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Antecedents of Leadership Agency : Understanding Leadership Development

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Abstract

This study aims to look into leadership development and the antecedents that are important for its development using Bandura's Social Cognitive Theory. Specifically, the purpose of this study is threefold: 1) To develop and present a new construct called leadership agency, 2) to conduct a study to develop a self-reported measure of leadership agency, and finally 3) to create a framework that outlines the relationship between antecedents and leadership agency. Using an online survey tool, 36 freshmen students in the Emerging Leader Learning Community at Montclair State University, participated and completed surveys on the four components of leadership agency; leader intentionality, leader forethought, leader self-reactiveness, leader self-reflectiveness and its hypothesized antecedents; behavioral, environmental and personal factors. Results indicated that leadership agency is construct that can be examined both as single and multi-faceted construct, depending on the situation. Furthermore, results from the regression analyses indicated that personal factors such as physiological state (resilience), goal orientation, and personality (conscientiousness, extroversion) as well as vicarious experience and individual's perception of their past leadership experience had a significant impact on leadership agency. The implications of these results and how leadership agency can help understand leadership development are evaluated in the discussion section.

MONTCLAIR STATE UNIVERSITY

Antecedents of leadership agency: Understanding leadership development

By

Aishwarya Shashidhar

A Master's Thesis Submitted to the Faculty of
Montclair State University

In Partial Fulfillment of the Requirements
For the Degree of Master of Arts in
Industrial/Organizational Psychology

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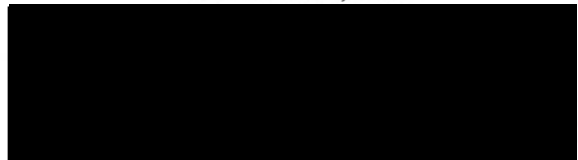
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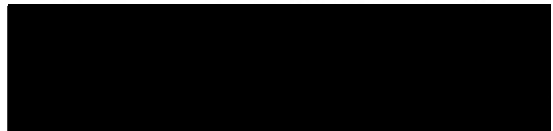
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ANTECEDENTS OF LEADERSHIP AGENCY: UNDERSTANDING LEADERSHIP
DEVELOPMENT

A THESIS

Submitted in partial fulfillment of the requirements

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Montclair, NJ

2014

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INTRODUCTION

Understanding why some people are more effective leaders than others has been a topic of interest for decades (Yukl, 1989, Gordon & Yukl, 2004). There have been several studies examining the impacts of leadership interventions and positive outcomes, however, there is a vast majority of literature that is dominated by poor research designs and lack of theoretically driven interventions (Reichard & Avolio, 2005, Yeow, & Martin, 2013). Although, studies in the past have tried to explore various predictors that may help organizations and individuals develop effective leaders (Chan & Drasgow, 2001; Gayle & Jan, 2002; Vecchio & Bullis, 2006, Connelly et al. 2000; McCall, 2004), there is a lack of research that examines the personal attributes or characteristics that predict leader performance in self-developmental activities and understand why these attributes influence leadership development (Boyce, 2004).

In order to understand the process of leadership development, it is important to analyze the progression of leadership over time and view it as a progressive event. One theory that is useful in understanding how leadership develops over time is Bandura's Social Cognitive theory, in particular, his notion about agency and its development. Bandura defines agency as the capacity to exercise control over oneself, in order to intentionally make things happen by one's actions (Bandura, 2001). Although these actions can be attributed to any human action in general, it has been a critical theory in examining leadership. The Social cognitive theory provides a framework for understanding the leader attributes and interaction of various factors through which leadership is developed (McCormick, 2004).

Central to leadership and its development, Bandura (1997) states that efficacy is the most prevalent among the mechanisms of agency and provides a foundation for all other facets of agency to operate. Leader efficacy is a specific form of efficacy associated with the level of confidence in the knowledge, skills, and abilities associated with the development of personal leadership.

Although there have been numerous research studies focusing on the role self-efficacy plays in leadership; i.e., leader self-efficacy (e.g. Hannah & Luthens, 2008; Chemers et al, 2000; Hendricks & Payne, 2007, McCormick et al, 2002, Singer, 1989), little attention has been given to all the four features constituting agency, especially within leadership. The current study sheds light on the other all the four features of agency together and attempts to understand what factors are important to develop these features. Therefore, the purpose of this study is threefold: 1) To develop and present a new construct based on Bandura's human agency, called leadership agency, 2) to conduct a study to develop a self-reported measure of leadership agency, and finally 3) to create a framework that outlines the relationship between leadership agency and its antecedents.

Social Cognitive Theory

The Social Cognitive Theory depicts any human phenomenon or human action as being the result of a dynamic process consisting of reciprocal relationships among three categories of factors: the individual's social cognitions, the individual's behavior, and the social context. This framework is explained by the triadic reciprocal determinism theory (Bandura, 1986). According to this, behavior, environment and other personal factors interact and influence each other bidirectionally (Bandura, 1991). This means that the environment can influence our thoughts and our behavior, our thoughts can influence

both our behavior and how we interact with our environment, and our behavior can impact the environment as well as the way that we think. The personal determinant is represented by self-beliefs of efficacy, personal goal setting and self-evaluation. These are personal resources of self-development and personal standards that enable individuals to engage in their goals and maintain motivation till the goal is achieved (Bandura, 2001). These are internal agents within an individual that regulates one's actions, through their interactive effects. For instance, self-beliefs of efficacy are beliefs in one's own capabilities of achieving a goal or completing an action, personal goal-setting is the process of selecting a goal based on its level of difficulty and specificity (Lord, 2010). Finally, self-evaluation is the process of judging and assessing oneself based on the efficacy beliefs and how well the goal is being achieved.

This study will be developing leadership agency based on Bandura's human agency and personal resource and is described in detail in later sections.

Review of Agency for Leadership Development

Bandura's human agency is composed of four core features; intentionality, forethought, self-reactiveness and self-reflectiveness. In the next section, we will review each of these features based on Bandura's description, followed by a section adapting these features into leadership agency.

- (i) *Intentionality*: The first feature in Bandura's agency signifies the intention to form action plans and strategies. It is a representation of a future course of action that needs to be performed and consists of a proactive commitment and expectation of a desired outcome (Bandura, 2001, 2008). According to Bandura (2001), this part of the agency is used to produce different outcomes.

Bandura (1977a) originally introduced self-efficacy as a crucial factor in social cognitive theory and discussed human motivation primarily in terms of outcome expectations. However, his later studies began to focus more on self-efficacy and stated that it had a larger role to play on self-regulatory processes (Zimmerman, 2000). In other words, this is the stage where an individual visualizes their intention of attaining a goal.

- (ii) *Forethought*: According to Bandura, forethought involves a continual process of setting goals and having a perception of direction and rationality to the plan/goal. At this stage, foreseeable future events are seen as motivators and regulators of current behavior (Bandura, 2001, 2008). Through forethought, individuals can motivate themselves and guide actions in the hope of achieving the desired results. Therefore, this part of the agency can be seen as the motivating factor for an individual's current behavior.
- (iii) *Self-reactiveness*: This is where individuals adopt personal standards, monitor and regulate their activities (Bandura, 2001). This process involves self-regulatory actions such as self-monitoring, self-guidance and self-reactions (Bandura, 1986, 1991b, 2001, 2008). According to Bandura (1991), monitoring one's performance based on their personal values and pre-existing cognitions about the task is partly responsible for a successful self-regulatory process. Most theories on self-regulation have the central idea that, "individuals set goals, compare their progress against the goals, and make modifications to their behaviors or cognitions if there is a discrepancy between a goal and the current state" (Karloly 1993 in Lorde, 2010, p.545).

Self-guidance is the process of exercising a direction for oneself where certain behaviors are monitored and assessed in order to succeed in attaining the goal. Lastly, self-reaction is the process where the individual controls their own behavior by providing incentives and anticipating affective responses as a result (Bandura, 1991). According to Bandura (1991), these incentives that influence self-reactions may be tangible outcomes or self-evaluative reactions. Self-reactiveness is therefore, a combination of the three processes which result in the individual regulating their actions through goal-setting to govern motivation and action.

- (i) *Self-reflectiveness*: This is the stage where individuals judge the correctness of their predictive and operative thinking against the outcome of their behavior. Efficacy beliefs play a key role in self-regulation because self-efficacy “affects whether individuals' think in self-enhancing or self-debilitating ways, how well they motivate themselves and persevere in the face of difficulties” (Bandura & Locke, 2001, p. 87). As mentioned before, this component of Bandura's agency is the most studied in the field of leadership.

There have been no studies that look at all these features together, and the role they play in leadership development. The current study aims to examine how all the four core features play together (and separately)

Conceptualizing Leadership Agency

Definition. In this study, we argue that although leader self-efficacy is key to high leader performance (Hannah et al, 2008), it is not the only relevant component of the social cognitive theory in leadership development (McCormick, 2001). Therefore, we suggest

that an individual possessing all the four core features of agency, is more likely to engage in leadership activities and make changes in their behavior as a result of these leadership activities. Adapting from Bandura's definition of agency, we define leadership agency as the capability of a leader to exert influence over their own functioning in attaining a leadership role or position. Leadership agency is formed when its four features collectively work together. In other words, the four features of leadership agency enable individuals to exert influence, regulation and motivation upon themselves to engage in leadership activities and roles. An individual who possesses high leadership agency, is more likely to develop his or her personal leadership. The current study will focus on the relationship between leadership agency and the factors that influence its development in an individual.

Measuring Leadership Agency. Borrowed from Bandura's core features, leadership agency is also composed of four features and is therefore a multidimensional construct. The four features that constitute leadership agency are: Leader intentionality, leader forethought, leader self-reactiveness, and leader self-reflectiveness. The leader intentionality can be defined as a person's assessment that a given behavior will lead to certain outcomes. Leader forethought can be defined as the direction and motivation of an individual to persist and make decisions that will help and improve the possibilities of assuming leadership roles. Leader self-reactiveness refers to the internal processes and regulation that an individual consciously experiences in order to fulfill his or her leadership aspirations (or, leader outcome expectations). Finally, leader self-reflectiveness can be defined as an individual's personal belief in his or her capabilities to exert leadership using regulatory processes, thereby, achieving leader outcome

expectations (Pallis & Green, p. 217, 2002). Adapted from the four features of human agency (described in the previous section), the following sections will describe the four argued features of leadership agency.

Leader Intentionality: Outcome Expectations: The leader intentionality can be defined as a person's assessment that a given behavior will lead to certain outcomes. Outcome expectations represent the intentionality feature of leadership agency. Based on Bandura's description of intentionality, leader intentionality is a representation of a future course of action (leadership activity) that needs to be performed and consists of a proactive commitment and expectation of a desired outcome (Bandura, 2001, 2008). Leader intentionality can be referred as leader aspirations of an individual, which is the fundamental stage of leadership agency. As defined in the above section, this stage can be referred to as a person's vision of themselves as a leader, which leads them estimate the outcome of a certain behavior. It represents the desired outcome that causes an individual to proactively plan their next action.

