Gordon Institute of Business Science
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The compounding effect of a combination of influence tactics on individual work engagement:

Is more necessarily better?

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Abstract

Management uses Influence tactics to direct and coordinate their teams towards a common goal. This crucial part of leadership, specifically the usage of influence tactics in combination, is not as well understood as when used individually. Engagement, on the other hand, is well accepted to contribute to better organisational performance. The understanding of influence tactics through the lens of engagement is still not well understood, and as a result, this study goes deeper into understanding the links between these two crucial constructs.

The study aimed to understand the effect of using rational persuasion and collaboration, individually and in combination, relative to individual work engagement (IWE).

The hypotheses were tested using quantitative methods through the use of a self-report online questionnaire. The constructs were tested for validity and reliability, and analyses were done using the ANOVA analysis. The study was cross-sectional and included a final valid sample size of 129 respondents.

The study provided empirical evidence that rational persuasion and collaboration positively affected individual work engagement, individually and in combination. It was further found that rational persuasion had a more significant effect on individual work engagement than collaboration and a combination of rational persuasion and collaboration. There was, however, no statistical difference between the individual work engagement between using collaboration individually and in combination with rational persuasion.

The study thus contributes to the literature in leadership, influence, engagement and performance.

Keywords:

- Engagement
- Influence
- Rational persuasion
- Collaboration
- Leadership

Declaration

I declare that this research project is my own work. It is submitted in partial fulfilment of the requirements for the Master of Business Administration degree at the Gordon Institute of Business Science, University of Pretoria. It has not been submitted before for any degree or examination in any other University. I further declare that I have obtained the necessary authorisation and consent to carry out this research.

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CHAPTER 1: INTRODUCTION TO THE RESEARCH PROBLEM

1.1 Problem background

Influence is essential to get one's way (Lee, Han, Cheong, Kim & Yun, 2017, p. 210)

The art of influence has always been of the utmost importance, as it allows management to align a large number of people, from various backgrounds and teams, towards a common strategic goal. It is an essential part of leadership.

One of the critical areas that can be managed with proper use of influence tactics, that has significant business performance is engagement. Unfortunately, managing business performance through increased engagement has not received the required attention (Hanaysha, 2016).

According to Hanaysha (2016), disengagement in the United States of America costs the industry between $292 and $255 billion each year. These costs are consistent with work done by Saks (2006), a view years earlier, who said that the lack of engagement costs the US economy close to $300 billion each year. Disengagement was estimated to cost the German economy close to $263 billion, and similar results in Asia and Australia (Shuck, Reio & Rocco, 2011). The same study found that close to 30% of all employees were not engaged (Shuck et al., 2011). Thus, engagement, or the lack thereof, is a global phenomenon that accounts for massive financial losses.

The lack of engagement costs the world an astronomical amount of money. One could go so far as to say, if one has a truly engaged workforce, it could be a competitive advanced. Inversely, one can also say that there is a significant opportunity to solve the engagement problem, leading to better overall business results (Hanaysha, 2016; Saks, 2006; Shuck et al., 2011).

1.2. Academic rationale

Influence tactics have been studied since the 1990s, with work done by Kahn (1990). Since then, it has been refined well, with much research done on the direction of influence (Erez, Rim & Keider, 1986; Kipnis, Schmidt & Wilkinson, 1980; Yukl & Falbe, 1990) as well as the creation of subcategories of engagement (Such as soft, hard, and rational influence tactics) (Yukl, 2018).

Although the concept of effectiveness when combining influence tactics was already considered in 1992 (Falbe & Yukl, 1992), it still has not received the required attention (Lee et al., 2017). This research will contribute to a better understanding of how influence tactics affect individual work engagement (IWE) in combination compared to individually.

Engagement, on the other hand, is a topic that also has been studied through various lenses. It has been studied individually (Hanaysha, 2016), in groups (Tyler & Blader, 2003), and have numerous well-established research instruments (Saks, 2006).

The main problem with engagement is that there seems to be a lack of consensus on improving this metric (Saks, 2006). This research will aim to look at the problem of IWE through the lens of influence tactics to hopefully better understand the dynamics of these constructs (Chong et al., 2013; Dulebohn, Shore, Kunze & Dookeran, 2005; Reina, Rogers, Peterson, Byron & Hom, 2018).

1.2. Implications for business

One of the primary responsibilities of management is to guide, direct and alter the behaviour of their teams and subordinates (Kacmar, Carlson & Harris, 2013). The action used to exercise influence is generally referred to as an influence tactic (Kipnis et al., 1980; Lee et al., 2017; Yukl & Falbe, 1990). It is vital to ensure that a team and the broader organisation move in the same strategic direction.

The relationship between a manager and his subordinates greatly defines a subordinate's role in an organisation (Williams, Scandura, Pissaris & Wood, 2016). This research hopes to support the field of leadership by adding additional depth on how influence tactics work, which could assist business leaders in using their influence tactics

more effectively.

As stated before, the cost associated with lack of engagement is immense, and there is still much to learn about engagement (Saks, 2006). It costs the economy of most significant countries billions of dollars (Hanaysha, 2016; Saks, 2006; Shuck et al., 2011). Besides direct monetary, it also improves discretionary effort (Shuck et al., 2011) and reduces intent to turnover (Saks, 2006).

By looking at engagement through the lens of influence tactics, it could be possible to understand this construct better to improve business performance.

1.3. Purpose statement

The researcher aims to determine whether a combination of influence tactics works better than using them individually and what those effects are on IWE, potentially translating into increased performance as measured through the unique lens of engagement.

This study aims to combine one soft and one rational influence tactic, individually and in combination with each other, to see whether there is a significant change in its relative effectiveness on individual engagement.

These influence tactics that were studied was collaboration (soft) and rational persuasion (rational).

The main objectives of this research study are:

- To determine whether rational persuasion has a direct positive relationship with regards to IWE
- To determine whether collaboration has a direct positive relationship with regards to IWE
- To determine whether collaboration and rational persuasion has a significant positive influence with regards to IWE
- To determine whether rational persuasion has a more significant positive impact with regards to IWE than collaboration
- To determine whether rational persuasion has a more significant positive impact with regards to IWE compared to a combination of rational persuasion and

collaboration

- To determine if the combination of rational persuasion and collaboration will have a statistical difference compared to only using collaboration on its own on IWE

1.4. Document outline

The document to follow will showcase the following sections:

- Chapter 1: Introduction (Current Chapter)
- Chapter 2: Literature review
- Chapter 3: Research question
- Chapter 4: Research methodology
- Chapter 5: Analysis
- Chapter 6: Discussion
- Chapter 7: Conclusion
- Appendixes

The literature review will summarise literature from peer-reviewed journals that were used as a foundation for building the research argument. It includes a review of the main work done in the fields of influence and engagement.

The research questions will show the main hypotheses that will be tested based on the information provided in the literature review. It will also graphically explain the main hypotheses that were used in this research.

The research methodology will outline the method used to complete the survey. It will start with the methodology, after which it will go into the design. It will end off with a summary of the analysis approach to aid future researchers in the techniques used in this research.

The analysis chapter will take the reader step by step through the data analyses techniques used, using IBM SPSS as an analysis tool. It will lay the foundation for the discussion chapter that follows.

The discussion chapter will use the results from the analysis chapter and link them to the literature review. This chapter will discuss how the findings link to the literature, see

where there are differences, and possibly explain why.

The conclusion chapter will summarise the entire document, highlighting the various components of the research.

The document will end with the appendixes, including the reference list, consistency matrix and other relevant information that was not included in the body of the report.

CHAPTER 2: THEORY AND LITERATURE REVIEW

2.1. Introduction

This literature review outlines the key frameworks and concepts that were studied to complete to build the research argument. The theoretical foundation, which consists of published literature, informed the researcher of the appropriate research questions and hypotheses to be formulated. The constructs of influence tactics, engagement, the concept and importance of knowledge workers, and their respective measurement instruments will be discussed in detail in this chapter.

2.1. Influence

The extent to which one can manage other individuals' actions and views is influence tactics (Kipnis et al., 1980). In a business context, it is essential to affect the actions of others, especially in a managerial position. This allows an organisation to align all its staff to move in the same direction, without which there would possibly be no strategic alignment in a company. As a result, influence and the successful execution of influence tactics to subordinates are essential aspects of managerial work. (Lamude, Scubber & Simmons, 2000). The following section will go through this construct, highlighting its main components, and discussing the various lenses that have been used to analyse this construct.

2.1.1. The different influence tactics

The first attempts at classifying influence tactics into separate categories resulted in creating 8 distinct influence categories (Kipnis et al., 1980; Yukl & Falbe, 1990). Further studies found the need to expand on the original 8 and introduced three more. Since then, it has been widely accepted that there are 11 main influence tactics (Lee et al., 2017; Yukl, Seifert & Chavez, 2008), which can be seen below:

- Rational persuasion
- Pressure, exchange
- Collaboration, apprising
- Legitimating
- Inspirational appeal
- Consultation

- Personal appeals
- Coalitions
- Ingratiation.

For many years these influence tactics have been studied, and the focus of these studies mainly was how often they were used and their relative success (Kipnis et al., 1980; Lee et al., 2017). Although there was a slight variation in the naming convention of these tactics, they and their definitions have remained constant for the largest part.

Since the initial identification of the various influence tactics, there have been discussions regarding whether or not these tactics could be grouped into smaller sub-categories (Reina et al., 2018). As such, another construct was created where the 11 influence tactics were grouped into three sub-categories.

The academic industry has widely accepted these three sub-categories as rational, hard, and soft (Kipnis & Schmidt, 1983; Qamar, Saleem & Bashir, 2019). Hard tactics have been theorised to use legitimate power and are generally exercised at a very impersonal level, whereas soft influence tactics were much more closely related to personal power (Lamude et al., 2000). Rational tactics were argued to exercise logical argumentation to deliver the tactic (Lamude et al., 2000). These categories have proven helpful to group the influence tactics and have been used successfully by scholars in various research papers.

The influence tactics identified as the most successful by Lee, Han, Cheong, Kim & Yun (2017) were all soft or rational main influence subgroups.

A summary of the sub-category, influence tactic, and a short description of each can be seen in Table 1 on the next page.

Table 1: Influence tactic summary (Adaptation from "Definition of the 11 Proactive Influence Tactics" by Yukl (2018))

Influence tactics

Sub-category	Influence tactic	Summary
Hard	Pressure	If an agent uses intimidation, threats, and demands to gain support or favour for a specific request
Hard	Legitimating	An agent would attempt to use formal power and add it to a request. This can be done by linking it to specific authoritative figures, rules, procedures, or contracts
Hard	Coalition	If an agent uses the support of others to form a group that has a similar view and opinion than the agent, and they use their collective to gain support
Soft	Exchange	If an agent clarifies that one will receive a specific reward for support in a specific area. One could be made aware of the reward implicitly or explicitly
Soft	Collaboration	If an agent works with other members to produce a standard solution or achieve a common goal
Soft	Ingratiation	If an agent attempts to alter the mood positively before giving a specific request with the idea of gaining a positive outcome as a result
Soft	Consultation	An agent would give a specific time, resources, or support to get assistance for a request
Soft	Personal appeals	An agent uses personal relationships to receive favours or preferential treatment with regards to the execution of a request
Soft	Inspirational appeal	If an agent makes a request that triggers an emotional response to support a specific concept. This emotional response could be positive (such as enthusiasm) or negative (such as sympathy)
Rational	Appraising	If an agent would explain how a specific task and the execution thereof would benefit the target, often with regards to reward and career advancements
Rational	Rational Persuasion	An agent uses logical arguments, often using factual evidence, to prove that a specific idea will result in the required outcome.

2.1.2. The direction of influence

Influence tactics have been a topic of great discussion for many years, and as such, the field has grown considerably (Lee et al., 2017; Yukl & Falbe, 1990). These topics have been viewed from various lenses to understand better how they are exercised and their effects in the practical business world.

One of these constructs was the specific direction to which the influence tactic was applied(Erez et al., 1986; Kipnis et al., 1980; Yukl & Falbe, 1990). With direction, it is meant that influence can be exercised in one of three directions:

- Lateral
- Downward
- Upward

Upward influence is the influence of people more senior than the individual exercising

the influence tactic, typically an agent's manager (Clarke, Alshenalfi & Garavan, 2019). Lateral influence relates to influencing an agent's peers or targets on the same organisational level as the agent. Downward influence influences a subordinate or targets lower in the hierarchy than the agent.

Research suggests that the type of influence tactic, and its relative effectiveness related to task outcomes, is greatly affected by the direction of influence (Lu, Bartol, Venkataramani & Zheng & Liu, 2019; Williams et al., 2016; Yukl & Tracey, 1992). Because there are various degrees of success depending on which tactic is used and in which direction, research has picked up vast differences in the frequencies that these tactics are used in each direction (Lee et al., 2017).

One such example was that although rational persuasion seems to work in all directions, it was perceived to be more successful downward than exercising it upward (Lee et al., 2017). There has been much interest on which influence tactics work well in all directions. Yukl & Tracey (1992) found that specific influence tactics work well in all directions. Consultation, rational persuasion, and inspirational appeal were typically amongst the influence tactics that fell in this category. On the other hand, Yukl & Tracey (1992) also found that exchange has a slightly higher strength when used laterally and downward. The same was found for ingratiation.

2.1.3. The general success of influence tactic

2.1.3.1. Hard influence tactics

Pressure is generally found to be more frequently used downward than upward or lateral (Yukl, 2018; Yukl & Falbe, 1990). This is because there is a specific amount of power required to execute this tactic successfully. Hard influence tactics usually require a power distance between individuals (Yukl, 2018). Pressure is generally accepted as the least successful influence tactic (Falbe & Yukl, 1992; Lee et al., 2017).

Legitimating is more often used laterally and specifically with outsiders of an organisation. This is because, in these circumstances, the general rules are not as well understood and could be ambiguous, leaving room open for reinforcement (Yukl, 2018). Because the use of this tactic forces a target to accept a different approach than what the individual initially intended, it is usually not intrinsically accepted by the target, even if successful. It has been found that this tactic is not very successful due to this reason

(Falbe & Yukl, 1992; Lee et al., 2017).

Coalition was equally successful with all three directions (Kipnis et al., 1980; Yukl, 2018; Yukl & Falbe, 1990). It is highly successful when attempting to gain significant support for a new project or initiative. Although it is successful to use downwards, its seldom required to use it on subordinates (Yukl, 2018). Because this tactic uses a critical mass of people to change the opinions of others, it is usually done under duress which is why it is part of the hard influence tactics. It is generally seen as the most effective of the hard strategies, but still not as effective as the soft and rational tactics (Falbe & Yukl, 1992; Lee et al., 2017).

2.1.3.2. Soft influence tactics

Exchange was used more lateral and downward compared to upward (Yukl & Falbe, 1990). This is because it usually involves a reward, and it is more likely that a manager has control over the rewards of his subordinates (Such as pay, bonuses etc.) than the other way around (Yukl, 2018). Many researchers have found the exchange tactic only moderately effective (Lee et al., 2017).

Collaboration is used more often laterally and downward. This is because management usually controls discretionary resources and uses this tactic more often than the subordinates (Yukl, 2018). There are significant similarities between collaboration and exchange, both offering something in return for a specific request. The main difference is that with exchange, the offering is usually reward-based, whereas, with collaboration, it is related more to an exchange of time often in the form of teamwork (Lee et al., 2017).

Ingratiation was seen to have significant effects on downward, lateral, and upward influence tactics. It is said that for it to be truly impactful, it needs to be from a position of authority, and as such, it is more successful used downward (Higgins, Judge & Ferris, 2003). It is often used upwards before asking for a specific request to gain favour. It might still be effective when done insincerely but is more associated with manipulation (Yukl, 2018). Many researchers have found the ingratiation tactic only moderately effective (Lee et al., 2017).

Consultation has generally been used primarily downwards, sometimes laterally and rarely upwards (Yukl & Falbe, 1990). The more authority associated with a task, the

more likely an individual is to follow it, meaning it is more effective from an authoritative figure (Yukl, 2018). It has been said that the use of consultation increases the relationships between the agent and the target, and as such, could assist in building trust between management and subordinates (Lee et al., 2017). Falbe & Yukl (1992) found that this tactic was very effective.

Personal appeals are more often used between individuals of the same perceived status. It is primarily a lateral influence tactic and is generally used between colleagues (Yukl, 2018). Many researchers have found the use of the personal appeals tactic only moderately effective (Lee et al., 2017).

Falbe & Yukl found that inspirational appeal was very effective (1992). It was generally used and more successful laterally and downward and is not often used upwards (Yukl, 2018; Yukl & Falbe, 1990). However, it has been found that it is more successful if it relates to new projects, change, and involves values and ideals (Yukl, 2018).

2.1.3.3. Rational influence tactics

Appraising is typically more successful when used with peers and subordinates and are not often used as an upward influence tactic (Yukl, 2018). Like rational persuasion, this technique requires logical arguments and fall into the “Rational” subcategory of influence tactics (Lee et al., 2017).

Rational Persuasion was equally successful with all three directions (Erez et al., 1986; Higgins et al., 2003; Yukl & Falbe, 1990) and is generally one of the tactics that are used the most (Erez et al., 1986; Lee et al., 2017). Rational persuasion is possibly the only influence tactic that has a positive relationship with both task- and relations-orientated outcomes (Lee et al., 2017). Rational persuasion is even more interesting because it requires less phycological pressure to exercise than any other influence tactic (Lee et al., 2017).

2.1.3.4. Primary overview of the effectiveness

In general, it has been found that soft and rational categories have a positive relationship when attempting to improve engagement to specific task-orientated outcomes (Yukl, Kim, & Falbe, 1996) and that hard influence tactics are generally less effective (Falbe & Yukl, 1992).

Despite the general overview given above, and extensive research done over three decades, there is still a lack of consensus regarding the effectiveness of the various influence tactics with numerous disputes over the more delicate nuances associated with influence tactics (Lee et al., 2017).

2.1.4. Using influence tactics in combination

Despite the amount of research done on influence tactics, there is less work done on what happens when one uses more than one influence tactic in combination – does more necessarily mean better?

Falbe & Yukl (1992) found that a combination of influence tactics could lead to an improved task-orientated outcome but cautioned that there is no benefit in some cases. They found that using two hard influence tactics often does not result in any improvement, and similar, a hard and soft influence tactic also shows no significant improvement over the use of a single hard influence tactic. On the contrary, using two soft influence tactics in combination did indicate improved effectiveness of these tactics.

The concept of the change in effectiveness when combining research tactics was also validated by Lee et al. (2017), who found that combing one hard influence tactic with either a soft or rational tactic, dramatically reduces the combination's influence ability. However, they found that neither coalition nor pressure showed any significant change in the effectiveness when these influence tactics were combined (Lee et al., 2017). On the other hand, the work done by Falbe & Yukl (1992) and Lee et al. (2017) also found that rational persuasion, consultation, and inspirational appeal was more effective when used individually than in combination, and Lee et al. (2017) found that collaboration was more effective when used in combination with another soft or rational tactic.

Despite numerous studies on influence, there is generally a lack of consensus and not enough work done regarding the effectiveness of various influence tactics individually, directionally, and in combination, when relating it to their outcomes (Lee et al., 2017).

2.1.5. Influence tactics for knowledge workers

Research has been done on the difference between blue- and white-collar performance, engagement, and happiness. The results showed a significant difference in the results of

these two groups when introduced with the same stimulus (Davenport, 2005; Locke, 1973).

It was also found that there was a notable difference in results between the effectiveness and use of influence tactics between permanently employed, temporarily employed and unemployed individuals (Lamude et al., 2000).

2.1.6. Measurement of influence tactics

The Profiles of Organizational Influence Strategies (POIS) has been developed to measure influence behaviour as a self-report specifically aimed at upward influence tactics (Kipnis et al., 1980; Schriesheim, Wu, & Scandura, 2009)

In contracts, the Influence behaviour questionnaire (IBQ) has been developed to determine the effect of an influence tactic on subordinates, peers, and superiors (Seifert, Yukl, & McDonald, 2003; Yukl et al., 2008).

Both scales have been widely used and compared to each other and has been found to hold a reasonable amount of accuracy when measuring influence tactics based on performance outcomes (Lee et al., 2017). Because this research will be measuring the effect of influence tactics on engagement, these measurement tools will not be used for this study.

