



The Impact of the Dark Triad Personality Traits on the Leadership Intentions of University Students: The Mediating Role of Motivation to Lead

Michaela Strong
STRMIC031

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Faculty of Commerce
University of Cape Town

Supervisor: Prof. Jeffrey Bagraim

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Abstract

This study aimed to investigate the dark triad's impact on the leadership intentions of Generation Z university students in South Africa. To further this, motivation to lead was used as a mediator in the relationship. A sample of 345 Generation Z students from the University of Cape Town was used to further understand knowledge on the impact of dark personality traits on leadership intentions as this generation enters the workforce. Data was collected using a self-report questionnaire which included scales for the dark triad, leadership intentions, motivation to lead, and several demographic questions. The results of the study revealed that this sample of Generation Z university students do not have a tendency towards dark triad personality traits, while they do have a high propensity for both leadership intentions and motivation to lead. The regression analyses indicated that the dark triad explained 1.8% of the variance in leadership intentions. Although significant, the result shows a weak relationship, and we conclude that the dark triad does not strongly impact a person's leadership intentions in this study. Additionally, motivation to lead was found to only partially mediate the relationship between the dark triad and leadership intentions in this study.

Keywords: dark triad, leadership intentions, motivation to lead, Generation Z, Gen Z, narcissism, Machiavellianism, psychopathy

The Impact of the Dark Triad Personality Traits on the Leadership Intentions of University Students: The Mediating Role of Motivation to Lead

The proposed study investigates the role of ‘dark’ personality traits in shaping the leadership intentions of Generation Z students in South Africa. It is hoped that the findings of this study will deepen our understanding of the distal-proximal modelling of personality traits and leadership emergence, as examined by Judge et al. (2002). Recent research on the link between personality and leadership has started to focus on the dark triad personality traits (Kennedy et al., 2021). Understanding how dark personality traits influence Generation Z university students' intention to assume leadership roles in South Africa is essential because Generation Z are our future business leaders who will shape enduring organisational cultures (Kennedy et al., 2021).

The dark triad is a taxonomy of examined ‘dark’ personality traits consisting of narcissism (self-enhancement tendencies, feeling of entitlement), Machiavellianism (being manipulative, lack of concern for others), and psychopathy (highly impulsive, lack of empathy) (Diller et al., 2021). The dark triad has been extensively studied in the workplace due to its destructive workplace effects (Diller et al., 2021). The adverse effects of dark triad leadership mean that it is necessary to understand the phenomenon so measures, such as those discussed by Pfeffer (2021), can be taken to counter it proactively.

Dark personality traits have also become more prevalent in popular culture, with artists like Taylor Swift singing about these dark personality traits, most recently in her chart-topping song called Anti-Hero: “Did you hear my covert narcissism I disguised as altruism like some kind of congressman” (Swift & Antonoff, 2022). The prevalence of these traits in popular culture makes it even more interesting and relevant to research as more people become aware of these traits and the vast impact that they can have.

While research on leadership often looks at leadership emergence (when individuals claim leadership roles), Kennedy et al. (2021) noted that leadership emergence requires both a motivation to lead (MTL) and an intention to lead. Leadership intentions are the expressed desire or aspiration to take on leadership roles and engage in leadership activities (Baker et al., 2016; Kennedy et al., 2021). In comparison, MTL refers to a person’s motivation (impetus that provides direction for behaviour) to assume leadership roles and responsibilities (Chan & Drasgow, 2001).

MTL is a core component of leadership emergence and consists of three factors: affective-identity, social-normative, and non-calculative MTL (Chan & Drasgow, 2001).

Research linking the dark triad personality traits to specific MTL dimensions exists in previous literature, which also examines leadership emergence as a result of MTL (Kennedy et al., 2021). Research has further suggested that MTL does not result in leader emergence if an active intention to lead is absent (Kennedy et al., 2021), and because MTL is said to precede leadership intentions (Kennedy et al., 2021), it will therefore be investigated as a mediator in the relationship between the dark triad personality traits and leadership intentions. Furthermore, there is very little research on the role of MTL as a mediator, and this study hopes to contribute by considering it.

Barhate and Dirani (2022) noted the importance of considering the relationship between the dark triad personality traits and leadership among generational cohorts, especially as Generation Z enters the workforce in the coming years. Defining generational cohorts is a contentious issue, but in this study, Generation Z will be defined by their year of birth, with Generation Z referring to all people born between 1995 and 2012 (Barhate & Dirani, 2022).

The proposed research study will investigate how the dark triad influences leadership intentions amongst Generation Z university students and whether MTL mediates this relationship. Possible implications of this research include recommendations regarding the recruitment and retention of Generation Z leaders (Maloni et al., 2019). The findings from this study will also provide insight into the leadership intentions of Generation Z university students (Pfeffer, 2021) and thereby help organisations develop leaders to address the long-term global leadership shortage (Pfeffer, 2021). Effective leadership is critical in South Africa, where the population is diverse and its challenges severe, making knowledge in this regard crucial (Bornman, 2019).

Research Question

How do ‘dark’ personality traits affect the leadership intentions of South African Generation Z university students?

Literature Review

This section defines key terms and presents past research on the relationship between the dark triad personality traits and leadership intentions. First, leadership intentions will be discussed, followed by the dark triad and then the relationship between these two constructs. Finally, the role of motivation to lead (MTL) will be examined as a mediator in this relationship.

Leadership Intentions

Leadership in the workplace is a well-researched topic as it impacts many workplace outcomes, such as the performance and attitudes of subordinates (LeBrenton et al., 2018). Numerous characteristics of leadership have been discussed in previous literature. However, this research will look at a less prominent characteristic, leadership intentions. Leadership intention is defined as a person having an expressed desire or aspiration to take on leadership roles and engage in leadership activities, which occurs before a person can emerge as a leader (Baker et al., 2016; Kennedy et al., 2021). According to Baker et al. (2016) and Kennedy et al. (2021), leadership intention is a precursor to assuming leadership roles and should be examined before leadership emergence, which is the act of claiming or assuming a leadership position.

Although under-researched, this aspect of leadership can provide valuable insights into the types of people who are likely to and have the desire to assume leadership roles. Although personality has not been extensively considered as a predictor of leadership intentions, Baker et al. (2016) found in their study that personality traits are indeed significant predictors of leadership intentions amongst female university students.

The trait theory of leadership suggests that a person's personality traits are likely to influence their effectiveness as a leader (Colbert et al., 2012). Despite this, research has often shown inconsistent results (Judge et al., 2002). Moreover, there is limited research surrounding leadership intentions specifically, as it is considered a transition stage between motivation to lead and emerging as a leader. Without the intention to lead, motivation to lead will not result in leader emergence (Kennedy et al., 2021). Therefore, increasing knowledge of leadership intentions is essential as it is intrinsically related to leadership emergence. This study will further this by focusing research on how the 'dark' personality traits affect these leadership intentions. Moreover, this research will consider the leadership intentions of Generation Z university students as they begin to enter and impact the workplace.

The Dark Triad

Narcissism, Machiavellianism, and psychopathy are the three personality traits which make up the dark triad. Paulhus and Williams developed the concept of the dark triad in 2002 when they found these three personality traits predominant in the literature relating to offensive personalities (Paulhus & Williams, 2002). The dark triad personality traits were found to be inter-correlated and all associated with norm-violating behaviours, with two of the critical characteristics of all three personality traits being the tendency to exploit and disagreeableness (Muris et al., 2017; Paulhus & Williams, 2002). Additionally, there is evidence of an overlap of Machiavellianism with psychopathy, narcissism with psychopathy, and Machiavellianism with narcissism (Paulhus & Williams, 2002).

Interest in studying the dark triad has grown significantly in recent years as researchers consider the dark triad to be an antecedent to adverse workplace outcomes and counterproductive work behaviours (LeBreton et al., 2018). For example, people scoring highly on the dark triad are often characterised as being manipulative of their colleagues and subordinates (Muris et al., 2017; Paulhus & Williams, 2002). Despite dark personality traits being linked to adverse workplace outcomes, some individuals who score highly on the dark triad seem to thrive in corporate environments, various careers, and leadership roles (Schneider et al., 2017). The three traits that make up the dark triad can be looked at individually to understand their differences further.

Narcissism

Narcissism can be either clinical or subclinical, with clinical being diagnosed according to the 5th edition of the diagnostic and statistical manual of mental disorders (DSM-5). When considering research on the dark triad in this literature review, we refer to only subclinical narcissism. Narcissism is the most commonly known and widely researched trait in the dark triad and is often considered to have both a bright and dark side (Braun, 2017). The bright side refers to the charming attributes of a narcissist, which forms the impression of them, while the dark side depicts their more manipulative and self-serving tendencies (Braun, 2017). In the short run, the bright and dark sides are said to co-exist; however, over time, the dark side tends to overrun the bright side (Braun, 2017). Narcissists are said to have the least dark traits of the dark triad and instead focus their attention on leaving a good impression (Braun, 2017).

Narcissists are often characterised by their desire for recognition and power, which in turn manifests in them pursuing leadership positions, which research has shown they are more likely to be selected for than others (Braun, 2017; Čopková & Jendřejáková, 2020). Research surrounding the definition of narcissism is vast, in which most found that narcissists believe they are superior to others (LeBreton et al., 2018). An inflated sense of self drives this, as well as a need for attention and admiration far more significant than what is considered normal (LeBreton et al., 2018). Additionally, narcissists tend to lack empathy and have a tendency to exploit (LeBreton et al., 2018). Narcissism is considered a dark personality trait because of its association with callous-manipulative behaviours (LeBreton et al., 2018; Schneider et al., 2017).

Because narcissism has been shown to predict leader emergence across various prior research, it is vital to understand the prevalence of narcissistic people as their behaviours can adversely affect those around them should they become leadership figures (Pfeffer, 2021). Research by Cragun et al. (2020) speaks specifically to the prevalence of narcissism among Chief Executive Officers (CEOs). This research focused on leadership figures because of their significant impact on businesses and their performance (Cragun et al., 2020). Research has also suggested that it is possible that being in leadership roles can make people narcissistic, which can be called acquired situational narcissism, rather than narcissists tending towards leadership roles (Cragun et al., 2020) – because of this, understanding a person's intention to lead will provide better insights into whether narcissists have more of a desire to be placed in leadership roles than others.

In literature, narcissism had been commonly associated with the Millennial generation when compared to others (Wood et al., 2021). A meta-analysis by Twenge et al. (2008) indicated that university students' narcissism levels had significantly increased from 1982 to 2006. Based on this, Millennials have entered the workforce with these higher levels of narcissism, which has the potential to adversely affect these workplaces. Therefore, there is a need to determine whether the trend towards higher levels of narcissism is continuing in the next generation, known as Generation Z, to establish how best to deal with the effects of this on the workplace (Wood et al., 2021).

Machiavellianism

Machiavellianism is the next dark personality trait which is included in the dark triad and is characterised by a tendency toward manipulation and deception (Čopková &

Jendrejáková, 2020). This is often in addition to a lack of empathy and a focus on oneself and one's own goals, even at the expense of others (LeBreton et al., 2018). Despite the negative connotations associated with Machiavellianism, some theories consider the ability to manipulate others as an essential factor in social intelligence and the development of a person's intelligence (Čopková & Jendrejáková, 2020). It is said that Machiavellians also place a significant focus on personal achievement and a desire for control, often leading them into leadership positions (Jones & Mueller, 2022). However, research has shown that in a workplace, Machiavellians are likely to be abusive and engage in workplace bullying, having a toxic impact on the environments they enter (Jones & Mueller, 2022). This can result in a workplace culture that fosters unethical practices and counterproductive work behaviours (Jones & Mueller, 2022).

Machiavellianism and psychopathy share numerous similarities in their characteristics (Guenole, 2014). However, Jones and Mueller (2022) noted that multiple meta-analyses have found that psychopathy is a better predictor for most antisocial outcomes than Machiavellianism, leading many researchers to view Machiavellianism as a redundant construct (Jones & Mueller, 2022). In their research, Jones and Mueller (2022) argued that Machiavellianism is a trait associated with interactions between a person and the environment. As a result of this, it is thought that Machiavellians can control their impulses in environments when they deem necessary, something that people high in psychopathy are unable to do (Jones & Mueller, 2022). Until Paulhus and Williams (2002) began researching the three dark and harmful constructs together, those who criticised Machiavellianism had argued that it did not offer anything beyond that of psychopathy and narcissism (Jones & Mueller, 2022). As a result of varying views, this research looks at these dark personality traits together and as individual constructs.

While research has considered narcissism as prevalent in the millennials, there is less literature surrounding Machiavellianism across generations. Arli et al. (2018) noted that while previous literature has not made this distinction, research has determined that millennials tend to be less concerned with ethics, a critical component of Machiavellianism, thus identifying a link between millennials and Machiavellianism. While millennials are still the largest population group, Generation Z is emerging and will soon hold more power than millennials indicating the importance of investigating these traits in relation to Generation Z (Arli et al., 2018).