There have not been many studies that look into the role of outcome expectations in leadership development, however we argue that it is an important factor to examine when an individual decides to take leadership roles and activities. This feature is the initial driving force when a potential leader actively seeks to develop personal leadership through activities and responsibilities.

Leader forethought: Motivation to Lead: Leader forethought of leadership agency represents the motivators for seeking leadership development activities. Leader forethought can be defined as the direction and motivation of an individual to persist and make decisions that will help and improve the possibilities of assuming leadership roles.

Adapting Bandura's description of human agency forethought, leader forethought involves a continual process of setting goals and having a forethoughtful perception of direction and rationality to the plan/goal that would aid in leadership development eventually.

Leader forethought is measured by the overall motivation to lead (MTL), a construct developed by Chan and Drasgow (2001). According to the study conducted by Chan & Drasgow (2001), MTL is an important antecedent of leadership development. Chan & Drasgow (2001), developed MTL as three subscales; the affective-identity MTL is referred to an individual wanting to lead because they enjoy it and have an affinity towards leading. Non-calculative MTL is at the opposite spectrum of affective MTL, where the individual does not see any benefits of leading, and finally, social-normative MTL refers to the motivation of wanting to lead because it is viewed as a social responsibility. We will look at MTL as a single construct which Chan & Drasgow (2001) define as the individual differences construct that affects a leader's or a potential leader's decisions to assume leadership training, roles, and responsibilities and that affect the amount of effort at they exert at leading and persisting as a leader. Therefore, as a leader forethought process, MTL is the forethought that gives a leader or a potential leader the direction and motivation to keep going forward and make decisions that will help and improve his or her possibilities of assuming leadership roles.

Leader self-reactiveness: Self-regulation: Leader self-reactiveness refers to the internal processes and regulation that an individual consciously experiences in order to fulfill his or her leadership aspirations. This is the stage where individuals judge the correctness of their predictive and operative thinking against the outcome of their behavior. Adapting

from Bandura (2001), leader self-reactiveness is the stage where individuals adopt personal standards, monitor and regulate their leadership activities. Here, the individual adopts several self-guiding processes to regulate their actions.

Self-regulation represents the self-reactiveness feature of leadership agency as this feature regulates an individual's behavior constantly to achieve the desired result. Self-regulation may be defined as, "...processes involved in attaining and maintaining (i.e., keeping regular) goals, where goals are internally represented (i.e., within the self) desired states" (Vancouver & Day, p. 158, 2005). These processes that regulate an individual to fulfill their leadership aspirations can be termed as leader self-regulation. Self-regulatory processes have become an important aspect of leadership research (Kark & Dijk, 2007; Higgins, 1997, 1998). Manz (1996) proposed that individual self-control systems such as self-regulation is a central mechanism within organizations. To support this idea, Yeow and Martin (2012) conducted an intervention among leaders of an organization to find that those who underwent self-regulatory interventions, were viewed as more effective leaders than those who did not.

Leader self-reflectiveness: Leader self-efficacy: Finally, leader self-reflectiveness can be defined as an individual's personal belief in his or her capabilities to exert leadership using regulatory processes. Adapting Bandura's description, leader self-reflectiveness can be referred to as the stage where individuals judge the correctness of their predictive and operative thinking against the outcome of their behavior. Individuals with leader self-reflectiveness are more likely to have self-enhancing thoughts about their capabilities to achieve expected outcomes, whereas those who do not possess leader self-reflectiveness

are more likely to have self-debilitating thoughts about their capabilities (Bandura & Locke, 2001).

Leader self-efficacy (LSE) represents the self-reflectiveness feature in leadership. Since self-efficacy is the most studied component of Bandura's theory in leadership research, there are many constructs of self-efficacy that have been developed; including leader self-efficacy, leadership efficacy and leadership self-efficacy. LSE can be defined as, "a person's judgment that he or she can successfully exert leadership by setting a goal and working with it to overcome challenges" (Pallis & Green, p. 217, 2002). When looking at past research between leader self-efficacy and leadership, there are some interesting findings. For instance, McCormick et al (2002), found that LSE was positively correlated with both prior leadership experience and with attempting to assume leadership positions. Another study, by Singer (1989) found that individuals with high levels of leadership aspirations scored higher on various forms of self-efficacy, in addition to their positivity towards leadership characteristics and their belief that effective leadership is based on internal sources.

The above four features constitute leadership agency which the study proposes is an important mediator of leadership development. The next section will look into the hypothesized antecedents of leadership agency.

Antecedents of leadership agency

The main objective of this study is to understand what antecedent variables influence leadership agency. Borrowing from Bandura's social cognitive theory, a key assumption in this study is that leadership agency is developed through prior individual

behavior, environmental influences as well personal factors. Figure 1 presents a structural framework of the various factors that fall under these three determinants.

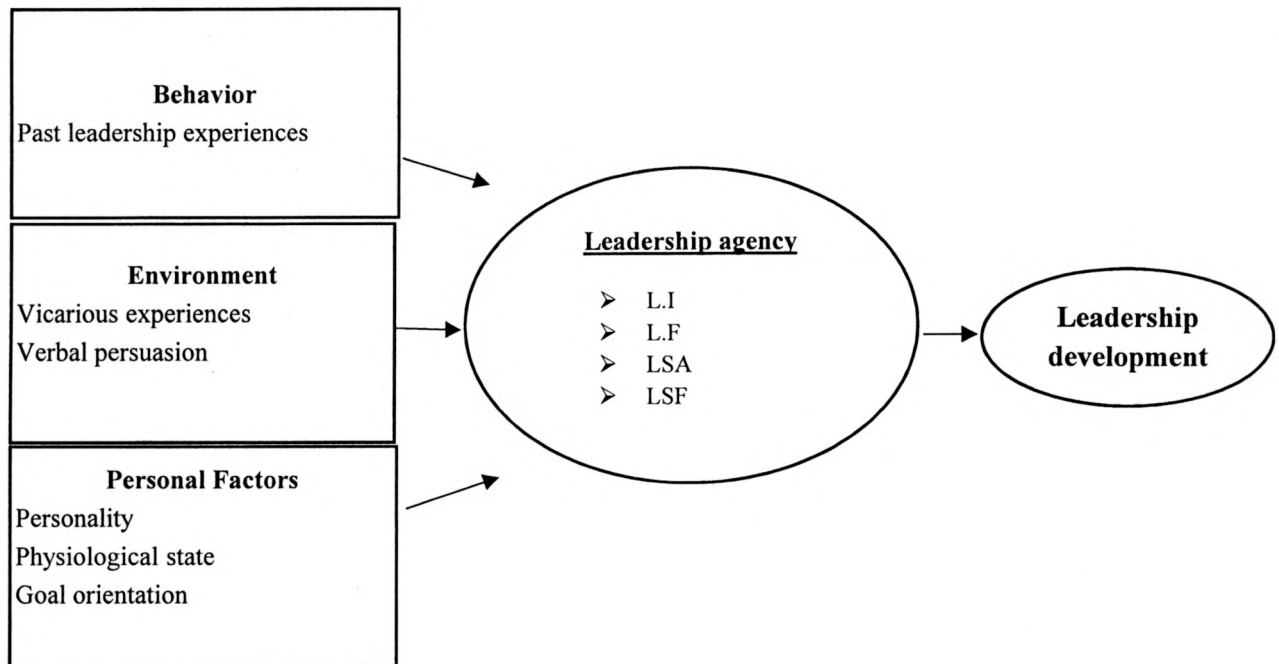


Figure 1: A general model leadership agency and its relationship to the antecedents and leadership development. (Note: L.I: Leader intentionality; L.F: Leader Forethought; LSA: Leader self-reactiveness; LSF: Leader self-reflectiveness)

Bandura states that there are four sources of information that affect the efficacy component of agency: past experiences, vicarious experiences, physiological state, and verbal persuasion (1989). In this study, while past leadership experiences constitute the behavioral factors, verbal persuasion and vicarious experiences (presence of mentor and role model) constitute the environmental factors. Lastly, Bandura states that an individual's physiological state, constitutes as a personal factor

In addition, Chan & Drasgow (2001) found in their study that all the five personality traits were positively associated with leader self-efficacy (leader self-reflectiveness) therefore, the current study will examine if this can be found for

leadership agency as a whole as well. In addition, previous studies have shown mastery goal orientation as an important antecedent of leader self-reflectiveness (Hendricks & Payne, 2007; Zaccaro, Tremble & Masuda, 2002)

Bandura states that the original four antecedents (past experiences, vicarious experiences, verbal persuasion and physiological state) influence an individual's efficacy beliefs (self-reflectiveness). According to Bandura (1989), "self-efficacy beliefs function as an important set of proximal determinants of human motivation, affect, and action" (p.1175). Efficacy beliefs ultimately direct an individual's decisions to move challenge themselves more, or give up. The three external sources (past experience, vicarious experiences and verbal persuasion) develop an individual and prepares him or her to set goals and aim to develop leadership, while the physiological state, which is the internal source helps the individual to cope with the stress and self-doubts that accompany when goal-striving. He argues that an individual's direct experience strengthen efficacy beliefs while adverse experiences (failure or negative) are believed to weaken self-efficacy. Similarly, a strong vicarious experience and verbal persuasion from an external source are believed to increase efficacy beliefs, whereas adverse vicarious experience and verbal persuasion are likely to lower efficacy beliefs. In this study, we extend these four "sources of information" to the all the features of agency (leader intentionality, leader forethought, leader self-reactiveness and leader self-reflectiveness). Although efficacy beliefs are critical to an individual's actions to continue or step back, the current study argues that the other three features proposed by Bandura are just as critical to determine the success of achieving a leadership goal. We will examine if these sources act as antecedents to the components of leadership agency, as discussed in later sections.

We will look at the relationship between the antecedents and the components of agency in two ways. One, is to look at leadership agency as a single construct and see whether the seven hypothesized antecedents influence this construct as a whole. The other, is to look at leadership agency as a multi-faceted construct and examine each antecedent as a factor of one or more of the leadership agency features. But first, let us look at each hypothesized antecedents in more detail.

Past leadership experiences as an antecedent. A leader's past work experience plays an important role in affecting leader and group performance (Chan & Drasgow, 2001). Chan & Drasgow's model of leader behavior describes leader behavior as an important antecedent of leadership development through MTL (leader forethought). According to their model, the quality and quantity of an individual's past leadership experience will subsequently influence leadership development. According to Chan, Rounds & Drasgow (2000), participating in leadership roles and responsibilities count towards one's leadership experience, which then increases both LSE (leader self-reflectiveness) and MTL (leader forethought). Additionally, Wilson (2009), submitted that past leadership experiences, especially when individuals have felt efficacious about their involvement, would influence future leadership involvement (Wilson, 2009). Specific to leader self-efficacy, McCormick et al. (2002) found that leader self-reflectiveness was positively correlated with both prior leadership experience and with attempting to assume leadership positions.