2.2. Engagement

2.2.1. Overview of constructs

Researchers have been trying to define the passion, commitment, and excitement associated with good job performance for the longest time. Over the years, numerous constructs and definitions in the field have emerged to quantify these ambiguous elements of the human psyche. One definition that has gained considerable attention is engagement.

Although the field has been studied for over thirty years, there is still a lack of agreement regarding elements associated with engagement. This is due to ongoing discussions relating to the definition itself, the various types of engagement, and numerous tools to measure engagement (Saks & Gruman, 2014).

Kahn coined the term in 1990, where he did two independent studies to try and determine what makes an individual engaged. In his study, he tried to determine how they throw themselves into the work and to what extent they get disengaged from work. These studies were done at a summer camp on a group of counsellors and a group of architects (Kahn, 1990).

From this study, Kahn defined work engagement as “the harnessing of organisational members’ selves to their work roles” (Kahn, 1990, p. 694). He further defined an engaged employee as passionate, committed, and excited about his or her work (Attridge, 2009; Kahn, 1992). The extent to which an employee exhibits these traits is commonly referred to as Engagement.

Several models have been created to understand better and quantify engagement. Three models have gained more attention than the others and are used more often. These three models are:

- The Job-Demands-Resource (JDR) model (Bakker & Demerouti, 2007)
- Burnout theory (Maslach, Schaufeli & Leiter, 2001)
- Kahn’s framework for engagement and disengagement (Kahn, 1990)

Maslach et al. (2001) believed that engagement is an inverse function of burnout and that by measuring the extent of one’s burnout, one would obtain highly accurate results. He believed this because he felt it was more accurate to measure burnout than measure one’s engagement. Many others agree that engagement is the direct opposite of burnout (Schaufeli, Bakker & Salanova, 2006). Maslach et al. (2001) argued that burnout results from six antecedents, and the greater the divide between the individual and the six antecedents, the larger the chance of burnout. These six antecedents were found to be:

- Control
- Rewards
- Recognition
- Workload
- Perceived fairness
- Values
- Social and community support (Maslach et al., 2001)

Maslach used these antecedents to create the Maslach-Burnout Inventory (MBI) and believed that engagement could be measured as the opposite of the MBI (Maslach et

al., 2001).

A related but slightly different model is the Job-Demands-Resource (JDR) model (Bakker & Demerouti, 2007). This model also attempted to measure engagement as an inverse of burnout but had a different approach to determining the extent of burnout. According to the JDR model, two categories influence burnout:

- Loading
- Resources (Bakker & Demerouti, 2007)

According to the JDR model, an individual will develop burnout because of exhaustion due to high job stresses, which is generally associated with a high workload and long working hours. Similarly, the lack of resources (such as staff, budget, systems etc.) is another factor that could lead to an increased rate of burnout. By removing the required resources, an individual would typically start to withdraw, which leads to disengagement or burnout (Bakker & Demerouti, 2007).

While these models and some not shared in this study give unique outlooks into engagement, Kahn's framework was the only one empirically created and tested (Shuck et al., 2011). As briefly discussed earlier, Kahn researched the summer camp counsellors and members of an architect firm, where he interviewed them on the instances where they were engaged and disengaged. He realized that the degree of engagement could be broken down into three components, namely:

- Psychosocial safety
- Phycological meaningfulness
- Phycological availability (Kahn, 1990)

Psychosocial safety relates to the consistency and predictability of an environment. It is also often referred to the extent an individual can be themselves without fear of punishment or retribution. Kahn argued that to be fully engaged, an employee needs to trust their employer (Kahn, 1990).

Phycological meaningfulness relates to when an employee feels valued and valuable. It also relates to a sense of accomplishment in work. It is envisioned that meaningfulness is a circular process whereby an employee adds value to the organization and receives feedback about the value he is adding from the organisation. This, in turn, allows an individual to add even more value (Shuck & Wollard, 2010).

Lastly, phycological availability relates to an individual's ability to invest in a role. This included the availability of physical and emotional resources. Physical resources could include funding, head count, or any other tangible resources required. (Kahn, 1990; Shuck & Wollard, 2010)

Within engagement, there is also a difference between constructs, most notably:

- Job engagement
- Organisational engagement
- Employee engagement (Saks & Gruman, 2014).

Saks (2006) found that job engagement was more related to the characteristics of the job, whereas organizational engagement was related to procedural justice.

Within employee engagement, there are also two different constructs:

- Individual engagement
- Team Engagement

Team engagement is focused on an individual's willingness to invest in their groups and uses underlying constructs such as procedural justice, social identity, and cooperative behaviour (Tyler & Blader, 2003).

Employee engagement relates to psychosocial safety, phycological meaningfulness and phycological availability (Kahn, 1990).

Even though many authors have since attempted to build on Kahn's work to understand engagement in the workplace (Harter, Schmidt & Hayes, 2002; Kacmar et al., 2013; May, Gilson & Harter, 2004), numerous questions in the field are still left unanswered (Kacmar et al., 2013).

2.2.2. Engagement and organisational performance

Many organisations have found that keeping employees engaged is one of the top challenges they are faced with (Attridge, 2009; Reina et al., 2018). This is because it has been seen that employees with higher levels of engagement generally have stronger relationships with their employer, resulting in more positive attitudes, lower intent to

turnover and improved behaviours and intentions (Saks, 2006).

This is predominantly due to employees with higher levels of engagement having a higher discretionary effort (Shuck et al., 2011). Discretionary effort is defined as an employee's inclination to go above and beyond the standard requirements of their duties. This relates to higher productivity, increasing profit generation (Shuck et al., 2011) and shareholder returns (Saks & Gruman, 2014). Furthermore, increased engagement also reduces intent to turnover allowing an organisation to maintain its talent (Shuck et al., 2011).

There are also other consequences of engagement such as job satisfaction, organisational behaviour and organisational commitment. These terms relate to engagement but are often confused with actual individual engagement but are separate constructs in their own right (Saks, 2006).

2.2.3. Measurement of engagement

Due to the different models used to measure engagement, it has been difficult for the academic community to gain consensus on the most applicable measure to use (Saks & Gruman, 2014).

There are two widely used engagement scales, which we will be discussing in the sections to follow.

2.2.3.1. Maslach Burnout Inventory (MBI)

The Maslach-Burnout Inventory (MBI) was developed in the early 2000s to measure burnout. It was argued that burnout could measure engagements directly opposite constructs (Maslach et al., 2001). It has been debated that although burnout and engagement are related, they are also still distinct and should be measured independently (Saks & Gruman, 2014).

2.2.3.2. Utrecht Work Engagement Scale (UWES)

The UWES is a self-administered questionnaire that has been developed and refined over the years (Schaufeli et al., 2006).

Originally the UWES had 24 items put through rigorous testing. It was discovered that

seven items could be removed without affecting the reliability of the scale. As such, a 17-item scale was developed (known as the UWES-17) . There is also an abbreviated version that only uses nine items (known as the UWES-9). Both these versions have been tested and have been found to have good reliability when measuring engagement, but the 17-item version was used more often (Seppälä et al., 2009). Both scales contained three primary constructs:

- Vigour
- Dedication
- Absorption

Several sub-questions make up each of these constructs. There has also been a one-factor questionnaire developed for both the 17 and 9 item scale, which only loads each question onto engagement equally without loading it onto the above factors. Although this one-factor method has been proven to be reliable, it has generally been found to be a less significant fit to engagement than the three-factor models (Seppälä et al., 2009).

Although there are many similarities between the UWES and BMI, such as specific dimensions being exact opposites of each other in the two scales, questions added to the UWES make it distictly unique. Absorption has been added, making engagement distinct from the MBI scale (Saks & Gruman, 2014).

The UWES has been extensively tested and validated. One meta-analysis, which included six different studies (one of which included a three-year longitude study and 2,555 respondents), found the instrument very reliable (Seppälä et al., 2009). One specific study also used structured equation modelling and found that the work engagement factors had high order rank stabilities (Seppälä et al., 2009). In a separate study, confirmatory factor analysis (CFA) endorsed the three constructs associated with the UWES and found that they were all highly interrelated.

Figure 1 on the next page shows a summary of the UWS-17, UWS-9 in factorised and principal component levels.

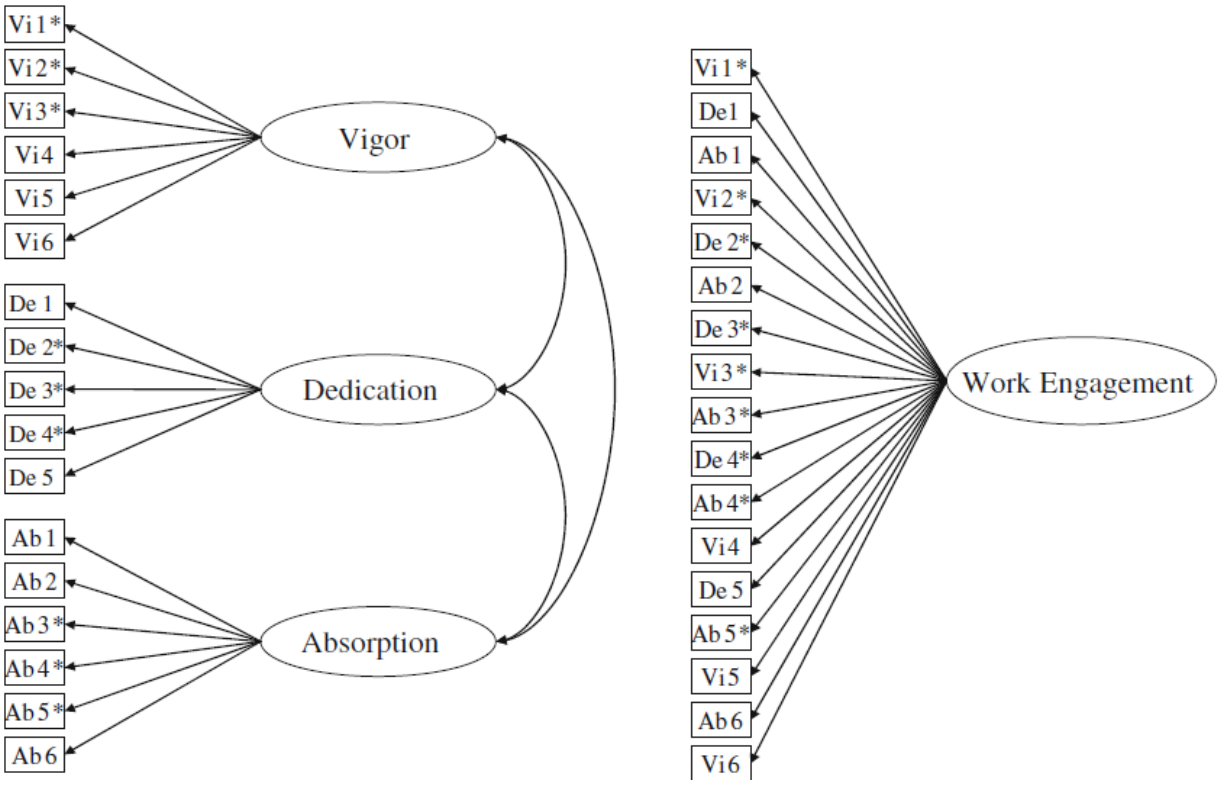


Figure 1: The various confirmatory factor analysis models created for UWS surveys, Left: Factorised version, Right: Principle component version (= UWES-9, VI = Vigor; DE = Dedication; AB = Absorption)* (Seppälä et al., 2009)

It is possibly the most widely used instrument for engagement (Saks & Gruman, 2014), and as such, it was being used for this research as the instrument. A summary of the questions associated with Figure 1 above can be seen below (Seppälä et al., 2009):

1. At my work, I feel that I am bursting with energy (VI1)*
2. I find the work that I do full of meaning and purpose (DE1)
3. Time flies when I'm working (AB1)
4. At my job, I feel strong and vigorous (VI2)*
5. I am enthusiastic about my job (DE2)*
6. When I am working, I forget everything else around me (AB2)
7. My job inspires me (DE3)*
8. When I get up in the morning, I feel like going to work (VI3)*
9. I feel happy when I am working intensely (AB3)*
10. I am proud of the work that I do (DE4)*
11. I am immersed in my work (AB4)*
12. I can continue working for very long periods at a time (VI4)
13. To me, my job is challenging (DE5)

14. I get carried away when I'm working (AB5)*
15. At my job, I am very resilient, mentally (VI5)
16. It is difficult to detach myself from my job (AB6)
17. At my work, I always persevere, even when things do not go well (VI6)

Seppälä et al. (2009) suggested that it is important to measure engagement between different groups of people as he obtained and made specific reference to the difference between blue- and white-collar workers. Similar results were obtained by other researchers as well. (Davenport, 2005; Locke, 1973; Seppälä et al., 2009)

2.3. Influence and engagement

The effect of using a specific influence tactic has been viewed through various lenses over the years. There has been a differentiation made to what is being measured by the usage of an influence tactic. In many cases, an influence tactic aims to gain favour, such as when using ingratiation in the use of upwards influence tactics. This is referred to as relations orientated outcomes (Bass & Bass, 2009). Alternatively, influence could be used to achieve a specific goal, and these outcomes are referred to as task-orientated outcomes (Bass & Bass, 2009). The differentiation could be made between the performance of a task or the quality of a relationship (Bass & Bass, 2009).

It has been theorised that influence tactics used by managers and leaders can alter the engagement of their subordinates and thus could contribute immensely to leadership (Kacmar et al., 2013).

A recent study found that employees' engagement can be significantly altered using different influence tactics (Reina et al., 2018). This study limited the research to pressure and inspirational appeals and found vastly different engagement results, which eventually could be quantified into employee turnover as well. It has also been found that using specifically soft influence tactics can significantly influence the engagement of individuals (Chong et al., 2013).

To this point, previous researchers have called for additional research in the field of influence that could be done on constructs such as engagement (Chong et al., 2013; Dulebohn et al., 2005; Reina et al., 2018).

2.4. Conclusion

The research aims to determine if there are significant relationships between various contracts, and as a result, the following research questions were considered based on the literature review:

- Does rational persuasion have a direct positive effect on engagement?
- Does collaboration have a direct positive effect on engagement?
- Do collaboration and rational persuasion have a significant positive effect on engagement?
- Does rational persuasion have a more significant positive impact on engagement than collaboration?
- Does a combination of rational persuasion and collaboration have a more significant positive impact on engagement compared to collaboration?
- Does rational persuasion have a more significant positive impact on engagement compared to a combination of rational persuasion and collaboration?

The empirical research justifies why the above questions would be prevalent. A better understanding of the deeper mechanics of employee engagement related to influence tactics, in combination and individually, would assist organisations to improve company performance. A summary of the primary constructs and their interactions can be seen in Figure 2.

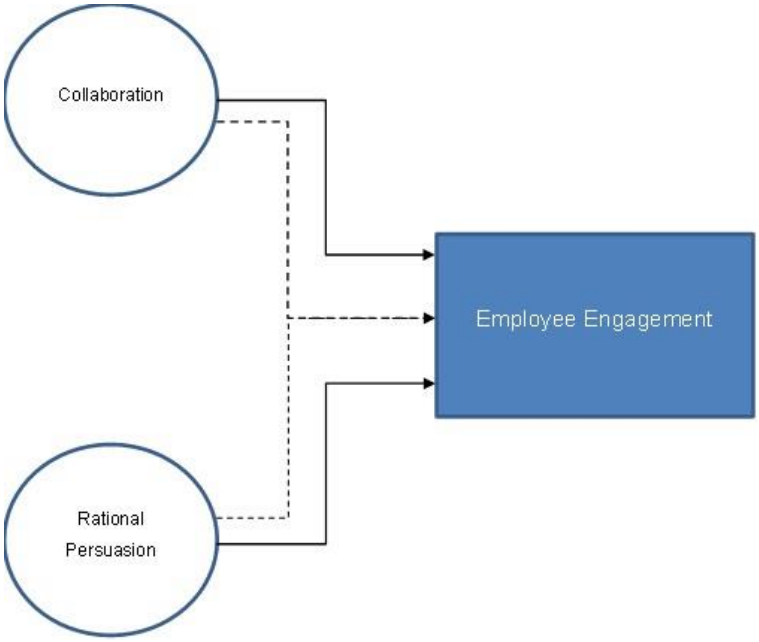


Figure 2: Summary of research constructs

CHAPTER 3: RESEARCH QUESTIONS

This chapter will be linking the literature review, research questions in Chapter 2 to the proposed hypothesis.

3.1. Summary of hypothesises

Building on information obtained in the literature review, out of which the research questions were created, the following hypotheses were proposed. A summary of these can be seen in the figure below:

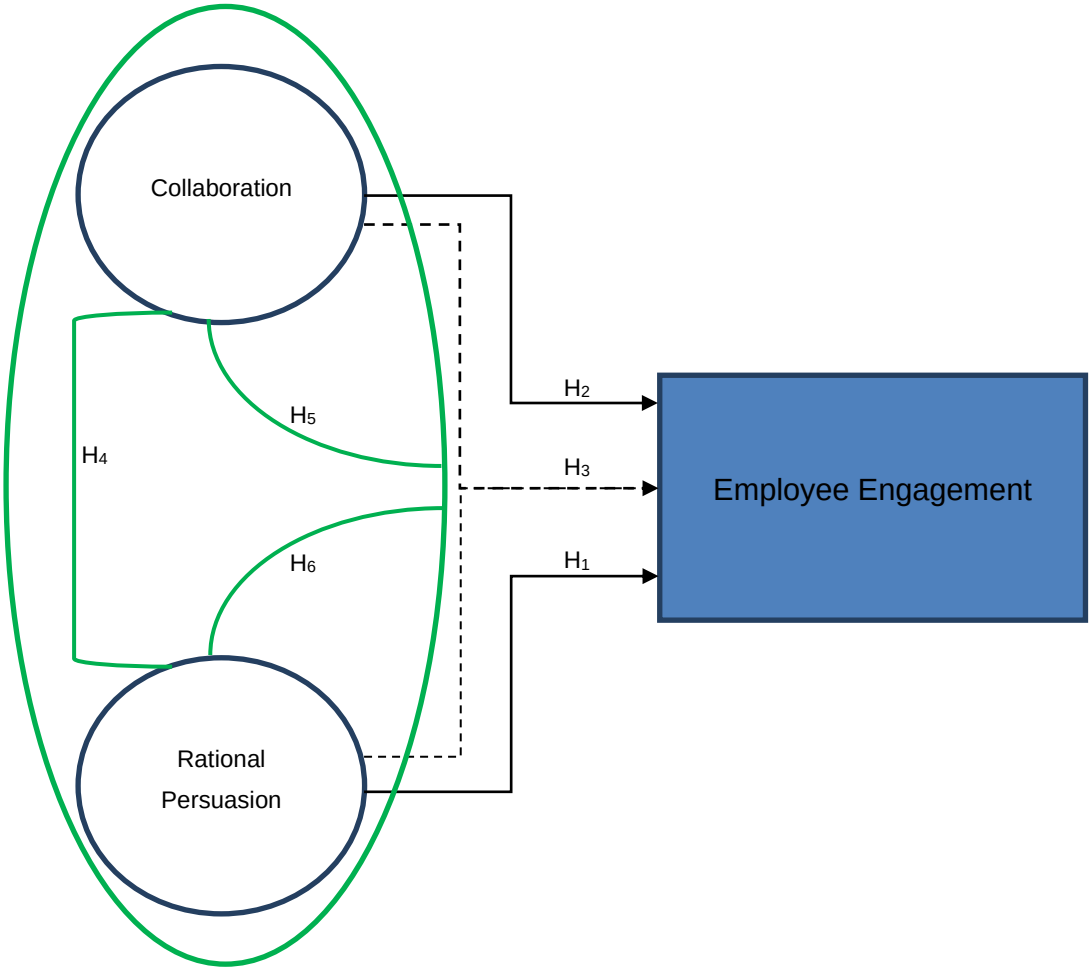


Figure 3: Summary of research questions

3.2. Research hypothesis

The following are the hypotheses that were created from the research questions in Chapter 2. The hypothesis was created to answer new and under-researched areas in the field of leadership, influence and engagement,

3.2.1. Hypothesis 1

Research question 1: Does rational persuasion have a direct positive effect on engagement?