Psychopathy

The final dark personality trait which forms the dark triad is psychopathy, which is often considered the most toxic trait in the dark triad (LeBreton et al., 2018). Similar to narcissism, psychopathy can also be discussed in two extremities, one in which it is clinically diagnosed according to the DSM-5 and the other as subclinical psychopathy. When considering research on psychopathy in this literature review, we refer only to subclinical psychopathy. The fundamental characteristics of psychopathy include impulsivity, lack of empathy, and a tendency to intimidate and threaten (Čopková & Jendřejáková, 2020; Paulhus & Williams, 2002). In the workplace, people who score highly in psychopathy tend to take significant risks and act irresponsibly (Čopková & Jendřejáková, 2020). This can lead to counterproductive work behaviours in organisations which can result in violating ethical standards, increased bullying, and increased conflict, amongst other issues (Diller et al., 2021).

As mentioned above, psychopathy and Machiavellianism share numerous similarities, with some researchers finding psychopathy a more valuable construct (Jones & Mueller, 2022). These two traits share similarities in the sense that they both centre around unethical behaviour and include the ability to lie without guilt, amongst others (Čopková & Jendřejáková, 2020). However, unlike the Machiavellians, those who score highly in psychopathy do not always know how to orient themselves in the lies they tell (Čopková & Jendřejáková, 2020). Additionally, Jones and Mueller (2022) noted that individuals high in psychopathy tend to behave in an antisocial manner consistently, resulting in a consistently negative impact on their environment. In contrast, those high in Machiavellianism only behave in this manner when the benefit outweighs the cost (Jones & Mueller, 2022). This means that Machiavellianism does not always result in counterproductive workplace behaviour, whereas psychopathy does (Jones & Mueller, 2022).

Research linking psychopathy to different generations is not prevalent. This research will aim to create a sense of understanding of psychopathy among Generation Z university students. Having looked at each trait of the dark triad individually, we can determine that each trait results in some form of destructive workplace behaviour, though how this happens will differ for each trait (Jones & Mueller, 2022). Generally speaking, millennials tend to score highly in dark personality traits compared to preceding generations (Keener, 2020). However, little research considers the generations which will come after millennials in the workplace. With this study being conducted on Generation Z university students, a further

understanding of the dark triad will be gained, which will help understand the career expectations and potential management practices of this emerging generation (Maloni et al., 2019).

Leadership Intentions and The Dark Triad

Pfeffer (2021) and Diller et al. (2021) noted that the emerging consensus in the literature is that it is common to have leaders who possess dark triad personality traits, as these traits have been shown to predict leader emergence. While research shows a link between the dark triad and leadership emergence, literature relating the dark triad to leadership intentions is limited (Baker et al., 2016; Kennedy et al., 2021).

Despite the prevalence of leadership amongst those who score highly on the dark triad personality traits, these traits are not explicitly related to a person's leadership effectiveness (Wood et al., 2021). This is because the outcome of dark triad leadership has the potential to harm the organisation and the people in it. When considering the outcomes of dark triad leadership on an organisation, LeBreton et al. (2018) found that narcissism in a leader did not harm their subordinate's well-being. However, due to their self-involved nature, their decision-making can be detrimental to an organisation as they are likely to focus on only their needs (Diller et al., 2021). While research has indicated that many leaders are narcissistic, little literature has indicated that narcissists have the expressed desire to take on leadership roles (Baker et al., 2016; Kennedy et al., 2021).

Machiavellianism in a leader was related to lower career satisfaction and higher emotional exhaustion among subordinates but was not linked to leadership intentions (LeBreton et al., 2018). In addition, due to their desire for power and disagreeable nature, Machiavellian leaders can lead to unethical workplace practices (Diller et al., 2021). Similarly, psychopathy in a leader was found to harm subordinates' job satisfaction (LeBreton et al., 2018).

The results of the research conducted by Kennedy et al. (2021) indicated that, individually, narcissism and Machiavellianism predict leadership intentions, while psychopathy does not affect leadership intentions. Kennedy et al. (2021) also found that the dark triad as a whole correlates with leadership intentions. However, more research is needed to link this relationship to Generation Z, as they are the emerging workforce. Kennedy et al. (2021) suggested that leadership emergence requires both motivation to lead and the intention to lead; therefore, to further understand the relationship between the dark triad and leadership intentions, we need to examine MTL as a mediator.

Motivation to Lead as a Mediator

In a meta-analysis, Badura et al. (2020) confirmed motivation to lead as essential in the distal-proximal model of motivation and leadership. They found that the 3 factors which make up MTL were typically associated with leader emergence using data from 100 primary studies (Bandura et al. 2020). This was refined by Kennedy et al. (2021), who noted that in order for leader emergence to take place, a person needs to have both an intention and a motivation to lead. They further argued that MTL is said to precede a person's intention to lead (Kennedy et al., 2021). With this understanding, Kennedy et al. (2021) hypothesised that MTL would mediate the relationship between the dark triad personality traits and leadership intentions. In asserting this, they broadened the scope of the research conducted by Badura et al. (2020) to consider dark triad personality traits and leadership intentions while considering MTL in the relationship.

Badura et al. (2020) found that MTL consists of three factors instead of one overarching construct, as previously thought. The three factors of MTL are affective-identity (an individual's desire to lead because they enjoy leading and being seen as a leader), social-normative (the extent to which an individual considers leadership as a duty), and finally non-calculative (the extent to which leadership is viewed positively despite the costs potentially outweighing the benefits) (Badura et al., 2020; Kennedy et al., 2021).

In their research, Kennedy et al. (2021) found that narcissism and Machiavellianism were associated with higher levels of affective-identity MTL. Individuals high in affective-identity MTL have more self-interest in leading, so they are likely to relate to positive self-concept traits such as narcissism (Badura et al., 2020). Furthermore, Braun (2017) noted that narcissists are likely to seek leadership positions, reflecting affective-identity MTL. In addition, Badura et al. (2020) argued that affective-identity MTL aligns with agency on the agency-communion dimension. This refers to leaders seeing themselves as differentiated from others due to their power instead of seeing themselves as part of a larger social entity. This is also indicative of narcissism (Gebauer & Sedikides, 2018). Therefore, we expect narcissism to relate positively to affective-identity MTL in this research.

Kennedy et al. (2021) found that Machiavellianism was negatively correlated with non-calculative MTL. This aligns with research by Chan and Drasgow (2001), in which they argue that non-calculative MTL considers leadership as involving costs and responsibilities. The less calculative a person is about leading, the less they would avoid leadership roles (Badura et al., 2020; Chan & Drasgow, 2001). Machiavellianism, however, is associated with

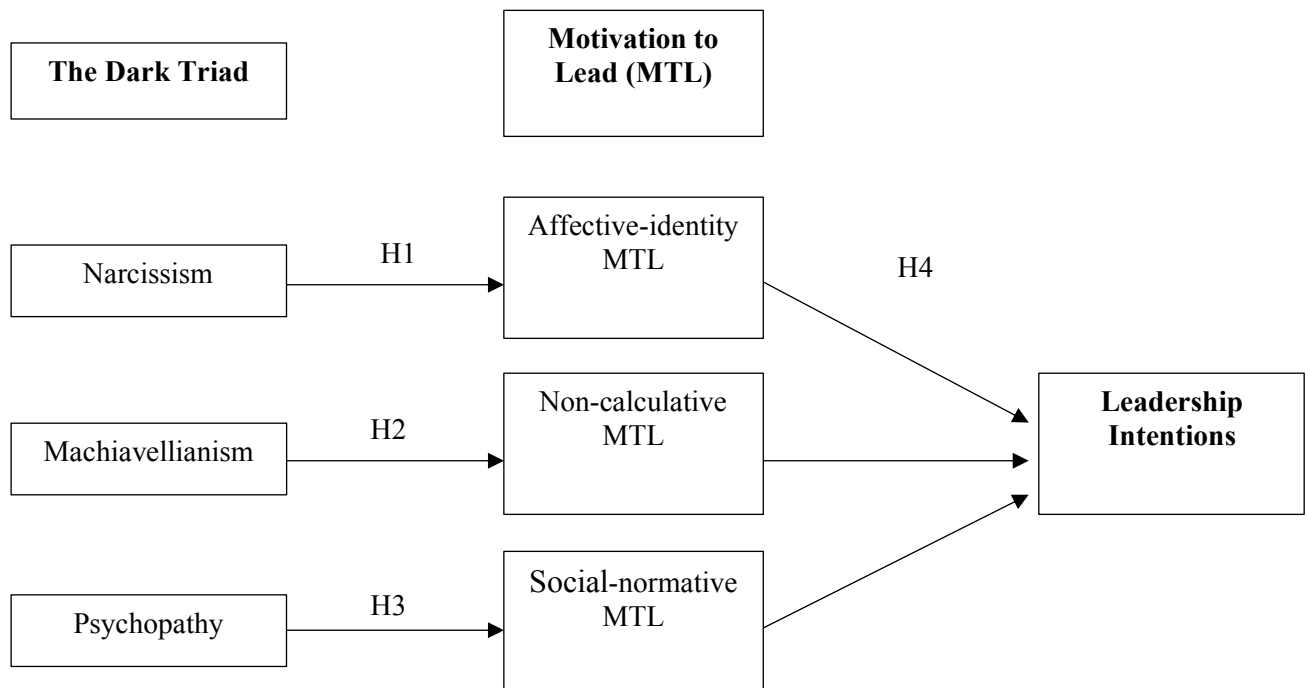
being calculative and manipulative, resulting in the expectation that Machiavellianism will be negatively correlated with non-calculative MTL (Chan & Drasgow, 2001).

According to Kennedy et al. (2021) and Furtner et al. (2017), psychopaths exhibit antisocial MTL and are non-altruistic, which is negatively related to social-normative MTL (Kennedy et al., 2021). As a result, it is expected that this study will find that psychopathy will be negatively correlated with social-normative MTL.

Finally, based on the meta-analysis by Badura et al. (2020), in which MTL was found to be an effective mediator of the relationship between motivation and leadership, and the research by Kennedy et al. (2021) which suggested that leadership emergence requires both MTL and the intention to lead, we expect MTL to mediate the relationship between the dark triad and leadership intentions. Figure 1 below provides a conceptual framework for the hypotheses being tested, with the dark triad and MTL being examined in their components when looking at the correlations, however, globally in the mediation analysis as examined in the literature.

Figure 1

A conceptual framework of the hypotheses being tested



Hypotheses

H1: Narcissism will correlate positively with affective-identity MTL amongst Generation Z students

H2: Machiavellianism will correlate negatively with non-calculative MTL amongst Generation Z students

H3: Psychopathy will correlate negatively with social-normative MTL amongst Generation Z students

H4: MTL will mediate the relationship between the dark triad and leadership intentions amongst Generation Z

Method

This section describes the methods employed in this study by detailing the research design, sampling, participants, measures used, demographic characteristics, ethical considerations, the procedure followed, and the data analysis methods used. This has been done to determine the mediating effect of motivation to lead on the relationship between the dark triad and leadership intentions amongst Generation Z university students.

Research Design

In order to test the hypotheses derived from a review of the literature, a cross-sectional descriptive design was used as it is efficient when facing cost and time restraints (Spector, 2019). This research aimed to collect quantitative data at a specific time point from a specific portion of the population. To collect this data, a self-report questionnaire was utilised. Additionally, quantitative data was chosen as there was a need to determine the correlation between constructs as outlined in the hypotheses.

Sampling

A purposive, non-probability sampling approach was used to focus on a specific population. The sampling frame included students from the University of Cape Town (UCT) who fell into the Generation Z cohort. Initially, a sample group was established by distributing the survey using an anonymous online survey link to the UCT Industrial and Organisational Psychology Master's class of 20 people. After that, snowball sampling was used, whereby the existing participants in the study were asked to share the survey with their peers at UCT. This approach did not reach as many people as desired, as only 63 responses were collected after two weeks. As a result, the sampling strategy was altered to distribute the survey within UCT better. The survey was then distributed by lecturers in class and by course administrators to various UCT classes via email. This resulted in a total of 335 responses being recorded, after which the survey was distributed by the Department of Student Affairs (DSA) to the UCT student body.

Participants

At the conclusion of data collection, 345 participants took part in this study, having removed 80 for being significantly incomplete. The population of interest in this study is Generation Z students at UCT across various faculties, and participants were required to be

born after 1995 and before 2012. UCT was chosen partly due to convenience and because it is the highest-ranking university in Africa, ranked 160th globally, according to the Times Higher Education (2022). This has the potential to give the findings more widespread significance and is likely more interesting in South Africa due to the university's stature.