Therefore, considering prior research on leader forethought and leader self-reflectiveness, we argue that past experiences can predict the development of leader forethought and leader self-reflectiveness.

Additionally, we argue that individuals who have assumed leader roles in the past, and have been successful in them are more likely to see themselves as a leader and have higher leadership aspirations, therefore, impact a leader's intentionality (outcome expectations) as well.

Hypothesis 1 (a): Leadership experience is a direct antecedent to leader intentionality, leader forethought and leader self-reflectiveness. Individual with more positive past leadership experience have higher leader intentionality, leader forethought and leader self-reflectiveness than individuals with fewer or less positive past leadership experiences.

Vicarious experiences (Role Model/Mentor) as an antecedent. When individuals observe others they look up to or can relate to perform challenging tasks successfully, they tend to believe the task is accomplishable. Observations of others can also provide information about the environment and the nature of predictability of events (Bandura, 1982). Vicarious experience is considered to be the second most effective factor in developing self-efficacy (self-reflectiveness) (Muretta, 2004). It is theorized that observing similar people succeed with persistent effort, increases one's self-reflectiveness, while observing similar people fail despite sustained effort, lowers it (Chowdhury et al., 2002; Wood & Bandura, 1989). When individuals observe others, they tend to learn new strategies that will promote success in difficult or challenging situations (Wilson, 2009). These other individuals could be role models that they look up to or mentors who support and guide them. Social cognitive theory argues that individuals are assumed to learn in a social context through observation of others with whom they can identify with and who perform well in an area in which the individuals

wish to be involved in. Although there have been studies that demonstrate that vicarious experiences are a source of self-efficacy (Muretta, 2004), no study has been conducted to examine whether these experiences develop other features of human agency.

In the current study, we argue that vicarious experiences of observing leaders who have a direct connection (e.g., role models or mentors) with the individuals would motivate individuals to regulate their behavior according to their role model's behavior or through guidance from their mentor, thus influencing leader self-reactiveness. These vicarious experiences help the individuals reflect and adjust their behavior. Furthermore, we argue that vicarious experiences are likely to encourage an individual to take up leadership roles, and thus, influence leader forethought.

Hypothesis 1(b): Vicarious experience impacts leader forethought and leader self-reactiveness. Individuals with (positive) leader role models and/or leader mentors have a higher leader forethought and leader self-reactiveness than individuals with no leader role model or mentor.

Verbal Persuasion as an antecedent. Verbal persuasion is defined as employing verbal feedback to convince or encourage the learners to accomplish the tasks. Verbal persuasion is thought to be the third most effective way to develop self-efficacy (leader self-reflectiveness) (Muretta, 2004). Essentially, this involves convincing people that they have the ability to succeed at a particular task (Lester et al., 2011). "If people receive realistic encouragement, they are more likely to exert greater effort and become successful than if they are troubled by self-doubts" (Wood & Bandura, 1989, p. 365). There have been studies that have looked into verbal persuasion playing a key role in developing self-efficacy (Eden & Kinnar, 1991; Chin & Kameoka, 2002). Interestingly,

verbal persuasion, along with vicarious experiences has been found to increase overall self-efficacy (Hagen et al., 1998; Muretta, 2004).

Adapting Bandura's theory and prior research that suggests that verbal persuasion influences self-efficacy beliefs, we hypothesize that verbal persuasion influences leader self-reflectiveness and encourages an individual to believe in themselves to assume leadership roles. Furthermore, we argue that when an individual is encouraged in their leader development through verbal persuasion, they are more likely to see themselves as a leader, and have higher leader intentionality, leader forethought and leader self-reflectiveness than individuals who receive little or no verbal persuasion regarding their leader development.

Hypothesis 1 (c): Verbal persuasion is a direct antecedent of leader intentionality, leader forethought and leader self-reflectiveness.

Physiological State as an antecedent. Physiological state is the fourth determinant of self-efficacy (Muretta, 2004; Bandura, 1989; Wood & Bandura, 1989). Bandura argues that emotional cues dictate self-efficacy. Physiological state can be also considered as an affective arousal or emotional arousal (Smith, 2002; Hagen et al., 1998; Muretta, 2004). A person who expects to fail at some task or finds something too demanding is likely to experience certain physiological symptoms: a pounding heart, feeling flushed, sweaty palms, headaches, and so on. The symptoms vary from individual to individual, but if they persist may become associated with poor performance. Physiological state of an individual can be referred to how soon and how well he/she recovers from self-doubt and the physiological state associated with such emotions and pushes himself or herself forward. Empowerment strategies such as displaying resilience despite the physiological

state of stress can strengthen self-efficacy (Conger & Kanungo, 1988). Hamil (2003) found that resilient adolescents possess self-efficacious qualities and an internal locus of control and demonstrate the ability to persist at difficult tasks. Therefore, an individual's resilience is an important factor that can predict self-efficacy, although not many studies have examined this feature or the other three features of agency (Muretta, 2004).

Hypothesis 1 (d): Physiological state is an antecedent of leader forethought, leader self-reactiveness and leader self-reflectiveness. In particular, individuals with higher resilience to push through are more likely to expect positive outcomes, see themselves as a potential leader and follow through with attaining their goals than those who have a lower resilience.

Personality as an antecedent. Past studies have indicated a strong correlation between personality and leadership (Quigley, 2008). Personality forms an individual's identity, consistently distinguishing him/her from others, and is reflected in the way the individual thinks, feels, and acts (Phipps & Prieto, 2011). Chan and Drasgow (2001) found that extroversion, conscientiousness and openness to experience (The Big Five) predicted LSE of individuals, which in turn partially mediated MTL (leader forethought). Furthermore, the study found that those with higher levels of MTL (leader forethought) tended to score high on agreeableness and conscientiousness traits. Also, the results indicated that extroversion and conscientiousness, along with past leadership experiences, were consistently related to LSE (Chan & Drasgow, 2001). We therefore, predict the following:

Hypothesis 1(e): Personality, in terms of the Big Five Model is an antecedent to both leader forethought and leader self-reflectiveness. Certain personality traits in

individuals such as extraversion, agreeableness and conscientiousness are more likely to influence leader forethought and self-reflectiveness.

Goal Orientation as an antecedent. Goal orientation describes an individual's disposition to set certain types of goals in achievement-related settings affecting what type of feedback is sought and how feedback is interpreted (Hendricks & Payne, 2007). Dweck (1986) proposed two types of goal orientation that individuals possess in achievement settings: a learning goal orientation (where the goal is to develop competence by acquiring skills and mastering new situations) and a performance goal orientation (where the goal is to demonstrate and validate worth by seeking favorable judgments and avoiding negative ones) (Vande Wall, et al., 2007). Little research has been conducted linking goal orientation to leadership (Hendricks & Payne, 2007), however when looking at past research on goal orientation, VandeWalle et al. (2007) found in their study that mastery/learning goal orientation was a strong predictor of self-efficacy (leader self-reflectiveness). Additionally, we argue that an individual with a mastery goal orientation is more likely to feel motivated to assume leadership roles to seek experiential learning and therefore, more likely to display leader forethought. Lastly, we propose that an individual who is eager to learn and explore to develop competence would also be more likely to regulate his or her actions and future behavior.

Hypothesis 1(f): Mastery goal orientation is an antecedent of leader forethought, leader self-reactiveness and leader self-reflectiveness. Individuals who are more inclined towards learning, rather than performing are more likely to develop a higher leader forethought, self-reactiveness and self-reflectiveness.

Exploratory hypotheses.

As discussed in the above section, leadership agency's four features have been argued to be outcome expectations, motivation to lead, self-regulation and leader self-efficacy. These features were an adaptation of Bandura's four features of agency. Leadership intentionality is represented by outcome expectations, leadership forethought is represented by motivation to lead, leader self-reactiveness is represented by self-regulation and lastly, leader self-reflectiveness is represented by leader self-efficacy. Adapting Bandura's human agency argument, we theorize that these four features work together to develop the internal regulatory process of leadership agency, which is required in personal leadership development of an individual. Although we argue that the features are related and work together as a single construct, this study will also examine if the hypothesized antecedents impact any features separately (for example, does past leadership experience impact on any one or more of the four features?) This examination may help us know that leadership agency may be viewed as a multi-faceted construct as well, therefore, each feature may vary in every individual and will help us understand leadership agency better in general. Situations may predict whether leadership agency should be viewed as multi-faceted or single construct, as discussed more in the discussion section.

When viewing leadership agency as a single construct, we hypothesize the following:

Hypothesis 2 (a): Past leadership experience is a direct antecedent of leadership agency.

Environment is an important role in shaping and preparing an individual for leadership development. Individuals that we look up to for guidance or as our role models can play a

crucial role in this shaping the process of leadership aspirations, setting goals, following through and evaluating our own behavior. Therefore we predict,

Hypothesis 2(b): Vicarious experiences that is, the presence of a mentor and role model are direct antecedents of leadership agency.

Hypothesis 2(c): Verbal persuasion is a direct antecedent of leadership agency.

Hypothesis 2(d): Personal factors (Personality, Mastery goal orientation and Physiological factors) are direct antecedents of leadership agency.

To test these hypotheses, the current study drew from a larger research study; specifically, it used data from the first survey in a six part longitudinal study.

Methods

Participants

The participants were drawn from 98 traditional-aged, first-semester, first-year students enrolled in Emerging leaders learning communities at a medium-sized, urban public teaching university in the mid-Atlantic region of the United States. Researchers received permission from course instructors to recruit students before visiting classes to seek volunteers. Sixty-six students agreed to participate in this research voluntarily for extra credit and completed an online survey, generating a response rate of 67%. The survey was sent out with an explanation and reminders were sent three times in a span of one month, after which the surveys were closed. Sixty students filled out at least part of the survey while 36 completed the survey, for a study response rate of 45%. All participants were 18 years or older with the average age being 18.2 years. The participants included 75% females and 25% males. This discrepancy in gender

demographics may be because on an average, there are 62% female students and 38% male students studying in the university and there is an even wider gender gap in the ELLC program in the university. Additionally, of those who reported their ethnicity, 33% were Hispanic or Latino, followed by Caucasian Americans (27%), African Americans (14%) and lastly, Asian Americans (3%).

Procedure

Students were informed about the study through in-person recruitment in the classroom to participate in the on-line survey. If they signed up for the study, they were later sent an email with the link to the surveys on the online survey tool along with instructions (e-mail script enclosed) and the informed consent. The students that participated in the study earned extra credit points at the end of their Leadership course.

Measures.

