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Identifying Predictors of University Sales Competition Performance: A Social-Cognitive Account

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LIST OF ABBREVIATIONS

IT	Implicit Theories
ITSA	Implicit Theories of Selling Ability
NFC	Need for Cognition
SE	Self-Efficacy
GO	Goal Orientations
LGO	Learning Goal Orientation
PGO	Prove Goal Orientation
AGO	Avoid Goal Orientation

ABSTRACT

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Because sales competitions simulate real sales calls (Mani, Kothandaraman, Kashyap, & Ashnai, 2015), identifying predictors of performance in collegiate sales competitions could be useful to both researchers and recruiters for screening potential employees. The current research examines how constructs consistent with a social-cognitive account of behavior (Dweck & Leggett, 1988), including implicit theories of selling ability, need for cognition, goal orientations, and self-efficacy predict outcomes, such as, performance within sales competitions. The results support many of the hypothesized relationships. This research replicates and extends prior research on goal orientations and sales behavior by adding cognitive predictors and by examining sales performance and other outcomes in a new setting (university sales competitions), yielding new screening tools for recruiters.

CHAPTER 1.INTRODUCTION

Sales recruiters are increasingly looking at sales competitions as a resource for identifying sales talent (Mani, Kothandaraman, Kashyap, & Ashnai, 2015). Sales recruiters likely feel confident discerning talent from these competitions because the competitions feature role plays that simulate both training in many sales organizations and real selling scenarios (Parker, Pettijohn, & Luke, 1996; Widmier, Loe, & Selden, 2007). Performance in these role plays may thus serve as a proxy for future sales performance (Mani et al., 2015). Identifying predictors of performance in sales competitions is important because it will allow managers to understand why some people perform better than others; this information could have implications for the selection and training of sales representatives. In other words, if predictors of performance in these sales competitions can be identified, this information could be used to screen potential talent who have not participated in competitions.

Despite the potential for screening that sales competitions hold, little research exists that examines predictors of performance in these competitions (for an exception, see Mani et al., 2015). However, a review of literature from sales and psychology seems promising for identifying potential predictors – here, implicit theories, need for cognition, self-efficacy, and goal orientation. Importantly, research across various disciplines supports the social-cognitive model as a useful predictor of performance as well as other

behaviors (Dweck & Leggett, 1988; Silver, Dwyer, & Alford, 2006; VandeWalle, 1997; VandeWalle, Brown, Cron, & Slocum Jr, 1999). This model is particularly useful in fields that have high rates of failure, in this case sales, because it predicts differential responses to failure (Dweck, 2000). In this paper, we examine the extent to which constructs consistent with this social-cognitive framework can predict performance-related outcomes within sales competitions.

Prior research has looked at the relationship between components of the social-cognitive model and sales performance. For instance, research finds that goal orientations predict sales performance, and some researchers recommend screening based on goal orientations (Silver et al., 2006). However, no research has examined the full social-cognitive model in sales settings, generally, nor within a sales competition setting, specifically. The full model, including cognitive predictors and additional behaviors should be more powerful, have additional implications, and perhaps more basic considerations for selection and training (Novell, Machleit, & Sojka, 2016). Below we introduce the social-cognitive model, its categories and constructs, and literature that supports our hypothesized relationships in a collegiate sales competition setting.

1.1. A Social-Cognitive Account of Behavior

In this research we operate from the social-cognitive model of behavior, a framework for explaining why people pursue different goals and exhibit different behavioral responses in the face of challenge (Dweck & Leggett, 1988).

The social-cognitive model comprises three component categories: beliefs, goals, and behavior. The model specifies interrelationships among these categories: beliefs inform motives, which in turn inform behaviors (see Figure A1). Although Dweck and

others have populated these categories with native constructs (i.e. she operationalizes: 1. beliefs as implicit theories and 2. goals as goal orientations), these broad categories should be flexible to include additional constructs consistent with each category. In this study, we are exploring additional variables that fit into each of those operationalized categories. Based on literature that we review later, we are examining need for cognition and self-efficacy to cognitive predictors and resiliency and feedback receptivity to behaviors.

1.2. Cognitive Predictors

1.2.1. Implicit Theories.

Implicit theories (IT) refer to people's beliefs about the nature and fixedness of ability, social attributes, and personality traits (Dweck & Leggett, 1988). In the current research, we examine beliefs about the nature of sales ability, also known as **Implicit Theories of Selling Ability** (ITSA) (Novell et al., 2016). These beliefs include perceptions regarding whether ability is due to nature or to effort as well as corresponding beliefs about how much control they have over ability (Dweck, Chiu, & Hong, 1995a; Dweck & Leggett, 1988). A belief that selling ability comes naturally and that one's ability is a fixed and unchangeable trait, commonly referred to as an **entity theory**. In contrast, a belief that sales ability comes through practice, effort, and one's environment, in other words, one's ability is a controllable, changeable, and malleable state is called having an **incremental theory**. According to a social-cognitive account, these beliefs have downstream effects on goals and behaviors in achievement settings (Dweck et al., 1995a; Dweck & Leggett, 1988; Novell et al., 2016). It is important to note that entity theory and incremental theory do not refer to one who theorizes about entity or

incremental beliefs, but rather that the individual has a theory about the nature of their ability – that their ability is fixed (i.e. entity theory) or changeable (i.e. incremental theory).

1.2.2. Need for Cognition

Need for cognition (NFC) refers to an "individual's tendency to engage in and enjoy effortful cognitive endeavors" (Cacioppo, Petty, & Feng Kao, 1984, p. 306). This may manifest as enjoying solving problems, thinking on their feet, and researching new clients. Because successful sales people must demonstrate these traits, it is easy to imagine that those higher in NFC are more likely to succeed at sales tasks (Sojka & Deeter-Schmelz, 2008).

1.2.3. Self-Efficacy

Perceived Self-Efficacy (SE) refers to "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (Bandura, 1997, p. 3). Self-efficacy has been used as a motivational level variable in psychological and organizational research (Barling & Beattie, 1983; Bell & Kozlowski, 2008; Judge, Jackson, Shaw, Scott, & Rich, 2007). However, because SE is a belief and described as affecting the goals that a person might pursue, in this study we operationalize self-efficacy as a cognitive variable.