The results indicated a good age distribution ranging from 18 to 27. Most participants who chose to disclose their age were either 19 or 21 years old (12.8% each). The sample had participants ranging from those in their first year of university to those in their eighth year, while the majority were in their first year (20.6%), followed by the second and third year (20% each). In addition, participants were asked to disclose which faculty they formed part of, with the results indicating that the majority (27%) of participants were from the humanities faculty, followed by commerce (15.1%), sciences (4.6%), engineering and the built environment (4.3%), health sciences (3.5%), law (2.6%), and those who prefer not to disclose being 42.9%. The above figures indicate a diverse spread across participants' years and faculties, however, results should be interpreted with caution due to the large percentage of students who did not disclose their faculty. These figures also represent the UCT student body faculty distribution, which sees humanities with the most students (25.86%) followed by commerce (25.25%).

In addition, most participants were female (67.2%), while 22.3% of the sample were male, and 10.5% indicated a preference not to disclose their gender. The racial distribution of the sample was as follows: the majority were white (39.1%), followed by African (22%), Coloured (16.5%), Indian (9%), Asian (1.7%), Other (2.3%), and 9.4% preferred not to disclose their race. The racial distribution of this study did not indicate an accurate representation of the actual South African population, which has African as the majority race at 81% of the population (South African Government, 2019). The racial distribution is also not representative of the UCT student body racial distribution in which most students prefer not to disclose their race (31.23%), followed by African (29.24%).

Measures

The Dark Triad

The dark triad was measured using the 12-item Dirty Dozen scale developed by Jonason and Webster (2010). Items in this scale were measured on a 9-point Likert-type scale ranging from 1 (*strongly disagree*) to 9 (*strongly agree*). High scores on this scale indicate higher levels of dark triad traits a person has. This scale is widely used to measure the dark

triad as it is shorter than other measures yet still achieves good internal consistency ($\alpha = .83$) (Jonason & Webster, 2010). This scale has four items relating to each aspect of the dark triad, with an example of an item relating to narcissism being “I tend to manipulate others to get my way” (Jonason & Webster, 2010). For Machiavellianism, an example item is “I have used deceit or lied to get my way”, and for psychopathy, an example item is “I tend to lack remorse” (Jonason & Webster, 2010). The full scale can be seen in Appendix A. This scale has previously been used in a sample of university students, similar to the sample for the present study, with a good internal consistency ($\alpha = .80$) (Kennedy et al., 2021).

Leadership Intentions

Leadership intentions were measured using a 6-item scale developed by Baker et al. (2016). This scale is an adapted version of the original Leadership Intentions Scale developed by Davies et al. (2005) and was chosen above the original as it is considerably shorter yet still achieves high internal consistency ($\alpha = .91$) (Baker et al., 2016). Items in this scale are measured on a 6-point Likert-type scale ranging from 1 (*very unlikely*) to 6 (*very likely*). Scoring highly on this scale is indicative of higher intentions to lead. An example of an item in this scale is “How likely are you to request more information about leadership positions?”. The full scale can be seen in Appendix B. This scale has also been used on university students in previous studies, making it a good choice for the present study (Baker et al., 2016).

Motivation to Lead

Motivation to Lead (MTL) was measured using a 10-item scale which was developed by Wellman et al. (2019). This scale is an adapted version of the MTL scale developed by Chan and Drasgow (2001) and has a high internal consistency ($\alpha = .84$) (Wellman et al., 2019). This scale includes the three underlying MTL dimensions, with four items assessing affective-identity MTL, three assessing social-normative MTL, and three assessing non-calculative MTL. Items in this scale are measured on a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). An example of an item relating to affective-identity MTL in this scale is “I usually want to be the leader in the groups that I work in” (Wellman et al., 2019). For social-normative MTL, an example item is “I feel that I have a duty to lead others if I am asked”, and for non-calculative MTL, an example item is “I never

expect to get more privileges if I agree to lead a group” (Wellman et al., 2019). The full scale can be seen in Appendix C.

Demographic Characteristics

To measure the participants' demographic characteristics, single items were used and included age, gender, race, faculty, and year of study. These specific demographic characteristics were chosen to provide further insights into the sample for analysis. The demographic questions asked can be seen in Appendix D.

Ethical Considerations

This research received approval from the UCT Commerce Faculty Ethics in Research Committee, which can be seen in Appendix E (REF: REC 2022/06/001). After that, the Department of Student Affairs (DSA) granted approval for UCT students to be used as potential participants in this study (See Appendix F). The cover page of the questionnaire was included to inform participants of the purpose of the research and their right to withdraw participation without consequence at any time when completing the questionnaire (See Appendix G). The participants' anonymity and confidentiality were strictly upheld throughout this research process, and there was no known risk associated with their involvement in this study. Guidelines have been followed throughout the research process as set out by the American Psychological Association (APA) 7th Edition. In addition, data has been stored on a password-protected cloud platform and a personal password-protected laptop.

Procedure

An electronic survey was created using Qualtrics to collect quantitative data using self-report measures. This survey included a consent form, demographic questions, and scales relating to the dark triad, leadership intentions, and motivation to lead.

Once ethics approval had been obtained from the Commerce Faculty Ethics in Research Committee at UCT and the DSA, the electronic survey was sent out to the 20 Industrial and Organisational Psychology Master's students on the 5th of July, 2022. A cover letter and consent form informing participants of the study and their rights was included in the survey. Participants in this group were then asked to send the survey to their network of UCT students who met the criteria for this study. In this pilot distribution of the survey, 63 participants completed it. After that, the survey was slightly altered to add a question asking for the participant's ages at the end of 2022 and the faculty in which they were studying.

These were added to enrich the data being collected for use in the analysis portion of this research.

The survey was then distributed to participants by sending the survey to specified groups of people at UCT. First, students were encouraged to complete the survey via a QR code displayed in lectures, and course convenors sent emails which included the survey link. The survey was distributed to the entire UCT student body on the 9th of September 2022 via the DSA mailing list, bringing the total number of complete responses to 425. Data collection was concluded on the 11th of September, 2022. The email sent via the DSA mailing list can be seen in Appendix H. After cleaning the data, 345 responses were retained as they had completed a significant portion of the survey, while the others were removed.

Data Analysis

Data collected from the survey created on Qualtrics was then exported to IBM Statistical Package for Social Sciences (SPSS) version 28. Thereafter, the data was cleaned to remove significantly incomplete responses and coded for statistical analysis in this study. Each scale's factorial validity was evaluated using Exploratory Factor Analysis (EFA), making use of principal axis factoring. After that, the reliability of each scale was established using Cronbach's Alpha (α) to measure the internal consistency of the scales (Field, 2018). Descriptive statistics were the next aspect determined, followed by assumption testing. Finally, the hypotheses stated were tested. Correlation, regression, and mediation analyses were run to test the hypotheses which have been presented.

Results

The section to follow will detail the results of the statistical analyses conducted in this study. The results aim to answer the research question, which asked how dark triad personality traits will affect the leadership intentions of Generation Z university students. The first section relates to the factorial validity of the scales using Exploratory Factor Analysis (EFA) to assess the dimensionality of each of the scales. This is followed by Cronbach's alpha (α) to assess the reliability of the scales. Correlation testing was conducted to determine the strength and direction of the relationships between the variables. After that, regression analyses were conducted and examined to understand further the relationship between the dark triad and leadership intentions. Finally, the mediating effect of motivation to lead was examined in the relationship between the dark triad and leadership intentions.

Factorial Validity

EFA was conducted to assess the factorial validity of each of the scales used and gives an understanding of the interrelationships of the variables in this research (Pallant, 2010). Confirmatory factor analysis (CFA) was also conducted for each scale. However, the results did not meet the required criteria, indicating a poor model fit using CFA (Janse Van Rensburg et al., 2022). According to Field (2018) and Tabachnick & Fidell (2014), for a scale to be suitable for factorial analysis using EFA, the scale needs to produce a significant Bartlett's Test of Sphericity ($p < .05$) and have a Kaiser-Meyer Olkin (KMO) value above .50 as a minimum. Furthermore, Hair et al. (2006) have suggested that a factor loading above .30 is considered the minimal level to interpret the structure when the sample size is 350 and above. As this research has a sample size of 345, the factor loading value needs to be above .35 to determine significant factor loadings (Hair et al., 2006). Additionally, the determinant score, which indicates an absence of multicollinearity, should be above .00001 (Field, 2018).

Leadership Intentions

Both the KMO and Bartlett's test of Sphericity for the leadership intentions scale justified the use of factor analysis (KMO = .839; $\chi^2_{15} = 1606.70$, $p < .000$). All factor loadings exceeded their required threshold of .35 (see Appendix I) thus, all items were retained. As expected, one factor with an eigenvalue greater than one was extracted and explained 70.37% of the total variance. The determinant score = .009 indicates an absence of multicollinearity as required (Field, 2018).

Dark Triad

The use of factor analysis for the dark triad was also justified (KMO = .844; $\chi^2_{66} = 1704.46, p < .000$). All factor loadings exceeded their required thresholds; however, the factor matrix indicated significant cross-loadings. To simplify the factor loadings and make it easier to interpret, this scale was first rotated using direct oblimin and varimax rotation, with direct oblimin resulting in the best overall fit. In the rotated factor matrix, three factors emerged with eigenvalues above 1, as expected for the dark triad scale, as it has three subscales (psychopathy, Machiavellianism, and narcissism). The factor loadings of the rotated scale using a direct oblimin rotation can be seen in Table 1 below. Finally, the determinant score = .007 indicates an absence of multicollinearity as required (Field, 2018).

Table 1

Factor Loadings of the Rotated Dark Triad Scale

Items	Factor loading		
	1	2	3
DT_1_Psychopathy	.114	.066	-.691
DT_2_Psychopathy	-.071	-.080	-.796
DT_3_Psychopathy	-.014	.223	-.527
DT_4_Psychopathy	.306	-.029	-.573
DT_5_Machiavellianism	.818	-.115	-.045
DT_6_Machiavellianism	.522	-.006	-.074
DT_7_Machiavellianism	.853	-.013	.073
DT_8_Machiavellianism	.518	.082	.004
DT_9_Narcissism	-.084	.873	.065
DT_10_Narcissism	-.036	.856	.012
DT_11_Narcissism	.052	.677	-.075
DT_12_Narcissism	.248	.421	-.164
Eigenvalues	4.48	2.24	1.04
Cumulative variance explained (%)	37.35	56.06	64.71

Note. $N = 345$. Extraction: Principal Axis Factoring. Rotation Method: Oblimin. DT = *Dark Triad*

Motivation to Lead

The use of factor analysis was again justified for the motivation to lead (MTL) scale (KMO = .840; $\chi^2_{45} = 1756.35$, $p < .000$). All factor loadings exceeded their required thresholds. However, the factor matrix indicated significant cross-loadings. Again, to simplify the factor loadings and make it easier to interpret, direct oblimin rotation was applied to the scale, as this resulted in the best fit. The resulting factor loadings showed two factors with eigenvalues above one instead of the three we expected to see. However, looking at the eigenvalues in conjunction with the scree plot, it can be determined that the point of inflection on visual assessment is at a factor number of three instead of two (see Appendix J). The factor loadings of the rotated scale using a direct oblimin rotation can be seen in Table 2 below. The determinant score = .005 indicates an absence of multicollinearity as required (Field, 2018). Therefore, according to the above criteria, the motivation to lead scale is also deemed appropriate for use in this research.

Table 2

Factor Loadings of the Rotated Motivation to Lead Scale

Items	Factor loading		
	1	2	3
MTL_1_Affective-Identity	.812	.008	-.104
MTL_2_Affective-Identity	.963	.085	.080
MTL_3_Affective-Identity	.833	.085	.023
MTL_4_Affective-Identity	.686	-.190	-.130
MTL_5_Social-normative	.129	-.070	-.658
MTL_6_Social-normative	-.030	.025	-.896
MTL_7_Social-normative	-.022	.087	-.501
MTL_8_Non-calculative	.081	.779	-.039
MTL_9_Non-calculative	-.055	.696	-.084
MTL_10_Non-calculative	.021	.824	.035
Eigenvalues	4.28	2.22	.93
Cumulative variance explained (%)	42.82	64.99	74.29

Note. $N = 345$. Extraction: Principal Axis Factoring. Rotation Method: Oblimin. MTL = Motivation to Lead

Reliability Analysis

Reliability is determined by calculating Cronbach's alpha (α) coefficient to examine the internal consistency of the chosen scales. Reliability is tested to ensure that a scale consistently measures and reflects the construct (Field, 2018). Field (2018) states that when Cronbach's alpha coefficient is above .70, it is considered satisfactory and indicates that a scale is reliable. Furthermore, Field (2018) notes that all of the corrected inter-item correlations should be above .30 for a scale to be seen as reliable. When these inter-item correlations are below .30, it can indicate that the item does not correlate well with the overall scale (Field, 2018). Finally, if an item is deleted, Cronbach's alpha should not significantly exceed the overall value of Cronbach's alpha in the scale (Field, 2018). Cronbach's alpha reliability analyses were run on each factor that emerged following the EFA analysis above.