Outcome expectations scale: Leader intentionality is measured by the outcome expectations of an individual. Literature search did not yield any current scale to measure leader outcome expectations therefore, a five item scale was developed for the purpose of this study. A 5 point likert scale was used and each item was measured on a scale of '1' to '5' ('1' = 'Strongly Disagree', '2' = 'Slightly Disagree', '3' = 'Neither Disagree nor Agree', '4' = 'Slightly Agree', '5' = 'Strongly Agree'). Originally, the five items that constituted this scale were, "My main goal professionally is to achieve a leadership position", "I have plans to develop myself as a leader during college to achieve my professional goals after college", "I plan to be in a leadership position in college in the near future", "I do not see myself in charge of others in my future", and finally, "I see

myself continuously furthering or advancing in the development of my leadership throughout my life". However, the original Cronbach's alpha with these items were displayed to be .62, but when the fourth item was deleted from the scale, the Cronbach's alpha was seen to increase to 0.88 thus, developing a 4 item scale for leader outcome expectations.

Motivation to lead: Leader forethought is measured by overall MTL of an individual. The scale developed by Chan and Drasgow to measure the MTL construct describes three types of motivation to be a leader and was used to measure leader MTL. The original 27 item scale was reduced to 17 items; only items with factor loadings of over 0.60 were retained. The first section of this scale is designed to measure Affective-Identity MTL for example, "Most of the time, I prefer being a leader rather than a follower when working in a group". The next section is designed to measure Non-calculative MTL, for example, "I am only interested to lead a group if there are clear" and the last section is designed to measure Social-normative MTL, for example "I feel that I have a duty to lead others if I am asked". However, for the purpose of this study, we looked at MTL as a single construct and measure the participants' overall MTL. The Cronbach's alpha for the 17 item scale was found to be .88. For the purpose of this study, MTL will be examined as an overall construct, rather than a multi-faceted construct.

Self-regulation Questionnaire: Leader self-reactiveness will be measured by self-regulation. The Self-regulation Questionnaire was developed by Brown, Miller & Lawendowski (1999) and is a 63-item scale to study the self-regulatory processes to describe general principles of behavioral self-control. For the purpose of the study, the

scale was reduced to 31 items. The Self-Regulation Questionnaire was developed as a first attempt to assess these self-regulatory processes through self-report since until this scale, it was not known whether people could reliably and accurately report their own self-regulatory capabilities (Brown, Miller & Lawendowski, 1999). Items were developed to mark each of the seven sub-processes of the Miller and Brown (1991) model (receiving, evaluating, triggering, searching, formulating, implementing and assessing), forming seven rationally-derived subscales of the SRQ. Published reliabilities indicate excellent Cronbach's alpha of .94. Internal consistency of the scale was also high ($\alpha = .91$).

Leader self-efficacy: Leader self-reflectiveness is measured by LSE. We measured leader self-efficacy using a 7 item scale adapted from Murphy (1992). Participants were asked to rate their own leader self-efficacy using two types of tasks, first for their role as a group leader, and second for attaining a particular level of performance. Each of the items was measured on a scale of '1' to '5' ('1' = 'Strongly Disagree', '2' = 'Slightly Disagree', '3' = 'Neither Disagree nor Agree', '4' = 'Slightly Agree', '5' = 'Strongly Agree'). The cronbach's alpha for the scale was .75

Past leadership experience: A short six item past leadership survey was adapted from Murphy (1992) into a 5 item scale to measure each subjects' recall of their months of experience in particular leadership situations in high school as well as their overall leadership ability compared to others. Items included the following: "For how many semesters during high school did you hold an elected office in either school government or organized clubs?", "For how many months that you spent involved in clubs or

committees did you assume a leadership role?”, “For how many months that you spent working either as a paid worker or volunteer did you manage other workers?”, “For group situations during classroom activities in high school, what percentage of the time would you say that you assume the leadership role?”, and finally, “In general, how much leadership experience do you have compared to others your age?”

Using the correlation analysis as a guide (see table 1), we grouped the five items in the following way: First, we looked at a single item asking them about their elected leadership position (‘Elected position’). The second scale contained two items, ‘high school non-elected positions’ and ‘high school managing position’ and the Cronbach’s alpha for these items was 0.85. Finally, we created a third scale, combining two items about perception of their own leadership, ‘Leading group settings’ and ‘leading group compared to peers’, the Cronbach’s alpha for this scale was 0.78.

Vicarious experience and verbal persuasion: Three questions were developed for the purpose of this study, to get information on the students’ role model, mentor and presence of any verbal persuasion to pursue leadership roles. Vicarious experience scale was created by combining the two questions on role model and mentor, whose Cronbach’s alpha is 0.71. Question about mentorship was stated, “Do you identify any person/authority/friend/peer as a mentor who can guide you on what paths to take to hone your leadership skills?”, while the question about presence of a role model was stated as, “Is there a person/authority/friend/peer you identify as a role model?” Finally, the presence of verbal persuasion was asked stating, “Can you recall an incident or conversation that encouraged you to develop leadership skills?”

Resilience Scale: The Resilience Scale (RS) is a 25-item scale using a 7-point rating (1–7) (Wagnild, 1993) and was used to measure the physiological state. The scale has two factors, personal competence and acceptance of self and life, which measure the construct of resilience (Ahern et al., 2006). Although originally tested with adult subjects, numerous studies have validated that the scale has worked well with samples of all ages and ethnic groups. For the purpose of this study, this scale was reduced from a 7-point to a 5-point scale, each item was scored from 1 = ‘strongly disagree’ to 5 = ‘strongly agree’. The Cronbach’s alpha coefficient for the Resilience Scale was 0.89. The validity of the scale has been supported in many published studies and demonstrates good validity.

Big Five Inventory: The Big Five Inventory (BFI) is a self-report inventory designed to measure the Big Five dimensions (John, O.P., Donahue, E.M. & Kentle, R.L., 1991). It consists of short phrases with relatively accessible vocabulary. The Big Five Inventory consists of 44 items measuring five trait dimensions of personality - extraversion (8 items), agreeableness (9 items), conscientiousness (9 items), neuroticism (8 items) and openness to experience (9 items) - and uses a 5-point Likert scale from 1 = ‘strongly disagree’ to 5 = ‘strongly agree’. Studies have shown evidence that most of the variables used to assess personality in academic research in the field of personality psychology can be mapped into one or more of the dimensions of the Big Five (Borghans, Duckworth, Heckman, and ter Wheel, 2008). In U.S. and Canadian samples, the alpha reliabilities of the BFI scales typically range from .75 to .90 and average above .80; three-month test-retest reliabilities range from .80 to .90, with a mean of .85.

Goal Orientation: The scale used to measure goal orientation was the 13-item scale was developed by VandeWall (1997), the likert scale was reduced from its original

7-point scale to 5-point scale, ranging from 1 = 'strongly disagree' to 5 = 'strongly agree'. The instrument has three subscales: five items measured the mastery goal orientation, four items measured the prove dimension of performance goal orientation, which is the desire to prove one's competence and gain favorable judgments. The last set of four items measure the avoid dimension of performance goal orientation, which is the desire to avoid the disproving of one's competence and to avoid negative judgment (Brett, J. & VandeWalle, D., 1999). The Cronbach's alpha for mastery goal orientation was 0.88, whereas for performance goal orientation was 0.81.

Leadership agency: For the purpose of this study, a scale, leadership agency was developed. Since leadership agency consists of four components described in the earlier sections, the scale of leadership agency will be measured with the four features as well. Therefore, leadership agency is measured by combining a scale for outcome expectations, MTL, self-regulation and LSE. The reliability for this scale was, $\alpha = 0.73$.

Results

The means, standard deviations and correlations of the variables are shown in Table 1.

Table 1: Means, Standard Deviations, and Correlations of the antecedents and features of leadership agency.

Variable	1	2	3	4	5	6	7	8
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Note. N=36; *p <.05 (2-tailed), **p <.01 (2-tailed).

1. Elected position	2.29 (2.78)							
2. Non-elected position	.35*	11.80 (12.3)						
3. Leadership perception	.18	.42**	3.25 (1.03)					
4. Vicarious experience	.06	.28	.25	1.81 (0.34)				
5. Verbal persuasion	.04	.31	.24	.54	1.68 (0.48)			
6. Extroversion	.10	.18	.49**	.39*	.00	3.65 (0.69)		
7. Agreeableness	.04	.02	.16	.09	-.01	.18	3.94 (0.52)	
8. Conscientiousness	.17	.31	.44**	.24	.06	.27	.21	3.73 (0.55)
9. Neuroticism	.17	.12	.17	.13	.09	.26	-.21	.05
10. Openness	.19	.39**	-.01	.00	.14	.23	.23	-.04
11. Physiological state	.11	.01	.39	.04	-.06	.29	.45	-.28
12. Mastery goal	.23	.25	.27	.36*	.25	.17	.27	.46*
13. Performance goal	-.01	-.05	-.22	-.29	-.17	-.30	-.45**	-.15
14. Leader Intentionality	.32	.13	.33*	.42*	.23	.32	.13	.56**
15. Leader Forethought	.23	.25	.48**	.24	-.09	.47**	.02	.32
16. Leader Self-reactiveness	.11	.23	.29	.08	-.04	.02	.16	.65**
17. Leader Self-reflectiveness	.25	.02	.09	-.05	-.24	.26	.28	1.83
18. Leadership agency	.31	.20	.40*	.24	-.04	.32	.20	.59**

Table 1 (continued)

Variable	9	10	11	12	13	14	15	16	17	18
9. Neuroticism	2.90 (.67)									
10. Openness	.14	3.66 (.41)								
11. Physiological state	.26	.29	4.23 (.41)							
12. Mastery goal	.04	.33	.47**	4.03 (.67)						
13. Performance goal	.09	-.34	-.29	-.27	2.51 (.61)					
14. Leader intentionality	.05	.15	.56**	.63**	-.32	4.48 (.57)				
15. Leader Forethought	.22	.25	.44**	.49	-.11	.53	3.82 (.48)			
16. Leader self-reactiveness	-.01	.05	.37*	.48	.14	.49**	.62**	3.88 (.52)		
17. Leader self-reflectiveness	-.17	.27	.56**	.17	-.02	.21	.27	.29	4.12 (.51)	
18. Leadership agency	-.00	.23	.66**	.61**	-.11	.77**	.81**	.81**	.58**	4.10 (.39)

Note. N=36; *p < .05 (2-tailed), **p < .01 (2-tailed).

The hypothesized antecedents were studied looking at leadership agency both as a single construct and as a multi-faceted construct. Each hypothesized antecedent was examined for its impact on leadership agency. Due to the low sample size in the study, the hypothesized antecedents were examined in three separate regressions. The first was behavioral factor, the second was environmental factors and the third was personal factors.