- Null hypothesis one ($H_0$1): Rational persuasion as an influence tactic does not positively affect IWE
- Alternative hypothesis one ($H_1$1): Rational persuasion as an influence tactic positively affects IWE

3.2.2. Hypothesis 2

Research question 2: Does collaboration have a direct positive effect on engagement?

- Null hypothesis two ($H_0$2): Collaboration as an influence tactic does not positively affect IWE
- Alternative hypothesis two ($H_1$2): Collaboration as an influence tactic does positively affect IWE

3.2.3. Hypothesis 3

Research question 3: Do collaboration and rational persuasion have a significant positive effect on engagement?

- Null hypothesis two ($H_0$3): A combination of rational persuasion and collaboration as an influence tactic does not positively affect IWE
- Alternative hypothesis two ($H_1$3): A combination of rational persuasion and collaboration as an influence tactic positively affects IWE

3.2.4. Hypothesis 4

Research question 4: Does rational persuasion have a more significant positive impact

on engagement than collaboration?

- Null hypothesis two ($H_0$4): Rational persuasion as an influence tactic has a smaller effect on IWE compared to and collaboration as an influence tactic
- Alternative hypothesis two ($H_1$4): Rational persuasion as an influence tactic will have a larger effect on IWE compared to and collaboration as an influence tactic

3.2.5. Hypothesis 5

Research question 5: Does a combination of rational persuasion and collaboration have a more significant positive impact on engagement compared to collaboration?

- Null hypothesis two ($H_0$5 Collaboration as an influence tactic has no different effect on IWE as a combination of rational persuasion and collaboration as an influence tactic
- Alternative hypothesis two ($H_1$5): Collaboration as an influence tactic has a more significant effect on IWE as a combination of rational persuasion and collaboration as an influence tactic

3.2.6. Hypothesis 6

Research question 6: Does rational persuasion have a more significant positive impact on engagement compared to a combination of rational persuasion and collaboration?

- Null hypothesis two ($H_0$6): Rational persuasion as an influence tactic has a smaller effect on IWE as a combination of rational persuasion and collaboration as an influence tactic
- Alternative hypothesis two ($H_1$6): Rational persuasion as an influence tactic has a larger effect on IWE as a combination of rational persuasion and collaboration as an influence tactic

3.3. Conclusions

Based on the literature review, five research questions has been identified. Each research question formulated hypotheses that will aid in answering these research questions. The next chapter will guide us through the data analyses used to answer test these hypotheses.

CHAPTER 4: RESEARCH METHODOLOGY AND DESIGN

4.1. Choice of methodology

This chapter will give an outline of the main choise of methodology taken, with defence and motivation for each specific component. A summary of the method used can be seen in the image below.

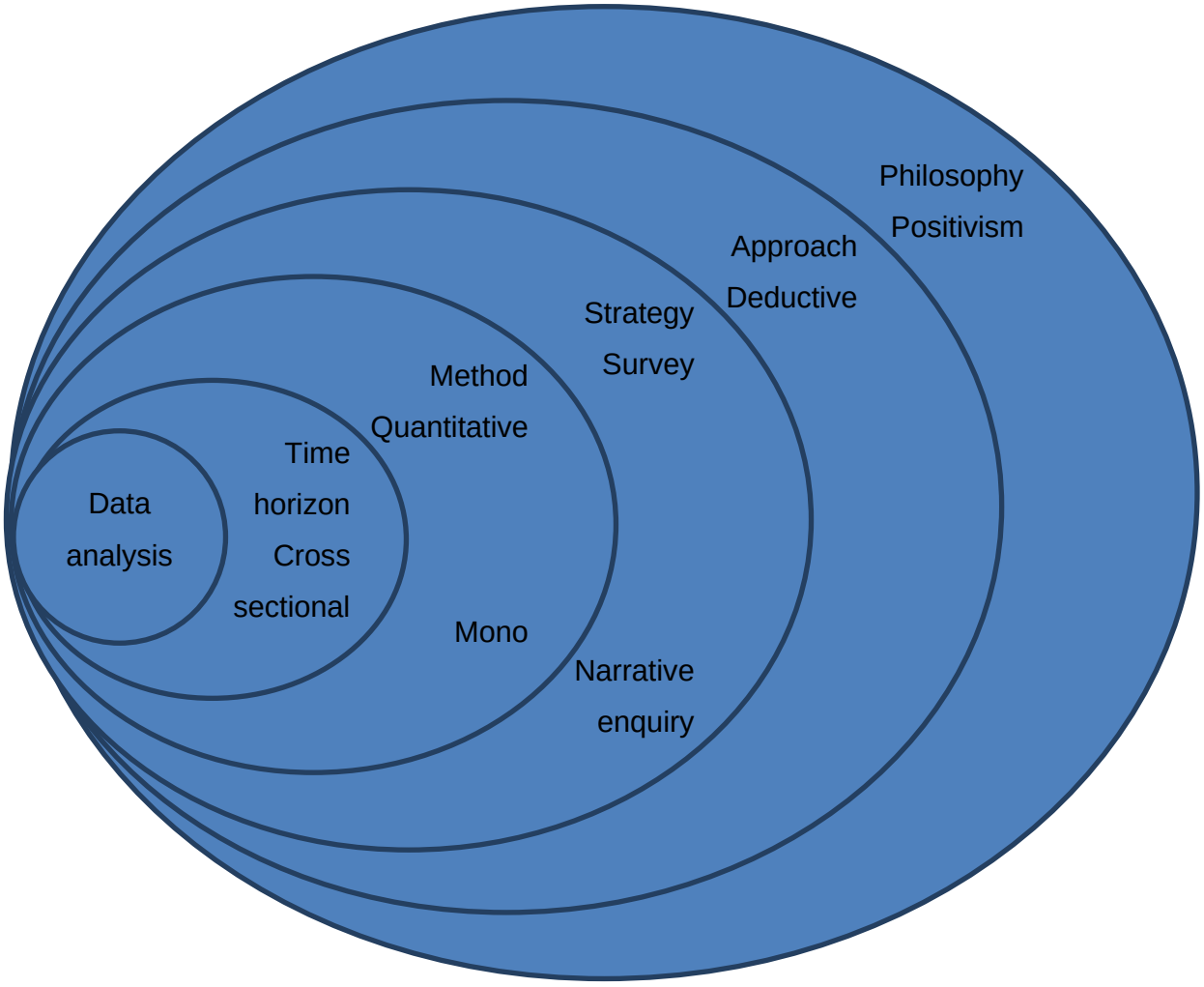


Figure 4: Research onion, (Adapted from "Research union" by Saunders, Lewis & Thornhill (2015)*)*

4.1.1. Purpose of research design

This study aimed to determine the relationship between various influence tactics used individually and in combination and individual engagement. This was done in the

absence of an experiment, and as such will the descripto-explanatory (Catterall, 2000).

The reason for choosing the non-experimental route was to increase the ease of getting access to both respondents and the data they provided.

4.1.2. Philosophy

The study was focused on individuals associating as knowledge workers, with each respondent being asked a set of standardised questions. The data was collected quantitatively. A highly structured data collection technique was used, which resulted in no need for freedom of interpretation. This means the philosophy that was used was positivism (Catterall, 2000).

4.1.3. Approach selected

This study aimed to test a working theory and explain the causal relationships between influence and engagement, focusing on rational persuasion, collaboration, and a combination. The data generated from the quantitative survey was analysed in a structured manner and was used to test the theory and the hypothesis. As a result, the approach was deductive (Creswell & Guetterman, 2019).

If we were aiming to understand the context better, we would have considered using a more flexible analysis procedure typically referred to as inductive (Lo, Rey-Martí & Botella-Carrubi, 2020).

4.1.4. Methodological choices

Although real-life problems often require the use of qualitative and quantitative examination, the practicality of such an approach in a study would have proven overly complex (Catterall, 2000), especially considering the timeframe allocated. As a result, this study only used a single method of data capturing, namely a quantitative approach to data capturing, which meant that the methodological choice was Mono (Catterall, 2000).

4.1.5. Strategy

The study used a narrative where the protagonist portrayed evidence of various influence tactics, individually and in combination. In a narrative enquiry, a researcher

does not observe the experience of a subject but instead takes them to a conceptualised situation in which they can immerse themselves to experience a predetermined context.

The narrative approach is a good way to convey the influence of others (Erez et al., 1986). Narrating is also known as the art of storytelling. It has been used to guide the perceptions and interpretations of a specific event. Daiute (2013) mentions that the power of a narrative *"is not so much that it is about life, but that it is in life"* (Daiute, 2013, p. 1) because it paints a context in which a subject can immerse themselves.

A narrative is beneficial if one requires the subjects to express their feelings and views relative to a specific stimulus rather than on their own experience (Daiute, 2013). It also assists if a particular environmental or cultural setting is required, which might be challenging to simulate under normal conditions (Haydon, Browne & van der Riet, 2018). It thus gives both the subject and the researcher a foundation to engage and explore views based on a pre-determined context (Haydon et al., 2018).

A series of research questions aimed at determining the reader's perception of team engagement was then asked to determine the influence effect. This study was thus a narrative enquiry.

The narrative enquiry will be sent out as a self-administered survey.

4.1.6. Time horizon

Due to limitations on time allocated to complete the study, this study was performed in 2021. No questionnaires were collected before or after this year so that no inferences could be made to any other year. This single time unit view is a cross-sectional research study (Barbur, Montgomery, & Peck, 1994; Creswell & Guetterman, 2019; Pitman, 1998).

4.2. Proposed research methodology

4.2.1. Population

Because the study was focusing on individual work engagement, only individuals would be eligible to participate. The research was limited to knowledge workers only, as it was assumed that influence tactics could work differently for a knowledge worker than

individuals who might work primarily with physical activities.

Knowledge work is that which intellectual and reasoning are used to create knowledge which is then applied. For the purpose of this study, a knowledge worker was one where new knowledge was created and applied to create new products, systems, services, and data (Palvalin, 2017; Tchakoute-Tchuigoua & Soumaré, 2019). Typical knowledge workers could have included developers, engineers, managers, analysts, lawyers, accountants, marketing, and academia.

The population thus had to be employed as a knowledge workers. The respondents would ideally had to have a tertiary education. For example, the population may have included individuals who operated in individual formats at an engineering firm, a consulting firm, an accounting firm or specialised divisions inside a firm that used knowledge workers such as the information technology department.

4.2.2. Unit of analysis

The unit of analysis was defined by what was being analysed, who was providing the data, and on what level of grouping it was analysed (Creswell & Guetterman, 2019; Quinlan, Babin, Carr, Griffin & Zikmund, 2021). The unit of analysis was thus knowledge workers, and the grouping unit of analysis was on the individual level (Creswell & Guetterman, 2019).

The extent to which individual engagement was changed was measured. The unit of analysis of this study was on an induvial level.

4.2.3. Sampling method

When choosing a sampling method and size, consideration was made to limit potential cost and time implications.

Unlike convenience sampling, where questionnaires would have been sent out and accepted by anyone without filtering, this study sampled a specific group exposed to individual influence interactions in a knowledge worker environment.

To determine the sample size, one would need a total population size in probability sampling (Quinlan et al., 2021). Since we did not know the total size of the population, it

was decided to use the non-probability sampling method.

In this type of sampling, the probability of a respondent being used from the population is unknown (Creswell & Guetterman, 2019). That also meant that convenience sampling could not be used to determine any type of random sampling error, and as a result, it could be argued to be incorrect. There are, however, many researchers that used this approach (Creswell & Guetterman, 2019), and it is widely accepted in the academic realm, and as such, it was decided to continue to use this approach.

Due to the researcher's background, industry networks could be used in the original sampling campaign. Because the survey was shared amongst colleagues and networks, snowball sampling was most probably also introduced.

The research did not have a bias towards any industry, but the effect of snowballing could result in many questionnaires being filled in by many individuals from the same industry or firm. This could have resulted in sampling bias due to the interdependence of the initial individuals and their respective networks. However, this did not seem to be a significant risk as the initial sample was chosen to match the required population closely. There was additionally also questions in the survey that acted as gatekeepers. It ensured that any respondents falling outside the target population was excluded from the study.

4.2.4. Measurement instrument

In qualitative research, the researcher is the primary measurement instrument (Barbur, Montgomery & Peck, 1994). In this case, the research instrument in this quantitative study took the form of a digital survey in narrative form, to be distributed electronically via an online data capturing program.

The chosen approach was to use a self-administered cross-sectional survey, whereby the respondents filled in the survey independently. This was done to improve ease of data collection and because it worked with the proposed measurement instrument.

The first page had a summary of the nature of the survey, the GIBS declaration, and a summary of the survey structure, which includes the expected time to complete the survey. It was envisioned that the survey takes no longer than 10 minutes to complete to

maintain participant engagement.

The second page was one out of three possible short narratives. The narratives took the form of a business setting, where a specific dilemma needed to be overcome. The protagonist did then clearly portray evidence of various influence tactics, individually or in combination (Depending on the survey you received).

The third page required the respondent to submit demographic information (Such as age, race, sex etc.) and labelled “Respondent Context”. The context of the respondent was vital as it will allow for descriptive statistics, assist in ensuring that the sample size was homogenous, and help reduce the ability of any demographic bias.

The fourth page will ask questions specific to the respondents' view on the protagonist's influence tactics might have had on individual work engagement. The survey questions were informed by the Utrecht Work Engagement Scale (UWES) (Schaufeli et al., 2006), used extensively to measure work engagement on an individual level.

4.2.5. Likert scale

The Likert scale was developed in 1932, and since then, has become one of the most widely used psychometric tools used by academics and scholars (Joshi, Kale, Chandel & Pal, 2015). It has a 7 point ordinal scale, with the first being linked to “strongly disagree” and point seven being “strongly agree”.

Historically there has been much debate regarding using a five-point instead of a seven-point scale. The seven-point Likert scale has been scrutinised over the years but has generally been an effective tool to measure social studies (Joshi et al., 2015). As a result, the seven-point Likert scale will be used in this research.

4.2.6. Pretest

Pretesting was conducted whereby the survey was sent out to five typical respondents to determine if it worked effectively, was not ambiguous, and the functionality worked well (Catterall, 2000).

These respondents had the opportunity to give constructive criticism related to the survey, which was used to optimise the survey before sending it out for the formal

survey process.

The pre-test was also crucial as it allowed the researcher to test the back end of the program, which related to data capturing and to ensure that the randomisation function was working as intended. Lastly, the pre-test helped the researcher answer the fundamental questions of whether the responses would allow him to answer his research questions – it was deemed sufficient in answering the research questions.

Feedback included related to grammar and the length of the survey. There was also mention of removing the aim on the cover page, as it was believed to pre-empt the respondents into a specific thought pattern which was that, in general, it took under 10 minutes to complete each survey.

After all the changes were incorporated, the researcher's supervisor accepted everything, and the survey was deemed ready to be used.

4.2.7. Data gathering process

The online data capturing program that was used was a German-owned company called SoSci. It was specifically chosen as it allowed for the randomisation of specific components of the survey. Because the research required three different randomly generated narratives, this function was imperative. Several other platforms could also allow for randomisation, but SoSci was chosen due to its solid foundation, anonymity, and cost-effectiveness.

As a result, no face-to-face interaction between the respondents and researchers was required. It was envisioned that the survey would take approximately 10 minutes to complete.

SoSci could randomly send specified questions, allowing for more data to be captured by each respondent. Additionally, it stored the data and allowed for exporting in formats such as Excel, which could be imported into SPSS for further analysis. Additionally, it automatically generated a codebook.

The online survey approach benefited from reaching a large number of respondents remotely over a short period and was seen as the most appropriate form of gathering

data.

The quantitative approach had the advantage of having structured questions, which avoids the risk of “going off track”, often associated with qualitative research (Cassell, 2018).

The data that was gathered made use of existing measurement scales that has already been tested and validated.

4.2.8. Data Storage

The data obtained from this study and all work done to complete this study have been stored on a personal notebook, automatically backed up by Microsoft OneDrive and saved to on the university data upload folder for a minimum of 10 years. The backup occurs in real-time, and Microsoft OneDrive is a cloud-based storage platform with industry-accepted levels of security. This means that if the device on which the data was stored were to get lost, stolen or broken, the data would still be safe in Microsoft OneDrive.

4.2.9. Limitations

Because the researcher used a single instrument to collect data, there was an inherent risk of common method variance.

The researcher was not an expert in writing the narrative stories required to set the scene for the narrative enquiry, and as such, the interpretation of the story could have impacted the effectiveness of the study.

Although respondents might be substantial in size, another potential limitation could be that the respondents were possibly limited to a tiny group in terms of tertiary qualifications. Additional work could be considered to expand to various other demographics.

Furthermore, this research focused only on a small number of influence tactics in combination, and there could be additional scope for the remainder in other combinations.

Lastly, it should be noted that no moderators were used in this study, and it could be reasoned that situational moderators could play a role in individuals' responses.

4.2.10. Quality controls

The questionnaire included a section in determining if the respondent was associated with a knowledge worker and whether they were currently working. If the respondent answered no to any one of those questions, their data were excluded from the study.

The researcher used analytical software such as SPSS, subject to various statistical tests before being accepted. These tests typically include Cronbach's Alpha, Levene' test and many others, which will be discussed in detail in the sections to follow.

4.3. Analysis approach

The analysis will be done using IBM's SPSS software. Firstly, the data collected was used to create descriptive statistics of the respondents who answered the survey. After that, the data were tested for reliability. Thirdly, the data underwent all the pre-requisites for various confirmation and exploratory factor analyses. The results from the data analysis were then used to test the various hypotheses of the study.

4.3.1. Level of significance

For all statistical tests, a 95% confidence interval was used.

4.3.2. Effect of size

Some researchers maintained that population size does not affect sample size. However, it does reduce variation inherent to the population (Creswell & Guetterman, 2019; Quinlan et al., 2021).

Increasing the sample size would have thus resulted in a smaller confidence interval required to be used in statistical analysis of the data and directly reduces sampling error (Bonett & Wright, 2015).

Cohen (2018) has created a process to determine the minimum allowable size. He believes that four variables need to be taken into account when determining the minimum samples size. These include significance (α), power (β), the effect of size (EV)

and the number of independent variables.

The significance criteria are the probability of accidentally rejecting the null hypothesis (False positive). This is also commonly referred to as a Type I error. Generally, the significance criteria (α) is usually set to 0.05, which translates to a 95% confidence interval (Cohen, 2013). This

Similarly, power is related to the probability of accidentally rejecting a false null hypothesis (False negative). This is typically referred to as a type II error. Generally, the power number is a factor of four more significant than the significance criterion. This results in the power value (β), generally being set as 0.2 (Cohen, 2013).

This will result in Type II errors being four times less likely to occur than Type I errors.

The effect of size (ES) is the amount to which there is a discrepancy between H_1 and H_0. Each test has its own ES calculation and, and as such, is unique (Cohen, 2013).

Based on Cohen's work, the minimum sample size that will have a medium effect, at a 95% confidence interval, is 52, although a number larger than 300 might be required for factor analysis (Cohen, 1992).

4.3.3. Relationships between constructs

It was essential to test the internal significance of the difference between results being generated. The degree to which the two sets of independent variables created a variation related to the dependent variable could be measured to determine if it is statistically relevant.

Karl Pearson's r-test was used to measure this phenomenon to determine if differences in respondent reactions are statistically significant. To use Karl Pearson's r-test, a bivariate normal distribution is present between the comparing data sets. Without this, the researched cannot make statistically relevant conclusions regarding the study's outcome (Lin, 1989)The Karl Pearson's r-test can be seen below (Lin, 1989):

$$r = \frac{n(\sum x_i y_i) - \sum x_i \sum y_i}{\sqrt{[n\sum x_i^2 - (\sum x_i)^2][\sum y_i^2 - (\sum y_i)^2]}}$$

Where:

- r Karl Pearson's r-value
- n Sample size
- x_i Variable one
- y_i Variable two

The correlation gives results ranging between -1.0 and +1.0. These values denote the extent to which a correlation exists. +1.0 results in a perfectly positive correlation, whereas -1.0 relates to a perfectly negative correlation. If the answer is 0, then there is no correlation found between the two variable sets. All tests were conducted at a 95% confidence interval.

4.3.4. Internal reliability

It was essential to test the validity and reliability of any research instrument being used. Cronbach's Alpha was one of the most widely used calculations which test the reliability and consistency of the data generated using the specified measurement instrument. This indicator was often used to ensure that all the questions measured the same underlying construct (Pallant, 2020).