Leadership Intentions, Dark Triad, and Motivation to Lead

Reliability analyses were run on all items of the leadership intentions scale, followed by each factor extracted for the dark triad and motivation to lead scales. These resulted in Cronbach's alpha values above the cut-off value of .70, and all inter-item correlations were above the .30 cut-off, as the criteria by Field (2018) indicated. An overview of the inter-item correlations and Cronbach's alpha values of the three scales can be seen in Table 3 below.

Table 3

Internal Consistency of the Scales

Scale	Cronbach's Alpha	Corrected Inter-Item Correlations
Leadership Intentions	.914	.642 < r > .847
Dark Triad		
<i>Psychopathy</i>	.791	.535 < r > .673
<i>Machiavellianism</i>	.754	.450 < r > .693
<i>Narcissism</i>	.815	.478 < r > .726
Motivation to Lead		
<i>Affective-Identity</i>	.907	.711 < r > .851
<i>Social-Normative</i>	.738	.460 < r > .660
<i>Non-Calculative</i>	.821	.650 < r > .696

Descriptive Statistics

Descriptive statistics help interpret and understand the data. This section will look at the mean (M), standard deviation (SD), kurtosis and skewness to better understand the data at hand. Mean scores were then used to determine the way in which participants responded to each scale, with the mean score being well above the midpoints on both the leadership intentions scale (Midpoint = 3, $M = 4.11$, $SD = 1.211$) and the MTL scale (Midpoint = 3.5, $M = 4.89$, $SD = 1.033$). On the other hand, the mean score for the dark triad scale was well below the midpoint (Midpoint = 4.5, $M = 3.39$, $SD = 1.269$).

The standard deviation refers to how dispersed the data are around the mean and are considered relative to the mean (Field, 2018). A large standard deviation indicates scores far from the mean, whereas a small standard deviation indicates scores closer to the mean. The standard deviation for the leadership intentions scale ($SD = 1.211$), the dark triad ($SD = 1.269$), and the MTL scale ($SD = 1.033$) indicate a larger standard deviation which means that data points are further from the mean (Field, 2018).

The minimum and maximum scores for leadership intentions (min = 1.00, max = 6) and MTL (min = 1.00, max = 7) indicate that the responses were well dispersed in these scales, with responses being recorded at both extremes. Conversely, the minimum and maximum scores for the dark triad (min = 1.00, max = 7.83) do not have any responses at the extreme, which would also indicate a lower prevalence of dark personality traits in this sample.

George and Mallery's (2010) guidelines state that the kurtosis value should fall between -2 and 2 and skewness values between -1 and 1 to indicate normality in the distribution (Field, 2018). As depicted in Table 4 below, the skewness and kurtosis across the three scales, when looked at globally, were within the accepted range. However, the Machiavellian factor in the dark triad scale has a skewness well above 1 and a kurtosis value well above 2. This indicates that there was a cluster of scores on the right of the scale (higher Machiavellianism) and that it is significantly positively skewed, which means that there is a cluster of frequent scores at one end of the scale (Field, 2018).

Additionally, the non-calculative factor of the MTL scale has a skewness well below -1 and a kurtosis value well above 2. This indicates that there was a cluster of scores on the right of the scale (higher non-calculative MTL) and that it is significantly negatively skewed, meaning that there is a cluster of frequent scores at one end of the scale (Field, 2018). Despite this, the overall outcome according to this criterion is that the scales used are normally distributed. A summary of the descriptive statistics can be seen in Table 4 below.

Table 4*Descriptive Statistics of the Scales Used*

Scale	Likert Scale Type	Min	Max	M	SD	Skewness	Kurtosis
Leadership Intentions	6-Point	1	6	4.11	1.211	-.639	-.311
Global Dark Triad	9-Point	1	7.83	3.39	1.269	.547	.537
<i>Narcissism</i>	9-Point	1	9	4.55	1.848	-.122	-.648
<i>Machiavellianism</i>	9-Point	1	9	2.31	1.406	1.576	2.704
<i>Psychopathy</i>	9-Point	1	9	3.32	1.702	.643	-.188
Global MTL	7-Point	1	7	4.89	1.033	-.956	1.723
<i>AI-MTL</i>	7-Point	1	7	4.40	1.54	-.409	-.594
<i>NC-MTL</i>	7-Point	1	7	5.15	1.40	-1.219	2.392
<i>SN-MTL</i>	7-Point	1	7	5.28	1.61	-.816	.284

Note. Min = minimum. Max = maximum. *M* = mean. *SD* = standard deviation. MTL = Motivation to Lead. AI-MTL = Affective-Identity MTL. NC-MTL = Non-Calculative MTL. SN-MTL = Social-Normative MTL

Assumption Testing

To conduct the correlation and regression analyses to follow, the data needs to meet several assumptions as set out in Field (2018). The first assumption that needs to be met can be deduced from the simple scatterplot and is that of linearity (see Appendix K, Figure K1). This indicates that the dark triad and leadership intentions have a positive linear relationship. The next assumption of normality can be assessed by examining the P-P Plot (Figure K2) and the histogram showing the standard normal curve (Figure K3), which indicates that this data has a normal distribution without outliers or extreme values. In addition, the residual scatterplot (Figure K4) shows a random distribution and ensures that the assumption of homoscedasticity can be met (Field, 2018). The next assumption considers the Durbin-Watson test statistic, which produced a score of 1.97, indicating independent observations and no autocorrelation in the sample, as Field (2018) indicates that this value should be between 1 and 3. In addition, a variance inflation factor (VIF) of 1 indicates that there is an

absence of multicollinearity, which is indicated by (Zach, 2020). All of the above assumptions have therefore been met, and the hypothesis testing can now be conducted.

Correlation Analysis

This research uses correlation analyses to describe the strength and direction of the relationship between two variables (Pallant, 2010). When two variables are correlated, we can say that when one variable changes, the other will change by a proportionate amount, giving us good insight into the relationship between variables (Field, 2018). Table 5 below summarises the correlations and gives descriptive statistics at a global and factor level. Examining this table, we can see that the global MTL significantly correlates with leadership intentions ($r = .521, p < .01$) as well as all three factors being correlated with leadership intentions, with affective-identity and social-normative MTL having the strongest correlations ($r = .473, p < .01$ and $r = .482, p < .01$ respectively).

The global dark triad correlates significantly with leadership intentions ($r = .132, p < .05$). However, looking at the three dark triad traits separately, we see that narcissism is correlated with leadership intentions ($r = .185, p < .01$). In contrast, the results depict that the correlation between Machiavellianism and psychopathy, each with leadership intentions, is not significant.

When examining the components of the dark triad and MTL, we see that each factor has a different relationship making it worthwhile to examine these scales at a factor level. The first correlation which was calculated was that of narcissism and affective-identity MTL. H1 in this research indicates that there will be a positive correlation between these two variables. There is a significant but weak positive correlation between narcissism and affective-identity MTL ($r = .256, p < .01$). Following that, H2 indicates that there will be a negative correlation between Machiavellianism and non-calculative MTL. As expected, the results indicate a significant but weak negative correlation between Machiavellianism and non-calculative MTL ($r = -.323, p < .01$). Finally, H3 indicates that psychopathy will correlate negatively with social-normative MTL. The results of this analysis show a very weak positive correlation between psychopathy and social-normative MTL ($r = .031, p = .571$). However, this result is not significant. As a result, we can support H1 and H2; however, these results do not support H3.

Table 5*Scale Descriptive Statistics, Reliabilities (in diagonals), and Inter-Scale Correlations*

Variable	N Items	M	SD	1	2	3	4	5	6	7	8	9	10	11
Demographic Variables														
1	Gender	n.a	n.a	n.a	n.a									
2	Age	n.a	21.56	2.048	.021	n.a								
Leadership Variables														
3	Leadership Intentions	6	4.114	1.212	-.105	-.057	(.914)							
4	Global MTL	9	4.890	1.033	-.180**	.028	.521**	(.839)						
5	AI-MTL	3	4.402	1.536	-.154**	.046	.473**	.824**	(.907)					
6	NC-MTL	3	5.153	1.397	-.060	.024	.191**	.591**	.112*	(.821)				
7	SN-MTL	3	5.277	1.161	-.189**	-.027	.482**	.804**	.546**	.352**	(.738)			
The Dark Triad														
8	Global Dark Triad	12	3.394	1.269	-.232**	-.029	.132*	-.004	.191**	-.369**	.096	(.837)		
9	Narcissism	4	4.550	1.848	-.145**	.002	.185**	.142**	.256**	-.227**	.242**	.751**	(.815)	
10	Machiavellianism	4	2.307	1.406	-.242**	.045	-.005	-.157**	.011	-.323**	-.097	.693**	.194**	(.754)
11	Psychopathy	4	3.324	1.702	-.162**	-.105	.099	-.034	.139*	-.313**	.031	.848**	.434**	.513** (791)

Note. $N = 345$. MTL = Motivation to Lead. AI-MTL = Affective-Identity MTL. NC-MTL = Non-Calculative MTL. SN-MTL = Social-Normative MTL. n.a = not applicable. *Correlation is significant at the 0.05 level. ** Correlation is significant at the 0.01 level. Casewise deletion of missing data has been used

Regression Analysis

Linear Regression

After determining the relationships between the numerous variables, a simple linear regression was conducted between the global dark triad and leadership intentions. This revealed that the dark triad is a significant predictor of leadership intentions ($R^2 = .018$; $adj R^2 = .015$; $F_{1, 344} = 6.111$, $p < .001$). Based on these results, it can be said that the dark triad explains 1.8% of the variance in leadership intentions, indicating a poor model. These results indicate that participants who scored highly on the dark triad in the sample were slightly more inclined to have leadership intentions. Although the relationship is weak, the effect is still significant.

Having looked at the global dark triad to leadership intentions, we now need to examine each factor of the dark triad. Firstly, a regression between narcissism and leadership intentions was conducted. This revealed that narcissism is a significant predictor of leadership intentions ($R^2 = .034$; $adj R^2 = .034$; $F_{1, 344} = 12.191$, $p < .001$). The result indicates a poor yet significant result.

A regression between Machiavellianism and leadership intentions revealed that Machiavellianism is not a significant predictor of leadership intentions at $p < .05$ ($R^2 = .000$; $adj R^2 = -.004$; $F_{1, 344} = .009$, $p = .923$). This is in line with expectations, as the correlation was not significant. Similarly, the regression between psychopathy and leadership intentions was not significant at $p < .05$ ($R^2 = .010$; $adj R^2 = .007$; $F_{1, 344} = 3.396$, $p = .066$). A summary of the regression analysis can be seen in Table 6 below.

Table 6

Regression Analysis: Dependent Variable = Leadership Intentions

	R^2	β	t	p
Global Dark Triad	.018	.126	2.472	< .001*
<i>Narcissism</i>	.034	.121	3.492	< .001*
<i>Machiavellianism</i>	.000	-.005	-.097	.923
<i>Psychopathy</i>	.010	.071	1.843	.066

Note. $N = 345$. *Correlation is significant at the 0.001 level

Hierarchical Regression

Hierarchical regression was then used to gain further insights into the data gathered. In this analysis, we want to determine the dark triad's and MTL's ability to predict the levels of leadership intention when controlling for age, gender, race, and faculty. Before conducting this regression, we assessed the assumptions of normality, linearity, multicollinearity, and homoscedasticity to ensure no violations.

Age, gender, race, and faculty were entered at step 1, explaining 3.7% of the variance in leadership intentions. After the entry of the three dark triad factors at step 2, 6.7% of the variance in leadership intentions was explained. Finally, in step 3, the three MTL factors were added, and the model as a whole explained 32.7% of the variance in leadership intentions, $F_{10, 196} = 8.65, p < .001$. The dark triad and MTL explained an additional 26% of the variance in leadership intentions after controlling for age, gender, race, and faculty. As seen in Table 7 below, model 2 reveals that the dark triad adds incremental validity to predicting leadership intentions with narcissism ($\beta = .110$) and psychopathy ($\beta = .119$). In addition, model 3 reveals that each MTL factor adds incremental validity to predicting leadership intentions and that the three factors of the dark triad continue to provide incremental validity.

