AUTHENTIC LEADERSHIP, TRUST AND WORK ENGAGEMENT AMONGST HEALTH CARE WORKERS

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REMARKS

The reader is reminded of the following:

- The editorial style in the first and last chapters of this mini-dissertation follows the format prescribed by the Programme in Industrial Psychology of the North-West University (Vaal Triangle Campus).

- The referencing as well as the writing style used in this mini-dissertation ensures full compliance with prescriptions by the American Psychological Association (APA). This practice is in line with the policy of the Programme in Industrial Psychology of the North-West University (Vaal Triangle Campus) to use the APA style in all scientific documents and publications.

- This mini-dissertation is submitted in the form of a research article. The editorial style specified by the *South African Journal of Industrial Psychology* is used in the second chapter.

DECLARATION

I, Aysha Bibi Ebrahim, hereby declare that “Authentic leadership, trust and work engagement amongst health care workers” is my own work and that the views and opinions expressed in this mini-dissertation are my own and those of the authors as referenced both in the text and in the reference lists.

I further declare that this work will not be submitted to any other academic institution for qualification purposes.

Aysha Bibi Ebrahim

NOVEMBER 2016

DECLARATION OF LANGUAGE EDITING

I hereby declare that I was responsible for the language editing of the mini-dissertation: **Authentic leadership, trust and work engagement amongst health care workers** submitted by A. B. Ebrahim.

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SUMMARY

Authentic leadership, trust and work engagement amongst health care workers

Keywords: Authentic leadership, trust, work engagement, public health care, public health care employees

The public health care sector encompasses a volatile working environment that faces an array of challenges. Employees in this environment are often overworked and conduct their work under negative circumstances due to a lack of proper management, a lack of resources and the inability of the employees to remain motivated and engaged. According to literature, the Department of Health has recently included the term 'leadership' as one of its main drivers to overcome the obstacles faced by individuals in this sector. In authentic leadership, specifically, the ability of the leader to be transparent and honest with others can have phenomenal benefits, especially in such a demanding work environment.

The objective of this study was to investigate the relationship between authentic leadership and work engagement through the indirect effects of trust. The study was cross sectional in nature, with a non-probability convenient sampling technique being used. The total sample (N = 633) was obtained. The measuring instruments that were used in this study are the authentic leadership inventory (ALI), the work engagement scale (UWES) and two of the three sub-constructs of the workplace trust survey (WTS). In order to conduct the statistical analysis, structural equation modelling was used for the development of the measurement and structural models. These models were used to test the hypotheses in the study. In addition to the measurement models, correlations among latent variables were determined and the structural model analysed the strength and direction (regression) between the latent variables as well as possible indirect effects.

In the measurement model, it was found that a significant relationship exists between authentic leadership and work engagement, however the direction of authentic leadership preceding work engagement could not be confirmed by the structural model. The results of the study found that authentic leadership through trust in co-worker had a greater indirect effect on work engagement than through trust in supervisor, although both showed a significant impact.

CHAPTER 1

INTRODUCTION

This mini-dissertation explores the relationship between authentic leadership, trust in co-worker, trust in supervisor and work-engagement amongst health care workers in the public sector. The author specifically explored whether authentic leadership influences work engagement directly or indirectly through trust in co-worker and trust in supervisor.

The aim of this chapter is to provide a problem statement, stating why it is important to conduct this research and to formulate general and specific research objectives. The research design and method are clearly explained, followed by an overview of the various chapters and what they will entail.

1.1 Problem Statement

The contemporary workplace has changed dramatically in the last decade. It is characterised by continuous change and renewal (Newell, 2002; Robbins, Judge, Odendaal, & Roodt, 2016; Wang & Hsieh, 2013). As new trends continue to emerge, employees are affected by possible re-organisation, retrenchments and mergers which may impact negatively on their behaviours and attitudes in the work domain (Henryhand, 2009).

In South Africa the health care sector has particularly been given focus as a result of such continuous change. The amount of money invested into the health care sector in South Africa is one of the largest in comparison to all the other African countries, yet the South African health care sector is still unable to deliver (Jooste & Jasper, 2012; Stander, de Beer, & Stander, 2015).

Healthcare plays an important part in every individual's life and without it one will not be able to function optimally. The health care sector is experiencing an immense number of challenges such as higher responsiveness to patient needs, limited resources, budget constraints, the increasing population, fraud, thigh levels of unemployment and a lack of proper management (Salanova, Agut, & Peiro, 2005; Siedine et al., 2012).

These challenges bring about an increase in workload and, given the lack of resources, result in employees being less engaged in their work (Health Systems Trust, 2013; Okanga & Drotskie, 2015). This gives rise to the concept of leadership. Individuals in the organisation who occupy leadership roles have the responsibility of leading their followers through these difficult times; understanding the workforce and showing recognition in order to influence their followers (Babcock-Roberson & Strickland, 2010; Bamford, Wong, & Laschinger, 2013; Coxen, van der Vaart, & Stander, 2016). These individuals are able to identify and focus on the strengths and accomplishments of their followers in order to achieve organisational outcomes and, in turn, impact on their followers' feelings of trust and work engagement (Rothmann & Jordaan, 2006).

Being a leader in such a demanding work situation is not an easy task, but not an impossible one; this is one of the reasons why the type of leadership used in different work settings is crucial. Avolio and Gardner (2005) state that authentic leaders are individuals who are able to utilise and draw on life experiences, and psychological capacities/capital (i.e. hope, optimism, resilience, and self-efficacy), and provide a supportive organisational climate. A supportive climate is one that encourages self-awareness and positive behaviours. Given the challenges that are faced by the health care industry, individuals require a leader that will be able to draw on their personal resources in order to achieve outcomes (Arakawa & Greenberg, 2007; Peterson, Walumbwa, Avolio, & Hannah, 2012).