To test the hypotheses, the predicting powers of the established variables on the established dependent variables were looked at using linear regression analysis. Since leadership agency was looked at both as a multi-faceted construct as well as a single

construct, we will display the results for both. The results of all regression analyses are shown in Table 2-6.

First, we will look at leadership agency as a multi-faceted construct (Table 2-5), therefore, the impact of each antecedent on each component of leadership agency; leader intentionality, leader forethought, leader self-reactiveness and leader self-reflectiveness will be examined separately. The next section will discuss the impact of the hypothesized antecedents on each leadership agency component. Since there are multiple variables predicted for each factor in the hypotheses, a section displaying support for each hypothesis based on the results is shown for clarity.

Impact of antecedents on leader intentionality

Hypothesis 1(a) predicted that behavioral factor, that is, past leadership experience is a direct antecedent to leader intentionality (along with leader forethought and leader self-reactiveness). To test the effects of behavioral, environmental and personal factors on leader intentionality, three regression analyses were run (as seen in table 2). First, leader intentionality was regressed on the behavioral factor, previous leadership experience ($r^2 = 0.1$, *ns*). Results did not demonstrate any relationship between leadership experience and leader intentionality.

Second, leader intentionality was regressed on two environmental factors, vicarious experiences and verbal persuasion ($r^2 = 0.13$, $p < 0.05$). Results indicated that vicarious experiences were significantly related to leader intentionality ($\beta = 0.42$, $p < 0.05$). According to the results, presence of vicarious experience impacted leader intentionality.

Lastly, leader intentionality was regressed on personal factors, personality traits, goal orientation and physiological state ($r^2 = 0.54$, $p < 0.01$). Results from the linear

regression analysis indicated that mastery goal orientation ($\beta=0.34, p<0.05$) and physiological state ($\beta=0.43, p<0.01$) were significantly related to leader intentionality. Furthermore, conscientiousness moderately impacted leader intentionality ($\beta=0.28, p<0.05$)

Part of hypothesis 1 (a) predicted that behavioral factor (past leadership experience) impacted leader intentionality while part of 1(c) predicted that verbal persuasion impacted leader intentionality. While the results did not demonstrate support for either past experience or verbal persuasion impacting leader intentionality, they did demonstrate support for antecedents that were not hypothesized, that is, vicarious experiences, mastery goal orientation, physiological state and conscientiousness were significant predictors of leader intentionality.

Table 2: Impact of behavioral, environmental and personal factors on leader intentionality.

Variable	β
<i>Behavioral factors</i>	
Non-elected position	0.07
Leadership perception	0.31
Elected position	0.29
R^2	0.09
<i>Environmental factors</i>	
Vicarious experiences	0.42**
Verbal persuasion	-0.00
R^2	0.13*
<i>Personal factors</i>	
Extroversion	0.04
Agreeableness	-0.27
Conscientiousness	0.28
Neuroticism	0.10
Openness to Change	-0.12
Mastery goal orientation	0.34*
Performance goal orientation	-0.22*
Physiological state	0.43*
R^2	0.55**

Note. N=36; *p<.05, **p<.01, ***p<.001

Impact of antecedents on leader forethought

Leadership experiences, vicarious experiences, verbal persuasion and personal factors were studied for impacts on leader forethought. Three regression analyses were conducted on leader forethought (as seen in Table 3). The behavioral factor (leadership experience) was examined on leader forethought ($r^2 = 0.17, p < 0.05$) and found a significant relationship. The individuals who perceived their past leadership experience to be higher compared to their peers, showed a significant relationship with leader forethought ($\beta = -0.41, p < 0.05$). Environmental factors were then regressed on leader forethought ($r^2 = 0.07, ns$) and no significant impact was demonstrated. Finally, personal factors were regressed on leader forethought ($r^2 = 0.35, p < 0.01$). Results indicated that mastery goal orientation ($\beta = 0.36, p < 0.1$), extroversion ($\beta = 0.33, p < 0.1$) and physiological state ($\beta = 0.34, p < 0.1$) demonstrated only marginal significance for leader forethought.

The hypotheses 1(a) through 1(f) predicted that all the antecedents within behavioral, environmental and personal factors impacted leader forethought. While there was no support for environmental factors (1b & 1c), results demonstrated significant support for leadership perception, within behavioral factors and marginal support for personal factors (extroversion, mastery goal orientation and physiological state).

Table 3: Impact of behavioral, environmental and personal factors on leader forethought

Variable	β
<i>Behavioral factors</i>	
Non-elected position	0.06
Leadership perception	0.41*
Elected position	0.14
R^2	0.17*
<i>Environmental factors</i>	
Vicarious experiences	0.41
Verbal persuasion	-0.32
R^2	0.07
<i>Personal factors</i>	
Extroversion	0.33^
Agreeableness	-0.23
Conscientiousness	0.04
Neuroticism	0.14
Openness to Change	0.02
Mastery goal orientation	0.33^
Performance goal orientation	0.07
Physiological state	0.34^
R^2	0.35**

Note. N=36; ^p<0.1; *p<.05, **p<.01, ***p<.001.

Impact of antecedents on leader self-reactiveness

Leadership experiences, vicarious experiences, verbal persuasion and personal factors were studied for impact on self-regulation. As seen in Table 4, regression analyses on the behavioral factor (leadership experience) ($r^2 = 0.1$, *ns*), environmental factors ($r^2 = -0.43$, *ns*) and personal factors ($r^2 = 0.52$, $p < .001$) were conducted. Results from the three linear regression analyses did not demonstrate any significant relationship between behavioral factors and leader self-reactiveness or environmental factors and leader self-reactiveness. However, results did demonstrate personal factors, particularly, performance goal orientation ($\beta = .37$, $p < 0.05$) and conscientiousness ($\beta = .60$, $p < 0.001$) were significant predictors of leader self-reactiveness.

Part of hypothesis 1(b) predicted that vicarious experiences (presence of a mentor or a role model) impacted leader self-reactiveness, while hypothesis 1(f) predicted that mastery goal orientation impacted leader self-reactiveness. Results did not support for vicarious experiences impacting leader self-reactiveness. Results did not demonstrate support for mastery goal orientation either, however, contrary to the hypothesis, results demonstrated a support for performance goal orientation impacting leader self-reactiveness. Additionally, results found personality trait of conscientiousness to significantly influence leader self-reactiveness.

Table 4: Impact of behavioral, environmental and personal factors on leader self-reactiveness

Variable	β
<i>Behavioral factors</i>	
Non-elected position	0.18
Leadership perception	0.19
Elected position	0.08
R^2	0.01
<i>Environmental factors</i>	
Vicarious experiences	0.14
Verbal persuasion	-0.12
R^2	-0.04
<i>Personal factors</i>	
Extroversion	-1.36
Agreeableness	0.05
Conscientiousness	0.60
Neuroticism	-0.09
Openness to Change	0.11
Mastery goal orientation	0.12
Performance goal orientation	0.37*
Physiological state	0.19
R^2	0.51**

Note. N=36; *p<.05, **p<.01, ***p<.001.

Impact of antecedents on leader self-reflectiveness

Leadership experiences, vicarious experiences, verbal persuasion and personal factors were studied for impact on leader self-efficacy. Regression analyses were conducted for behavioral factors ($r^2 = -0.03$, *ns*), environmental factors ($r^2 = 0.01$, *ns*) and personal factors ($r^2 = 0.22$, $p < .05$), as seen in Table 5. Results from the linear regression analysis did not demonstrate support between either behavioral factor and leader self-reflectiveness or environmental factors and leader self-reflectiveness. However, the regression analysis demonstrated that within personal factors, physiological state ($\beta = 0.55$, $p < 0.05$) had a significant impact on leader self-reflectiveness.

Hypotheses 1(a) through 1 (f) predicted that behavioral, environmental and personal factors have a significant relationship with leader self-reflectiveness. While the hypotheses predicting behavioral and environmental impact on leader self-reflectiveness were not supported by the results, the hypothesis that physiological state within personal factors impacts leader self-reflectiveness was supported.

Table 5: Impact of behavioral, environmental and personal factors on leader self-reflectiveness

Variable	β
<i>Behavioral factors</i>	
Non-elected position	-0.08
Leadership perception	0.05
Elected position	0.27
R^2	-0.03
<i>Environmental factors</i>	
Vicarious experiences	0.12
Verbal persuasion	-0.31
R^2	0.01
<i>Personal factors</i>	
Extroversion	0.01
Agreeableness	0.10
Conscientiousness	0.14
Neuroticism	-0.06
Openness to Change	0.23
Mastery goal orientation	-0.19
Performance goal orientation	0.25
Physiological state	0.55*
R^2	0.22 [^]

Note. N=36; [^]p<.10, *p<.05, **p<.01, ***p<.001.

Support for hypotheses

Hypothesis 1(a) predicted that behavioral factors, that is, past leadership experiences are direct antecedents to leader intentionality, leader forethought and leader self-reflectiveness. Results partially supported for hypothesis 1 (a), therefore, behavioral factors did not impact on leader intentionality or leader self-reflectiveness, but leader perception within behavioral factors demonstrated significant impact on leader intentionality.

Hypothesis 1(b) predicted that within environmental factors, vicarious experiences, would directly impact leader forethought and leader self-reactiveness. Results did not demonstrate support for this hypothesis, therefore, vicarious experiences did not predict for leader forethought or leader self-reactiveness.

Hypothesis 1(c) predicted that within environmental factors, verbal persuasion is a direct antecedent of leader intentionality, leader forethought and leader self-reflectiveness. Results showed that verbal persuasion did not significantly predict for leader intentionality, leader forethought or leader self-reflectiveness.

Hypothesis 1(d) predicted that physiological state is an antecedent of leader forethought, self-reactiveness and leader self-reflectiveness. Results indicated that physiological state significantly predicted for leader self-reflectiveness, and marginally for leader forethought, but there was no support for leader self-reactiveness, therefore there was partial support for the hypothesis.

Hypothesis 1(e) predicted that personality is an antecedent of both leader forethought and leader self-reflectiveness. Results indicated that extroversion had some

impact on leader forethought but no support was found for leader self-reflectiveness, therefore there was a partial support for the hypothesis.

Hypothesis 1(f) predicted that mastery goal orientation is an antecedent to leader forethought, leader self-reactiveness and leader self-reflectiveness. Results indicated that mastery goal orientation impacted on leader forethought, but not on leader self-reactiveness or leader self-reflectiveness. Therefore, hypothesis 1(f) was partially supported.

Impact of antecedents on leadership agency

As seen in Table 6, three set of regression analyses examined for leadership agency as a single construct: behavioral factor; past leadership experience ($r^2 = 0.13$, *ns*), environmental factors; vicarious experience and verbal persuasion ($r^2 = 0.04$, *ns*) and finally, personal factors ($r^2 = 0.69$, $p < 0.01$) were examined. The results for each hypothesis are demonstrated below:

Hypothesis 2(a) predicted that behavioral factors, are a direct antecedent of leadership agency. This hypothesis was examined using a linear regression analysis and found that leadership experience did not predict leadership agency.