Table 7

Hierarchical Regression Model: Dependent Variable = Leadership Intentions

Model	1	2	3
Gender	-.039	-.023	.034
Race	.002	-.016	-.095
Age	-.049	-.038	-.038
Faculty	-.187	-.184	-.130
Narcissism		.110	.024
Machiavellianism		-.059	.034
Psychopathy		.119	.042
AI-MTL			.334
SN-MTL			.277
NC-MTL			.064
R ²	.037	.067	.327
Adj R ²	.017	.032	.291
R ² Change	.037	.030	.260

Note. MTL = Motivation to Lead. AI-MTL = Affective-Identity MTL. NC-MTL = Non-Calculative MTL. SN-MTL = Social-Normative MTL

Mediation Analysis

As we have seen, there are specific relationships between the factors of the dark triad and the factors of motivation to lead, and this study will consider these specific mediation analyses. The plug-in, PROCESS v. 3.4.1 by Andrew. F. Hayes is used in SPSS in order to conduct a mediation analysis. Mediation is explained by Field (2018) as a situation in which the relationship between a predictor and outcome variable can be explained by their relationship to the third variable, known as the mediator. Three separate mediation analyses will be conducted to test H4, which aligns with the literature. The first is the mediating effect of affective-identity motivation to lead on the relationship between narcissism and leadership intentions. Secondly, the mediating effect of non-calculative motivation to lead will be examined on the relationship between Machiavellianism and leadership intentions. Finally, the mediating effect of social-normative motivation to lead on the relationship between psychopathy and leadership intentions will be examined.

Mediation Model 1

In the first mediation analysis looking at the mediating effect of affective-identity motivation to lead on the relationship between narcissism and leadership intentions, the overall mediation analysis was found to be significant ($R = .4765$, $R^2 = .2270$, $F_{330} = 48.4579$, $p < .000$). This result indicates that this model can explain 47.65% of the total variance.

From the mediation analysis, pathway *a* (see Figure 2 below), which is narcissism (X) to affective-identity MTL (M), was determined to be significant ($R^2 = .0657$, $\beta = .2106$, $p < .000$), which indicates that narcissism (X) significantly predicts affective-identity MTL (M). In addition, path *b*, which is affective-identity MTL (M) to leadership intentions (Y), was found to be statistically significant ($R^2 = .2270$, $\beta = .3640$, $p < .000$), indicating that affective-identity MTL (M) predicts leadership intentions (Y).

Confidence intervals were constructed to show the indirect effect and test its significance. According to Hayes (2012), if these confidence intervals do not overlap zero, the mediation is considered statistically significant. The result for the indirect effect ($ab = c - c'$) was as follows $\beta = .0367$, CI [.0406; .1173]. The confidence interval for the indirect effect did not contain zero, thus demonstrating its significance.

Finally, Field (2018) states that mediation has occurred when c' is smaller than c , because this means that the strength of the relationship between narcissism and leadership intentions is reduced by including the mediator of affective-identity MTL. This is the case for

this study as $c = .0767$ and $c' = .0400$. We are therefore able to conclude that mediation has occurred in this model. Table 8 below summarises the indirect and direct effects of mediation model 1.

Table 8

Summary of Mediation Model 1

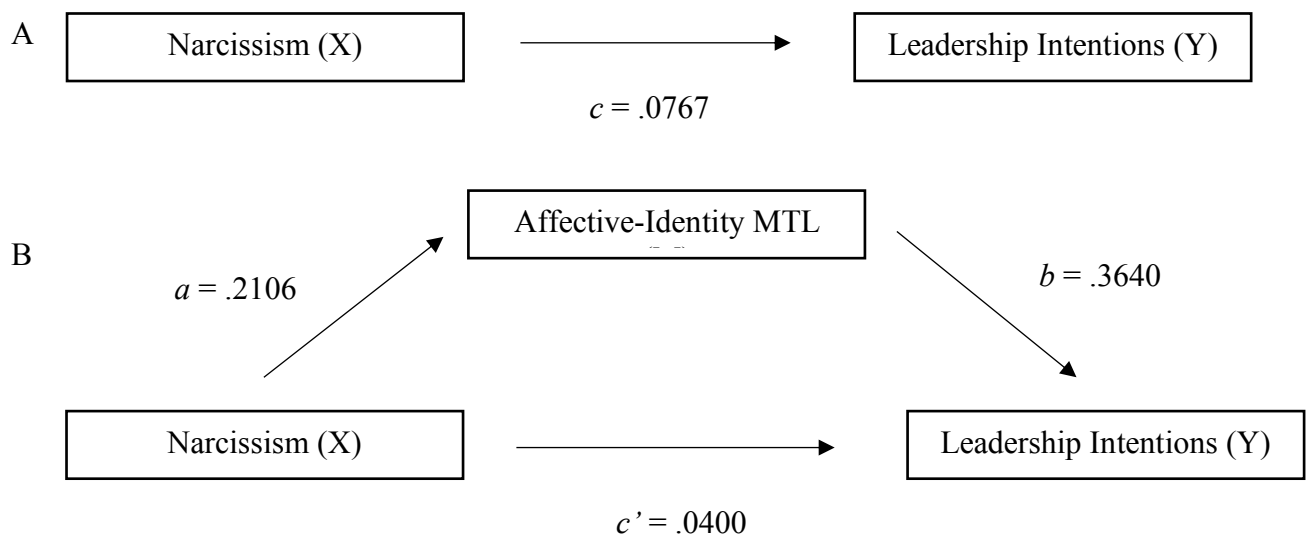
Direct Effect					
	Estimate	SE	P	95% Confidence Interval	
				Lower	Upper
Narcissism – Leadership Intentions	.0400	.0328	.223	-.0244	.1045

Indirect Effect					
	Estimate	SE	P	95% Confidence Interval	
				Lower	Upper
Narcissism – AI MTL – Leadership Intentions	.0767	.0199	.000	.0406	.1173

Note. AI MTL = Affective-Identity Motivation to Lead

Figure 2

Mediation Model 1



Mediation Model 2

In the second mediation analysis looking at the mediating effect of non-calculative motivation to lead on the relationship between Machiavellianism and leadership intentions, the overall mediation analysis was found to be significant ($R = .1977$, $R^2 = .0391$, $F_{330} = 6.7137$, $p < .001$). This means that the model can explain 19.77% of the total variance.

From the mediation analysis, pathway *a* (see Figure 3 below), which is Machiavellianism (X) to non-calculative MTL (M), was found to be significant ($R^2 = .1041$, $\beta = -.3183$, $p < .000$), indicating that Machiavellianism (X) significantly predicts non-calculative MTL (M). In addition, path *b*, which is non-calculative MTL (M) to leadership intentions (Y), was found to be statistically significant ($R^2 = .0391$, $\beta = .1825$, $p < .001$), indicating that non-calculative MTL (M) predicts leadership intentions (Y).

The result for the indirect effect ($ab = c - c'$) was as follows $\beta = -.105$, CI [-.1004; -.0184]. It was determined that the confidence interval for the indirect effect did not contain zero, proving its significance.

Finally, as c' is smaller than c ($c = -.0581$; $c' = .0469$), we can conclude that the strength of the relationship between Machiavellianism and leadership intentions is reduced by including the mediator of non-calculative MTL and that mediation has occurred in this instance (Field, 2018). Table 9 below summarises the indirect and direct effects of mediation model 2.

Table 9

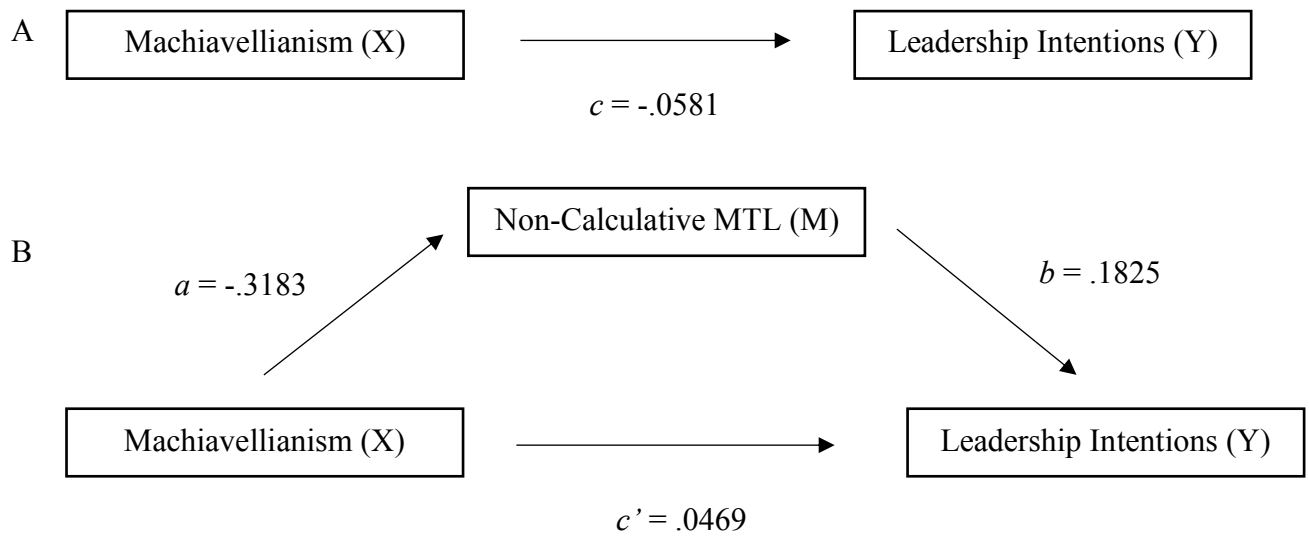
Summary of Mediation Model 2

Direct Effect					
	Estimate	SE	P	95% Confidence Interval	
				Lower	Upper
Machiavellianism – Leadership Intentions	.0469	.0492	.3412	-.0499	.1438
Indirect Effect					
	Estimate	SE	P	95% Confidence Interval	
				Lower	Upper
Machiavellianism – NC MTL – Leadership Intentions	-.0581	.0210	.000	-.1004	-.0184

Note. NC MTL = Non-Calculative Motivation to Lead

Figure 3

Mediation Model 2



Mediation Model 3

In the final mediation analysis looking at the mediating effect of social-normative motivation to lead on the relationship between psychopathy and leadership intentions, the overall mediation analysis was found to be significant ($R = .4879$, $R^2 = .2380$, $F_{330} = 51.5368$, $p < .000$). This means that the model can explain 48.79% of the total variance.

From the mediation analysis, pathway a (see Figure 4 below), which is psychopathy (X) to social-normative MTL (M), was found not to be significant ($R^2 = .0010$, $\beta = .0211$, $p = .5710$), indicating that psychopathy (X) does not predict social-normative MTL (M). Alternatively, path b , which is social-normative MTL (M) to leadership intentions (Y), was found to be statistically significant ($R^2 = .2380$, $\beta = .5052$, $p < .000$), indicating that social-normative MTL (M) predicts leadership intentions (Y).

The result for the indirect effect ($ab = c - c'$) was as follows $\beta = -.0442$, CI [-.0374; .0603]. It was determined that the confidence interval for the indirect effect contained zero, proving that this indirect effect is not significant.

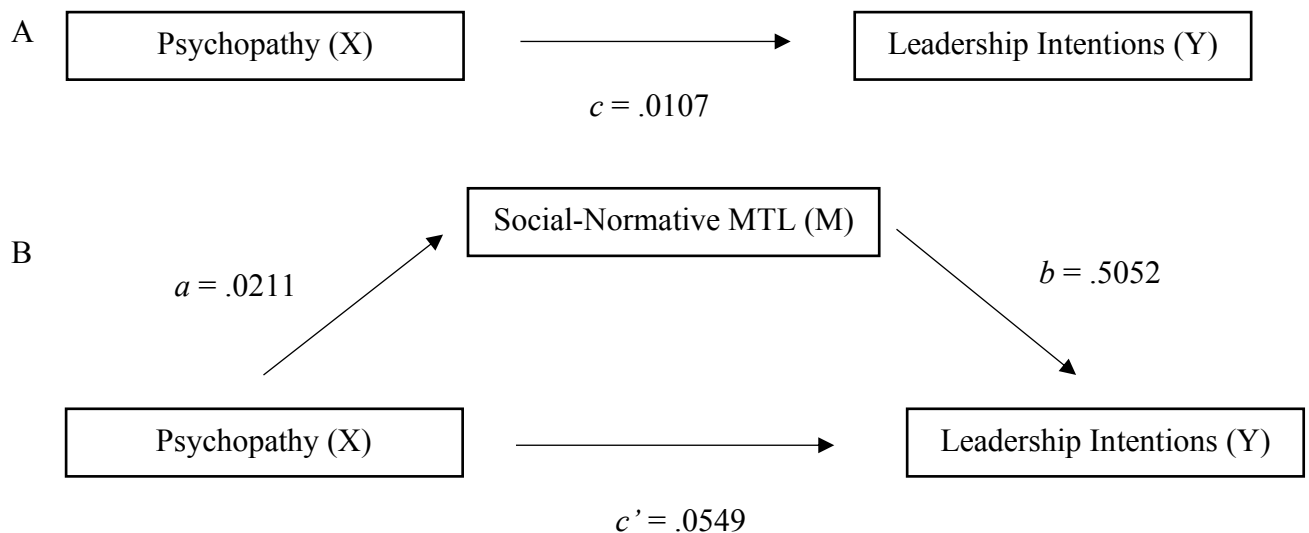
Finally, as c' is not smaller than c ($c = .0107$, $c' = .0549$), we can conclude that the strength of the relationship between psychopathy and leadership intentions is not reduced by including the mediator of social-normative MTL and that mediation has not occurred in this instance (Field, 2018). Table 10 below summarises the indirect and direct effects of mediation model 3.