1.3. Motivational Predictors

1.3.1. Goal Orientation

Goal orientations are motivations that orient people towards certain behaviors (Dweck & Leggett, 1988; VandeWalle & Cummings, 1997). Goal orientations generally refer to whether people seek to develop or demonstrate a specific ability. Individuals who

set learning goals are characterized as developing their ability in achievement settings by pursuing challenging situations (Dweck & Leggett, 1988). While **learning goals** are concerned with the development of ability, performance goals are concerned with the demonstration of ability. Importantly, in the 3-factor goal orientation measure performance goals are divided into two components: Prove goal orientation and avoid goal orientation (Silver et al., 2006). Whereas **prove goal orientations** (PGO) reflect an individual's motivation to receive positive judgment for their ability, **avoid goal orientations** (AGO) are grounded in a *fear of failure*, where people seek to avoid showing failure to others (Silver et al., 2006). Research suggests that people who adopt an avoid goal are likely to be the most problematic type of employee because they have a *helpless response* to challenges (Elliot & Harackiewicz, 1996; Porath & Bateman, 2006; Silver et al., 2006).

1.4. Relationships between Cognitive and Motivational Predictors

1.4.1. Implicit Theories of Selling Ability and Need for Cognition

Entity theorists believe in a "simpler reality that allows for rather rapid closure" suggesting that entity theorists spend less time thinking than incremental theorists (Dweck et al., 1995a, p. 281). Thus we expect that people who score higher on an entity ITSA scale will tend to score lower on NFC.

H_1: *An entity ITSA will be negatively correlated with NFC.*

1.4.2. Implicit Theories of Selling Ability and Goal Orientations

It is easy to see how implicit theories can influence people's GO (Dweck & Leggett, 1988; VandeWalle & Cummings, 1997). Specifically, because entity theorists believe they are born with a set amount of talent, they are concerned about documenting

ability always performing well; as such, they tend to set performance goals and stick to things they know they will do well. In contrast, because incremental theorists believe their ability is largely due to effort, they are more interested in developing their ability and not so caught up on the end result; as such, they tend to set learning goals and try to challenge themselves even if failure is likely (Dweck, Chiu, & Hong, 1995b).

Research consistently links implicit theories and goal orientations (Dweck, 2000; Novell et al., 2016; VandeWalle, 1997). The two-factor model of goal orientations finds that as endorsement of an entity theory of intelligence increases, a learning goal decreases while their performance goal increases (Dweck, 2000; Dweck & Leggett, 1988). Using the three-factor model, researchers (Novell et al., 2016; VandeWalle, 1997) have found that as endorsement of an entity implicit theory in a given domain increased, a work learning goal decreased, and work performance-avoid goal increased. Using Novell et al. (2016)'s sales domain-specific measure of implicit theories (ITSA), we predict that:

H_{2a}: An entity ITSA will be negatively associated with a learning goal.

H_{2b}: An entity ITSA will be positively associated with an avoid goal.

1.4.3. Need for Cognition and Goal Orientations

Following from these predictions, we anticipate that NFC will function similarly to our other cognitive predictor, ITSA, and have similar relationships with the hypothesized effects of ITSA. That is, NFC is likely to be related to goal orientations. Harris, Mowen, and Brown (2005) examined the relationship between need for learning (a construct conceptually similar to NFC) and salesperson goal orientations and found that need for learning (a construct conceptually similar to NFC) was positively correlated with a learning goal orientation; however, performance goal orientation was not

correlated at all. Based on the three factor model (learning, proving, and avoiding) instead of the two factor model (learning and performing) (Silver et al., 2006), those findings translate to the following hypotheses:$H3_a$: NFC will be positively correlated with a learning goal orientation.

H_{3a}: *NFC will be positively correlated with an learning goal orientation.*

H_{3b}: *NFC will be negatively correlated with an avoid goal orientation.*

1.4.4. Self-Efficacy, Implicit Theories of Selling Ability, and Goal Orientations

Research consistently links incremental theories of intelligence and learning goal orientation with higher self-efficacy, and entity theorists and performance goal orientation with lower self-efficacy (Bell & Kozlowski, 2002; Phillips & Gully, 1997; Tabernero & Wood, 1999; Wood & Bandura, 1989). A possible explanation for this is that one way to bolster self-efficacy is through mastery experience (Bandura, 1997, p. 80). Because performance goal orientated individuals seek to demonstrate their performance, it is rare to consistently achieve perfect performance (Phillips & Gully, 1997). Whereas a learning goal orientated individual would interpret difficulty as an opportunity to improve, performance goal orientated individuals interpret difficultly as a failure of their ability. Simply put, it is more difficult for a performance goal orientated individual to achieve mastery experience than a learning goal orientated individual.

Using a three-factor model of GO, Bell and Kozlowski (2008) found that a prove goal orientation was positively associated with self-efficacy, and avoid goal orientation was negatively related with self-efficacy, but mastery (learning) orientation did not. In line with our previous hypotheses, we expect that learning and prove goal orientation will

positively correlate with self-efficacy and avoid goal orientation will negatively correlate with self-efficacy.

H_{4a}: *Implicit theories will be negatively correlated with self-efficacy.*

H_{4b}: *Learning goal orientation will positively correlate with self-efficacy.*

H_{4c}: *Prove goal orientation will positively correlate with self-efficacy.*

H_{4d}: *Avoid goal orientation will negatively correlate with self-efficacy.*

1.5. Behavior Patterns in the Social-Cognitive Model

In sum, a social-cognitive account of behavior predicts behaviors through cognitions (here, implicit theories, need for cognition, and self-efficacy) and goal orientations. Because of this model's success in predicting responses to failure, it seems particularly well-suited for use for work environments that pose a high occurrence of failure, such as sales. Within a sales setting, these behavior patterns could affect a sales representative's decision to make sales calls, follow up on leads, or seek feedback on their performance.

1.6. Cognitive Predictors

1.6.1. ITSA and Performance

Though no prior research has examined the relationship between a sales-specific scale of implicit theories and sales performance, there is research to suggest that the relationship exists (Novell et al., 2016). For example, research in education has found that incremental beliefs tend to be associated with higher performances while entity beliefs are associated with lower performances (Blackwell, Trzesniewski, & Dweck, 2007; Dweck & Leggett, 1988). These studies generally show that when children believe that their effort can make a meaningful positive change on a situation, children are likely

to continue to attempt different strategies when performing a task. Although our study exams adults, within a sales context we expect the same relationship: sales representatives that persist through a challenge by trying different strategies, will be more likely to succeed than those who do not persist. Thus we predict that:

H_5: An entity ITSA will be negatively associated with performance sales competition.

1.6.2. Need for Cognition and Performance

Recently, NFC correlates with on the job sales performance. Sojka and Deeter-Schmelz (2008) surveyed 900 sales representatives at a sales meeting about their NFC with subjective and objective measures of sales performance. Using the 18-item NFC scale, they found that NFC had a low to moderate correlation with objective and subjective measures of sales performance suggesting that better sellers may be more able to think on their feet.