Hypothesis 2(b) predicted vicarious experiences are direct antecedents of leadership agency. Results from the regression analysis did not demonstrate any impact on vicarious experiences on leadership agency.

Hypothesis 2(c) predicted that verbal persuasion was an antecedent of leadership agency. Results did not demonstrate any support for hypothesis 2(c).

Hypothesis 2(d) predicted that personal factors (goal orientation, personality and physiological state) are direct antecedents of leadership agency. Results partially

supported the hypothesis; conscientiousness ($\beta=0.37, p<0.01$), as well as physiological factors ($\beta= 0.51, p<0.001$) were predicted for leadership agency.

Table 6: Impact of behavioral, environmental and personal factors on leadership agency.

Variable	β
<i>Behavioral factors</i>	
Non-elected position	0.03
Leadership perception	0.33
Elected position	0.24
R^2	0.13
<i>Environmental factors</i>	
Vicarious experiences	0.37 [^]
Verbal persuasion	-0.24
R^2	0.04
<i>Personal factors</i>	
Extroversion	0.07
Agreeableness	-0.12
Conscientiousness	0.37**
Neuroticism	0.03
Openness to Change	0.08
Mastery goal orientation	0.23
Performance goal orientation	0.15
Physiological state	0.51**
R^2	0.60**

Note. N=36; * $p<.05$, ** $p<.01$, *** $p<.001$.

Discussion

The purpose of the study was to examine leader development by developing a new construct called leadership agency. The study aimed to examine all the features of agency in terms of leadership, rather than singularly looking at efficacy beliefs. The study created a framework to depict how important antecedents are in developing leadership agency, which we propose indirectly influences leadership development. The idea of self as an agent is central to much research in educational psychology focusing on self-regulated learning, especially those that adapt Bandura's Social Cognitive Theory (Martin, 2004). In this study, we proposed exploring the relationship between leadership agency and Bandura's three set of factors; behavioral, environmental and personal factors. The study proposed hypotheses on leadership agency both as a multi-faceted construct and as a single construct to examine whether there were any differences in the results. The results indicate that, a) leadership agency can be viewed as either as a single construct a multi-faceted construct based on the situation , and b) Overall, all three set of factors; behavioral, environmental and personal, had some amount of impact on leadership agency. Personal factors especially, demonstrated a strong support for leadership agency.

Antecedents and leader intentionality

Leader intentionality is referred to as the conscious assessment of an individual about an expected outcome. A proactive commitment needs to be present in order for leader intentionality to occur. When the three set of factors (behavioral, environmental and personal) were examined with leader intentionality, it was found that vicarious experience impacted leader intentionality, therefore an individual who has a mentor or a

role model as a positive influence is more likely to develop leader intentionality.

Although not hypothesized, findings imply that individuals who are more inclined towards learning and gaining experience are more likely to develop leader intentionality, or an expected outcome to leadership behavior. Findings also indicated that physiological state had an impact on leader intentionality, therefore, individuals who persist through moments of self-doubt and are resilient are more likely to have a vision and an action plan, perhaps because they know they will be able to go through the challenge.

Antecedents and leader forethought

Leader forethought is the phase where the individual has a direction to go in order to achieve some goal and requires motivation to persist. When the three set of factors were examined with leader forethought, past experiences played a role in leader forethought, therefore, an individual who perceived his or her high school leadership experience better than most of his or her peers is more likely to develop leader forethought. Additionally, personal factors seemed to play some role in developing leader forethought. Individuals who have a mastery goal orientation, were extroverted and were resilient seemed to have a marginal impact on their leader forethought and were more likely to be motivated to set goals to build their leadership achievements.

Antecedents and leader self-reactiveness

Leader self-reactiveness is the phase where internal regulatory processes push the individual forward in achieving their goal. This is the stage where the individual regulates his or her action or behavior after judging their progress. Leader self-reactiveness was examined using the three set of factors; behavioral, environmental and personal factors and found that contrary to the hypothesis, performance goal orientation had a significant

relationship with leader self-reactiveness. This suggests that an individual who has inclination towards performance and accomplishment can develop leader self-reactiveness. An individual with a performance goal orientation would mean that the individual has set goals that he or she plans to achieve through regulation (regardless of the intent). Within personality, conscientiousness was found to have a significant effect on leader self-reactiveness. Therefore, an individual who is naturally task and goal oriented is more likely to develop leader self-reactiveness.

Antecedents and leader self-reflectiveness

Leader self-reflectiveness refers to the internal belief in one's capabilities to achieve a goal through self-evaluation and judgment. It is the stage where individuals judge the correctness of their predictive thinking against the outcome of their leadership behavior. When leader self-reflectiveness was examined across the three set of factors, it was found that physiological state had a significant relationship with leader self-reflectiveness. This suggests that having a resilient state or emotional arousal that helps an individual persist helps them develop leader self-reflectiveness. Therefore, an individual who can push through a stressful situation and persist will develop the inner capability to judge himself/herself through self-evaluation.

The above sections displayed and discussed the results when leadership agency was examined as multi-faceted. The following section will discuss the results when leadership agency was examined as a single construct.

Antecedents and leadership agency

When leadership agency was examined as a single construct, two personal factors, physiological state and conscientiousness trait were found to have a significant

relationship with leadership agency. Physiological information is the emotional arousal that is associated with fear and self-doubt or with being psyched-up and ready for performance (Feltz & Lirgg, 2001), this is affected by the level of resilience exerted by the individual. Therefore, if an individual is low in resilience, the physiological factors such as fear and self-doubt may cloud the person's judgment, resulting in lower leadership agency, whereas a person with a higher resilience will bounce back and be persistent. Results indicated that physiological state was highly significant in predicting for leadership agency. Therefore, an individual who is resilient and persistent through the self-doubting phases, has higher leadership aspirations and a higher motivation to reach a goal, is more likely to have regulatory processes to compare behavior and self-evaluate.

Results also indicated that conscientiousness had a significant impact on leadership agency. The effect of conscientiousness, the trait of being orderly and self-disciplined, is consistent with past research. For instance, Chan & Drasgow (2001) found in their study that conscientiousness was strongly related to MTL (leader forethought) as well as leader self-efficacy (leader self-reflectiveness). Another study conducted by Ng, Ang and Chan (2008), found that conscientiousness was strongly correlated to leader effectiveness. With the results from the current study, we can conclude that conscientiousness is an important trait to have in an individual who strives to develop his or her personal leadership.

Limitations and Future research

The sample included in the study was a relatively small size and had participants mostly in the 17 to 19 age range which may limit the findings. Future research should be conducted with a much larger sample size, broader age range and a wider variety of

contexts/different situations such as workplace or particular industries. Additionally, the current study examined the relationship between hypothesized antecedents and leadership agency which is only half the part of the whole model. To fully examine leadership agency, future research needs to look at the construct as a mediator with leadership development and how it influences this development. Furthermore, other antecedents that may impact leadership agency should be examined.

Contrary to expectations and prior research, only one factor, physiological state predicted for leader self-reflectiveness, i.e. leader self-efficacy (Chan & Drasgow, 2001; Hendricks & Payne, 2007; Luthans & Peterson, 2002; McCormick, 1999; Mellor et al., 2006). Future studies should examine this relationship with the use of different instruments measuring leader self-efficacy to see if the results of the current study are still consistent. In addition, when examining leadership agency as a multi-faceted construct, vicarious experiences and perceiving one's past experiences compared to their peers were found to be important antecedents as well. However, none of the behavioral or environmental factors seemed to demonstrate an impact on leadership agency as a single construct. Further research should be conducted to examine the behavioral and environmental factors impacting leadership agency.

Additionally, although the study was conducted on leadership agency both as a multi-faceted construct as well as a single construct, it does not specify if one is better than the other or if there are certain situations or contexts that may be better for each. Therefore, future studies should examine which contexts may be best for viewing leadership agency as a single construct and which work best for viewing it as multi-faceted.

Practical Implications

There are several interesting practical implications from the current study. Firstly, an individual who has developed leadership agency is more likely to have a relatively strong perception of his or her past leadership experience, have the presence of a role model or mentor, be conscientious and resilient.

Leadership agency can be viewed as a sequence of stages which an individual may experience before developing personal leadership. Firstly, the individual develops an outcome expectation or aspirations of becoming a leader. He/she has a vision of an outcome and certain behaviors or actions that will need to be taken to get there. Next, the potential leader reaches leader forethought stage, where the individual sets goals and begins to act on his/her plan of reaching that goal. At this stage, when an individual chooses to pursue a goal, he/she mentally imagines the amount of effort it would take to reach the potential goal as well as what the potential outcomes might be (Aspinwall & Taylor 1997 in Lord, 2010). Next, the individual compares their own behavior to what is expected and try to regulate it to keep it as close to the plan as possible, this self-regulatory process is the leader self-reactive phase. Finally, the leader evaluates self and develops a leader self-efficacy based on the evaluations; the evaluation can lead to either self-enhancing thoughts or self-hindering thoughts about one's capabilities. The first three phases of leadership agency can be teamed together as part of a goal setting process. The leader self-reactive phase is the self-regulatory phase, which Vancouver & Day (2005, p. 158) define as, "processes involved in attaining and maintaining (i.e., keeping regular) goals, where goals are internally represented (i.e., within the self) desired states". The leader self-reflectiveness is the phase of leader self-efficacy and is more of an

affective component of leadership agency as opposed to active processes in the other three phases.

These findings can be applied to educational settings, where leadership development programs can focus on instructors to assume the role of a mentor to their students to encourage vicarious experiences. Additionally, high school as well as colleges should provide more opportunities for students to attain challenging leadership roles or positions. Those individuals who are selected for these roles are likely to have a positive perception of their leadership experience if these roles are challenging to attain. This will help them with setting future goals related to leadership positions and roles. Additionally, certain programs or workshops, in educational settings as well as workplaces can be introduced that help in managing a better physiological state during phases of self-doubt and stress. These workshops can be related to stress management or time management, but would focus more on recovery and coping mechanisms during phases of such emotional arousals.