Table 10*Summary of Mediation Model 3*

Direct Effect					
	Estimate	SE	P	95% Confidence Interval	
				Lower	Upper
Psychopathy – Leadership Intentions	.0549	.0344	.1110	-.0127	.1226

Indirect Effect					
	Estimate	SE	P	95% Confidence Interval	
				Lower	Upper
Psychopathy – SN MTL – Leadership Intentions	.0107	.0250	.000	-.0374	.0603

Note. SN MTL = Social-Normative Motivation to Lead

Figure 4*Mediation Model 3*

Therefore, we reject H4 as not all three mediation analyses were found to be significant. These results indicate that only two factors of motivation to lead mediate the relationship between the dark triad and leadership intentions. A summary of the results can be seen in Table 11 on the following page.

Table 11*Summary of Results*

Hypotheses	Result
H1: Narcissism correlates positively with affective-identity MTL	Supported
H2: Machiavellianism correlates negatively with non-calculative MTL	Supported
H3: Psychopathy correlates negatively with social-normative MTL	Not Supported
H4: MTL will mediate the relationship between the dark triad and leadership intentions	Not Supported

Discussion

This study sought to explore the dark triad's impact on the leadership intentions of Generation Z university students. In doing this, motivation to lead was considered a mediator in the relationship. This study also aimed to contribute to the literature around the dark triad in Generation Z specifically and to understand leadership intentions, a valuable yet under-researched construct. This section will detail the main findings of this study and outline the contributions made and implications of these. Finally, the limitations of this study and recommendations for future research will be discussed.

Analysis of the Psychometric Properties of the Scales

Before running analyses using the scales found in previous literature, the reliability and factorial validity needed to be determined, exploratory factor analysis (EFA) was conducted first and indicated that each scale had factorial validity. Using EFA for these scales, we could further confirm the factors found for each construct aligned with previous literature, specifically for the dark triad and motivation to lead (MTL) scales which had more than one factor (Kennedy et al., 2021). Although the dark triad scale presented with cross-loadings initially, this was resolved by simplifying the factor loading through rotation.

Although EFA was ultimately used, confirmatory factor analysis (CFA) was also conducted on the scales. However, the results of the CFA analysis did not meet the criteria outlined by Hu and Bentler (1999). Hu and Bentler (1999) developed a criterion which states that the comparative fit index or goodness-of-fit indices values should be $> .90$, the standardised root mean square residual should be $< .05$ for a good fit and $< .08$ for an acceptable fit, and the root mean square error of approximation should be $< .05$ to be good, and $< .08$ to be close. The CFA results for the scales used in this study did not meet these criteria, and CFA could not be used.

After that, the reliability of the scales was determined by examining the internal consistency of the scales. In their research, Kennedy et al. (2021) used the same scales for the dark triad, leadership intentions and motivation to lead, using a sample of university students at a research university in Singapore. In their study, the internal consistency of the scales was good, similar to what they are in this study, indicated by a high Cronbach's alpha (α) coefficient (Kennedy et al., 2021). Additionally, Jonason and Webster (2010) found the reliability of the dark triad scale to be high ($\alpha = .83$), in line with the findings in this research.

Descriptive Statistics

Descriptive statistics can provide valuable insights into the sample and the interpretation of the data making it essential to discuss. Mean scores varied across the scales, with the mean score for the leadership intentions scale being well above the midpoint of 3 ($M = 4.11$, $SD = 1.211$). This indicates that in the sample of Generation Z university students, there was an above-average intention to lead. As this generation are the future business leaders, it is promising to see their heightened intention to lead. This is especially significant in South Africa, where effective leadership is imperative for the country's future (Bornman, 2019). While this above-average intention to lead does not refer to leader emergence, it is a precursor to it (Kennedy et al., 2021).

Similarly, the mean score for the motivation to lead (MTL) scale was well above the midpoint of 3.5 ($M = 4.89$, $SD = 1.033$). This indicates that not only is this sample of Generation Z university students intending to lead, but they are also motivated to lead. As argued by Kennedy et al. (2021), for a person to emerge as a leader, they require both the intention to lead as well as a motivation to lead, which is evident in this sample. Therefore, with the intention and motivation to lead, this sample of Generation Z university students will likely emerge as leaders as they enter into the workforce in the coming years (Badura et al., 2020; Kennedy et al., 2021). On the other hand, the mean score for the dark triad scale was well below the midpoint of 4.5 ($M = 3.39$, $SD = 1.269$). This indicates a negative propensity for dark personality traits in this sample. This result provides valuable insight as this sample comprises only Generation Z university students. As discussed, the Millennial generation generally has higher levels of dark personality traits than preceding generations (Keener, 2020). Concern that this would continue on an upwards trajectory in coming generations is prevalent due to the destructive workplace outcomes that these traits can have (Diller et al., 2021). However, with this sample indicating a negative propensity for dark personality traits amongst Generation Z university students, these concerns could be re-evaluated in the future and through further research as it is not evident that a prevalence for dark personality traits is emerging in future generations as it was in the Millennial generation.

Relationship Between the Variables

Narcissism and Affective-Identity MTL

The first hypothesis put forward in this research said that narcissism would correlate positively with affective-identity MTL amongst Generation Z university students. This was

formulated using previous research, which argued that narcissism would positively relate to affective-identity MTL due to the positive self-concept traits embodied by narcissists, which is aligned with the desire to lead because they enjoy it embodied by those with affective-identity MTL (Badura et al., 2020; Braun, 2017). This relationship was also found to be the strongest in prior research that similarly looked at the factors that make up the dark triad and MTL (Kennedy et al., 2021).

In their research, Kennedy et al. (2021) found that narcissism was positively correlated with affective-identity MTL ($r = .24, p < .01$). The result of their study is closely aligned with the current study, where a positive correlation was also found ($r = .256, p < .01$). Although the positive correlation is significant, the strength of the relationship is weak, as it is in the research by Kennedy et al. (2021) as well. This means that while narcissism and affective-identity MTL impact one another, the impact is not large. Although the weak relationship is consistent with research by Kennedy et al. (2021), a possible reason for the weak relationship could relate to the sample from which data was collected and the amount of variability in it (Goodwin & Leech, 2010). In addition, the results of this study align with the arguments made for the relationship between these constructs, as seen in previous literature (Badura et al., 2020; Braun, 2017).

Machiavellianism and Non-Calculative MTL

The second hypothesis presented in this research said that Machiavellianism would correlate negatively with non-calculative MTL amongst Generation Z university students. Research relating to Machiavellianism and non-calculative MTL is not as definitive, with Bandura et al. (2020) and Chan and Drasgow (2001) finding a link between their characteristics and arguing that there would be a negative correlation between these two constructs, thereby formulating this hypothesis. Kennedy et al. (2020) found that non-calculative MTL was negatively correlated with Machiavellianism ($r = -.26$), as expected in conjunction with research by Badura et al. (2020) and Chan and Drasgow (2001). The findings of this study reaffirmed this, with the results indicating a significant but weak negative correlation ($r = -.323, p < .01$).

Psychopathy and Social-Normative MTL

The third hypothesis presented said that psychopathy would correlate negatively with social-normative MTL amongst Generation Z university students. Psychopaths are said to

exhibit antisocial behaviours, which Furtner et al. (2017) and Kennedy et al. (2021) argue are negatively related to social-normative MTL (when leadership is seen as a duty). This result was not supported by Kennedy et al. (2021), in which the relationship between psychopathy and social-normative MTL was weak and negative as expected ($r = -.08, p < .05$); however, it was not significant at $p < .01$. Similarly, the present study found a very weak negative correlation ($r = -.031, p = .571$) which was also not significant.

Examining the factors of the dark triad and MTL, we see that each factor had different relationships with the others, thereby validating the use of the scales at a factor level in future research confirmed by the results of Kennedy et al. (2021) (Badura et al., 2020).

The Dark Triad and Leadership Intentions

Previous research on the relationship between the dark triad and leadership intentions is limited. While research suggests that the dark triad predicts leader emergence, it does not consider the intention to lead, which is said to precede leader emergence (Kennedy et al., 2021). Looking at the correlation analysis, we see that the global dark triad is significantly positively correlated with leadership intentions amongst Generation Z university students in this research ($r = .132, p < .05$). This is aligned with the findings of Kennedy et al. (2021). Considering the dark triad at a factor level, the results of this study indicate that narcissism positively correlates with leadership intentions. At the same time, Machiavellianism and psychopathy were found to have correlations which were not significant. On the other hand, Kennedy et al. (2021) found narcissism to have the strongest correlation with leadership intentions, followed by Machiavellianism, with the correlations between psychopathy and leadership intentions not proving significant. Across this research and the research conducted by Kennedy et al. (2021), we can conclude that narcissism has the strongest relationship with leadership intentions.

Although we have seen how the factors relate to each other in the correlation analysis, a linear regression analysis was conducted. This allows us to see the strength of prediction that the dark triad has on leadership intentions to gain a further understanding. From the results, we see that the global dark triad is a significant predictor of leadership intentions, despite the model being poor ($R^2 = .018; adj R^2 = .015; F_{1, 344} = 6.111, p < .01$). This indicates that although those who score highly on the dark triad are more inclined to have the intention to lead, the impact of the dark triad on leadership intentions was very weak. As a result of the weak relationship, we conclude that the global dark triad does not substantially impact a person's leadership intentions in this sample.

When considered at a factor level, the results of this study indicated that narcissism is the only significant predictor of leadership intentions ($R^2 = .034$; $adj R^2 = .034$; $F_{1, 344} = 12.191$, $p < .01$) amongst the dark triad traits. This result indicates that people who score highly in narcissism are more inclined to have the intention to lead. However, as with the global dark triad, the impact is weak. This again means that although higher levels of narcissism predict higher intentions to lead, the impact is not substantial. Both Machiavellianism and psychopathy produced results which were not significant in predicting leadership intentions in this study.

Looking at the results of the hierarchical regression, we see that the dark triad explained the variance in leadership intentions over and above the demographic characteristics of age, gender, race, and faculty. The addition of the factors of MTL brought about the most significant change ($R^2 \text{ Change} = .260$), indicating that the dark triad, in conjunction with MTL, has the most significant impact on leadership intentions amongst Generation Z university students.

Previous research has argued for moderate to strong relationships between the dark triad and leadership. However, the results of this study, in conjunction with the results of Kennedy et al. (2021), indicate that while these relationships exist, their impact is not strong. This differs from research focusing on Millennials, in which the dark triad is said to impact leadership strongly (Keener, 2020).

Motivation to Lead as a Mediator

The final hypothesis presented in this research was that motivation to lead would mediate the relationship between the dark triad and leadership intentions amongst Generation Z university students. Because we have considered specific relationships between the factors of the dark triad and the factors of MTL in this research, the mediation analyses conducted were related to those specific relationships. This analysis indicates the extent to which MTL mediates the effects of dark personality traits on leadership intentions.

The results of the first mediation model, the mediating effect of affective-identity MTL on the relationship between narcissism and leadership intentions, indicated that a partial mediation had occurred. Partial mediation refers to a significant direct and indirect effect from X to Y (Field, 2018). This means that the unmediated relationship is significant (narcissism to leadership intentions), as well as the mediated relationship being significant (narcissism to affective-identity MTL to leadership intentions).

In addition, the results of the second mediation model, the mediating effect of non-calculative MTL on the relationship between Machiavellianism and leadership intentions, indicated that a partial mediation has also occurred in this model. This means that the unmediated relationship is significant (Machiavellianism to leadership intentions), in addition to the mediated relationship being significant (Machiavellianism to non-calculative MTL to leadership intentions).

Finally, the third mediation model, the mediating effect of social-normative MTL on the relationship between psychopathy and leadership intentions, indicated that mediation has not occurred in this model. Given the correlation analysis for psychopathy and social-normative MTL not being significant, it is in line with expectations that the mediation will not be significant either. As a result, we cannot say that MTL mediates the relationship between the dark triad and leadership intentions, as not all three factors presented a mediation. Badura et al. (2020) also found that only two MTL factors act as mediators. However, their research indicated affective-identity and social-normative MTL, while this research indicates affective-identity and non-calculative MTL as mediators.