H_6: *NFC will be positively associated with performance.*

1.6.3. Self-Efficacy and Performance

Self-efficacy has been consistently linked with performance in academic settings (Komarraju & Nadler, 2013); however, the relationship between self-efficacy and performance in business settings is more complex. Generally, self-efficacy predicts work performance, but is moderated by task complexity (Judge et al., 2007; Stajkovic & Luthans, 1998). That is, as task complexity increases, self-efficacy becomes less predictive of performance. Despite this finding, self-efficacy has been found to correlate with several measures of sales performance, suggesting that one's beliefs in their own

ability plays a role in closing deals (Barling & Beattie, 1983). As such, we predict that self-efficacy will be positively correlated with performance.

H_7: *Self-efficacy will be positively correlated with performance in the sales competition.*

1.7. Goal Orientations Behavior Patterns

In addition, we expect that goal orientations will predict performance in the sales competitions. Prior research has linked goal orientations with sales performance (Silver et al., 2006). Specifically, research finds that learning goals positively predict sales performance (Silver et al., 2006; Sujan, Weitz, & Kumar, 1994; VandeWalle et al., 1999); prove goals positively predict sales performance (Silver et al., 2006); and avoid goals negatively predict sales performance (Silver et al., 2006).

As such, we predict that:

H_{8a}: A learning goal will be positively associated with performance in the sales competition.

H_{8b}: An avoid goal will be negatively associated with performance in the sales competition.

1.8. Other Predictors of Performance

Several other variables that are not necessarily specified in a social-cognitive account of behavior are of interest in the current research, due to a) their documented relationship with implicit theories, with goal orientations, and/or with performance, and b) the utility of including additional potential predictors of sales competition performance for managers. Below we describe each variable and what value it could bring to predicting performance in sales competitions.

1.8.1. Resiliency

Resiliency is referred to as "any behavioral, attributional, or emotional response to an academic or social challenge that is positive and beneficial for development" (Yeager & Dweck, 2012, p. 303). Practitioners understand that the more resilient a salesperson is, the better their future performance is. Importantly, resiliency seems to vary as a function of implicit theories: in a review of the literature, Yeager and Dweck (2012) outline studies that found that entity theories impair resiliency while incremental theories boost resiliency. Thus, we predict that:

H_{9a}: An entity ITSA will be negatively associated with resiliency.

H_{9b}: Resiliency will be positively associated with performance.

1.8.2. Receptivity to Feedback

Receiving supervisory feedback has been identified as being a way that sales representatives can improve (Rich, 1997). This is based on research that positively associates feedback and subsequent performance (Ashford & Cummings, 1983; Ilgen & Moore, 1987). However, the effectiveness of such feedback on performance should be dependent on how receptive the sales representative is to the feedback. Importantly, research in the area of feedback receptivity finds that implicit theories and goal orientations are related to feedback-seeking behaviors (Porath & Bateman, 2006; VandeWalle & Cummings, 1997) and feedback avoidance behaviors (Novell et al., 2016). Specifically, an entity implicit theory and an avoid goal orientation positively predicted performance feedback avoidance, whereas a learning goal orientation negatively predicted performance feedback avoidance. We predict that:

H_{10a}: An entity ITSA will be positively associated with feedback avoidance.

H_{10b}: A learning goal will be negatively associated with feedback avoidance.

H_{10c}: An avoid goal will be positively associated with feedback avoidance.

H_{10d}: Feedback avoidance will be negatively correlated with resiliency.

H_{10e}: Feedback avoidance will be negatively associated with performance.

1.8.3. The Current Research

The present research investigates these hypotheses in a collegiate sales competition setting. We also attempt to test the full model as specified in Figure A1.

CHAPTER 2. METHODOLOGY

2.1. Participants

Seventy-two undergraduate students enrolled at a large public Midwestern university were recruited from a professional sales class and information sessions before each sales completion. They completed an online survey before their first and after their last sales competition (59.7% male; age 18-32 M = 21.08, SD = 1.15). However, only 51 participants completed the entire survey, so 21 were removed from analysis. All participants were entered into a raffle to win one of many $5 gift cards to Amazon; those enrolled in the professional sales class were eligible to earn extra credit.

2.2. Materials

2.2.1. Implicit Theories

The main measure was the 6-item Implicit Theories of Selling Ability (ITSA) scale. An example item is "*When it comes to selling, you have a certain selling ability, and you can't really do much to change it"* (1 = *highly disagree* to 6 = *highly agree*). Higher numbers indicate a more entity ITSA.

2.2.2. Need for Cognition

The need for cognition scale comprised of 18 items (Cacioppo et al., 1984). An example item is "*I would prefer complex to simple problems.*" (1 = *very strong disagreement* to 9 = *very strong agreement*).

2.2.3. Self-Efficacy

The general self-efficacy scale comprised 8 items on a 5-point Likert scale from strongly disagree (1) to strongly agree (5) (Chen, Gully, & Eden, 2001). An example item is, "*I will be able to achieve most of the goals that I have set for myself"* (1 = *strongly disagree* to 5 = *strongly agree).*

2.2.4. Goal Orientations

Participants filled out the 3-factor goal work orientation scale (McFarland & Kidwell, 2006). The subscales were learning ("*Even if it is going to upset me, I want to find out what a superior thinks of my performance*"), performance-prove ("*I am concerned with showing that I can perform better than my coworkers"*), and performance-avoid work goals ("*I would rather avoid taking on a new task if there was a chance that I would appear incapable to others*") (1 = *strongly disagree* to 6 = *strongly agree*).

2.2.5. Performance

Performance is a key outcome of interest in sales. In the field, performance may be measured through total sales, units sold (VandeWalle et al., 1999), percent of quota met (Porath & Bateman, 2006), and years of sales experience (Sojka & Deeter-Schmelz, 2008).

Due to the setup of college sales competitions, other performance metrics must be considered. An obvious method is to use judges' evaluations of sales performance. Because the judges in the sales competitions are either sales supervisors or sales representatives, their evaluations are likely a reliable metric for performance, which is

supported by research that shows that such ratings are predictive of sales performance (Barrick, Mount, & Strauss, 1993).

We assessed participants' performance through the evaluation sheets completed by the judges, which contained sales behavior dimensions such as rapport building, probing, objection handling, and closing (see Figure A2 in the appendix for a sample). The evaluation sheet was adapted from the National Collegiate Sales Competition judging criteria ("Judging Criteria," 2016). Total scores were created by summing all of the dimensions and then dividing by total points possible (49), and finally multiplying the total by 100. To control for companies' differential scores, we converted each participant's total score to a rank. Thus, lower numbered rankings indicate better performance. Finally, because there were multiple sales competitions, and not all participants participated in the same competitions, rank composite scores were calculated for each participant based on the number of competitions they competed in. Hypothesis testing was performed on rank composite scores.