Cronbach's alpha tested the consistency of the data generated from one measure to the next. This degree of consistency related to the size of the error the measurement instrument generated when all other variables remained constant (Cronbach & Shavelson, 2004). This meant that it would ensure that the questions in the survey were related to each other if the same construct was being tested (Bonett & Wright, 2015). The calculation for Cronbach's alpha can be seen below (Cronbach, 1951):

$$a = \frac{k}{k-1}\left(1 - \frac{\sum s_i^2}{s_t^2}\right)$$

Where:

- a Cronbach's Alpha
- k Number of conditions being assessed in the measurement
- s_i The standard deviation from each of these conditions
- s_t The total standard deviation from all conditions

This method was often used where questions were posed in a Likert Scale format (Cronbach & Shavelson, 2004), as was the case in this study on pages four and six of

the survey. Cronbach's alpha could not be used for non-categorical data, and as such, was not applied to page two of the survey where it was primarily used for descriptive purposes.

All questions that had to have a Cronbach's Alpha higher than 0.7, or else it had to be considered removed the question as it could yield results with a lower value. This metric was very sensitive to the size of the scale, and it is common to receive low values for scales of 10 or less (Pallant, 2020). Fortunately for the researcher, the UWS had 17 scales.

It was also important to realise that the scale had to have all items coded in the same direction, and as such, if any questions were negatively worded, they had to be reverse coded before running the test.

4.3.5. Questionnaires

The study will make use of well-accepted engagement questionnaires will be used to test IWE) (Schaufeli et al., 2006).

As a result, no interpretation of senses was used to make any conclusions that could pose an inherent bias (Pitman, 1998).

CHAPTER 5: OUTCOME OF ANALYSIS

5.1. Introduction

In this chapter, we will go through the detail of the analysis approach. We will be going through a summary of what was done to prepare the data, details on the descriptive statistics, and tests for reliability and correlation. After this, we will go through the primary analysis techniques used to test the research hypotheses.

5.2. Data preparation

5.2.1. Editing

The data was exported from the SoSci platform into an excel sheet containing the raw data. The raw data had to be edited to represent the target population and accurately analysed using the IBM SPSS analytical software.

The first phase removed all the data, which was incomplete. The second phase removed data from respondents that did not fit the sample population, which included individuals who were not currently working and those who did not associate with being a knowledge worker. The fourth phase was to remove data from respondents that seemed to be invalid measured as a function of the time spent to complete the survey.

The final phase was to change the date format in excel in order to be accurately analysed by IBM SPSS.

5.2.2. Data Entry

The edited excel data was then imported into IBM SPSS analytical software as is.

5.2.3. Coding

The final phase of the data preparation was to code the data to be accurately analysed. All the descriptive statistics were set to Nominal based on being selection based, whilst the results of the research questions analysed using a Likert scale were set to ordinal, as it was sale based. There were serial numbers, timestamps and time-based values set as text, time, and metric, respectively.

5.3. Descriptive analysis

The following section will give an outline describing the population that has been surveyed.

5.3.1. Survey timeline

The interview process was conducted over 10 weeks between August and October 2021.

The questionnaire was opened 520 times, of which only 154 respondents completed the survey in its totality. Of this group, only 132 passed the criteria for the survey (Namely if they are currently working and if they consider themselves a knowledge worker). Three data points were removed as the respondents completed the survey in under 30 seconds and chose the same rating on all items throughout the survey, questioning the integrity of the data points. A summary of the progress through the questionnaire can be seen in the figure below. The difference between the “Opened survey” and “Started page 1” sections relate to someone that the survey opens for longer than three seconds.

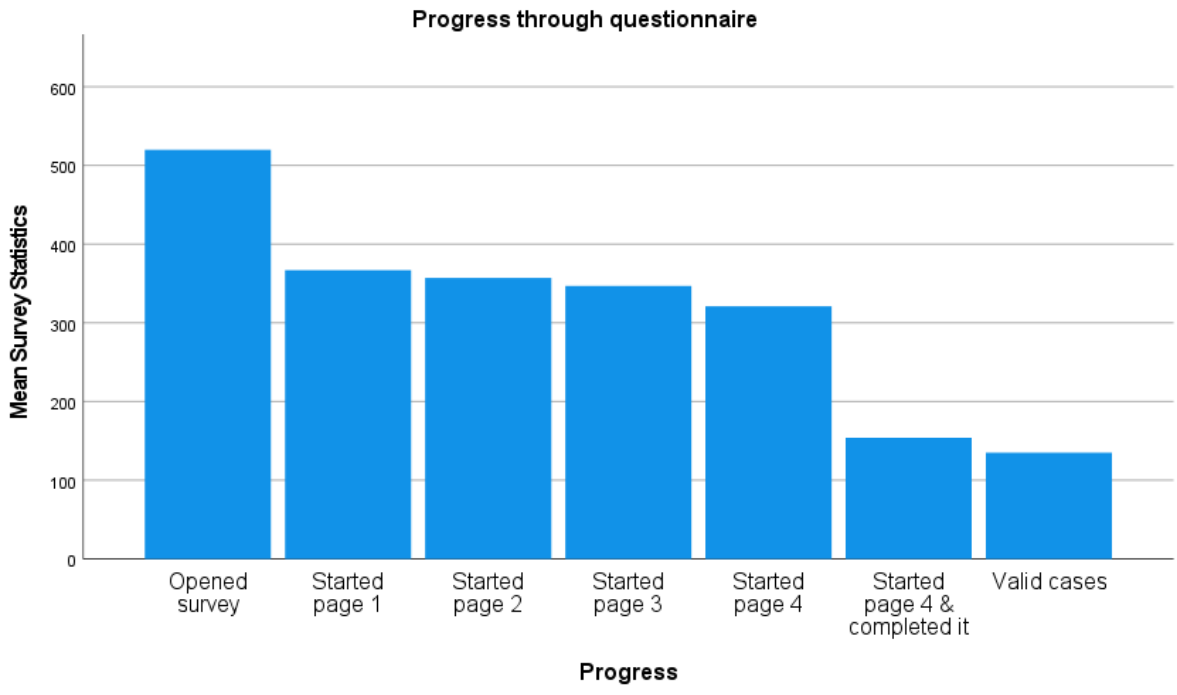


Figure 5: Progress through questionnaire

The figure on the next page showd the frequency of respondents over the campaign life. From this point forward only, valid respondents will be analysed for the study.

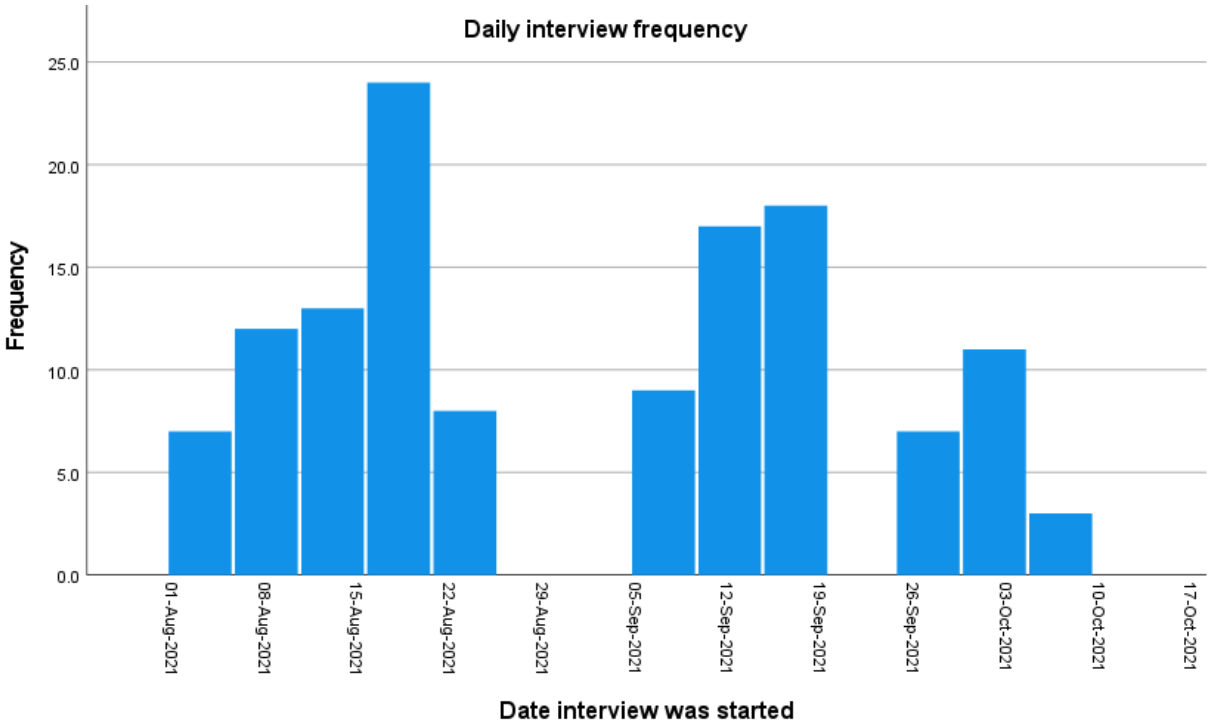


Figure 6: Date interview completed

The survey was initially circulated amongst friends and colleagues in the industry. It was later shared with fellow researchers at GIBS, whose intern resulted in many valid respondents (See 15 to 22 August 2021). It was later circulated with members of LinkedIn who belonged to an engagement group. The same individuals were contacted iteratively to ensure a maximum number of respondents had the opportunity to complete the survey.

5.3.2. Age

The table on the next page summarises the age of the 129 respondents that completed the survey. We can see that most of the respondents were between the age of 31 and 40, accounting for 60.47% of the total sample. This is to be expected as it closely resembles the researcher's age, and it can be assumed that his network could be more skewed to individuals of a similar age. The second-largest group was the ages 41 to 50, accounting for 20.93% of the sample, followed by the ages larger than 50 (13.18%).

Table 2: Age of respondents

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<25	1	0,78	0,78	0,78
	25-30	6	4,65	4,65	18,6
	31-40	78	60,47	60,47	79,07
	41-50	27	20,93	20,93	100
	>50	17	13,18	13,18	13,95
	Total	129	100	100	

The younger ages (younger than 31) accounted for only 5.93% of valid survey cases. This is possible because they did not feature much in the areas where the surveys were distributed.

5.3.3. Race

Looking at the race of the valid respondents, one can see that the vast majority of respondents were white (67.44%). The second-largest ethnic group was black, accounting for 20.16%, followed by Indians, accounting for 9.30%. A minority of 3.10% identified with races not mentioned in the demographics portion of the survey.

Table 3: Race of respondents

Race

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Black	26,00	20,16	20,16	20,16
	Indian	12,00	9,30	9,30	29,46
	Other	4,00	3,10	3,10	32,56
	White	87,00	67,44	67,44	100,00
	Total	129,00	100,00	100,00	

5.3.4. Gender

There was a slightly larger response rate from males compared to females. Males accounted for 61.24% of all the valid surveys completed, whereas females accounted for 38.76%.

Table 4: Gender of respondents

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	50,00	38,76	38,76	38,76
	Male	79,00	61,24	61,24	100,00
	Total	129,00	100,00	100,00	

5.3.5. Salary

Tacking a look at the annual salary of the respondents, the surveyed group was a high earning group, giving further support that the sample size was indeed knowledge workers. We can see that more than half the respondents earned more than R900,000 per annum (56.59%). Those earning between R600,000 and R900,000 were 16.28%, and those earning lower than R600,000 were only 18.61%. There was a small group of 8.53% who preferred not to disclose their annual salary.

Table 5: Annual salary of respondents

Salary

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Prefer not to say	11,00	8,53	8,53	36,43
	<R300k	5,00	3,88	3,88	3,88
	R300k-R600k	19,00	14,73	14,73	51,16
	R600k-R900k	21,00	16,28	16,28	67,44
	R900k-R1200k	42,00	32,56	32,56	100,00
	>R1200k	31,00	24,03	24,03	27,91
	Total	129,00	100,00	100,00	

5.3.6. Highest level of education

Looking at the level of qualification, 92.70% had at least one tertiary qualification, with only 9.30% having only completed high school. The largest group is those who have honours degrees (37.21%), followed by Master's degrees (24.81%). There were 22.48% of the respondents with only a bachelor's degree and 6.20% who are educated up to a doctorate level.

Table 6: Highest qualification of respondents

Highest Qualification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High School	12,00	9,30	9,30	37,98
	Bachelor's degree	29,00	22,48	22,48	22,48
	Honours Degree	48,00	37,21	37,21	75,19
	Master's Degree	32,00	24,81	24,81	100,00
	Doctor of Philosophy	8,00	6,20	6,20	28,68
	Total	129,00	100,00	100,00	

5.3.7. Persuasion tactic used

Because SoSci uses a random number generator which allows each persuasion tactic to have an equal opportunity to be drawn, the various influence tactics have an equal opportunity to be drawn in each case (Which is 33.33% for the three cases).

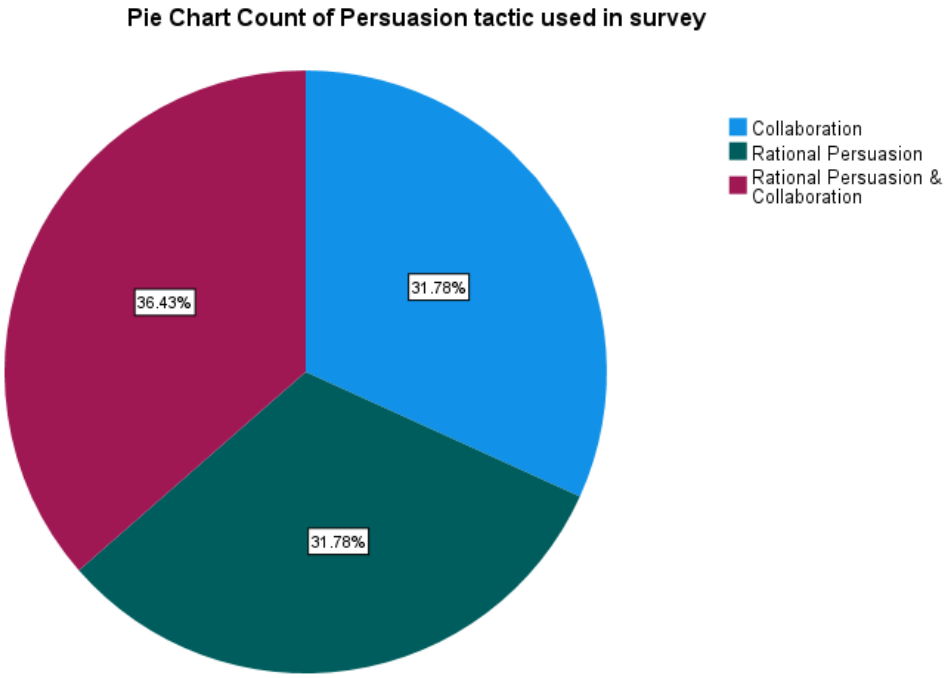


Figure 7: Persuasion tactic used for analysis

This equal opportunity is given at the start of each survey, but because some respondents did not fit the target population and only partially completed the survey, the

result differs slightly from the original 33.33%. It can be seen in the pie chart above that 31.78% of the valid respondents received the collaboration stimuli, 31.78% the rational persuasion stimuli, and 36.43% completed the combination of rational persuasion and collaboration stimuli.

5.3.8. Descriptive statistics of those answering the questionnaire

An overview of the responses to the research instrument can be seen in the table below. The lowest mean recorded was 4.62, from the question “You will forget everything else around you”. The highest mean recorded was from the question “You will be proud of the work you do” and recorded a value of 6.03.

Table 7: Descriptive statistics of those answering the questionnaire

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
You will be bursting with energy	129	3	7	5.67	.930
The work you do will be full of meaning and purpose	129	3	7	5.94	.882
Time will fly	129	1	7	5.58	1.236
You will be strong and vigorous	129	3	7	5.57	.975
You will be enthusiastic about your job	129	1	7	5.95	1.007
You will forget everything else around you	129	1	7	4.57	1.605
Your job will inspire you	129	2	7	5.69	.975
You would like to go to work when you wake up in the morning	129	1	7	5.63	1.061
You will be happy when you are working intensely	129	2	7	5.73	1.006
You will be proud of the work that you do	129	4	7	6.09	.814
You will be immersed in your work	129	3	7	5.77	.948
You will be able to continue working for very long periods at a time	129	2	7	5.53	1.008
Your job will be challenging	129	1	7	5.74	1.174
You could get carried away when working	129	1	7	5.33	1.337
You will be mentally resilient	129	2	7	5.59	1.035
You are worried that it might be difficult to detach yourself from your job	129	1	7	4.64	1.500
You will always persevere, even when things do not go well	129	2	7	5.50	1.193
Valid N (listwise)	129				

A 7-point Likert scale was used, one being “Strongly disagree” and seven being “Strongly agree”. Based on the results, it is clear the results were mainly located in the upper-middle quadrant on the scale.

5.4. Test for reliability & correlation

5.4.1. Test for correlation

Parson’s correlation was used to test for correlation. For the items to correlate, they need to have a Sig value lower than 0.05. All the questions had Sig values larger than 0.05 compared to the total engagement score. This means that most of the questions are seen to have correlations with each other. The detailed table can be seen in the Appendix section of the report (Appendix E – Validity).

5.4.2. Test for reliability - Cronbach’s Alpha

Internal reliability for the constructs was evaluated using Cronbach’s Alpha. A value larger than 0.7 is generally accepted as sufficient, with the higher the value, the better the internal reliability. The table below shows the outcome of the overall Cronbach’s alpha using a 95% confidence interval.

Table 8: Cronbach's Alpha

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.913	.925	17

According to a study done in 2009, the Utrecht Work Engagement Scale has good internal consistency, with a Cronbach’s alpha of at least 0.75 (Seppälä et al., 2009). In this study, Cronbach’s alpha was 0.91, which is far above 0.70. We can thus assume that the reliability is good.

It is worthwhile looking at whether we can improve the internal reliability by removing

some of the questions. The table below summarises the effect on the overall Cronbach's Alpha. It would give an idea of the outcome if any of the questions were removed from the survey.

Table 9: Item total statistics

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
You will be bursting with energy	88.86	135.480	.681	.659	.906
The work you do will be full of meaning and purpose	88.59	136.322	.679	.651	.906
Time will fly	88.95	133.474	.563	.480	.909
You will be strong and vigorous	88.96	134.428	.694	.628	.905
You will be enthusiastic about your job	88.57	133.496	.712	.664	.905
You will forget everything else around you	89.95	135.435	.350	.376	.919
Your job will inspire you	88.84	133.590	.734	.660	.904
You would like to go to work when you wake up in the morning	88.90	131.701	.749	.700	.903
You will be happy when you are working intensely	88.80	133.209	.726	.695	.904
You will be proud of the work that you do	88.43	139.294	.579	.499	.909
You will be immersed in your work	88.76	135.293	.675	.629	.906
You will be able to continue working for very long periods at a time	88.99	135.398	.625	.460	.907
Your job will be challenging	88.78	135.140	.533	.390	.910
You could get carried away when working	89.19	134.486	.478	.458	.912
You will be mentally resilient	88.94	134.605	.641	.575	.907
You are worried that it might be difficult to detach yourself from your job	89.89	133.879	.431	.426	.915
You will always persevere, even when things do not go well	89.02	132.242	.635	.615	.906

Comparing the Cronbach's alpha if deleted column to the overall Cronbach's alpha, it is clear there is no significant increase in the overall Chrombach alpha; as a result, all questions was kept.

5.5. Confirmative factor analysis (CFA)

5.5.1. Assessing the suitability of data for factor analysis

Factor analysis is a technique used to reduce the number of variables and is specifically helpful when many variables are present. It is, in essence, a variable reduction technique (Pallant, 2020).

Although there is little consensus in the academic world regarding the minimum amount required to use factor analysis successfully, a value of at least 300 should provide satisfactory results (Tabachnick, Fidell & Ullman, 2007). It has been noted that smaller sample sizes could also work if one has several high loading markers.

Viewing the tabled label correlation matrix in Appendix F, we can see that most of the questions have values larger than 0.3, meaning there is a relationship between each question.

There are, however, three questions that do not have values larger than 0.3, these include “You will forget everything else around you”, “You could get carried away when working”, and “You are worried that it might be difficult to detach yourself from your job”.