References

- Ahern, N. R., Kiehl, E. M., Lou Sole, M., & Byers, J. (2006). A review of instruments measuring resilience. *Issues in comprehensive Pediatric nursing, 29*(2), 103-125.
- Aspinwall L.G., & Taylor, S.E. (1997). A stitch in time: self-regulation and proactive coping. *Psychol. Bull. 121*, 417-36.
- Bandura, A. (1986). *Social Foundations of Thought and Action*. Englewood Cliffs, New Jersey: Prentice-Hall, Inc.
- Bandura, A. (1989). Regulation of cognitive processes through perceived self-efficacy. *Developmental Psychology, 25*(5), 729-735.
- Bandura, A. (1991). Social-cognitive theory of self-regulation. *Organizational Behavior and Human Decision Processes, 50*.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Bandura, A. (2001). Social Cognitive Theory: An agentic Perspective. *Annual Review of Psychology, 52*, 1-26.
- Bandura, A., & Locke, E. A. (2003). Negative self-efficacy and goal effects revisited. *Journal of Applied Psychology, 88*, 87-99.
- Borghans, L., Duckworth, A. L., Heckman, J. J., & Ter Weel, B. (2008). The economics and psychology of personality traits. *Journal of Human Resources, 43*(4), 972-1059
- Boyce, L. A., Zaccaro, S. J., & Zazanis, M. W. (2004). Propensity for self-development of leadership attributes: Understanding, predicting, and supporting leader self development performance. *The Leadership Quarterly*.

- Brett, J. F., & VandeWalle, D. (1999). Goal orientation and goal content as predictors of performance in a training program. *Journal of Applied Psychology, 84*(6), 863.
- Brown JM, Miller WR, Lawendowski LA. The self-regulation questionnaire. In: VandeCreek L, Jackson TL, editors. Innovations in clinical practice: A sourcebook. Vol. 17. Sarasota, FL: *Professional Resource Press/Professional Resource Exchange*. 281–292.
- Chan, K. Y., Rounds, J., & Drasgow, F. 2000. The relation between vocational interests and the motivation to lead. *Journal of Vocational Behavior, 57*: 226–245
- Chan, K. -Y., & Drasgow, F. (2001). Toward a theory of individual differences and leadership: Understanding the motivation to lead. *Journal of Applied Psychology, 86*(3), 481–498.
- Chemers, M. M., Watson, C. B., & May, S. T. (2000). Dispositional affect and leadership effectiveness: A comparison of self-esteem, optimism, and efficacy. *Personality and Social Psychology Bulletin, 26*, 267–277.
- Chin, D., & Kameoka, V. A. (2002). Psychosocial and contextual predictors of educational and occupational self-efficacy among Hispanic inner-city adolescents. *Hispanic Journal of Behavioral Sciences, 24*(4), 448-464.
- Chowdhury, S., Endres, M., & Lanis, T.W. (2002). Preparing students for success in team work environments: The importance of building confidence. *Journal of Managerial Issues, 14*, 346–359.
- Conger, J.A & Kanungo, R.K. (1988). The empowerment process: Integrating theory and practice. *Academy of Management Review, 13*(2), 471-182.

- Connelly, M., Gilbert, J., Zaccaro, S., Threlfall, K., Marks, M., Mumford, M. "Exploring the relationship of leadership skills and knowledge to leader performance." *Leadership Quarterly* (2000): 65-86.
- Day, D. V., Harrison, M. M., & Halpin, S. (2009). An integrative approach to leader development: Connecting adult development, identity, and expertise. New York, NY: Routledge.
- Dweck, C. S. (1986). Motivational processes affecting learning. *American psychologist*, 41(10), 1040.
- Eden, D., & Kinner, J. (1991). Modeling Galatea: Boosting self-efficacy to increase volunteering. *Journal of Applied Psychology*, 76, 770-780.
- Feltz, D. L., & Lirgg, C. D. (2001). Self-efficacy beliefs of athletes, teams, and coaches. *Handbook of sport psychology*, 2, 340-361.
- Gayle, C., & Avery, J. R. (2002). Applying Situational Leadership in Australia. *Journal of Management Development*, 242-262.
- Gordon, A., & Yukl, G. (2004). The Future of Leadership Research. *German Journal of Human Resource Research*, 359-365.
- Hagen, K.M., Gutkin, T.B., Wilson, C.P., & Oats, R.G. (1998). Using vicarious experience and verbal persuasion to enhance self-efficacy in pre-service teachers: "priming the pump" for consultation. *School Psychology Quarterly*, 13(2), 169-178.
- Hamil, S. (2003). Resilience and self-efficacy: The importance of efficacy beliefs and coping mechanisms in resilient adolescents. *Colgate University Journal of the Sciences*, 35, 115-146.

- Hannah, S. T., & Luthans, F. (2008). A cognitive affective processing explanation of positive leadership: Toward theoretical understanding of the role of psychological capital. In R. H. Humphrey (Ed.), *Affect and emotion: new directions in management theory and research*, volume 7 of *research in management* : Information Age Publishing.
- Hendricks, J., & Payne, S. (2007). Beyond the big five: Leader goal orientation as a predictor of leadership effectiveness. *Human Performance*, 20, 317–343.
- John, O. P., Donahue, E. M., & Kentle, R. L. (1991). The Big Five Inventory--Versions 4a and 54. Berkeley, CA: University of California, Berkeley, Institute of Personality and Social Research.
- John, O. P., Naumann, L. P., & Soto, C. J. (2008). Paradigm shift to the integrative Big Five trait taxonomy: History, measurement, and conceptual issues. In O. P. John, R. W. Robins, & L. A. Pervin (Eds.), *Handbook of personality: Theory and research* (pp. 114-158). New York, NY: Guilford Press.
- John, O. P., & Srivastava, S. (1999). The Big-Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin & O. P. John (Eds.), *Handbook of personality: Theory and research* (Vol. 2, pp. 102–138). New York: Guilford Press.
- Kanfer, R. (1990). Motivation theory and industrial and organizational psychology. In M. D. Dunnette & L. M. Hough (Eds.), *Handbook of industrial and organizational psychology*. 2(1), 75-170.

- Lester, P. B., Hannah, S. T., Harms, P. D., Vogelgesang, G.R., & Avolio, B. J. (2011). Mentoring impact on leader efficacy development: a field experiment. *Academy of Management Learning & Education, 10*(3), 409–429.
- Lord, R.G., Diefendorff, J.M., Schmidt, A.M., & Hall, R.J. (2010). Self-regulation at work. *Annual Review of Psychology, 61*, 543–568.
- Luthans, F., & Peterson, S. J. (2002). Employee engagement and manager self-efficacy: Implications for managerial effectiveness and development. *Journal of Management Development, 21*(5), 376–387.
- McCall, Morgan W. "Leadership development through experience." *Academy of Management Executive* (2004): 127-142.
- McCormick, M.J. (1999). The Influence of goal orientation and sex–role identity on the development of leadership self-efficacy during a training intervention. Unpublished dissertation, Texas A&M.
- McCormick, M.J. (2001). Self-efficacy and leadership effectiveness: Applying social cognitive theory to leadership. *The Journal of Leadership Studies, 8*, 22-33.
- McCormick, M. J., Tanguma, J., & Lopex-Forment, A. S. (2002). Extending self-efficacy theory to leadership: A review and empirical test. *Journal of Leadership Education, 1*, 34–49.
- McCormick, M.J., & Martinko, M.J. (2004), Identifying leader social cognitions: integrating the causal reasoning perspective into social cognitive theory. *Journal of Leadership and Organizational Studies, 10*(4), 2-11.
- Mellor, S., Barclay, L., Bulger, C., & Kath, L. (2006). Augmenting the effect of verbal persuasion on self-efficacy to serve as a steward: Gender similarity in a union

- environment. *Journal of Occupational and Organizational Psychology*, 79, 121–129.
- Muretta, R. J., Jr. (2004). Exploring the four sources of self-efficacy. Unpublished doctoral dissertation, Touro University International, Cypress, New York.
- Murphy, S. E. (1992). The contribution of leadership experience and self-efficacy to group performance under evaluation apprehension. Unpublished doctoral dissertation, University of Washington, Seattle.
- Ng, K. Y., Ang, S., & Chan, K. Y. (2008). Personality and leader effectiveness: a moderated mediation model of leadership self-efficacy, job demands, and job autonomy. *Journal of Applied Psychology*, 93(4), 733.
- Pallis, L., & Green, S. G. (2002). Leadership self-efficacy and managers' motivation for leading change. *Journal of Organizational Behavior*, 215-235.
- Phipps, S.T.A., & Prieto, L.C. (2011). The influence of personality factors on transformational leadership: Exploring the moderating role of political skill. *International Journal of Leadership Studies*, 6(3), 430-447.
- Quigley, N. R. (2008). Influence of individual differences on the growth of leadership efficacy over time. *Academy of Management Proceedings*, 1-6.
- Reichard, R. J., & Avolio, B. J. (2005). Where are we? The status of leadership intervention research: A metaanalytic summary. In W. L. Gardner, B. J. Avolio, & F. O. Walumbwa (Eds.), *Authentic leadership and practice: Origins, effects, and development*. 203–226. Oxford, UK: Elsevier.

- Singer, M. (1989). Individual differences in leadership aspirations: An exploratory study from valence, self-efficacy and attribution perspectives. *Journal of Social Behavior and Personality*, 3, 253–262.
- Smith, S.M. (2002). Using the social cognitive model to explain vocational interest in information technology. *Information Technology, Learning and Performance Journal*, 20(1), 1-9.
- Vancouver, J.B., & Day, D.V. (2005). Industrial and organizational research on self-regulation: from constructs to applications. *Appl. Psychol.: Int. Rev.* 54, 155–85.
- VandeWalle, D. (1997). Development and validation of a work domain goal orientation instrument. *Educational and Psychological Measurement*, 57(6), 995-1015.
- Vecchio, Robert P., Bullis, R. C., Brazil, Donna M. (2006). The Utility of Situational Leadership Theory. *Small Group Research*. 407-424.
- Wagnild, G.M., & Young, H.M. (1993). Development and psychometric evaluation of the resilience scale. *Journal of Nursing Measurement*, 1, 165–178.
- Wood, R. E., & Bandura, A. (1989). Social cognitive theory of organizational management. *Academy of Management Review*.
- Yukl, G. Managerial leadership: A review of theory and research. (1989). *Journal of Management*. 15, 251-289.
- Zaccaro, S. J., Foti, R. J., & Kenny, D. A. (1991). Self-monitoring and trait-based variance in leadership: An investigation of leader flexibility across multiple group situations. *Journal of Applied Psychology*, 76, 308–315.
- Zimmerman B J (2000). Self-efficacy: an essential motive to learn. *Contemporary Educational Psychology*. 25, 82-91.