2.2.6. Feedback Avoidance

Feedback Avoidance was measured with a nine-item scale that assesses people's tendencies to avoid feedback from superiors that was adapted from (Novell et al., 2016). An example item is, "*Sometimes I don't even look at feedback from a superior because I'm afraid of what I might see*" (1 = *strongly disagree* to 5 = *strongly agree*).

2.2.7. Resiliency

The resiliency scale comprised of four items. An example item is "*I can easily bounce back from a selling performance failure.*" This scale used a 5-point Likert format (1 = *strongly disagree* to 5 = *strongly agree*).

2.3. Procedure

2.3.1. Sales Competition

The week before each sales competition, a company representative held an information session for participants at the university's sales center. At this session, participants received a link to the survey to complete prior to participating in the competition. The survey included the cognitive and motivational predictors described in the materials above: ITSA, NFC, GO, SE, feedback avoidance tendencies, and resiliency.

Participants and company representatives returned the next week for the competition. The sales representatives acted as buyers and judges. Judging occurred through a live stream video through a camera set up in each role play room. At the end of each role play, judges completed an evaluation form, scoring participants on metrics such as rapport building and closing. Refer to Figure A2 for a sample of the evaluation form. At the conclusion of the competition, judges tallied scores for each participant.

2.4. Preliminary Analyses

After reverse-coding appropriate items, we calculated composites for all appropriate measures. Refer to Table A3 for composite Cronbach's alphas, means, standard deviations, and correlations among these variables.

Although we initially sought to test the full model by running a structural equation model, a power analysis revealed that we would need to have a sample size of around 250 participants in order to run the model. Thus, due to our sample size of 51, we tested our hypotheses using a series of MANCOVAS, regressions, and correlations.

CHAPTER 3. RESULTS

We first conducted a series of correlational and multivariate (MANCOVA) analyses to determine the effects of each cognitive and motivational predictor on our three outcomes (i.e., resiliency, feedback avoidance, and performance).

3.1. ITSA

ITSA was marginally significantly correlated with NFC (H_1 r = -.26, p = .07), and significantly correlated with AGO (H_{2b} r = .31, p = .03) and resiliency (H_{9a} r = -.36, p = .03). However, ITSA was not found to be significantly correlated with learning goal orientation (H_{2a} r = -.12. p = *ns*), self-efficacy (H_{4a} r = -.11, p = *ns*), feedback avoidance (H_{10a} r = .18, p = *ns*), or performance rankings (H_5 r = .04, p = *ns*). Table A4 contains a list of the hypotheses and the level of significance.

We ran a MANCOVA to assess if ITSA had a collective effect on our outcome variables. The multivariate test was marginally significant (Wilk's Lamda = .864, (F = 2.472, p = .07)), which suggests ITSA may be an important predictor for sales competition outcomes.

3.2. NFC

NFC was significantly correlated with learning goal orientation (H_{3a} r = .552, p < .001), AGO (H_{3b} r = -.43, p < .01), and with performance rankings (H_6 r = -.31, p

= .03). While not hypothesized, NFC was also correlated with PGO (r = .36, p < .01), self-efficacy (r = .48, p < .001), and feedback avoidance (r = -.49, p < .001.

We ran a MANCOVA to assess if NFC had a collective effect on our outcome variables. The multivariate test was marginally significant (Wilk's Lamda = .72, (F = 6.09, p < .001)), which suggests NFC is an important predictor for sales competition outcomes.

3.3. Self-Efficacy

Self-efficacy was found to be significantly correlated with performance rankings (H_7 r = -.29, p = .04). We ran an MANCOVA to assess if SE had a significant effect on our outcome variables. We ran a MANCOVA to assess if SE had a collective effect on our outcome variables. The multivariate test was marginally significant (Wilk's Lamda = .65, (F = 8.51, p < .001)), which suggests SE is an important predictor for sales competition outcomes.

3.4. Goal Orientation

Learning and prove (r = .509, p < .001), LGO and AGO (r = -.30, p = .02), and AGO and PGO (r = -.33. p = .02) were all significantly correlated. Learning goal orientation was found to be significantly correlated with SE (H_{4b} r = .75, p < .001), feedback avoidance (H_{10b} r = -.59, p <.001), but not with performance rankings in the sales competition (H_{8a} r = .19, p = *ns*). Prove goal orientation was found to be significantly correlated with SE (H_{4c} r = .50, p < .001). Avoid goal orientation was found to be significantly correlated with SE (H_{4d} r = -.33, p < .001), and feedback avoidance (H_{10c} r = .34, p = .01), as well as performance rankings (H_{8b} r =-.34, p = .02).

First, we ran a MANCOVA to assess if LGO had a collective effect on our outcome variables. The multivariate test was marginally significant (Wilk's Lamda = .63, ($F = 9.37$, $p < .001$)), which suggests LGO is an important predictor for sales competition outcomes.

We ran a MANCOVA to assess if PGO had a collective effect on our outcome variables. The multivariate test was marginally significant (Wilk's Lamda = .46, ($F = 2.472$, $p = ns$)), which suggests PGO is not an important predictor for sales competition outcomes.

Finally, we ran a MANCOVA to assess if AGO had a collective effect on our outcome variables. The multivariate test was marginally significant (Wilk's Lamda = .77, ($F = 4.64$, $p < .01$)), which suggests AGO is an important predictor for sales competition outcomes.

3.5. Relationships among the Outcomes

Resiliency was significantly correlated with feedback avoidance (H_{10d} $r = -.44$, $p < .001$) rankings in the sales competition (H_{9b} $r = -.30$, $p = .03$). However, feedback avoidance was not significantly correlated with performance rankings (H_{10e} $r = .18$, $p = ns$).

3.6. Performance Regressions

We ran a series of multiple regressions to assess which variables were most important in predicting each outcome. We used the stepwise procedure because many of the predictors themselves were significantly correlated. First, we examined which variables within each category (cognitive, motivational) best predicted each outcome. Then, we examined all predictor variables simultaneously for each outcome.

3.6.1. Cognitive Predictors on Performance

We conducted a multiple regression with our three cognitive predictors on performance rankings. A stepwise elimination procedure resulted in a single model that featured only NFC ($\beta = -.31$), indicating only NFC significantly contributed to the explained variance. The model was statistically significant ($F(1,49) = 5.06$, $p = .03$), and accounted for 9% of the variance (adjusted $R^2 = .08$).