It could thus mean that there is no relationship between the questions, and we could be considered removing these questions. For this study, it has been decided to keep them in the study.

The Kaiser-Meyer-Olkin (KMO) technique is used to determine if the samples can be factorized into smaller constructs to improve ease of analysis. To consider factor analysis, we need to prove that two conditions are met. Firstly, the KMO value needs to be larger than 0.6 (Kaiser, 1970, 1974), and secondly, the Bartlett test of sphericity should be lower than 0.05 (Bartlett, 1954).

Table 10: KMO & Bartlett’s Test

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.908
Bartlett's Test of Sphericity	1242.857	1387.707
	136	136
	.000	.000

Because the KMO is larger than 0.6, and the sig value is less than 0.05, we conclude that factor analysis is suitable.

5.5.2. Determining how many components can be extracted

One of the most widely used techniques is Kaiser's "eigenvalue greater than 1" rule (Pallant, 2020). This technique states that only factors with values larger than one can be extracted. Below we can see the outcome of this technique.

Table 11: Eigenvalue 1 Rule

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.994	47.026	47.026	7.994	47.026	47.026	7.172	42.191	42.191
2	1.727	10.157	57.183	1.727	10.157	57.183	2.549	14.992	57.183
3	.977	5.747	62.930						
4	.881	5.183	68.113						
5	.800	4.705	72.818						
6	.652	3.836	76.654						
7	.597	3.510	80.164						
8	.550	3.236	83.400						
9	.500	2.939	86.339						
10	.426	2.508	88.847						
11	.371	2.183	91.030						
12	.352	2.073	93.104						
13	.317	1.864	94.968						
14	.246	1.446	96.413						
15	.238	1.398	97.811						
16	.201	1.180	98.992						
17	.171	1.008	100.000						

Extraction Method: Principal Component Analysis.

Because the extraction sums of squared loadings have two components greater than one, we can group the research questions into two components. This means that these two components will represent 57.18% of the variance.

According to the literature, there are three components:igour, dedication, and absorption (Seppälä et al., 2009). One reason why the loadings do not align could be because of the sample size. We obtained 129 valid data points in this study, much lower than the 300 Tabachnich et al. (2007) required. A larger sample size could potentially have improved the loadings to align with the literature.

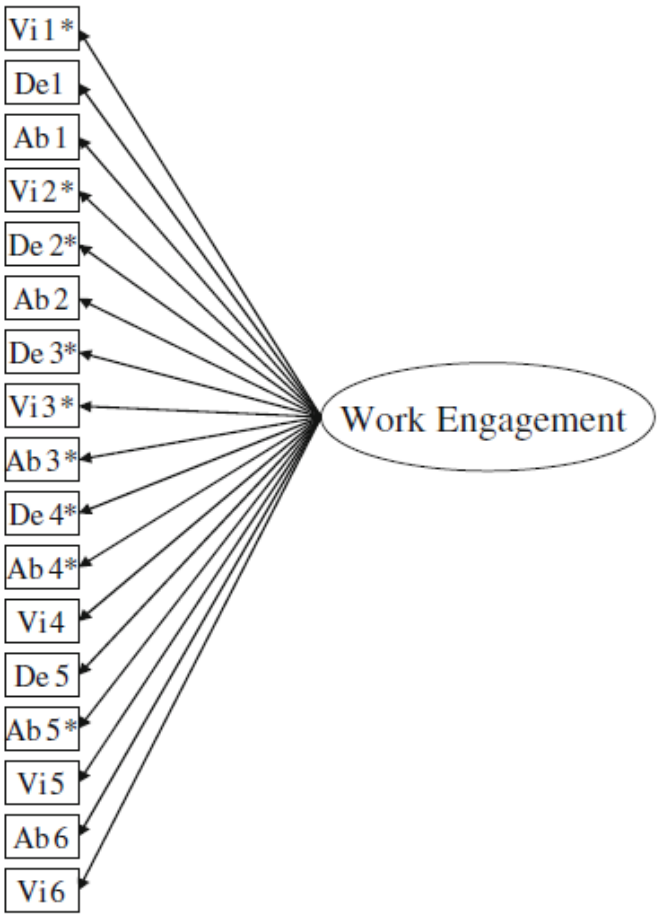


Figure 8: PCA proposed for this study (Seppälä et al., 2009)

As this does not correspond with the literature, we will be reverting to exploratory factor analysis using principal component analysis (PCA), an example of which can be seen in the above figure.

5.6. Exploratory factor analysis (EFA)

Exploratory factor analysis is used to analyse the XXXXX.

We will be using the analysis of variance (ANOVA) method to do our analysis. This will tell us whether there are statistical differences in the means of the three scenarios. The following assumptions will need to be satisfied before the technique can be used:

1. There is only one dependent variable measured at the continuous level
2. At least one dependent variable that has three or more categorical, independent groups
3. Independence of observations, which means there is no relationship between the observations in each group of the independent variable or the groups themselves
4. No significant outliers in the groups of the independent variable in terms of the dependent variable
5. The dependent variable is normally distributed for each group of independent variables
6. There is a homogeneity of variances

These assumptions will need to be validated individually. The section that follows will give a brief validation of each assumption.

5.6.1. Testing assumptions

5.6.1.1. Assumption one

Assumption one states that there is only one dependent variable measured at the continuous level. IWE is the dependant variable in this specific case. As per Figure 8, we will be analysing this metric using principal component analysis. The following formula was used to calculate IWE:

$$Individual\ work\ engagement = \frac{\sum_1^{17} Individual\ work\ engagement\ scale\ questions}{17}$$

It can be confirmed that the dependent variable is measured on a continuous level.

5.6.1.2. Assumption two

Assumption 2 requires at least one dependent variable with three or more categorical, independent groups. In this case, the dependent variable is IWE, and there are three independent groups, namely rational persuasion, collaboration, and a combination of rational persuasion and collaboration. As such, assumption two is validated.

5.6.1.3. Assumption three

Assumption three requires the observations to be independent. Considering that each of the independent groups generated data from a specific narrative and the respondents are not related in any way, we can assume the assumption 3 is also validated.

5.6.1.4. Assumption four

Assumption four states that there should be no significant outliers in the groups of your independent variable in terms of the dependent variable. Below we can see the descriptive statistics of the IWE.

Table 12: Descriptive statistics on IWE

Descriptive statistics

						95% Confidence Interval for Mean			
		N	Mean	Std. Deviation	Std. Error	Lower Bound	Upper Bound	Minimum	Maximum
IWE	Rational persuasion	41	5,91	0,51	0,08	5,75	6,07	4,59	7,00
	Collaboration	41	5,31	0,86	0,13	5,04	5,58	3,41	6,76
	Rational persuasion & collaboration	47	5,48	0,65	0,09	5,29	5,67	3,06	6,65
	Total	129	5,56	0,72	0,06	5,43	5,69	3,06	7,00

We can see the minimum and maximum of the scenarios are between 3.06 and 7.00, with a standard deviation between 0.51 and 0.86. Comparing the minimum and maximum values with the standard deviations around the means, no significant outliers, and the assumption is subsequently validated.

5.6.1.5. Assumption five

Assumption five requires that the dependent variable is normally distributed for each group of independent variables. To test this, we plot the IWE dependent variable as a function of each independent variable.

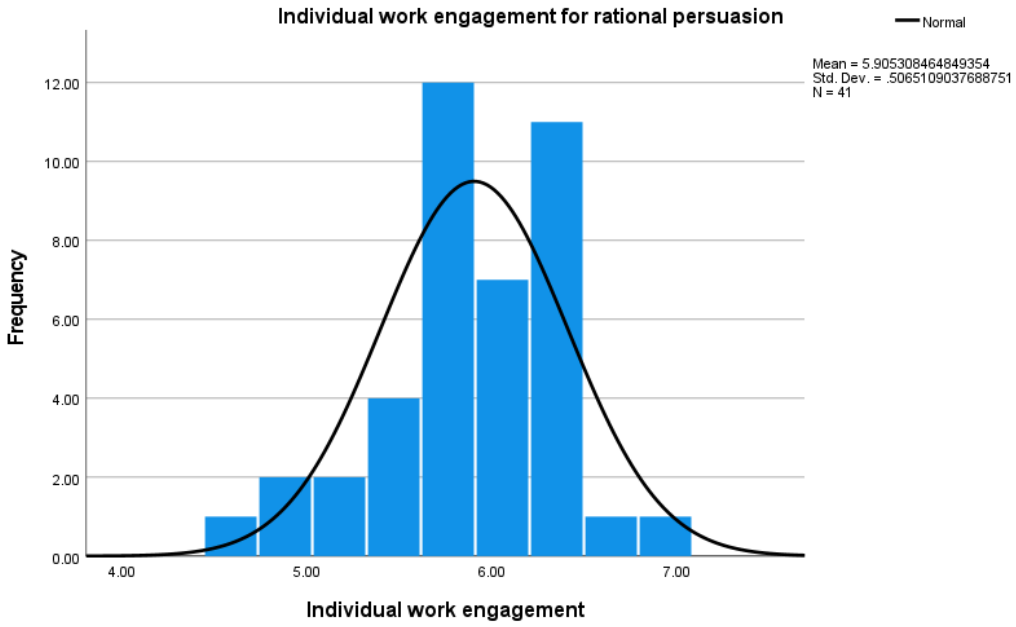


Figure 9: Histogram of data from IWE metric for rational persuasion independent variable

The dependent variable (IWE) is normally distributed around the mean in the rational persuasion independent variable.

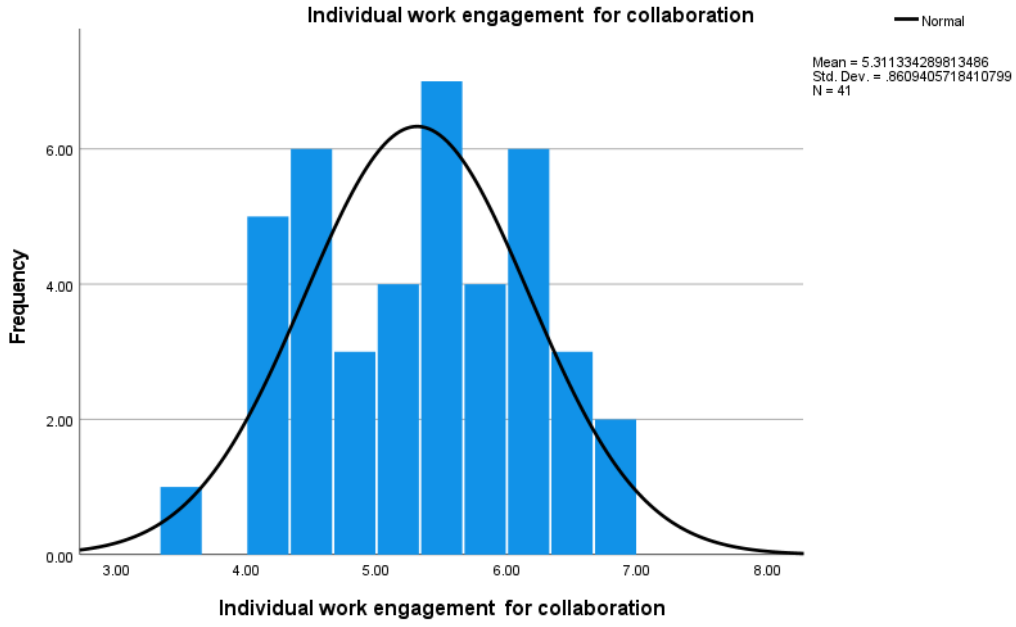


Figure 10: Histogram of data from IWE metric for collaboration independent variable

The dependent variable (IWE) is normally distributed around the mean in the collaboration independent variable, although with a slightly wider standard deviation as compared to rational persuasion on its own (0.51 compared to 0.86 in this case).

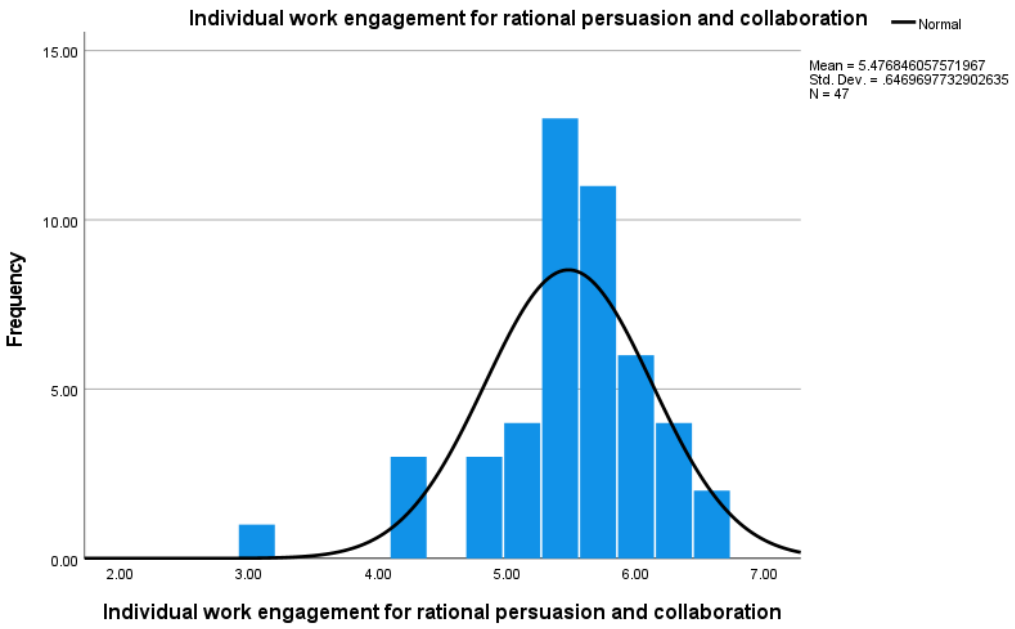


Figure 11: Histogram of data from IWE metric for rational persuasion and collaboration independent variable

Lastly, the dependent variable (IWE) is normally distributed around the mean by the collaboration and rational persuasion independent variable.

As such, we can see that there is a normal distribution of each of the three independent variables around the mean. Assumption four is validated.

5.6.1.6. Assumption six

Assumption six requires the variances to be homogeneity in each group. To test this, we revert to Levene's Test for Homogeneity of Variances. According to Levene's test, the Sig. Value needs to be more than 0.05 to satisfy the assumption.

Table 13: Test for homogeneity

Tests of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
IWE	Based on Mean	7,14	2,00	126,00	0,00
	Based on Median	6,72	2,00	126,00	0,00
	Based on Median and with adjusted df	6,72	2,00	114,55	0,00
	Based on trimmed mean	7,09	2,00	126,00	0,00

Looking at the table above, the Sig. value between the means is 0.00, which means we have violated the assumption of homogeneity of variances. This means we will have to revert to the Games Howell Post Hoc Analysis.

5.6.2. Analysis of variance (ANOVA)

The ANOVA will tell us whether there are statistical differences in the means of the three scenarios on the dependent variable, IWE. When running the ANOVA, we need to look at the Sig. value, if it is lower than 0.05, there is a statistical difference between the groups.

Table 14: ANOVA

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
IWE	Between Groups	7.749	2	3.874	8.251	.000
	Within Groups	59.165	126	.470		
	Total	66.914	128			

We can see from the table above that the Sig. value is 0.00, which means there is a statistical difference between the groups. At this point, we do, however, not know between which groups these differences occur. To solve this, we turn to the Games-Howell post hoc analysis (Because we violated the assumption of homogeneity of variances).

5.6.3. Post hoc analysis

Because we have violated the assumption of homogeneity of variances, we will be using the Games-Howell post hoc analysis. When running this post hoc analysis, we need to

look at the Sig. value, if it is lower than 0.05, then there is a statistical difference between the specific groups.

Table 15: Games-Howell Post Hoc Analysis

Multiple Comparisons

Dependent Variable		(I) Persuasion tactic used	(J) Persuasion tactic used	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
IWE	Games-Howell	Rational persuasion	Collaboration	.593*	.155	.001	.219	.968
			Rational persuasion & collaboration	.428*	.123	.002	.134	.722
		Collaboration	Rational persuasion	-.593*	.155	.001	-.968	-.219
			Rational persuasion & collaboration	-.165	.164	.574	-.558	.227
		Rational persuasion & collaboration	Rational persuasion	-.428*	.123	.002	-.722	-.134
			Collaboration	.165	.1641	.574	-.227	.558

*. The mean difference is significant at the 0.05 level.

As can be seen in the post hoc analysis, we can see a significant difference between the means of rational persuasion and collaboration, as well as rational persuasion and a combination of rational persuasion and collaboration. The difference between the means of collaboration and the combination of rational persuasion and collaboration was found not to be statistically significant.

5.7. Effect of size

It is possible to calculate the error because of the effect of size through calculating the eta squared value as follows:

$$Eta\ squared = \frac{Sum\ of\ squeres\ between\ groups}{Total\ sum\ of\ squares}$$

These values are in the ANOVA table (Table 14). We can thus calculate the eta squared value as such:

$$Eta\ squared = \frac{7.75}{66.91} = 0.12$$

The resulting eta squared value is 0.12. According to Cohen (Cohen, 2013), a value of 0.01 translates into a small effect, 0.06 translates into a medium effect, and any value larger than 0.14 translates into a significant effect. With the eta value being smaller than 0.14, we can assume that the effect of sample size had a medium effect on the outcome of results.

5.8. Planned comparisons

With the ANOVA, we were interested in testing the variance of means across three groups. Now that we have seen a statistical difference between rational persuasion and the other groups, we want to focus our attention on the other groups, which the ANOVA could not pick up a statistical difference between their means. This means we could consider using planned comparisons as an alternative to normal post-ho tests due to power issues. This is because planned comparisons are more sensitive to statistical differences than other post-hoc tests.

Planned comparisons give one result based on whether there were equal variances present. This was calculated using Levene's test in Table 13. This table indicated that we had violated the rule of homogeneity, and as such, we can assume that the variances are not equal.

Table 16: Planned comparisons

Contrast Tests

		Contrast	Value of Contrast	Std. Error	t	df	Sig. (2-tailed)
IWE	Assume equal variances	1	0,166	0,146	1,130	126,000	0,261
	Does not assume equal variances	1	0,166	0,164	1,008	73,588	0,317

Looking at the above table, we can see the row that indicates the assumption of unequal variances, the Sig. value is 0.317. As such, it does also not conform to be statistically significant at a 95% confidence interval.

5.9. Hypotheses testing results

5.9.1. Hypotheses 1

Individual IWE (as measured using the UWES-17) was measured as a function of rational persuasion (with a narrative inquiry stimulus). Preliminary analyses were performed to ensure there was no violation of the assumptions of correlation and reliability. It was found that rational persuasion has a significant positive influence on engagement.

5.9.2. Hypotheses 2

Individual IWE (as measured using the UWES-17) was measured as a function of collaboration (with a stimulus of a narrative enquiry). Preliminary analyses were performed to ensure there was no violation of the assumptions of correlation and reliability. It was found that rational persuasion has a significant positive influence on engagement.

5.9.3. Hypotheses 3

Individual IWE (as measured using the UWES-17) was measured as a function of a combination of rational persuasion and collaboration (with a stimulus of a narrative enquiry). Preliminary analyses were performed to ensure there was no violation of the assumptions of correlation and reliability. It was found that rational persuasion has a significant positive influence on engagement.

5.9.4. Hypotheses 4

A one-way between-groups analysis of variance was conducted to explore the effect of influence tactics on engagement, as measured by the Utrecht Work Engagement Scale (UWES). Participants were divided into three groups based on a randomly generated number. There was a statistically significant difference at $\rho < .05$ level in LOT score for the three persuasion tactics: $F(2, 129)$, $\rho = 0.00$. The effect of size calculated using eta squared was 0.12. Post-hoc comparisons using Games-Howell test indicated that the mean score for Persuasion ($M = 5.91$, $SD = 0.51$) was significantly different from that of collaboration ($M = 5.31$, $SD = 0.51$).