APPENDIX A

Outcome Expectations

To what extent do you disagree or agree with the following statements? Choose the appropriate number using this response scale:

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

1. My main goal professionally is to achieve a leadership position in my field of study.
1 2 3 4 5
2. I have plans to develop myself as a leader during college to achieve my professional goals after college.
1 2 3 4 5
3. I plan to be in a leader position in college in the near future.
1 2 3 4 5
4. I do not see myself in charge of others in my future.
1 2 3 4 5
5. I see myself continuously furthering or advancing in the development of my leadership throughout my life.
1 2 3 4 5

APPENDIX B
Motivation to lead

To what extent do you disagree or agree with the following statements? Choose the appropriate number using this response scale:

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

1. Most of the time, I prefer being a leader rather than a follower when working in a group.
1 2 3 4 5
2. I am the type of person who is not interested to lead others.
1 2 3 4 5
3. I am definitely not a leader by nature. (R)
1 2 3 4 5
4. I am the type of person who likes to be in charge of others.
1 2 3 4 5
5. I believe I can contribute more to a group if I am a follower rather than a leader. (R)
1 2 3 4 5
6. I usually want to be a leader in the groups that I work in.
1 2 3 4 5
7. I am the type who would actively support a leader but prefers not to be appointed as a leader.(R)
1 2 3 4 5
8. I have a tendency to take charge in most groups or teams that I work in.
1 2 3 4 5
9. I am seldom reluctant to be the leader of a group.
1 2 3 4 5

10. I am only interested to lead a group if there are clear advantages for me.

1 2 3 4 5

11. I would want to know "what's in it for me" if I am going to agree to lead a group.

1 2 3 4 5

12. I never expect to get more privileges if I agree to lead a group.

1 2 3 4 5

13. I have more of my own problems to worry about than to be concerned about the rest of the group. (R)

1 2 3 4 5

14. I feel that I have a duty to lead others if I am asked.

1 2 3 4 5

15. I agree to lead whenever I am asked or nominated by the other members.

1 2 3 4 5

16. I was taught to believe in the value of leading others.

1 2 3 4 5

17. I have been taught that I should always volunteer to lead others if I can.

1 2 3 4 5

APPENDIX C

Self-regulation questionnaire

To what extent do you disagree or agree with the following statements? Choose the appropriate number using this response scale:

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

1. I usually keep track of my progress toward my goals.

1 2 3 4 5

2. I have trouble making up my mind about things.

1 2 3 4 5

3. I get easily distracted from my plans.

1 2 3 4 5

4. I don't notice the effects of my actions until it's too late.

1 2 3 4 5

5. I am able to accomplish goals I set for myself.

1 2 3 4 5

6. I put off making decisions.

1 2 3 4 5

7. It's hard for me to notice when I've "had enough" (alcohol, food, sweets).

1 2 3 4 5

8. If I wanted to change, I am confident that I could do it.

1 2 3 4 5

9. When it comes to deciding about a change, I feel overwhelmed by the choices.

1 2 3 4 5

10. I have trouble following through with things once I've made up my mind to do something.

1 2 3 4 5

11. I don't seem to learn from my mistakes.

1 2 3 4 5

12. I can stick to a plan that's working well.

1 2 3 4 5

13. I usually only have to make a mistake one time in order to learn from it.

1 2 3 4 5

14. I have personal standards, and try to live up to them.

1 2 3 4 5

15. As soon as I see a problem or challenge, I start looking for possible solutions.

1 2 3 4 5

16. I have a hard time setting goals for myself.

1 2 3 4 5

17. I have a lot of willpower.

1 2 3 4 5

18. When I'm trying to change something, I pay a lot of attention to how I'm doing.

1 2 3 4 5

19. I have trouble making plans to help me reach my goals.

1 2 3 4 5

20. I am able to resist temptation.

1 2 3 4 5

21. I set goals for myself and keep track of my progress.

1 2 3 4 5

22. Most of the time I don't pay attention to what I'm doing.

1 2 3 4 5

23. I tend to keep doing the same thing, even when it doesn't work.

1 2 3 4 5

24. I can usually find several different possibilities when I want to change something.

1 2 3 4 5

25. Once I have a goal, I can usually plan how to reach it.

1 2 3 4 5

26. If I make a resolution to change something, I pay a lot of attention to how I'm doing.

1 2 3 4 5

27. Often I don't notice what I'm doing until someone calls it to my attention.

1 2 3 4 5

28. I usually think before I act.

1 2 3 4 5

29. I learn from my mistakes.

1 2 3 4 5

30. I know how I want to be.

1 2 3 4 5

31. I give up quickly.

1 2 3 4 5

APPENDIX D

Leader self-efficacy

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

Instructions: Below are some of the skills required for leaders in different groups, please rate the level to which you agree or disagree. None of these behaviors is better than the others but are different ways of achieving good group performance.

Even though you might not be asked to serve as the leader for this group, please indicate whether you can exhibit this skill in a leadership role.

Influencing group members involves directing them to accomplish a task while persuading them to perform well. I am capable of influencing a group..

1. When the group has as much knowledge as I do and no one has actually been chosen as a leader. 1 2 3 4 5
2. When I know more than the rest of the group about the task at hand. 1 2 3 4 5
3. When the group has been told to defer to me because I am the leader of the group or supervisor. 1 2 3 4 5

Facilitating a group discussion involves keeping a group on task while allowing the group members to contribute their knowledge. I am capable of facilitating a group discussion..

4. When the members do not get along with each other 1 2 3 4 5
5. When the group refuses to cooperate because they are not interested in the task. 1 2 3 4 5
6. When I know more than the rest of the group about the task. 1 2 3 4 5
7. When the group is enthusiastic about the task and is willing to cooperate. 1 2 3 4 5

APPENDIX E

Past Leadership Experience

1. For how many semesters during high school (or college) did you hold an *elected* office in either school government or organized clubs? _____

2. For how many months that you spent involved in clubs or committees did you assume a leadership role? This question does not refer to elected leadership positions but situations in which you volunteered to lead or emerged as a leader.
Number of months in leadership role _____

3. For how many months that you spent working either as a paid worker or volunteer did you manage other workers?
Number of months as Manager of others _____

4. For group situations during classroom activities in high school (or college), what percentage of the time would you say that you assume the leadership role?

0	1	2	3	4	5
None 1-20%	21-40%	41-60%	61-80%	81-100%	

5. In general, how much leadership experience do you have compared to others your age?

0	1	2	3	4	5
None	>20%	>40%	>60%	>80%	>99%

APPENDIX F

Vicarious Experiences & Verbal persuasion

Leadership role model/ mentor/friend

1. Do you identify any person/authority/friend/peer as a mentor who can guide you on what paths to take to hone your leadership skills?

Yes

No

2. Is there a person/authority/friend/peer you identify as a role model?

Yes

No

Verbal persuasion

3. Can you recall an incident or conversation that encouraged you to develop leadership skills?

Yes

No

APPENDIX G
Resilience Scale

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

1. When I make plans I follow through with them
1 2 3 4 5
2. I usually manage one way or another
1 2 3 4 5
3. I am able to depend on myself more than anyone else
1 2 3 4 5
4. Keeping interested in things is important to me.
1 2 3 4 5
5. I can be on my own if I have to.
1 2 3 4 5
6. I feel proud that I have accomplished things in my life.
1 2 3 4 5
7. I usually take things in stride.
1 2 3 4 5
8. I am friends with myself.
1 2 3 4 5
9. I feel that I can handle many things at a time.
1 2 3 4 5
10. I am determined.
1 2 3 4 5
11. I seldom wonder what the point of it all is.
1 2 3 4 5
12. I take things one day at a time.
1 2 3 4 5
13. I can get through difficult times because I've experienced difficulty before
1 2 3 4 5
14. I have self-discipline.
1 2 3 4 5
15. I keep interested in things.
1 2 3 4 5
16. I can usually find something to laugh about.
1 2 3 4 5
17. My belief in myself gets me through hard times.
1 2 3 4 5
18. In an emergency, I'm someone people generally rely on
1 2 3 4 5
19. I can usually look at a situation in a number of ways.

- 1 2 3 4 5
20. Sometimes I make myself do things whether I want to or not
1 2 3 4 5
21. My life has meaning.
1 2 3 4 5
22. I do not dwell on things that I cannot do anything about.
1 2 3 4 5
23. When I am in a difficult situation, I can usually find my way out of it.
1 2 3 4 5
24. I have enough energy to do what I have to do.
1 2 3 4 5
25. It's okay if there are people who do not like me.
1 2 3 4 5

APPENDIX H

Big Five Inventory

Here are a number of characteristics that may or may not apply to you. For example, do you agree that you are someone who *likes to spend time with others*? Please write a number next to each statement to indicate the extent to which **you agree or disagree with that statement.**

1	2	3	4	5
Disagree Strongly	Disagree a little	Neither agree nor disagree	Agree a little	Agree strongly

I am someone who:

1. _____ Is talkative
2. _____ Tends to find fault with others
3. _____ Does a thorough job
4. _____ Is depressed, blue
5. _____ Is original, comes up with new ideas
6. _____ Is reserved
7. _____ Is helpful and unselfish with others
8. _____ Can be somewhat careless
9. _____ Is relaxed, handles stress well.
10. _____ Is curious about many different things
11. _____ Is full of energy
12. _____ Starts quarrels with others
13. _____ Is a reliable worker
14. _____ Can be tense
15. _____ Is ingenious, a deep thinker
16. _____ Generates a lot of enthusiasm
17. _____ Has a forgiving nature
18. _____ Tends to be disorganized
19. _____ Worries a lot
20. _____ Has an active imagination
21. _____ Tends to be quiet
22. _____ Is generally trusting
23. _____ Tends to be lazy
24. _____ Is emotionally stable, not easily upset
25. _____ Is inventive
26. _____ Has an assertive personality
27. _____ Can be cold and aloof
28. _____ Perseveres until the task is finished
29. _____ Can be moody
30. _____ Values artistic, aesthetic experiences

31. _____ Is sometimes shy, inhibited
32. _____ Is considerate and kind to almost everyone
33. _____ Does things efficiently
34. _____ Remains calm in tense situations
35. _____ Prefers work that is routine
36. _____ Is outgoing, sociable
37. _____ Is sometimes rude to others
38. _____ Makes plans and follows through with them
39. _____ Gets nervous easily
40. _____ Likes to reflect, play with ideas
41. _____ Has few artistic interests
42. _____ Likes to cooperate with others
43. _____ Is easily distracted
44. _____ Is sophisticated in art, music, or literature

APPENDIX I

Goal Orientation

1-----2-----3-----4-----5-----6

Strongly Disagree Disagree Slightly Disagree Slightly Agree Agree Strongly Disagree

1. I am willing to select to a challenging work assignment that I can learn a lot from.
2. I often look for opportunities to develop new skills and knowledge.
3. I enjoy challenging and difficult tasks at work where I'll learn new skills.
4. For me, development of my ability is important enough to take risks.
5. I prefer to work in situations that require a high level of ability and talent.
6. I'm concerned with showing that I can perform better than my coworkers.
7. I try to figure out what it takes to prove my ability to others at work.
8. I enjoy it when others at work are aware of how well I am doing.
9. I prefer to work on projects where I can prove my ability to others.
10. I would avoid taking on a new task if there was a chance that I would appear rather incompetent to others.
11. Avoiding a show of low ability is more important to me than learning a new skill.
12. I'm concerned about taking on a task at work if my performance would reveal that I had low ability.
13. I prefer to avoid situations at work where I might perform poorly.