3.6.2. Motivational Predictors on Performance

We ran a multiple regression with our motivational predictors on performance. A stepwise elimination procedure resulted in a single model that featured only AGO ($\beta = .34$), indicating that AGO predicted performance in the sales competition. The model was statistically significant ($F(1,49) = 6.24$, $p = .02$), and it accounted for 11% of the variance (adjusted $R^2 = .10$).

3.6.3. Full Model on Performance

All predictor variables were entered into a multiple regression model. A stepwise elimination procedure resulted in a single model that featured only AGO ($\beta = .336$), indicating that AGO predicted performance in the sales competition. The model was statistically significant ($F(1,49) = 6.24$, $p = .02$, $R^2 = .11$).

3.7. Resiliency Regressions

3.7.1. Cognitive Predictors on Resiliency

We ran a multiple regression with our cognitive predictors on resiliency. A stepwise elimination procedure found that self-efficacy ($\beta = .35$) and ITSA ($\beta = -.33$) significantly contributed to the explained variance, indicating that self-efficacy and ITSA

predicted resiliency in the sales competition. The model was statistically significant ($F(1,49) = 8.59$, $p < .01$), and it accounted for 25.1% of the variance (adjusted $R^2 = .22$).

3.7.2. Motivational Predictors on Resiliency

We ran a multiple regression with our motivational predictors on resiliency. A stepwise elimination procedure found that only learning goal ($\beta = .30$) and AGO ($\beta = -.28$) significantly contributed to the explained variance, indicating that self-efficacy and ITSA predicted resiliency in the sales competition. The model was statistically significant ($F(1,49) = 6.87$, $p < .01$), and it accounted for 22% of the variance (adjusted $R^2 = .19$).

3.7.3. Full Model on Resiliency

For performance, all predictor variables were entered into a multiple regression model. A stepwise multiple regression revealed that only LGO ($\beta = .35$) and ITSA ($\beta = -.32$) significantly contributed to the variance. This means that the more people endorse a learning goal and believe that their ability is changeable, the more resilient they are to failure. The mode was statistically significant ($F(1,49) = 8.09$, $p < .001$, $R^2 = .50$).

3.8. Feedback Avoidance Regressions

3.8.1. Cognitive predictors on feedback avoidance

We ran a multiple regression with our cognitive predictors on feedback avoidance. The model was statistically significant ($F(1,49) = 13.63$, $p < .001$), and it accounted for 36% of the variance (adjusted $R^2 = .34$). The stepwise elimination procedure found that only self-efficacy ($\beta = -.42$) and NFC ($\beta = -.28$) significantly contributed to the explained variance, indicating that self-efficacy and ITSA predicted feedback avoidance in the sales competition.

3.8.2. Motivational Predictors on Feedback Avoidance

We ran a multiple regression with our motivational predictors on feedback avoidance. The model was statistically significant ($F(1,49) = 26.56$, $p < .001$), and it accounted for 35% of the variance (adjusted $R^2 = .34$). The stepwise elimination procedure found that only LGO ($\beta = -.59$) significantly contributed to the explained variance, indicating that LGO predicted feedback avoidance in the sales competition.

3.8.3. Feedback Avoidance

For feedback avoidance, all predictor variables were entered into a multiple regression model, and a significant regression equation was found ($F(1,49) = 26.56$, $p < .001$, $R^2 = .35$). The stepwise multiple regression revealed that only LGO significantly contributed to the variance ($\beta = -.59$), meaning that the more participants endorsed a LGO, the less feedback avoidant they tended to be.

CHAPTER 4. DISCUSSION

This study examined the extent to which sales competition outcomes could be explained through a social-cognitive account of behavior. This research closely mimicked the social-cognitive model of motivation, which has been shown to predict behavior in various achievement settings (Dweck & Leggett, 1988; Payne, Youngcourt, & Beaubien, 2007). In the current research, we examined the predictive power of cognitive predictors (including implicit theories, need for cognition, self-efficacy), as well as motivational predictors (learning, prove, and avoid goal orientations) on sales-related constructs including performance, resiliency, and feedback avoidance.

Many of our hypotheses were supported, and several were not. The data generally supported relationships between the cognitive predictors and goal orientations, and to a lesser extent, relationships between both categories of antecedents and outcome variables. Regarding the relationships with cognitive predictors, ITSA was negatively (positively) related to resiliency (AGO) as predicted, indicating that those who believe their ability is based in effort are more likely to not endorse avoid goals and be more resilient in response to failure. Surprisingly, ITSA did not predict performance, a relationship supported in much prior research (Blackwell et al., 2007; Dweck & Leggett, 1988). Although ITSA was not directly related to performance, two of the other variables that ITSA did predict—resiliency and AGO—were related to performance. This suggests the

possibility that beliefs about one's own ability has downstream effects on behaviors and performance (Dweck et al., 1995a; Dweck & Leggett, 1988; Novell et al., 2016).

All of the hypotheses regarding NFC and SE were supported. Need for cognition has been linked with sales performance (Sojka & Deeter-Schmelz, 2008), and this research provides additional support for why NFC and performance are linked. Those who have a higher NFC tended to want to improve their ability and not avoid feedback. If a person enjoys thinking deeply about complex tasks, they may be more likely to seek feedback (and not avoiding feedback) and set personal goals to improve their ability from that feedback. Similarly for SE, there are many studies supporting the connection between a belief in one's own ability and performance (Barling & Beattie, 1983; Judge et al., 2007; Stajkovic & Luthans, 1998).

Many of the hypotheses regarding goal orientation were supported. This research corroborates the work of Silver et al. (2006) and Porath and Bateman (2006) that found that wanting to improve one's ability (LGO) and demonstrate it (PGO) are correlated. Interestingly, of the three goals, only PGO was not significantly correlated with feedback avoidance and resiliency. This finding supports the 3-factor goal orientation model over the 2-factor model that conceptually combined the PGO and AGO into a performance goal. Furthermore, AGO was the only goal orientation that was found to be significant with performance rankings. This suggests that while PGO and LGO are related to positive sales person behaviors (such as high resiliency and low feedback avoidance), not being afraid to demonstrate inability is much more important for performance.

4.1. Contributions and Implications

The contributions of this research are manifold. First, identifying predictors of performance in these competitions is useful to sales researchers to increase theoretical understanding of who does well and why. Second, identifying these predictors of performance will allow sales managers to screen potential talent based on these findings to people who do not or cannot participate in these sales completions and ultimately help better identify talent.