5.9.5. Hypotheses 5

A one-way between-groups analysis of variance was conducted to explore the effect of influence tactics on engagement, as measured by the Utrecht Work Engagement Scale (UWES). Participants were divided into three groups based on a randomly generated number. There was a statistically significant difference at $\rho < .05$ level in LOT score for the three persuasion tactics: F (2, 129), $\rho = 0.00$. The effect of size calculated using eta squared was 0.12. Post-hoc comparisons using Games-Howell test indicated that the mean score for collaboration (M = 5.31, SD = 0.86) did not differ statistically from a combination of rational persuasion and collaboration (M = 5.48, SD = 0.65).

5.9.6. Hypotheses 6

A one-way between-groups analysis of variance was conducted to explore the effect of influence tactics on engagement, as measured by the Utrecht Work Engagement Scale (UWES). Participants were divided into three groups based on a randomly generated number. There was a statistically significant difference at $\rho < .05$ level in LOT score for the three persuasion tactics: F (2, 129), $\rho = 0.00$. The effect of size calculated using eta squared was 0.12. Post-hoc comparisons using the Games-Howell test indicated that the mean score for Persuasion (M = 5.91, SD = 0.51) was significantly different from that of a combination of rational persuasion and collaboration (M = 5.48, SD = 0.65).

5.10. Conclusion

The statistical analysis resulted in using the UWS-17 EFA approach to determine the effect of the influence tactics on IWE. The ANOVA technique was used in comparison with the Games-Howell post hoc analysis. The results of the statistical analysis are summarised below:

- The null hypothesis was rejected for hypothesis one, indicating that there is a positive correlation between rational persuasion with IWE
- The null hypothesis was rejected for hypothesis two, indicating that there is a positive correlation between collaboration with IWE
- The null hypothesis was rejected for hypothesis three, indicating that there is a positive correlation between a combination of rational persuasion and collaboration with IWE
- The null hypothesis was accepted for hypothesis four, indicating that there is no significant difference between collaboration and a combination of rational

persuasion and collaboration with regards to IWE

- The null hypothesis was rejected for hypothesis five, indicating that there is a significant difference between rational persuasion and a combination of rational persuasion and collaboration with regards to IWE, with rational persuasion having a more significant impact on IWE

These results will be discussed in more detail in the following chapter, with specific reference to the foundation of the literature review done in Chapter 2.

CHAPTER 6: DISCUSSION

This chapter discusses and compares the research outcomes to the literature used as a foundation described in Chapter 2. The primary purpose of this research was to determine if there is a significant difference between the use of various influence tactics (independent variables) on IWE (dependant variable). The influence tactics that were compared against each other were rational persuasion, collaboration, and a combination of rational persuasion and collaboration. This chapter will build on Chapter 5, which showed the primary analyses of the data, which will be unpacked in this chapter.

6.1. Overview of demographic data

The survey was opened 520 times, but only 154 respondents completed the survey in totality. Three of these 154 respondents were removed as they completed the survey in under 30 seconds and chose the same answer for each engagement question. An additional 22 were removed as they did not fit the population criteria, leaving 129 valid respondents on whom the analysis was conducted.

The survey lasted just over two months, and the valid respondents received very close to equal influence tactic stimulus (36.43%, 31.78%, and 31.78%, respectively). This indicated that the survey tool (SoSci) successfully generated close to equal amounts of each stimulus to the valid respondents.

The age was slightly skewed towards 31 to 50, which accounted for 81.4% of the respondents. Although skewed to this age group, this represented a large portion of the workforce and was sufficient. There was a 61.24% response rate from males and 38.76% from females, which indicated a healthy response rate from both sexes.

Although the annual salary was more towards higher income brackets, there was a healthy response rate from all income ranges. The same could be said regarding the highest qualification, indicating a well-spread sample population.

However, 67.44% of respondents self-identified as “White”, which could be seen as unrepresentative of the current demographic and professional workforce and should therefore be noted.

6.2. Overview of components and constructs

6.2.1. Influence tactics

Influence tactics are defined as the extent to which one can manage other individuals' actions and views (Kipnis et al., 1980; Yukl, 2018). There are 11 well-defined influence tactics which been widely accepted by the academic industry (Lee et al., 2017; Yukl et al., 2008).

These 11 influence tactics have been broken down into subcategories to categorise their underlying mechanics. The academic industry has widely accepted these three sub-categories being rational, hard, and soft (Kipnis & Schmidt, 1983). Hard tactics have been theorised as using legitimate power and are generally exercised at a very impersonal level, whereas soft influence tactics were much more closely related to personal power (Lamude et al., 2000). Rational tactics were argued to exercise logical argumentation to deliver the tactic (Lamude et al., 2000). These categories have proven helpful to group the influence tactics and have been used successfully by scholars in various research papers.

The influence tactics identified as the most successful by Lee et al. (2017) were all soft or rational main influence subgroups.

The direction of influence has also been discussed in depth over the years (Erez et al., 1986; Kipnis et al., 1980; Yukl & Falbe, 1990). There are three main directions, upwards (targets more senior than the agent), downwards (targets more junior than the agent) and lateral (targets on the same level as the agent). Research supports that the type of influence tactic, and its relative effectiveness related to task outcomes, is greatly affected by the direction of influence (Lu et al., 2019; Williams et al., 2016; Yukl & Tracey, 1992).

6.2.1.1. Rational persuasion

Rational persuasion is one of the main influence tactics in the rational subcategory. It can be defined as when an agent uses a logical argument, basing it on facts or evidence, to prove to a target that a specific idea will result in the required outcome (Lamude et al., 2000; Yukl, 2018).

Although research suggests that rational persuasion works well in all directions (Yukl & Tracey, 1992), it was perceived to be more successful downward than lateral and upward (Lee et al., 2017).

6.2.1.2. Collaboration

Collaboration is one of the main influence tactics in the soft-influence subcategory. It can be defined as when an agent works with the target to produce a standard solution or achieve a common goal (Lamude et al., 2000; Yukl, 2018).

Collaboration has also been found to work well in all directions (Yukl & Tracey, 1992).

6.2.1.3. Combination of rational persuasion and collaboration

Although it was found that using hard influence tactics in combination with soft or rational influence tactics yielded no improvement, there is evidence that suggests that the right combination of influence tactics could lead to improved task-orientated outcomes (Falbe & Yukl, 1992). One such example is using two soft influence tactics, or a soft and a rational influence tactic in combination, indicating improved effectiveness of these tactics (Lee et al., 2017). Because of this work done, it was decided to combine a soft and a rational influence tactic in this research.

Work done by Falbe & Yukl (1992) and Lee et al. (2017) found that rational persuasion was more effective when used individually than in combination, and Lee et al. (2017) found that collaboration was more effective when used in combination with another soft or rational tactic.

Despite numerous studies on influence, there is generally a lack of consensus and not enough work done regarding the effectiveness of various influence tactics individually, directionally, and in combination when relating it to their outcomes (Lee et al., 2017). This underpins the importance of this research to clarify this topic that has gained so much attention.

6.2.2. Engagement

The term engagement originally received attention when Kahn did two independent studies to try and determine what makes an individual engaged in 1990. The studies

were conducted at a summer camp on two separate groups (Kahn, 1990). Kahn defined work engagement as “the harnessing of organisational members’ selves to their work roles” (Kahn, 1990, p. 694).

Several models have been created to understand better and quantify engagement (Kahn, 1990), but we used Kahn’s framework for engagement and disengagement because his framework was the only empirically created and tested (Shuck et al., 2011).

Three constructs were identified, psychosocial safety (which relates to consistency and predictability of an environment), phycological meaningfulness (whether one feels valued and valuable) and psychological availability (relating to one’s capability to invest in a role) (Kahn, 1990). Even though many authors have since attempted to build on Kahn’s work to understand engagement in the workplace (Harter et al., 2002; May et al., 2004), numerous questions in the field are still left unanswered (Kacmar et al., 2013).

6.3. Hypothesis 1

6.3.1. Overview

Research question 1: Does rational persuasion as an influence tactic have a positive effect on individual engagement?

The null hypothesis ($H_0 1$) was that “Rational persuasion as an influence tactic does not positively affect IWE”. The alternative hypothesis ($H_1 1$) was that “Rational persuasion as an influence tactic positively affects IWE”.

6.3.2. Interpretation of results

Running the descriptive statistics on the sample that only received the stimulus for rational persuasion indicated that the mean, maximum and especially the minimum results recorded were above the median selectable score of 4 on the licker scale at a 95% confidence interval.

Table 17: Descriptive statistics - Rational persuasion

Descriptive statistics – Rational persuasion

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
IWE	Rational persuasion	41	5,91	0,51	0,08	5,75	6,07	4,59	7,00

The results indicated that rational persuasion as an influence tactic has positively affected individual engagement. This confirms current literature as most of what has been done confirms that rational persuasion does have a positive effect on numerous different outcomes (Higgins et al., 2003). This is consistent with Lee et al. (2017), who identified that all soft and rational influence tactics positively affected most metrics.

The findings extend current work by using the dimension of engagement as a measurement instrument. This extends the current research and ads to the little work that has been done between rational persuasion as an influence tactic and its effect on engagement (Chong et al., 2013; Dulebohn et al., 2005; Reina et al., 2018).

Consequently, there was sufficient statistical evidence to reject the null hypothesis at the 95% confidence level in favour of the alternative hypothesis.

6.4. Hypothesis 2

6.4.1. Overview

Research question 2: Does collaboration as an influence tactic have a positive effect on individual engagement?

The null hypothesis ($H_0 2$) was that “Collaboration as an influence tactic does not positively affect IWE”. The alternative hypothesis ($H_1 2$) was that “Collaboration as an influence tactic positively affects IWE”.

6.4.2. Interpretation of results

Running the descriptive statistics on the sample that only received the stimulus for collaboration indicated that the mean, maximum and especially the minimum results

recorded were all above the median selectable score of 4 on the licker scale at a 95% confidence interval.

Table 18: Descriptive statistics – Collaboration

Descriptive statistics

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
IWE	Collaboration	41	5,31	0,86	0,13	5,04	5,58	3,41	6,76

The results indicated that collaboration as an influence tactic had had a positive effect on individual engagement. This confirms current literature as most of what has been done confirms that rational persuasion does have a positive effect on numerous different outcomes (Higgins et al., 2003). This is consistent with Lee et al. (2017), who identified that all soft and rational influence tactics positively affected most metrics.

The findings extend current work by using the dimension of engagement as a measurement instrument. This extends the current research and ads to the little work that has been done between collaboration as an influence tactic and its effect on engagement (Chong et al., 2013; Dulebohn et al., 2005; Reina et al., 2018).

Consequently, there was sufficient statistical evidence to reject the null hypothesis at the 95% confidence level in favour of the alternative hypothesis.

6.5. Hypothesis 3

6.5.1. Overview

Research question 3: Does a combination of rational persuasion and collaboration as an influence tactic positively affect individual engagement?

The null hypothesis ($H_0$3) was that “A combination of rational persuasion and collaboration as an influence tactic does not positively affect IWE”. The alternative hypothesis ($H_1$3) was that “A combination of rational persuasion and collaboration as an influence tactic positively affects IWE”.

6.5.2. Interpretation of results

Running the descriptive statistics on the sample that only received the stimulus for rational persuasion and collaboration indicated that the mean, maximum and especially the minimum results recorded were all above the median selectable score of 4 on the licker scale at a 95% confidence interval.

Table 19: Descriptive statistics - Combination of rational persuasion and collaboration

Descriptive statistics

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean Lower Bound	95% Confidence Interval for Mean Upper Bound	Minimum	Maximum
IWE	Rational persuasion & collaboration	47	5,48	0,65	0,09	5,29	5,67	3,06	6,65

The results indicated that a combination of rational persuasion and collaboration as an influence tactic has positively affected individual engagement. This confirms current literature as most of what has been done confirms that a combination of rational and soft tactics will have positive outcomes (Lee et al., 2017) but extends the research by defining the exact influence tactics used in the research.

The findings extend current work by using the dimension of engagement as a measurement instrument. This extends the current research and ads to the little work that has been done between a combination of rational persuasion and collaboration as an influence tactic and its combined effect on engagement (Chong et al., 2013; Dulebohn et al., 2005; Reina et al., 2018).

Consequently, there was sufficient statistical evidence to reject the null hypothesis at the 95% confidence level in favour of the alternative hypothesis.

6.6. Hypothesis 4

6.6.1. Overview

Research question 4: Does rational persuasion have a more significant effect than collaboration as an influence tactic relative to individual engagement?

The null hypothesis ($H_0 4$) was that “Rational persuasion as an influence tactic has a smaller effect on IWE compared to and collaboration as an influence tactic”. The alternative hypothesis ($H_1 4$) was that “Rational persuasion as an influence tactic will have a larger effect on IWE compared to and collaboration as an influence tactic”.

6.6.2. Interpretation of results

A one-way between-groups analysis of variance was conducted to explore the effect of influence tactics on engagement, as measured by the Utrecht Work Engagement Scale (UWES). Participants were divided into three groups based on a randomly generated number.

Using the Games-Howell post-hoc analysis test, it was clear that the mean scores were different, with persuasion being 5.91 and collaboration being 5.31. This was found to be statistically significant at a 95% confidence level.

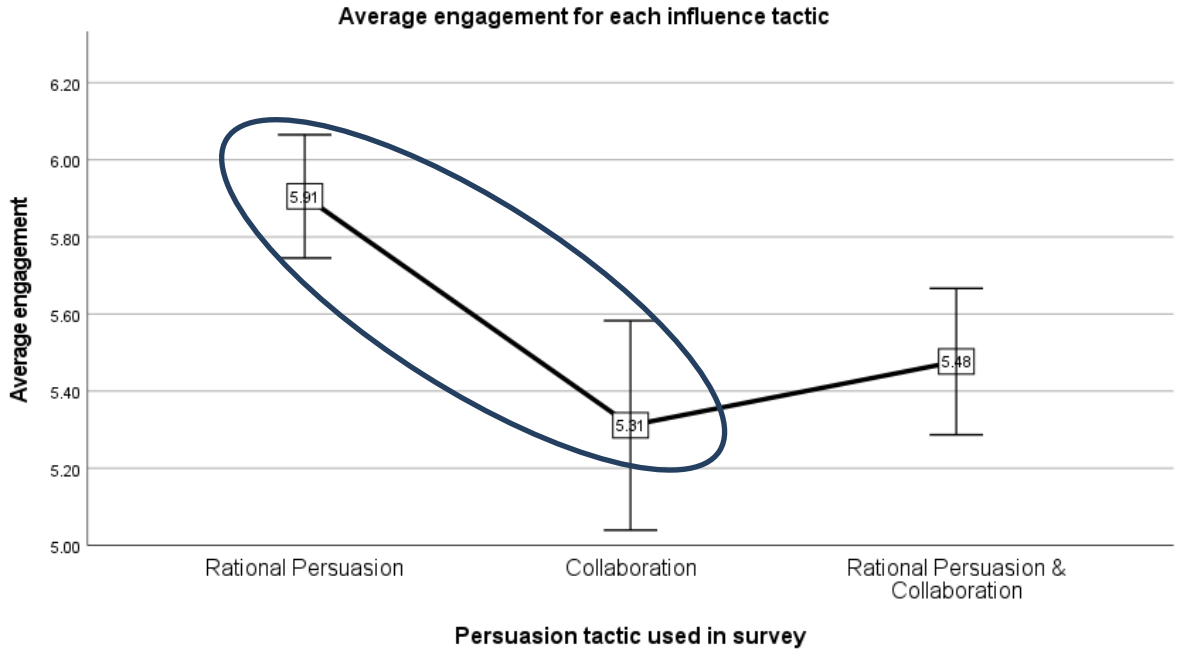


Figure 12: Graphical representation of the average influence tactic, with specific reference to the comparison between rational persuasion collaboration

This confirms current literature as most of what has been done confirms that rational persuasion has a much higher impact on most metrics than engagement (Higgins et al., 2003; Lee et al., 2017). These studies did, however, not use engagement as a measurement tool.

The findings extend current work by using the dimension of engagement as a measurement instrument. This extends the current research and ads to the little work that has been done between influence tactics and engagement (Chong et al., 2013; Dulebohn et al., 2005; Reina et al., 2018). Based on the information obtained from the literature review, this research question has not been considered before in this format. This result can, therefore, not be compared to other research directly.

Consequently, there was sufficient statistical evidence to reject the null hypothesis at the 95% confidence level in favour of the alternative hypothesis.

6.7. Hypothesis 5

6.7.1. Overview

Research question 5: Does either collaboration or a combination of rational persuasion and collaboration have a more significant effect as an influence tactic relative to individual engagement?

The null hypothesis ($H_0 5$) was that “Collaboration as an influence tactic has no different effect on IWE as a combination of rational persuasion and collaboration as an influence tactic”. The alternative hypothesis ($H_1 5$) was that “Collaboration as an influence tactic has a more significant effect on IWE as a combination of rational persuasion and collaboration as an influence tactic”.

6.7.2. Interpretation of results

A one-way between-groups analysis of variance was conducted to explore the effect of influence tactics on engagement, as measured by the Utrecht Work Engagement Scale (UWES). Participants were divided into three groups based on a randomly generated number.

Using the Games-Howell post-hoc analysis test, it was clear that the mean scores were different, with a combination of persuasion and collaboration being 5.45 and collaboration being 5.31. This was unfortunately found to not be statistically significant at a 95% confidence level.

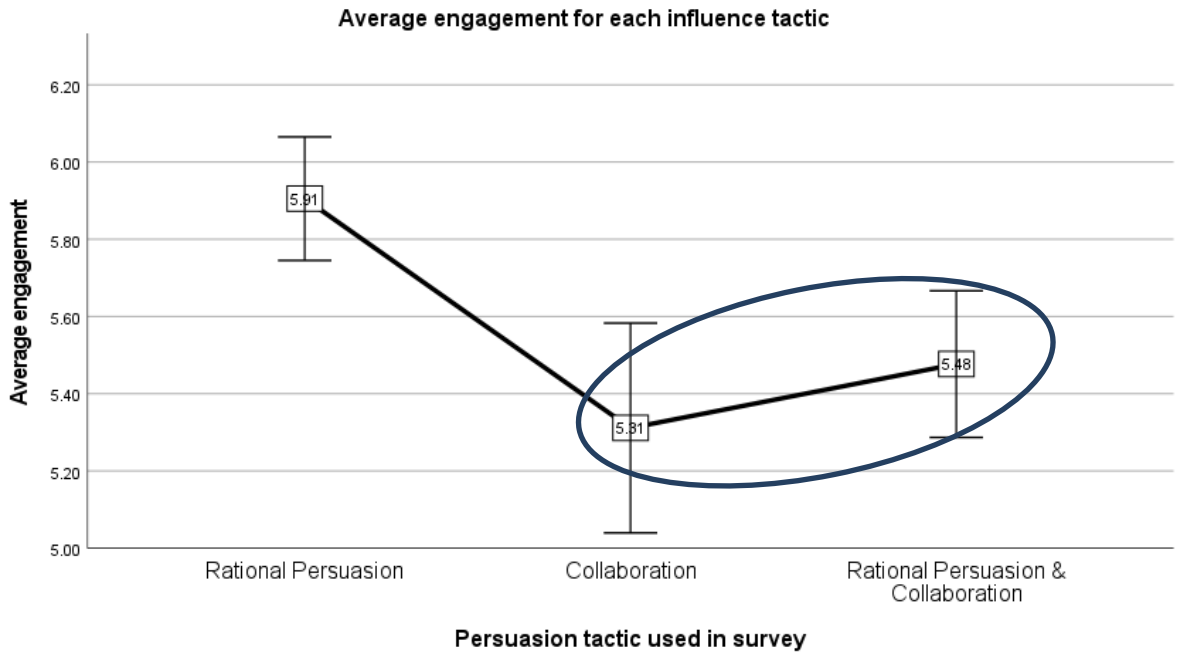


Figure 13: Graphical representation of the average influence tactic, with specific reference to the comparison between collaboration and a combination of rational persuasion and collaboration

These results appose current literature as most of what has been done found that collaboration was more effective when used with another soft or rational tactic than being used on its own (Lee et al., 2017). These studies did, however, not use engagement as a measurement tool.

The findings extend current work by using the dimension of engagement as a measurement instrument. This extends the current research and ads to the little work that has been done between influence tactics and engagement (Chong et al., 2013; Dulebohn et al., 2005; Reina et al., 2018). Based on the information obtained from the literature review, this research question has not been considered before in this format. This result can, therefore, not be compared to another research directly.

There was consequently not sufficient statistical evidence to reject the null hypothesis at the 95% confidence level. As a result, the null hypothesis was accepted in favouring the

alternative hypothesis at the 95% confidence level.

