treatment. *Support Cancer Care*, 21, 1043-1051.
- Maggio, M., Dall'aglio, E., Lauretani, F., Cattabiani, C., Ceresini, G., Caffarra, P., & Ceda, G. P. (2012). Hormonal dysregulation and cognition in the elderly: The hormonal pathway to cognitive impairment in older men. *The Journal of Nutrition, Health & Aging*, 16(1), 40-54.
- Piper, B. J., Acevedo, S. F., Craytor, M. J., Murray, P. W., & Raber, J. (2010). The use and validation of the spatial navigation memory island test in primary school children. *Behavioral Brain Research*, 210, 252-262.
- Piper, B. F., Dibble, S. L., Dodd, M. J., Weiss, M. C., Slaughter, R. E., & Paul, S. M. (1998). The revised Piper Fatigue Scale: Psychometric evaluation in women with breast cancer. *Oncology Nursing Forum*, 25, 677-684.
- Pinto, B. M., Dunsiger, S., & Waldemore, M. (2013). Physical activity and psychosocial benefits among breast cancer patients. *Psycho-Oncology*, 22, 2193-2199. doi:10.1002/pon.3272
- Proctor, R. N., (2003). Cancer. *Dictionary of American History*. 2 (3rd ed.), 34-35.
- Quist, M., Rorth, M., Zacho, M., Andersen, C., Moeller, T., Midtgaard, J., & Adamsen, L., (2006). High-intensity resistance and cardiovascular training improve physical capacity in cancer patients undergoing chemotherapy. *Scandinavian Journal of Medicine and Science in Sports*, 16, 349-357.
- Salkind, M. R. (1969). Beck depression inventory in general practice. *The Journal of the Royal College of General Practitioners*, 18, 267.
- Schneider, C. M., & Hayward R. (2013). Cancer rehabilitation and cancer-related fatigue. *Journal of Clinical Exercise Physiology*, 2(1), 1-7.
- Schneider, C. M., Hsieh, C. C., Sprod, L. K., Carter, S. D., & Hayward, R. (2007). Cancer treatments-induced alterations in muscular fitness and quality of life: the role of exercise training. *Annals of Oncology*, 18, 1957-1962.
- Schmitz, K. H., & Speck, R. M. (2010). Risks and benefits of physical activity among breast cancer survivors who have completed treatment. *Future Science Group*, 6, 221-238.
- Schuurs, A. & Green, H. J. (2013). A feasibility study of group cognitive rehabilitation for cancer survivors: Enhancing cognitive function and quality of life. *Psycho-Oncology*, 22, 1043-1049.
- Siegel, R., DeSantis, C., Virgo, K., Stein, K., Mariotto, A., Smith, T.,... & Ward, E. (2012). Cancer treatment and survivorship statistics, 2012. *CA: A Cancer Journal for Clinicians*, 62, 220-241.

- Summers, L. E. (2012). Effects of chemotherapy on patients' cognitive function. *Cancer Nursing Practice, 11*(8), 27-31.
- Ward, E., DeSantis, C., Robbins, A., Kohler, B., & Jemal, A. (2014). Childhood and adolescent cancer statistics. *CA: A Cancer Journal for Clinicians, 64*, 83-103.
- Wechsler, D. (2009). *Wechsler Memory Scale—Fourth Edition (WMS-IV) technical and interpretive manual*. San Antonio, TX: Pearson.
- Wechsler, D. (2008). *Wechsler Adult Intelligence—Fourth Edition (WAIS-IV)*. San Antonio, TX: Pearson.
- Wefel, J. S., & Schagen, S. B. (2012). Chemotherapy-related cognitive dysfunction. *The Canadian Veterinary Journal, 50*, 665-668.
- Weis, J., Poppelreuter, M., & Bartsch, H. H. (2011). Rehabilitation of therapy-related cognitive deficits in patients with breast cancer. *Psicooncología, 8*, 371-384.
- Wolinsky, F. D., Unverzagt, F. W., Smith, D. M., Jones, R., Stoddard, A., & Tennstedt, S. L. (2006). The active cognitive training trial and health-related quality of life: protection that lasts for 5 years. *Journal of Gerontology: Medical Science, 61A* (12), 1324-1329.
- Wolman, R. L., Cornall, C., Fulcher, K., & Greenwood, R. (1994). Aerobic training in brain-injured patients. *Clinical Rehabilitation, 8*, 253-257.