This study also has several potential implications for theory and practice. First, this is one of a few only research that we are aware of that sought to predict performance in sales competitions (Mani et al., 2015). Other research has predicted sales representative performance (Silver et al., 2006; Sojka & Deeter-Schmelz, 2008; VandeWalle et al., 1999), and exposure to sales related curricula to future sales performance (Bolander, Bonney, & Satornino, 2014; Mani et al., 2015; Weilbaker & Williams, 2006). Indeed, if performance within sales competitions can be predicted, then sales managers could employ better recruiting methods for people not able to participate in sales competitions. Based on the findings, sales managers would do well to pay attention to the following findings below.

First, this research replicates the importance of goal orientations in a sales setting (Porath & Bateman, 2006; Silver et al., 2006; Sujan et al., 1994; VandeWalle et al., 1999). Previous research has repeatedly found a link between learning goal orientation and performance in a sales setting (Silver et al., 2006; Sujan et al., 1994; VandeWalle et al., 1999), which shows that seeking to increase mastery in achievement settings is related to performance. Pertinent to the current research, performance-avoid goals (AGO)

tend to be the most harmful for sales performance. Those who are motivated to avoid receiving negative judgements may avoid thinking about their work, avoid important feedback, which may hard their sales performance. This is especially important for sales managers because rejection and failure is inevitable in sales, and sales representatives need to be receptive to constantly improving in order to meet the needs of different and evolving clients.

Second, this research corroborates the importance of NFC and self-efficacy in a sales setting (Barling & Beattie, 1983; Sojka & Deeter-Schmelz, 2008). Those who are high in NFC may do well because they are motivated to learn, and are not concerned with demonstrating nor hiding their ability (Sojka & Deeter-Schmelz, 2008). The adage about learning from one's failures appears to be true: those who enjoy thinking critically, especially about their failures, may be able to better identify areas of improvement. Additionally, those who believe that they have the ability to accomplish their goals may be more likely to do well because they approach challenging situations rather than avoid them (Barling & Beattie, 1983).

Based on these findings, sales managers should look for evidence of a high NFC, high self-efficacy, and learning goals in potential employees, and to screen out or train out avoid goals among potential or existing employees. These cognitive and motivational variables have an impressive body of literature that consistently finds positive outcomes across multiple settings such as education and sales.

At this point, ITSA's connection with performance is mixed, and more data is needed to explore these relationships carefully. Despite these findings, ITSA's relationship with a number of key sales related behaviors such NFC and AGO suggest

there are many positive outcomes of an incremental mindset and that it should be considered and included in training (Novell et al., 2016).

4.2. Limitations and Future Research

There are several limitations of the current research. First, because the data were correlational in nature, causal inferences cannot yet be made. Indeed, it is possible that there are feedback loops among some of the variables, such as between resiliency, performance, and motivation. Further, our operationalization of performance may or may not generalize to actual sales performance. However Mani et al. (2015) suggests that sales competition performance predicts sales-related success outside of the competition so we think our findings would also generalize.

Another limitation is the small sample size. Each competition is limited to a certain amount of participants, and not every participant completed the survey; thus, we were unable to test the model as a mediation model. Further, by aggregating all of the sales competitions scores, we are treating all of the competitions as if they were the same. In reality, each competition had a different role play scenario, with different judges, from different companies, and thus were not standardized and likely introduced a lot of static in the variance of the data. This suggests that the results reported here are a conservative estimate of the hypothesized relationships. Consequently, the fact that many of the hypothesized relationships were supported is suggestive of the utility of this model. Future research should aim at sampling from a single, larger competition where all the participants will be competing in the same scenario with the same judges. This would provide a more reliable measure of performance and greater consistency and power for our hypotheses.

4.3. Conclusion

The current research examined how a social-cognitive account of behavior, featuring implicit theories of selling ability, goal orientations, and other metrics, predict performance within sales competitions. The results show that many cognitive and motivational variables significantly predict performance and other important performance-related outcomes in a collegiate sales competition setting. Future research would do well to continue to assess predictors of sales performance within sales competitions, colleges, and work levels for additional implications for sales managers.

LIST OF REFERENCES

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Ashford, S. J., & Cummings, L. L. (1983). Feedback as an individual resource: Personal strategies of creating information. *Organizational behavior and human performance*, *32*(3), 370-398.

Bandura, A. (1997). Self-efficacy: The exercise of control: New York: Freeman.

Barling, J., & Beattie, R. (1983). Self-efficacy beliefs and sales performance. *Journal of Organizational Behavior Management*, *5*(1), 41-51.

Barrick, M. R., Mount, M. K., & Strauss, J. P. (1993). Conscientiousness and performance of sales representatives: Test of the mediating effects of goal setting. *Journal of Applied Psychology*, *78*(5), 715.

Bell, B. S., & Kozlowski, S. W. (2008). Active learning: effects of core training design elements on self-regulatory processes, learning, and adaptability. *Journal of Applied Psychology*, *93*(2), 296.

Bell, B. S., & Kozlowski, W. (2002). Goal orientation and ability: interactive effects on self-efficacy, performance, and knowledge. *Journal of Applied Psychology*, *87*(3), 497.

Blackwell, L. S., Trzesniewski, K. H., & Dweck, C. S. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal study and an intervention. *Child development*, *78*(1), 246-263.

Bolander, W., Bonney, L., & Satornino, C. (2014). Sales Education Efficacy: Examining the Relationship Between Sales Education and Sales Success. *Journal of Marketing Education, 36*(2), 169-181. doi:10.1177/0273475314536733

Cacioppo, Petty, R. E., & Feng Kao, C. (1984). The Efficient Assessment of Need for Cognition. *Journal of Personality Assessment, 48*(3), 306-307. doi:10.1207/s15327752jpa4803_13

Chen, G., Gully, S. M., & Eden, D. (2001). Validation of a new general self-efficacy scale. *Organizational research methods, 4*(1), 62-83.

Dweck, C. S. (2000). *Self-theories: Their role in motivation, personality, and development*: Psychology Press.

Dweck, C. S., Chiu, C.-y., & Hong, Y.-y. (1995a). Implicit theories and their role in judgments and reactions: A word from two perspectives. *Psychological inquiry, 6*(4), 267-285.

Dweck, C. S., Chiu, C.-y., & Hong, Y.-y. (1995b). Implicit theories: Elaboration and extension of the model. *Psychological inquiry, 6*(4), 322-333.

Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological review, 95*(2), 256. doi:Doi 10.1037/0033-295x.95.2.256

Elliot, A. J., & Harackiewicz, J. M. (1996). Approach and avoidance achievement goals and intrinsic motivation: A mediational analysis. *Journal of Personality and Social Psychology, 70*(3), 461-475. doi:10.1037/0022-3514.70.3.461

Harris, E. G., Mowen, J. C., & Brown, T. J. (2005). Re-examining salesperson goal orientations: personality influencers, customer orientation, and work satisfaction. *Journal of the Academy of Marketing Science*, *33*(1), 19-35.