6.8. Hypothesis 6

6.8.1. Overview

Research question 6: Does rational persuasion have a more significant effect than a combination of rational persuasion and collaboration as an influence tactic relative to individual engagement?

The null hypothesis ($H_0$6) was that “Rational persuasion as an influence tactic has a smaller effect on IWE as a combination of rational persuasion and collaboration as an influence tactic”. The alternative hypothesis ($H_1$6) was that “Rational persuasion as an influence tactic has a larger effect on IWE as a combination of rational persuasion and collaboration as an influence tactic”.

6.8.2. Interpretation of results

A one-way between-groups analysis of variance was conducted to explore the effect of influence tactics on engagement, as measured by the Utrecht Work Engagement Scale (UWES). Participants were divided into three groups based on a randomly generated number.

Using the Games-Howell post-hoc analysis test, it was clear that the mean scores were different, with a combination of persuasion and collaboration being 5.45 and rational persuasion being 5.48. This was found to be statistically significant at a 95% confidence level. This can be seen in the figure on the next page.

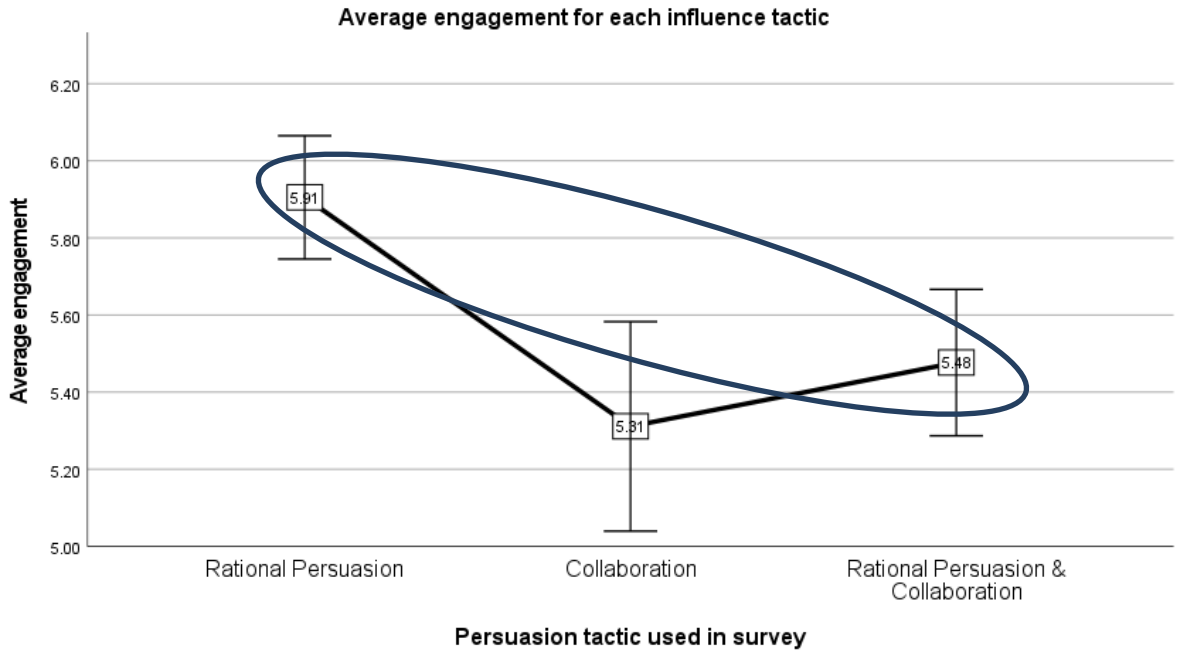


Figure 14: Graphical representation of the average influence tactic, with specific reference to the comparison between rational persuasion and a combination of rational persuasion and collaboration

These results support current literature. Falbe & Yukl (1992) and Lee et al. (2017) found that rational persuasion was more effective when used individually than in combination These studies did, however, not use engagement as a measurement tool.

The findings extend current work by using the dimension of engagement as a measurement instrument. This extends the current research and ads to the little work that has been done between influence tactics and engagement (Chong et al., 2013; Dulebohn et al., 2005; Reina et al., 2018). Based on the information obtained from the literature review, this research question has not been considered before in this format. This result can, therefore, not be compared to another research directly.

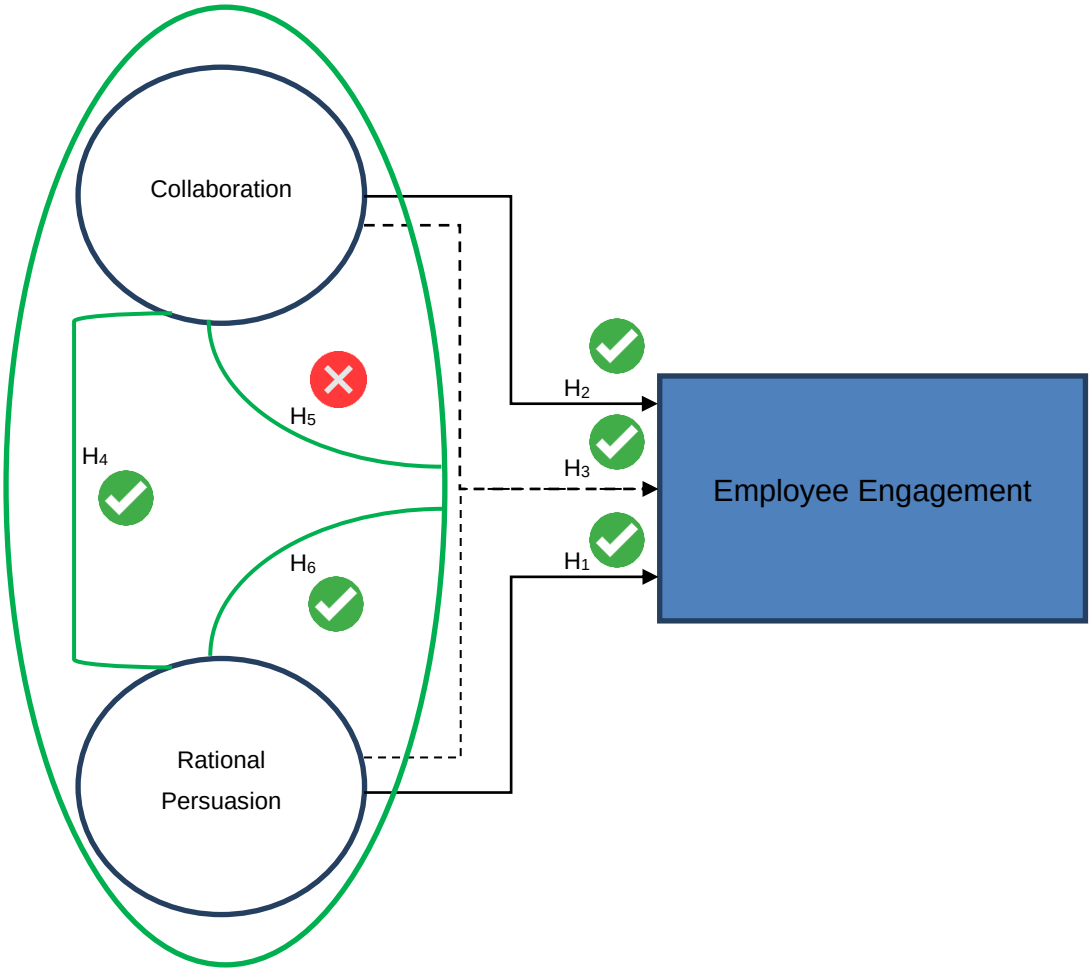
Consequently, there was sufficient statistical evidence to reject the null hypothesis at the 95% confidence level in favour of the alternative hypothesis.

6.9. Conclusion

The results of the research study have shown the following:

- Rational persuasion had a significant positive influence on IWE
- Collaboration had a significant positive influence on IWE
- A combination of rational persuasion and collaboration had a significant positive influence on IWE, and rational persuasion will have a more significant positive relationship than collaboration
- Rational persuasion had a more significant positive relationship than collaboration on IWE
- A combination of rational persuasion and collaboration did not have a statistically different effect with relation to IWE compared to that of collaboration
- Rational persuasion had a more significant positive relationship than the combination of collaboration and rational persuasion on IWE

Figure 15: Graphical representation of the outcome of hypotheses



CHAPTER 7: CONCLUSION

7.1. Introduction

The actual worth of this research lies in the benefit of better understanding how to influence subordinates so that they are more engaged. We are yet again reminded that numerous studies focus on influence tactics; however, there are fewer than look at them in combination, and even less that compares their effect relative to engagement. This study aims at filling this gap by better understanding how these constructs work with each other. yeah

An overview of the main findings in this study will be presented. This will include the implication for academics as well as for business. A list of limitations will be discussed to understand better the research context, and a section that talks to recommendations for future work are also included in this chapter.

7.2. Recap on research questions

Below we can see the main research questions that guided this research:

- **Research question 1**: Does rational persuasion as an influence tactic have a positive effect on IWE?
- **Research question 2**: Does collaboration as an influence tactic have a positive effect on IWE?
- **Research question 3**: Does a combination of rational persuasion and collaboration as an influence tactic positively affect IWE?
- **Research question 4**: Does rational persuasion have a more significant effect than collaboration as an influence tactic relative to IWE?
- **Research question 5**: Does either collaboration or a combination of rational persuasion and collaboration have a more significant effect as an influence tactic relative to IWE?
- **Research question 6**: Does rational persuasion have a more significant effect than a combination of rational persuasion and collaboration as an influence tactic relative to IWE?

7.3. Principal findings

The research aimed at better understanding the relationship between influence tactics and engagement. A specific focus was on rational persuasion and collaboration. An additional factor was considered by combining the influence tactics to understand the combined relationship with engagement better.

It has been proven that engagement leads to better overall business results (Hanaysha, 2016; Saks, 2006; Shuck et al., 2011) and influence tactics is one of a manager's arsenal that can be used to influence a team's engagement. As such, the benefit of understanding these relationships was relevant and essential to both academics and businesses.

The study has contributed to the literature in the following ways:

- It was found that rational persuasion, collaboration and a combination of rational persuasion and collaboration positively affected IWE.
- It was found that rationale persuasion had a more significant effect on IWE compared to collaboration.
- This is consistent with work done on influence tactics that soft and rational influence tactics have positive effects on most metrics, and a combination of them also has positive effects (Chong et al., 2013; Dulebohn et al., 2005; Reina et al., 2018).
- It was found that collaboration, used on its own, has no improved effect than using a combination of rational persuasion and collaboration on IWE.
- It was found that rational persuasion had a more significant effect on IWE when compared to a combination of rational persuasion and collaboration

7.4. Implications for business

Understanding the effect of various influence tactics is essential for management as it is one of the primary ways that managers can direct their subordinates. The study gives a better understanding of two influence tactics, using them individually. More importantly, it gives a better understanding of the effect of these influence tactics in combination, as most forms of influence are not used in isolation.

There is a consensus amongst academics that engagement leads to better results

(Hanaysha, 2016; Saks, 2006; Shuck et al., 2011). Linking influence tactics to IWE gives a fresh lens to an area studied for many years. Better understanding how to manage this metric is vital for organisations to direct their teams.

7.5. Implications for theory

This study complements existing theory by better understanding the impact of using influence tactics individually and in combination. To date, the combined effect of influence tactics is not as well understood as the individual use of the same tactics (Lee et al., 2017).

The research extends current research by looking at the effect of influence tactics through the lens of engagement, a link that has not been extensively studied (Chong et al., 2013; Dulebohn et al., 2005; Reina et al., 2018).

This research paves a foundation for future researchers to understand the dynamics between influence tactics and engagement. It also gives additional insight on the effect of combining influence tactics.

7.6. Limitations

The identification of the following items as possible limitations to the research:

- The narrative enquiry could have potentially only partially immersed the target audience, and some residual bias concerning their current working environments could still have been present
- Limitations regarding generalisability as a result of the method used to conduct the survey and complete the study
- The usage of a self-report questionnaire to conduct the survey and could cause common method bias
- The cross-sectional approach was adequate for the research timeline, but a longitudinal approach could result in more consistent data that could be more transferable relative to time
- The study is limited to knowledge workers

7.7. Recommendations for future research

Based on the information obtained whilst doing this study, the following recommendations for future research could be considered:

- This study only focuses on knowledge workers, and there could be a benefit in better understanding the relationships under blue-collar workers.
- To further validate this study, only engagement was considered. Other constructs should also be considered for comparison purposes to expand on the current knowledge of combined influence tactics.
- This research only looks at the direction of the relationship for rational persuasion, collaboration, and the combination of rational persuasion and collaboration concerning IWE. It could be beneficial to look at the relationship in totality and not only the direction. This could be done by varying the intensity of the stimuli and comparing the results.
- Further research could be done to understand better why there is no significant difference between the effect of collaboration and the combination of rational persuasion and collaboration on IWE.
- There was a large majority of respondents that self-identified as “White” (67.44%). This is not representative of the current demographic and professional workforce. Future research could include expanding the research to include a healthier split between various races to obtain a more holistic understanding of the effect of the influence tactics.

7.8. Conclusions

Influence tactics and employee engagement are items that are well researched but not yet fully understood. This research study considered the effects of influence tactics individually (rational persuasion, collaboration) and in combination (rational persuasion and collaboration) and compared each scenario relative to IWE.

The research results provide insights into influence tactics' significance and serve as a good foundation for future research. The research could be expanded on for individuals who are interested in better understanding these constructs concerning leadership.

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CHAPTER 9: APPENDIX

9.1. Appendix A – Measurement instrument Alteration - UWES Questions

The UWES will be used to determine the extent of individual engagement. The below Likert scale can be used as a guide on how to answer the questions:

Table 20: Likert scale indicating possible options to answer the UWES (Schaufeli et al., 2006)

	Almost never	Rarely	Sometimes	Often	Very often	Always
0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

The following questions are used in the UWES and were altered better to suit the contextual nature of the narrative enquiry, and as such, will be used in the questionnaire (Schaufeli et al., 2006).

Original UWES Questions	Altered UWES Questions
At my work, I feel bursting with energy	After being allocated this project, you feel you will be bursting with energy
I find the work that I do full of meaning and purpose	After being allocated this project, you feel that the work you do will be full of meaning and purpose
Time flies when I'm working	After being allocated this project, you feel that time will fly when you're doing this new project
At my job, I feel strong and vigorous	After being allocated this project, you feel you will be strong and vigorous
I am enthusiastic about my job	After being allocated this project, you feel you will be enthusiastic about your job
When I am working, I forget everything else around me	After being allocated this project, you feel that when you will be working on this project, you will forget everything else around you

My job inspires me	After being allocated this project, you feel your job will inspire you
When I get up in the morning, I feel like going to work	After being allocated this project, you feel that you would like to go to work when you wake up in the morning
I feel happy when I am working intensely	After being allocated this project, you feel you will be happy when you are working intensely
I am proud of the work that I do	After being allocated this project, you feel you will be proud of the work that you do
I am immersed in my work	After being allocated this project, you feel you will be immersed in your work
I can continue working for very long periods at a time	After being allocated this project, you feel that you will be able to continue working for very long periods at a time
To me, my job is challenging	After being allocated this project, you feel that your job will be challenging
I get carried away when I'm working	After being allocated this project, you feel that you could get carried away when working
At my job, I am very resilient, mentally	After being allocated this project, you feel you will be mentally resilient
It is difficult to detach myself from my job	After being allocated this project, you are worried that it might be difficult to detach yourself from your job
At my work I always persevere, even when things do not go well	After being allocated this project, you feel that at work you will always persevere, even when things do not go well

9.2. Appendix B – Questionnaire

9.2.1. Page 1 - Cover page

Gordon Institute of Business Science
University of Pretoria

MBA RESEARCH SURVEY

Dear Sir/Madam,

This survey is conducted as part of a research project, which shall be submitted as part of the fulfillment of a Masters in Business Administration degree from the Gordon Institute of Business Science. The purpose of this survey is to better understand the contextual dynamics of individual engagement.

Please answer all the questions as honestly and accurately as possible. Your participation in this survey is entirely anonymous. Your participation is voluntary, and you can withdraw at any time without penalty. By completing the survey, you indicate that you voluntarily participate in this research. To this end, should you choose to participate, it is required that you envisage yourself in the context provided.

Thank you for your valued cooperation and assistance.

Should you have any questions, concerns or comments regarding this survey, please do not hesitate to contact the researcher at the details provided below.

Prepared by:
Johannes Marthinus Koorts
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Gordon Institute of Business Science

Supervised by:
Gavin Price, *Associate Professor*
priceg@gibs.co.za
Gordon Institute of Business Science

If you agree to participate, please click on the link labelled “Next”.

9.2.2. Page 2 - Narrative Enquiry

9.2.2.1. Rational Persuasion (Respondent will receive one from a possible of three)

You are working in a company that continuously innovates and pushes the boundaries when it comes to your industry. Your company has a clear strategy which has been communicated to all levels of the organisation. You support your company strategy and are aligned to the company vision. Your company also continuously performs better than most of their competitors and some would define your company as having a high-performance culture. This culture does not only apply to the general organisation, but also filters down to the smaller business units. You operate in one of these business units, as part of a wider team specializing in your current area of expertise.

You are a very close-knit team, most of whom have been there several years. The team consists of members with different skills, but all related to your current industry. You are a valued member of this team with a distinctive set of skills and expertise which contributes to the diverse set of skills required by your team. You respect your manager tremendously as she has successfully steered the team through very difficult times in the past, and always protected the team though these tough times.

In your team, you have weekly check in meetings, bi-monthly project meetings and monthly strategy meetings. Your manager calls for the usual monthly strategy team meeting, where your team usually discuss matters that has a significant long-term impact on the organisation. She goes through the minutes from the previous meeting and continues to discuss the strategic topics that were still open in the previous meeting. She also allocates tasks and gives management feedback regarding various important aspects of the business that relates to the team.

After most of these items have been discussed, she informs you that she has a strategic project which she would want you to lead. You are aware that it could possibly take up a considerable amount of your time. The task is complex and involves various moving parts as well as requiring you to liaise with several stakeholders.

Your manager explains to you that the importance of this task, specifically what it would mean to the organisation, and the benefit to the team. She explains to you how it would positively impact you specifically. She further sheds light on how this would align to the

wider company strategy and that the benefits of the project are truly enormous. She then goes on to shed some light as to why you specifically were chosen for this task. You are aware that because of your background, you have had experience in unique circumstances, and you can appreciate that your experience would be needed for this project. Your manager points this out, and acknowledge that in the team, there is no one else that would be better suited to take on the project successfully.

9.2.2.2. Narrative Enquiry – Collaboration (Respondent will receive one from a possible of three)

You are working in a company that continuously innovates and pushes the boundaries when it comes to your industry. Your company has a clear strategy which has been communicated to all levels of the organisation. You support your company strategy and are aligned to the company vision. Your company also continuously performs better than most of their competitors and some would define your company as having a high-performance culture. This culture does not only apply to the general organisation, but also filters down to the smaller business units. You operate in one of these business units, as part of a wider team specializing in your current area of expertise.

You are a very close-knit team, most of whom have been there several years. The team consists of members with different skills, but all related to your current industry. You are a valued member of this team with a distinctive set of skills and expertise which contributes to the diverse set of skills required by your team. You respect your manager tremendously as she has successfully steered the team through very difficult times in the past, and always protected the team though these tough times.

In your team, you have weekly check in meetings, bi-monthly project meetings and monthly strategy meetings. Your manager calls for the usual monthly strategy team meeting, where your team usually discuss matters that has a significant long-term impact on the organisation. She goes through the minutes from the previous meeting and continues to discuss the strategic topics that were still open in the previous meeting. She also allocates tasks and gives management feedback regarding various important aspects of the business that relates to the team.

After most of these items have been discussed, she informs you that she has a strategic project which she would want you to lead. You are aware that it could possibly take up a considerable amount of your time. The task is complex and involves various moving parts as well as requiring you to liaise with several stakeholders.

Your manager acknowledges that the task is quite enormous and offers to assist you through the process. She agrees to meet with you weekly to check in and see how she can assist with the allocation of resources in order to support, and re-allocating some of your other daily activities to the rest of the team to ensure a successful execution of this project. She offered to assist in smoothing over any obstacles that might have occurred.