Contributions

This study has added to research investigating the dark triad and leadership intentions in several ways. Firstly, this study added to the knowledge of the prevalence of dark personality traits across generations. Secondly, this study supported previous research findings showing the relationship between the dark triad traits and motivation to lead. Thirdly, this study provided further evidence of the predictive relationship between dark personality traits and leadership intentions. Finally, this study provided further evidence of the role of MTL as a mediator in the relationship between the dark triad and leadership intentions.

Theoretical Implications

This study added to the existing literature surrounding the distal-proximal modelling of personality traits and leadership, as examined by Judge et al. (2002). While Judge et al. (2002) looked at personality using the Big 5 traits, this study looked specifically at dark personality traits. Additionally, this study focused on Generation Z specifically, as prior research has considered dark personality traits and leadership in preceding generations.

This study also supported the findings of the predictive relationship between the dark triad and leadership intentions (Kennedy et al., 2021). This supports the notion that darker personality traits lead to a greater intention to lead, specifically among Generation Z university students in South Africa. Overall, this study has added knowledge to the limited research assessing leadership intentions. Furthermore, this study further emphasised the importance of considering leadership intentions and MTL as precursors to leadership emergence. Based on these results, we have seen that dark personality traits have a significant but small impact on leadership.

Practical Implementations

This study has provided knowledge regarding Generation Z, which was previously limited. As this generation enters the workforce, understanding their propensity for leadership would provide great insight. This will help managers work with this generation in the best way possible to ensure their success without the detrimental effects of dark personality traits, as shown in the literature about other generations.

This study has shown that although dark triad personality traits predict leadership intentions of the emerging workplace cohort of Generation Z, these dark personality traits are not highly prevalent amongst this generation, which helps compare dark personality traits across generations. This study's findings indicated high intention and motivation to lead amongst Generation Z university students, which could help Industrial and Organisational psychologists better understand and manage the leadership development of Generation Z employees in the workplace. In addition, prior research on Generation Z has been based on high school students, while this study focuses on university students who are closer to entering the workplace (Benitez-Marquez et al., 2021).

Limitations and Suggestions for Future Research

Although this research has both theoretical and practical implications, several limitations should be addressed for future research on this subject area. Firstly, this study made use of a cross-sectional design which meant collecting data at a specific point in time (Spector, 2019). Although this design is practical when facing time and cost restraints, it would have been beneficial to have longitudinal data. Longitudinal data allows for causal inference amongst the study variables over time. This would be especially useful in data relating to leadership as the longitudinal design would allow the researcher to assess the

emergence based on intention and motivation to lead. If future researchers were to use longitudinal research design, we would be able to determine whether these precursors to leadership emergence result in this emergence.

A second potential limitation of this study is that it made use of self-report questionnaires in the data collection process. This method of data collection, when used to test personality traits and other non-cognitive skills, has the potential to lead to social desirability bias which could impact the results (Larson, 2019). To mitigate this as much as possible, the survey was anonymous, and respondents were informed of this, although it may not have been enough to deter them. To combat this in the future, it is suggested that researchers use reverse-coded questions and the social desirability scale to reduce this beyond the assurance of anonymity (Arthur et al., 2021).

In addition, due to using self-report questionnaires and a cross-sectional research design, this study is vulnerable to common method variance (Lindell & Whitney, 2001). This implies that the method used in the study can result in the correlations between variables being inflated (Lindell & Whitney, 2001). To avoid this, it is suggested that measures be collected from different sources for different constructs (Lindell & Whitney, 2001).

It should also be noted that this study has used shortened scales to measure the constructs. While these have achieved high reliability, the longer scales should be used where possible to more thoroughly reflect the constructs and increase reliability (Kennedy et al., 2021). Although CFA was not possible in this study, it is recommended for future research in this area with greater sample sizes.

Due to the time and resource constraints faced in this process, this study has only used Generation Z students at the University of Cape Town (UCT). Although the focus on a specific generation proved valuable, it is recommended that more universities in the Western Cape and South Africa be included to increase the generalisability of the results.

Conclusion

This study sought to investigate the relationship between the dark triad and leadership intentions, specifically amongst South African Generation Z university students. To further the understanding of this relationship, this study also considered motivation to lead as a mediator, as this is considered an important precursor to leadership intentions (Kennedy et al., 2021). This study was conducted using a self-report survey which was distributed to students within the University of Cape Town who fell into the Generation Z cohort. The results were analysed to provide insights into the relationship between the dark triad and leadership intentions and the role of motivation to lead as a mediator.

The results indicated that the global dark triad is, in fact, a significant predictor of leadership intentions, although the impact that the dark triad has on leadership intentions is small. This was in line with previous research conducted by Kennedy et al. (2021). Looking at the dark triad traits individually revealed that narcissism is the only component of the dark triad that correlated with leadership intentions. Furthermore, narcissism and Machiavellianism revealed significant correlations with affective-identity and non-calculative MTL, respectively, allowing H1 and H2 to be supported. The results further indicated that only two of the three MTL factors acted as mediators in this study leading to H3 not being supported.

Interestingly, the findings of this study indicated that this sample of Generation Z university students do not have a high propensity for dark triad personality traits. However, they do have a high propensity for both intention and motivation to lead. This is worth noting when comparing this generation to Millennials, who are notoriously narcissistic and show high dark triad personality traits (Keener, 2020). As concern over these traits increasing in future generations continues due to their destructive workplace outcomes, the results of this study are promising for future business leaders. Knowledge of the personality attributes and propensity for leadership of Generation Z students is useful in their development as they enter the workforce and beyond.

This study has provided further insights into the constructs which determine leadership emergence, namely motivation to lead and leadership intentions. As under-researched aspects of leadership, it is suggested that further studies consider these two constructs when considering leader emergence. Further knowledge of Generation Z as future leaders is vital, and it is hoped that this study provided a basis on which to examine this in the future.

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Appendix

Appendix A

Dark Triad Scale

The following questions are about you. Please choose the most appropriate response.

	Strongly Disagree	Disagree	Moderately Disagree	Slightly Disagree	Undecided	Slightly Agree	Moderately agree	Agree	Strongly Agree
I tend to manipulate others to get my way									
I have used deceit or lied to get my way									
I have use flattery to get my way									
I tend to exploit others towards my own end									
I tend to lack remorse									
I tend to be unconcerned with the morality of my actions									
I tend to be callous or insensitive									
I tend to be cynical									
I tend to want others to admire me									
I tend to want others to pay attention to me									
I tend to seek prestige or status									
I tend to expect special favours from others									

Appendix B

Leadership Intentions Scale

The following questions concern your leadership intentions. Please choose the most appropriate response.

How likely are you to...?

	Very Unlikely	Unlikely	Neutral	Likely	Very Likely
Request more information about leadership positions					
Attend a leadership development workshop					
Apply for a leadership role on their					
Apply for a leadership position if notified about it					
Apply for a leadership position if specifically nominated					

Appendix C

Motivation to Lead Scale

The following questions are about your motivation to lead. Please choose the most appropriate response.

	Strongly Disagree	Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Agree	Strongly Agree
I usually want to be the leader in the groups that I work in							
Most of the time, I prefer being a leader rather than a follower when working in a group							
I have a tendency to take charge in most groups or teams that I work in							
I am the type of person who likes to be in charge of others							
I feel that I have a duty to lead others if I am asked							
I agree to lead whenever I am asked or nominated by the other members of my group or team							
It is appropriate for people to accept leadership roles or positions when they are asked							

Appendix D

Demographic Questions

Please indicate your response to the questions below with a tick.

1. What is your gender?

- Male
- Female
- Prefer not to answer
- Other (please specify)

2. What is your race?

- African
- Asian
- Coloured
- White
- Indian
- Prefer not to answer
- Other (please specify)

3. In what year were you born?

- Between 1995 and 2012
- Other (please specify)

4. How old are you? (as of the end of 2022)?

5. Are you a student at university?

6. What year are you at university?

7. Which faculty are you part of?

- Commerce
 - Engineering and the built environment
 - Health Sciences
 - Humanities
 - Law
 - Science
 - Other (please specify)
-

Appendix E

UCT Commerce Faculty Ethics in Research Committee Approval



Faculty of Commerce

Private Bag X3, Rondebosch, 7701
2.26 Leslie Commerce Building, Upper Campus
Tel: +27 (0) 21 650 4375/ 5748 Fax: +27 (0) 21 650 4369
E-mail: jacques.rousseau@uct.ac.za
Internet: www.uct.ac.za



@Commerce UCT



UCT Commerce Faculty Office

01 06 2022

Michaela Strong

School of Management Studies

University of Cape Town

REF: REC 2022/06/001

**The Impact of the Dark Triad Personality Traits on the Leadership Intentions
of University Students: The Mediating Role of Motivation to Lead**

We are pleased to inform you that your ethics application has been approved. Unless otherwise specified this ethical clearance is valid until 31-Dec-2023 .

Your clearance may be renewed upon application.

Please be aware that you need to notify the Ethics Committee immediately should any aspect of your study regarding the engagement with participants as approved in this application, change. This may include aspects such as changes to the research design, questionnaires, or choice of participants.

The ongoing ethical conduct throughout the duration of the study remains the responsibility of the principal investigator.

We wish you well for your research.

A handwritten signature in black ink, appearing to read 'JRousseau'.

2022.06.01
21:25:42 +02'00'

Jacques Rousseau
Commerce Research Ethics Chair
University of Cape Town
Commerce Faculty Office
Room 2.26 | Leslie Commerce Building

Office Telephone: +27 (0)21 650 2695 / 4375

Office Fax: +27 (0)21 650 4369

E-mail: jacques.rousseau@uct.ac.za

Website: <http://www.commerce.uct.ac.za/com/Ethics-in-Research>

"Our Mission is to be an outstanding teaching and research university, educating for life and addressing the challenges facing our society."

Appendix F

Department of Student Affairs Approval

	RESEARCH ACCESS TO STUDENTS	DSA 100
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NOTES

- This form must be **FULLY** completed by all applicants who want to access UCT students for the purpose of research or surveys.
- Return the fully completed (a) **DSA 100** application form by email, in the same word format, together with your: (b) **research proposal inclusive of your survey**, (c) **copy of your ethics approval letter / proof** (d) **informed consent letter** to: Nadierah.Pienaar@uct.ac.za. Your application will be attended to by the Executive Director, Department of Student Affairs (DSA), UCT.
- The turnaround time for a reply is **approximately 10 working days**.
- NB: It is the responsibility of the researcher/s to apply for and to obtain **ethics approval and to comply with amendments that may be requested**; as well as to obtain approval to access UCT staff and/or UCT students, from the following, at UCT, respectively: (a) **Ethics**: Chairperson, Faculty Research Ethics Committee' (FREC) for ethics approval, (b) **Staff access**: Executive Director: HR for approval to access UCT staff, and (c) **Student access**: Executive Director: Student Affairs for approval to access UCT students.
- Note**: UCT Senate Research Protocols requires compliance to the above, **even if prior approval has been obtained from any other institution/agency**. UCT's research protocol requirements applies to *all* persons, institutions and agencies from UCT and external to UCT who want to conduct research on human subjects for academic, marketing or service related reasons at UCT.
- Should approval be granted to access UCT students for this research study, such approval is effective for a period of one year from the date of approval (as stated in Section D of this form), and the approval expires automatically on the last day.
- The approving authority reserves the right to revoke an approval based on reasonable grounds and/or new information.