Ilgen, D. R., & Moore, C. F. (1987). Types and choices of performance feedback. *Journal of Applied Psychology*, *72*(3), 401.

Judge, T. A., Jackson, C. L., Shaw, J. C., Scott, B. A., & Rich, B. L. (2007). Self-efficacy and work-related performance: the integral role of individual differences. *Journal of Applied Psychology*, *92*(1), 107.

Judging Criteria. (2016). Retrieved from http://ncsc-ksu.org/contestant-info/undergraduate-competition/judging-criteria/

Komarraju, M., & Nadler, D. (2013). Self-efficacy and academic achievement: Why do implicit beliefs, goals, and effort regulation matter? *Learning and Individual Differences*, *25*, 67-72.

Mani, S., Kothandaraman, P., Kashyap, R., & Ashnai, B. (2015). Sales Role-Plays and Mock Interviews An Investigation of Student Performance in Sales Competitions. *Journal of Marketing Education*, 0273475315606785.

McFarland, R. G., & Kidwell, B. (2006). An examination of instrumental and expressive traits on performance: The mediating role of learning, prove, and avoid goal orientations. *Journal of Personal Selling & Sales Management*, *26*(2), 143-159.

Novell, C. A., Machleit, K. A., & Sojka, J. Z. (2016). Are Good Salespeople Born or Made? An Implicit Theories Perspective with Implications for Hiring and Training. *(Submitted to JPSSM).*

Parker, R. S., Pettijohn, C. E., & Luke, R. H. (1996). Sales Representatives And Sales Professors: A Comparative Analysis Of Sales Training Perceptions, Topics And Pedagogy. *Marketing Education Review, 6*(3), 41-50. Retrieved from http://search.ebscohost.com/login.aspx?direct=true&db=buh&AN=6488111&site=ehost-live

Payne, S. C., Youngcourt, S. S., & Beaubien, J. M. (2007). A meta-analytic examination of the goal orientation nomological net. *Journal of Applied Psychology, 92*(1), 128. doi:10.1037/0021-9010.92.1.128

Phillips, J. M., & Gully, S. M. (1997). Role of goal orientation, ability, need for achievement, and locus of control in the self-efficacy and goal--setting process. *Journal of Applied Psychology, 82*(5), 792.

Porath, C. L., & Bateman, T. S. (2006). Self-regulation: from goal orientation to job performance. *Journal of Applied Psychology, 91*(1), 185.

Rich, G. A. (1997). The sales manager as a role model: Effects on trust, job satisfaction, and performance of salespeople. *Journal of the Academy of Marketing Science, 25*(4), 319-328.

Silver, L. S., Dwyer, S., & Alford, B. (2006). Learning and performance goal orientation of salespeople revisited: The role of performance-approach and performance-avoidance orientations. *Journal of Personal Selling & Sales Management, 26*(1), 27-38.

Sojka, J. Z., & Deeter-Schmelz, D. R. (2008). Need for cognition and affective orientation as predictors of sales performance: An investigation of main and interaction effects. *Journal of Business and Psychology, 22*(3), 179-190.

Stajkovic, A. D., & Luthans, F. (1998). Self-efficacy and work-related performance: A meta-analysis. *Psychological bulletin, 124*(2), 240.

Sujan, H., Weitz, B. A., & Kumar, N. (1994). Learning orientation, working smart, and effective selling. *The Journal of Marketing*, 39-52.

Tabernero, C., & Wood, R. E. (1999). Implicit theories versus the social construal of ability in self-regulation and performance on a complex task. *Organizational Behavior and Human Decision Processes, 78*(2), 104-127.

VandeWalle, D. (1997). Development and validation of a work domain goal orientation instrument. *Educational and Psychological Measurement, 57*(6), 995-1015. doi:Doi 10.1177/0013164497057006009

VandeWalle, D., Brown, S. P., Cron, W. L., & Slocum Jr, J. W. (1999). The influence of goal orientation and self-regulation tactics on sales performance: A longitudinal field test. *Journal of Applied Psychology, 84*(2), 249.

VandeWalle, D., & Cummings, L. L. (1997). A test of the influence of goal orientation on the feedback-seeking process. *Journal of Applied Psychology, 82*(3), 390.

Weilbaker, D. C., & Williams, M. (2006). Recruiting new salespeople from universities: University sales centers offer a better alternative. *Journal of Selling & Major Account Management, 6*(3), 30-38.

Widmier, S., Loe, T. W., & Selden, G. (2007). Using role-play competition to teach selling skills and teamwork. *Marketing Education Review, 17*, 69-78.

Wood, R., & Bandura, A. (1989). Impact of conceptions of ability on self-regulatory mechanisms and complex decision making. *Journal of Personality and Social Psychology, 56*(3), 407.

Yeager, D. S., & Dweck, C. S. (2012). Mindsets that promote resilience: When students believe that personal characteristics can be developed. *Educational Psychologist, 47*(4), 302-314.

APPENDIX

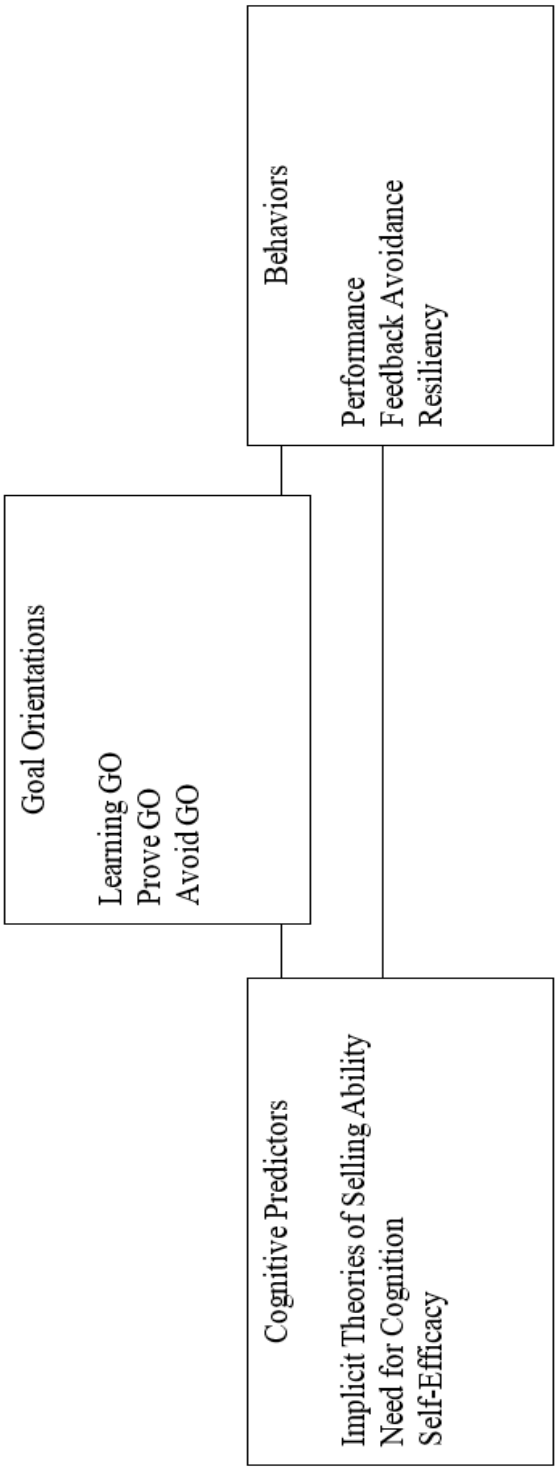
Behaviors
Performance
Feedback Avoidance
Resiliency
Goal Orientations
Learning GO
Prove GO
Avoid GO
Cognitive Predictors
Implicit Theories of Selling Ability
Need for Cognition
Self-Efficacy