9.2.2.3. Narrative Enquiry – Rational Persuasion & Collaboration (Respondent will receive one from a possible of three)

You are working in a company that continuously innovates and pushes the boundaries when it comes to your industry. Your company has a clear strategy which has been communicated to all levels of the organisation. You support your company strategy and are aligned to the company vision. Your company also continuously performs better than most of their competitors and some would define your company as having a high-performance culture. This culture does not only apply to the general organisation, but also filters down to the smaller business units. You operate in one of these business units, as part of a wider team specializing in your current area of expertise.

You are a very close-knit team, most of whom have been there several years. The team consists of members with different skills, but all related to your current industry. You are a valued member of this team with a distinctive set of skills and expertise which contributes to the diverse set of skills required by your team. You respect your manager tremendously as she has successfully steered the team through very difficult times in the past, and always protected the team though these tough times.

In your team, you have weekly check in meetings, bi-monthly project meetings and monthly strategy meetings. Your manager calls for the usual monthly strategy team meeting, where your team usually discuss matters that has a significant long-term impact on the organisation. She goes through the minutes from the previous meeting and continues to discuss the strategic topics that were still open in the previous meeting. She also allocates tasks and gives management feedback regarding various important aspects of the business that relates to the team.

After most of these items have been discussed, she informs you that she has a strategic project which she would want you to lead. You are aware that it could possibly take up a considerable amount of your time. The task is complex and involves various moving parts as well as requiring you to liaise with several stakeholders.

Your manager explains to you that the importance of this task, specifically what it would mean to the organisation, and the benefit to the team. She explains to you how it would positively impact you specifically. She further sheds light on how this would align to the wider company strategy and that the benefits of the project are truly enormous. She then goes on to shed some light as to why you specifically were chosen for this task. You are

aware that because of your background, you have had experience in unique circumstances, and you can appreciate that your experience would be needed for this project. Your manager points this out, and acknowledge that in the team, there is no one else that would be better suited to take on the project successfully.

Your manager acknowledges that the task is quite enormous and offers to assist you through the process. She agrees to meet with you weekly to check in and see how she can assist with the allocation of resources in order to support, and re-allocating some of your other daily activities to the rest of the team to ensure a successful execution of this project. She also offered to assist in smoothing over any obstacles that might have occurred.

9.2.3. Page 3 – Demographics

Figure 16: SoSci questionnaire: Demographics part 1

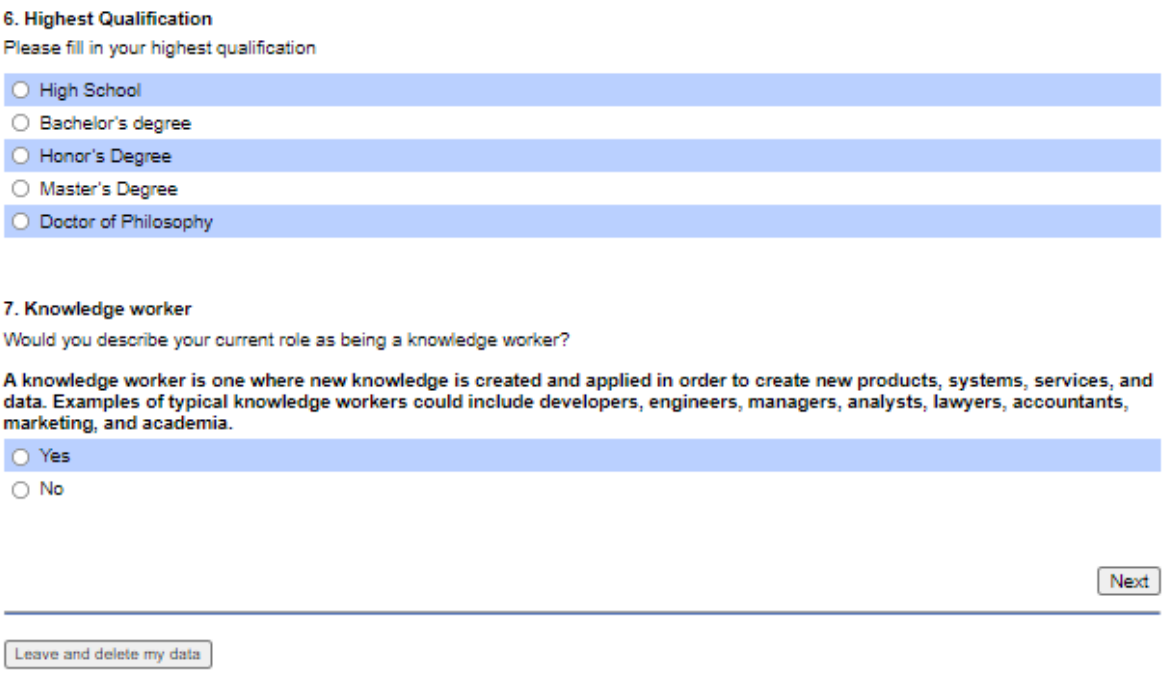

Figure 17: SoSci questionnaire: Demographics part 2

9.2.4. Page 4 - Measurement instrument

75% completed

Please think about how you would feel if you were given this project under these conditions.
Please use the following scale as a guideline on how to answer the questions

Never	Almost never	Rarely	Sometimes	Often	Very often	Always
0	1	2	3	4	5	6
Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

After being allocated this project, you feel you will be bursting with energy

Never ○ ○ ○ ○ ○ ○ ○ Every day

After being allocated this project, you feel that the work you do will be full of meaning and purpose

Never ○ ○ ○ ○ ○ ○ ○ Every day

After being allocated this project, you feel that time will fly when you're doing this new project

Never ○ ○ ○ ○ ○ ○ ○ Every day

After being allocated this project, you feel you will be strong and vigorous

Never ○ ○ ○ ○ ○ ○ ○ Every day

After being allocated this project, you feel you will be enthusiastic about your job

Never ○ ○ ○ ○ ○ ○ ○ Every day

After being allocated this project, you feel that when you will be working on this project, you will forget everything else around you

Never ○ ○ ○ ○ ○ ○ ○ Every day

After being allocated this project, you feel your job will inspire you

Never ○ ○ ○ ○ ○ ○ ○ Every day

Figure 18: SoSci questionnaire: UWES_17 part 1

After being allocated this project, you feel that you would like to go to work when you wake up in the morning

Never ○ ○ ○ ○ ○ ○ ○ Every day

After being allocated this project, you feel you will be happy when you are working intensely

Never ○ ○ ○ ○ ○ ○ ○ Every day

After being allocated this project, you feel you will be proud of the work that you do

Never ○ ○ ○ ○ ○ ○ ○ Every day

After being allocated this project, you feel you will be immersed in your work

Never ○ ○ ○ ○ ○ ○ ○ Every day

After being allocated this project, you feel that you will be able to continue working for very long periods at a time

Never ○ ○ ○ ○ ○ ○ ○ Every day

After being allocated this project, you feel that your job will be challenging

Never ○ ○ ○ ○ ○ ○ ○ Every day

After being allocated this project, you feel that you could get carried away when working

Never ○ ○ ○ ○ ○ ○ ○ Every day

After being allocated this project, you feel you will be mentally resilient

Never ○ ○ ○ ○ ○ ○ ○ Every day

After being allocated this project, you are worried that it might be difficult to detach yourself from your job

Never ○ ○ ○ ○ ○ ○ ○ Every day

After being allocated this project, you feel that at work you will always persevere, even when things do not go well

Never ○ ○ ○ ○ ○ ○ ○ Every day

Next

Leave and delete my data

Mr Johannes Koorts, Gibs – 2021

Figure 19: SoSci questionnaire: UWES_17 part 2

9.3. Appendix C – Consistency matrix

Table 21: Consistency matrix

Propositions/Questions/Hypotheses	Literature Review	Data Collection Tool	Analysis
Research proposition 1: Rational persuasion has a significant positive influence on IWE	(Yukl et al., 2008) (Kipnis et al., 1980) (Bass & Bass, 2009)	Narrative enquiry with rational persuasion UWES Questions 1 to 17	Descriptive statistics, Reliability and correlation, Confirmative factor analysis, Explorative factor analysis (If CFA does not work)
Research proposition 2: Collaboration has a significant positive influence on IWE	(Yukl et al., 2008) (Kipnis et al., 1980) (Bass & Bass, 2009)	Narrative enquiry with collaboration UWES Questions 1 to 17	Descriptive statistics, Reliability and correlation, Confirmative factor analysis, Explorative factor analysis (If CFA does not work)
Research proposition 3: A combination of rational persuasion and collaboration will have a significant positive effect on IWE	(Lee et al., 2017) (Falbe & Yukl, 1992)	Narrative enquiry with collaboration & rational persuasion UWES Questions 1 to 17	Descriptive statistics, Reliability and correlation, Confirmative factor analysis, Explorative factor analysis (If CFA does not work)
Research proposition 4: Rational persuasion as an influence tactic will have a larger effect on IWE compared to and collaboration as an influence tactic	(Lee et al., 2017) (Falbe & Yukl, 1992)	Narrative enquiry with collaboration & rational persuasion UWES Questions 1 to 17	Descriptive statistics, Reliability and correlation, Confirmative factor analysis, Explorative factor analysis (If CFA does not work)

Research proposition 5: Collaboration as an influence tactic has a smaller effect on IWE as a combination of rational persuasion and	(Lee et al., 2017) (Falbe & Yukl, 1992)	Narrative enquiry with collaboration & rational persuasion UWES Questions 1 to 17	Descriptive statistics, Reliability and correlation, Confirmative factor analysis, Explorative factor analysis (If CFA does not work)
Research proposition 6: Rational persuasion has a more significant effect than a combination of rational persuasion and collaboration as an influence tactic relative to IWE	(Lee et al., 2017) (Falbe & Yukl, 1992)	Narrative enquiry with collaboration & rational persuasion UWES Questions 1 to 17	Descriptive statistics, Reliability and correlation, Confirmative factor analysis, Explorative factor analysis (If CFA does not work)

9.4. Appendix D – Data book

Table 22: Data book

VAR	LABEL	TYPE	INPUT
CASE	Interview number (ongoing)	METRIC	SYSTEM
SERIAL	Serial number (if provided)	TEXT	SYSTEM
REF	Reference (if provided in link)	TEXT	SYSTEM
QUESTNNR	Questionnaire that has been used in the interview	TEXT	SYSTEM
MODE	Interview mode	TEXT	SYSTEM
STARTED	Time the interview has started (Europe/Berlin)	TIME	SYSTEM
RG01_CP	Random Generator: Complete clearances of the ballot, yet	METRIC	MEASURED
RG01	Random Generator: Code drawn	METRIC	MEASURED
DG01	Age	NOMINAL	SELECTION
DG02	Race	NOMINAL	SELECTION
DG03	Gender	NOMINAL	SELECTION
DG05	Employment	NOMINAL	SELECTION
DG04	Salary	NOMINAL	SELECTION
DG06	Highest Qualification	NOMINAL	SELECTION
DG07	Knowledge worker	NOMINAL	SELECTION
Q002_01	You will be bursting with energy	ORDINAL	SCALE
Q003_01	The work you do will be full of meaning and purpose	ORDINAL	SCALE
Q004_01	Time will fly	ORDINAL	SCALE
Q005_01	You will be strong and vigorous	ORDINAL	SCALE
Q006_01	You will be enthusiastic about your job	ORDINAL	SCALE
Q007_01	You will forget everything else around you	ORDINAL	SCALE
Q008_01	Your job will inspire you	ORDINAL	SCALE
Q009_01	You would like to go to work when you wake up in the morning	ORDINAL	SCALE
Q010_01	You will be happy when you are working intensely	ORDINAL	SCALE
Q011_01	You will be proud of the work that you do	ORDINAL	SCALE
Q012_01	You will be immersed in your work	ORDINAL	SCALE
Q013_01	You will be able to continue working for very long periods at a time	ORDINAL	SCALE
Q014_01	Your job will be challenging	ORDINAL	SCALE
Q015_01	You could get carried away when working	ORDINAL	SCALE
Q016_01	You will be mentally resilient	ORDINAL	SCALE
Q017_01	You are worried that it might be difficult to detach yourself from your job	ORDINAL	SCALE
Q018_01	You will always persevere, even when things do not go well	ORDINAL	SCALE
TIME001	Time spent on page 1	METRIC	SYSTEM
TIME002	Time spent on page 2	METRIC	SYSTEM
TIME003	Time spent on page 3	METRIC	SYSTEM
TIME004	Time spent on page 4	METRIC	SYSTEM

TIME_SUM	Time spent overall (except outliers)	METRIC	SYSTEM
MAILSENT	Time when the invitation mailing was sent (personally identifiable recipients, only)	TIME	SYSTEM
LASTDATA	Time when the data was most recently updated	TIME	SYSTEM
FINISHED	Has the interview been finished (reached last page)?	BOOL	SYSTEM
Q_VIEWER	Did the respondent only view the questionnaire, omitting mandatory questions?	BOOL	SYSTEM
LASTPAGE	Last page that the participant has handled in the questionnaire	METRIC	SYSTEM
MAXPAGE	Hindmost page handled by the participant	METRIC	SYSTEM
MISSING	Missing answers in percent	METRIC	SYSTEM
MISSREL	Missing answers (weighted by relevance)	METRIC	SYSTEM
TIME_RSI	Degradation points for being very fast	METRIC	SYSTEM
DEG_TIME	Degradation points for being very fast	METRIC	SYSTEM

9.5. Appendix E – Validity

The following can be used to interpret the table below:

- Q1 to Q17 Related to the questions in section 2.2.3.2. under the Utrecht Work Engagement Scale (UWES)
- PC Pearson Correlation
- S2T Sig. (2-tailed)

Table 23: Test for validity

Correlations

		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q17	Q17	IWE
Q1	PC	--																	
	N	129																	
Q2	PC	.708**	--																
	S2T	.000																	
	N	129	129																
Q3	PC	.476**	.456**	--															
	S2T	.000	.000																
	N	129	129	129															
Q4	PC	.641**	.541**	.555**	--														
	S2T	.000	.000	.000															
	N	129	129	129	129														
Q5	PC	.634**	.630**	.411**	.632**	--													
	S2T	.000	.000	.000	.000														
	N	129	129	129	129	129													
Q6	PC	.103	.064	.236**	.270**	.176*	--												

	S2T	.245	.471	.007	.002	.046													
	N	129	129	129	129	129	129												
Q7	PC	.557**	.505**	.462**	.523**	.630**	.309**	--											
	S2T	.000	.000	.000	.000	.000	.000												
	N	129	129	129	129	129	129	129											
Q8	PC	.602**	.610**	.446**	.522**	.642**	.186*	.718**	--										
	S2T	.000	.000	.000	.000	.000	.035	.000											
	N	129	129	129	129	129	129	129	129										
Q9	PC	.554**	.545**	.455**	.468**	.574**	.170	.679**	.746**	--									
	S2T	.000	.000	.000	.000	.000	.054	.000	.000										
	N	129	129	129	129	129	129	129	129	129									
Q10	PC	.506**	.563**	.342**	.445**	.596**	.090	.460**	.565**	.546**	--								
	S2T	.000	.000	.000	.000	.000	.308	.000	.000	.000									
	N	129	129	129	129	129	129	129	129	129	129								
Q11	PC	.470**	.628**	.417**	.439**	.635**	.176*	.488**	.573**	.581**	.595**	--							
	S2T	.000	.000	.000	.000	.000	.046	.000	.000	.000	.000								
	N	129	129	129	129	129	129	129	129	129	129	129							
Q12	PC	.425**	.477**	.407**	.508**	.463**	.234**	.440**	.494**	.529**	.405**	.532**	--						
	S2T	.000	.000	.000	.000	.000	.008	.000	.000	.000	.000	.000							
	N	129	129	129	129	129	129	129	129	129	129	129	129						
Q13	PC	.465**	.384**	.324**	.400**	.340**	.207*	.531**	.475**	.503**	.311**	.276**	.341**	--					
	S2T	.000	.000	.000	.000	.000	.019	.000	.000	.000	.000	.002	.000						
	N	129	129	129	129	129	129	129	129	129	129	129	129	129					
Q14	PC	.266**	.263**	.416**	.268**	.238**	.478**	.290**	.259**	.294**	.144	.284**	.359**	.304**	--				
	S2T	.002	.003	.000	.002	.007	.000	.001	.003	.001	.105	.001	.000	.000					
	N	129	129	129	129	129	129	129	129	129	129	129	129	129	129				

Q15	PC	.555**	.545**	.335**	.526**	.544**	.185*	.508**	.528**	.492**	.379**	.523**	.399**	.363**	.263**	--			
	S2T	.000	.000	.000	.000	.000	.036	.000	.000	.000	.000	.000	.000	.000	.003				
	N	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129			
Q16	PC	.153	.195*	.183*	.281**	.206*	.464**	.291**	.292**	.359**	.150	.253**	.285**	.297**	.501**	.220*	--		
	S2T	.083	.026	.038	.001	.019	.000	.001	.001	.000	.091	.004	.001	.001	.000	.012			
	N	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129		
Q17	PC	.462**	.468**	.255**	.505**	.553**	.227**	.512**	.550**	.421**	.434**	.574**	.482**	.293**	.247**	.675**	.309**	--	
	S2T	.000	.000	.003	.000	.000	.010	.000	.000	.000	.000	.000	.000	.001	.005	.000	.000		
	N	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	
IWE	PC	.720**	.717**	.630**	.734**	.751**	.462**	.770**	.786**	.764**	.622**	.716**	.674**	.600**	.559**	.689**	.528**	.691**	--
	S2T	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	
	N	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129	129

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

9.6. Appendix F – ANOVA

The following can be used to interpret the table below:

- Q1 to Q17 Related to the questions in section 2.2.3.2. under the Utrecht Work Engagement Scale (UWES)

Table 24: ANOVA

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Q1	Between Groups	9.597	2	4.798	5.625	.005
	Within Groups	112.596	132	.853		
	Total	122.193	134			
Q2	Between Groups	2.555	2	1.278	1.654	.195
	Within Groups	101.993	132	.773		
	Total	104.548	134			
Q3	Between Groups	19.631	2	9.816	6.889	.001
	Within Groups	188.073	132	1.425		
	Total	207.704	134			
Q4	Between Groups	17.844	2	8.922	10.528	.000
	Within Groups	111.860	132	.847		
	Total	129.704	134			
Q5	Between Groups	12.146	2	6.073	6.382	.002
	Within Groups	125.602	132	.952		
	Total	137.748	134			
Q6	Between Groups	30.947	2	15.473	6.805	.002
	Within Groups	300.135	132	2.274		
	Total	331.081	134			
Q7	Between Groups	12.144	2	6.072	6.485	.002
	Within Groups	123.589	132	.936		
	Total	135.733	134			
Q8	Between Groups	10.163	2	5.082	4.562	.012
	Within Groups	147.051	132	1.114		
	Total	157.215	134			
Q9	Between Groups	8.864	2	4.432	4.394	.014
	Within Groups	133.136	132	1.009		
	Total	142.000	134			
Q10	Between Groups	5.138	2	2.569	3.657	.028
	Within Groups	92.743	132	.703		
	Total	97.881	134			
Q11	Between Groups	13.321	2	6.661	7.500	.001
	Within Groups	117.227	132	.888		

	Total	130.548	134			
Q12	Between Groups	7.205	2	3.603	3.643	.029
	Within Groups	130.528	132	.989		
	Total	137.733	134			
Q13	Between Groups	10.460	2	5.230	3.860	.023
	Within Groups	178.844	132	1.355		
	Total	189.304	134			
Q14	Between Groups	8.799	2	4.400	2.542	.083
	Within Groups	228.504	132	1.731		
	Total	237.304	134			
Q15	Between Groups	9.257	2	4.629	4.484	.013
	Within Groups	136.269	132	1.032		
	Total	145.526	134			
Q16	Between Groups	19.250	2	9.625	4.697	.011
	Within Groups	270.484	132	2.049		
	Total	289.733	134			
Q17	Between Groups	23.805	2	11.902	9.267	.000
	Within Groups	169.529	132	1.284		
	Total	193.333	134			
IWE	Between Groups	11.115	2	5.557	11.552	.000
	Within Groups	63.503	132	.481		
	Total	74.618	134			

9.7. Appendix G – Ethical clearance

Figure 20: Ethical clearance approved