SECTION A: RESEARCH APPLICANT/S DETAILS

Position	Staff / Student No	Title and Name	Contact Details (Email / Cell / land line)
A.1 Student Number	STRMIC031	Ms Michaela Strong	Strmic031@myuct.ac.za / 0793549039
A.2 Academic / PASS Staff No.			
A.3 Visitor/ Researcher ID No.			
A.4 University at which a student or employee	University of Cape Town	Address if <i>not</i> UCT:	
A.5 Faculty/ Department/School	Commerce Faculty – Section of Organisational Psychology		
A.6 APPLICANTS DETAILS If different from above	Title and Name	Tel.	Email


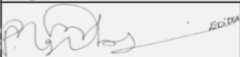
SECTION B: RESEARCHER/S SUPERVISOR/S DETAILS

Position	Title and Name	Tel.	Email
B.1 Supervisor	Prof. Jeffrey Bagraim	Prof. Jeffrey Bagraim	Jeffrey.bagraim@uct.ac.za
B.2 Co-Supervisor/s			

SECTION C: APPLICANT'S RESEARCH STUDY FIELD AND APPROVAL STATUS

C.1 Degree – if applicable	Master's in Industrial and Organisational Psychology
C.2 Research Project Title	The Impact of the Dark Triad Personality Traits on the Leadership Intentions of University Students: The Mediating Role of Motivation to Lead
C.3 Research Proposal	Attached: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
C.4 Target population	Generation Z UCT Students
C.5 Lead Researcher details	If different from applicant:
C.6. Will use research assistant/s	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes- provide a list of names, contact details :
C.7 Research Methodology and Informed consent	Research methodology: Quantitative research by way of a self-report questionnaire Informed consent: Consent form included in questionnaire
C.8 Ethics clearance status from UCT's Faculty Ethics in Research Committee /Chair (EIRC)	Approved by the UCT EIRC: Yes <input checked="" type="checkbox"/> With amendments: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> (a) Attach copy of your UCT ethics approval. Attached: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> (b) State date / Ref. No / Faculty of your UCT ethics approval: 01/06/2022 Ref. / Faculty: REC2022/06/001

SECTION D: APPLICANT/S APPROVAL STATUS FOR ACCESS TO STUDENTS FOR RESEARCH PURPOSE (To be completed by the ED, DSA or NOMINEE)

D.1 APPROVAL STATUS	Approved / With Terms / Not	* Conditional approval with terms	Applicant/s Ref. No.:	
	(i) <input checked="" type="checkbox"/> Approved (ii) <input type="checkbox"/> With terms (iii) <input type="checkbox"/> Not approved	a) Access to students for this research study must only be undertaken after written ethics approval has been obtained. b) In event any ethics conditions are attached, these must be complied with before access to students.	STRMIC031 / Ms Michaela Strong	
D.2 PREPARED BY:	Designation	Name	Signature	Date of Approval
	Research Assistant	Tavonga Mazhetese		30/06/2022
D.3 APPROVED BY:	Designation	Name	Signature	Date of Approval
	Executive Director / Nominee Department of Student Affairs	Mr Pura Mgolombane		30/06/2022

Appendix G

Consent Form

Hello,

Thank you for participating in my research study about the leadership intentions of Generation Z university students in South Africa.

The University of Cape Town Commerce Faculty Ethics in Research has approved this research, and the survey should take about 5 minutes to complete. Responses are anonymous, confidential, and used exclusively for this study.

Thank you for your time.

Kind Regards,
Michaela

Researcher: Michaela Strong (strmic031@myuct.ac.za)

Supervisor: Prof. Jeffrey Bagraim (jeffrey.bagraim@uct.ac.za)

Note: Participation in this study is entirely voluntary, and you may withdraw at any time. All responses are anonymous, confidential, and used exclusively for this study. Raw data is stored on a password-protected laptop and will not be shared.

Appendix H

Department of Student Affairs Research Invitation

Dear Students,

I am a Master's student in Industrial Psychology at UCT. For my dissertation, I am conducting research on the impact that personality has on leadership intentions amongst Generation Z university students. You are invited to participate in this research, and any participation would be greatly appreciated.

This questionnaire is voluntary, completely anonymous, and should only take about 5 minutes of your time.

To participate in this study, you need to:

- Be a university student
- Be born between 1995 and 2012

If you meet these criteria, please click on the link below to be taken to the start of the questionnaire.

https://ucpcommerce.eu.qualtrics.com/jfe/form/SV_71aT0CWx964tEKa

Participation in this study is entirely voluntary, and you may withdraw at any time. All responses are anonymous, confidential, and used exclusively for this study. Raw data is stored on a password-protected laptop and will not be shared.

If you have any questions, please feel free to reach out to me at strmic031@myuct.ac.za

Thank you in advance for your participation.

Kind regards,

Michaela Strong – Researcher

Appendix I

Table I1

Factor Loadings of the Leadership Intention Scale

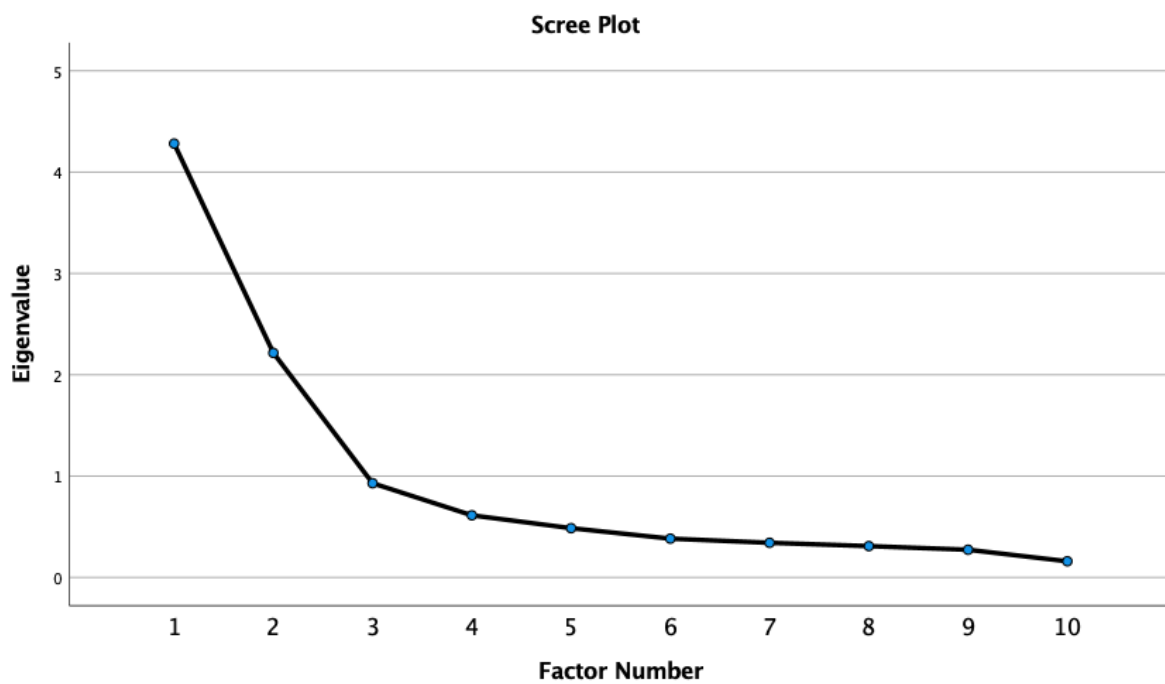
Items	Factor loading
	1
LI_1	.651
LI_2	.467
LI_3	.803
LI_4	.787
LI_5	.694
LI_6	.698
Eigenvalues	4.22
Cumulative variance explained (%)	70.37

Note. Extraction: Principal Axis Factoring. LI = Leadership Intentions

Appendix J

Figure J1

Scree Plot for the Motivation to Lead Scale



Appendix K
Assumption Testing

Figure K1

Simple Scatterplot Showing Relationship Between Leadership Intentions and Dark Triad

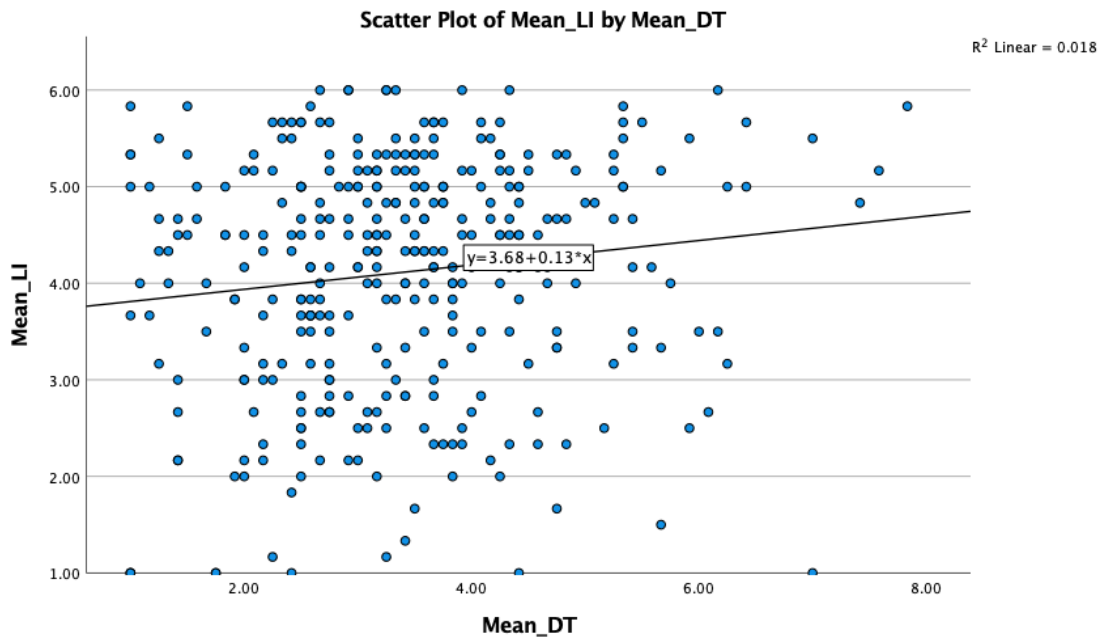


Figure K2

Normal P-P Plot of Regression Standardised Residual

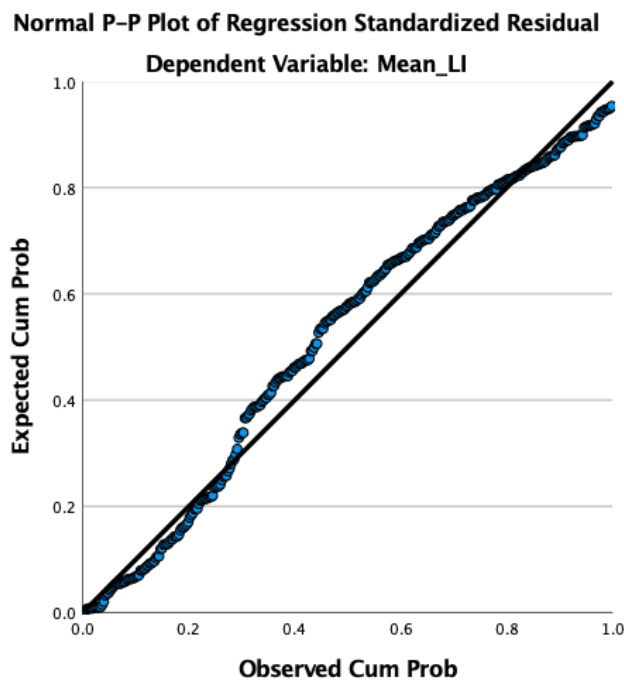


Figure K3

Histogram

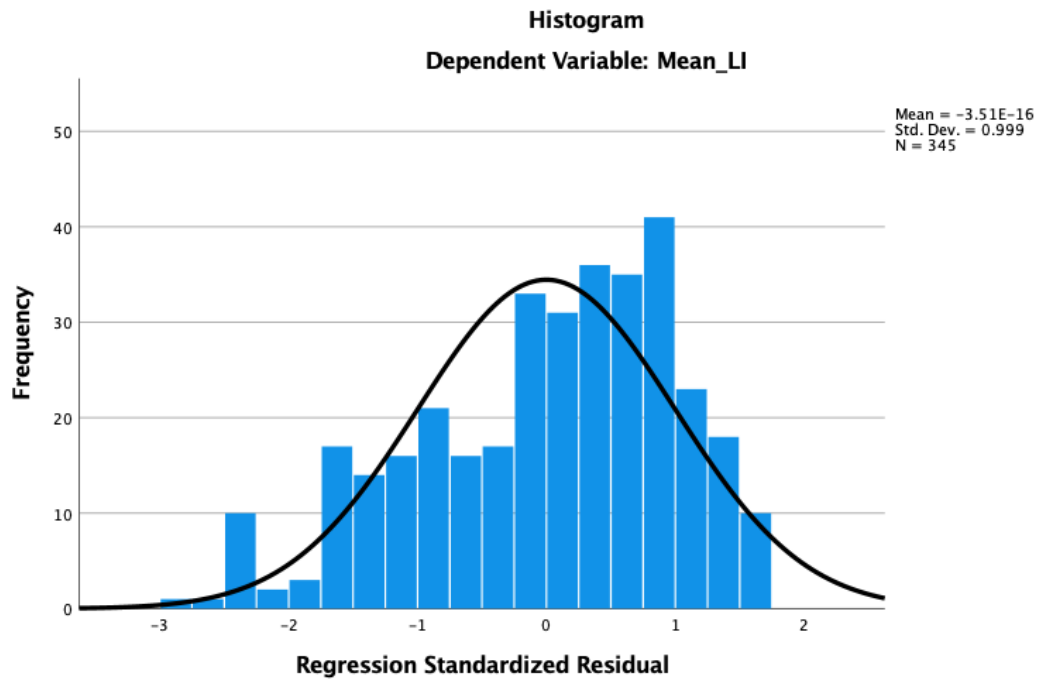


Figure K4

Residual Scatter Plot