Figure A1

Figure A2

Competition Evaluation Scorecard

Contestant # _____ Contestant Name _____

Please circle only one number in each of the five categories. Score each item on a 1 to 7 scale with 7 being the best possible score and 0 the absence of the skill or behavior being evaluated. Some items are rated from 1 to 5 because they are not weighted as heavily as the other skills.

Approach *(Effectively gains attention and builds rapport)*

- Professional introduction and rapport building.
- Demonstrated enthusiasm and confidence.
- Salesperson gains prospect's attention.

Rating: 1 2 3 4 5 6 7

Needs Identification *(Obtain a clear understanding of customer's situation in order to prepare a customized presentation)*

- Uncovered decision process (decision criteria, people involved in decision process).
- Effectively determined relevant facts about company and/or buyer.
- Asked effective questions, uncovered/qualified buyer's needs (convert implied needs to explicit needs).

Rating: 1 2 3 4 5 6 7

Objection Handling *(Eliminate concern's to prospect's satisfaction)*

- Initially gained better understanding of objection (clarifies or allows buyer to clarify the objection).
- Effectively answered the objection.
- Confirmed that the objection is no longer a concern for the buyer.

Rating: 1 2 3 4 5 6 7

Communication & Presentation *(Communicates well, product knowledge, presents products benefits, visual aids, clear, concise, appropriate non-verbals)*

- Effective verbal communication. (active listening, restated, rephrased, clarified, probed for understanding).

- Product knowledge.
- Effectively involved the buyer in the conversation.

Rating: 1 2 3 4 5 6 7

Close *(Takes the initiative to Close the sale in a smooth fashion with mutual commitment)*

- Persuasive in presenting justification to Close.
- Asked for the business and Closed.

Rating: 1 2 3 4 5 6 7

Overall Professionalism

- Would you be proud to put this student competitor in front of a customer?
- Would their style lend credibility to the company brand?

Rating: 1 2 3 4 5 6 7

Total (add circled numbers from each category together): _____

Table A3

Table of means, correlations, and reliabilities between the cognitive, motivational, and behavioral variables.

Measure	Mean	SD	1	2	3	4	5	6	7	8
1. ITSA	2.70	0.82	**0.82**							
2. NFC	5.72	0.97	-0.26	**0.87**						
3. SE	4.24	0.63	-0.11	.48**	**0.91**					
4. LG	4.82	0.96	-0.12	.55**	.75**	**0.94**				
5. PGO	4.38	0.92	-0.00	.35*	.50**	.51**	**0.79**			
6. AGO	2.98	0.86	.31*	-.43**	-.33*	-.30*	0.07	**0.80**		
7. Feedback Avoidance	2.37	0.76	0.18	-.48**	-.55**	-.59**	-0.16	.34*	**0.84**	
8. Resiliency	3.76	0.62	-.36**	.29*	.39**	.39**	0.12	-.37**	-.44**	**0.67**
9. Ranking	16.18	10.43	0.04	-.31*	-.29*	-0.19	-0.01	.34*	0.18	-.30*

n=51

Note: The coefficients on the diagonal in bold are the Cronbach's alpha of each scale.

Table A4

Hypotheses and correlations with performance rankings.

Hypotheses		*r*	*p*	Support
H_1	*An entity ITSA will be negatively correlated with NFC.*	-0.26	0.07	Yes
H_{2a}	*An entity ITSA will be negatively associated with a learning goal.*	-0.12	*ns*	No
H_{2b}	*An entity ITSA will be positively associated with an avoid goal.*	0.31	0.03	Yes
H_{3a}	*NFC will be positively correlated with a learning goal orientation.*	0.552	<.001	Yes
H_{3b}	*NFC will be negatively correlated with an avoid goal orientation.*	-0.43	<.01	Yes
H_{4a}	*Implicit theories will be negatively correlated with self-efficacy.*	-0.11	*ns*	No
H_{4b}	*Learning goal orientation will positively correlate with self-efficacy.*	0.75	<.001	Yes
H_{4c}	*Prove goal orientation will positively correlate with self-efficacy.*	0.50	<.001	Yes
H_{4d}	*Avoid goal orientation will negatively correlate with self-efficacy.*	-0.33	<.001	Yes
H_5	*An entity ITSA will be negatively associated with performance sales competition.*	.04	*ns*	No
H_6	*NFC will be positively associated with performance.*	-0.31	0.03	Yes
H_7	*Self-efficacy will be positively correlated with performance in the sales competition.*	-.29	.04	Yes
H_{8a}	*A learning goal will be positively associated with performance in the sales competition.*	-.19	*ns*	No
H_{8b}	*An avoid goal will be negatively associated with performance in the sales competition.*	-.34	.02	Yes
H_{9b}	*Resiliency will be positively associated with performance.*	-0.30	0.03	Yes
H_{10a}	*An entity ITSA will be positively associated with feedback avoidance.*	0.18	*ns*	No
H_{10b}	*A learning goal will be negatively associated with feedback avoidance.*	-0.59	<.001	Yes
H_{10c}	*An avoid goal will be positively associated with feedback avoidance.*	0.34	0.01	Yes
H_{10d}	*Feedback avoidance will be negatively correlated with resiliency.*	-0.44	<.001	Yes

H_{10e}	*Feedback avoidance will be negatively associated with performance.*	.18	*ns*	No