Authentic leadership can be defined as "a pattern of transparent and ethical leader behaviour that encourages openness in sharing information needed to make decisions while accepting input from those who follow" (Avolio & Gardner, 2005, p. 424). Authentic leadership consists of four core components, namely self-awareness, balanced information processing, internalised moral perspective and relational transparency. Self-awareness refers to having awareness and trust in one's own motives, feelings and desires, and the ability to act upon these when leading others. Balanced information processing refers to the process of objectively analysing all the relevant data before making a final decision. Internalised moral perspective is driven by one's internal moral standards and values rather than group and societal pressures (Avolio & Gardner, 2005).

The fourth component of authentic leadership is relational transparency, which in essence refers to the true presentation of one's self that allows the leader to understand and utilise his or her unique talents, strengths and values in such a way that it allows him or her to express his or her true emotions and feelings towards his or her followers (Avoilio & Gardner, 2005).

If an organisation employs an authentic type of leader that possesses the above characteristics, it will result in a healthier and more conducive working environment (Bamford et al., 2013). As stated by Engelbrecht, Heine, and Mahembe (2014), the manner in which leaders in an organisation implement their leadership style can influence the extent to which the follower trusts in the leader as trust is seen as a key factor that links authentic leadership to various follower attitudes and behaviours. The ability of a leader to develop the trust relationship is not an easy task, on the contrary, if one is unable to promote trust within the work setting, it results in lower levels of work engagement (Engelbrecht et al., 2014; Pienaar, 2009).

Trust is seen to be a fundamental element of a healthy and conducive working environment. According to Ferres (2003), trust can be defined as an individual's willingness to act on the basis of his or her perception of a trust referent (peer, supervisor, manager, leader, and organisation) being supportive/caring, ethical, competent and cognisant of others' performance. According to literature, a large amount of research has been conducted on trust and how trust contributes to leadership effectiveness (Carstens & Barnes, 2006; Neves & Caentano, 2009). If an organisation possesses authentic leaders (supervisors), employees then feel a sense of recognition and empowerment, thus increasing the levels of trust they have for their leader. If employees experience such feelings, it will further motivate them to achieve their goals, therefore resulting in better work engagement (Ferres & Travaglione, 2003; McEvily & Tortoriello, 2011).

Within the strenuous working environment that health care workers operate in, they need not only trust in their leaders, but also need to trust in their co-workers (George, Gow, & Bachoo, 2013). The trust in co-workers is said to emerge from supervisors (authentic leaders) creating an authentic culture and climate for their subordinates to work in. According to Chung and Jackson (2011), trust in co-worker plays a critical role in the sharing of knowledge, information and resources and therefore will impact on the levels of work engagement.

When trust exists amongst co-workers, an employee is more open to accepting feedback and utilising this feedback in a constructive manner, as trust ignites feelings of confidence and empowerment in the relationship amongst co-workers (Chung & Jackson, 2011).

Work engagement is referred to as an imperative factor towards any organisation's level of success and competitiveness. If an employee has a trustworthy leader, he or she will put in extra effort and be willing to go the extra mile (Walumbwa, Christensen, & Hailey, 2011), thus demonstrating higher levels of engagement (Albrecht, 2010: Engelbrecht et al., 2014). Work engagement can therefore be defined as a "persistent and pervasive work-related state of mind and it is characterised by three dimensions, namely: vigour, dedication and absorption" (Schaufeli & Bakker, 2005, p. 295). Vigour refers to having high levels of energy and mental resilience while working; dedication reflects being strongly involved in one's work and experiencing a sense of enthusiasm and inspiration; whilst absorption is the ability of an individual to be engrossed in work-related tasks (Schaufeli & Bakker, 2004).

According to literature, recent studies have shown that only two of the three dimensions of engagement should be utilised (Stander & Mostert, 2013; Stander et al., 2015); those which are seen to be the 'core dimensions' (vigour and dedication). This is due to the fact that absorption can be seen as a state of 'flow' (Cszikszentmihalyi & Rathunde, 1993; Stander & Mostert, 2013) that is a result of work engagement instead of a contributing factor of work engagement (Montgomery, Peeters, Schaufeli, & Den Ouden, 2003). As a result of these arguments, only vigour and dedication which are known as the 'core' dimensions of engagement will be utilised in this study.

The relationship between authentic leadership, trust and work engagement is supported by theories such as the Social Exchange Theory (SET) (Blau, 1964). This theory is based on the principle of reciprocity. Cropanzano and Mitchell (2005) found that individuals who perceive that they are treated in a fair and ethical manner with regard to their leader will be more likely to trust in their leader and in turn be more engaged in their work (Norman, 2006). If at any point individuals feel that they are being treated unfairly, their levels of trust in their leader decrease, impacting negatively on their levels of work engagement. If employees perceive their leader as one who takes their well-being into account, they will in turn trust in their leader, which will serve as a motivation to work. This will result in their being more engaged in the workplace; therefore referring to the principle of reciprocity (Wang & Hsieh, 2013).

In the public health care sector, health care workers are exposed to large numbers of patients, resulting in them spending long hours attending to the demands of their work, trying to do their jobs to the best of their ability with limited resources at their disposal (Korner, Reitzle, & Silbereisen, 2012; Perla, Bradbury, & Gunther-Murphy, 2013). Research shows that leaders as well as co-workers have a vital impact on employee well-being and engagement and that a positive relationship with both the leader and the co-worker has a significant impact on the levels of trust and work engagement (Carstens & Barnes, 2006; Onorato & Zhu, 2014).

With this said, the type of leadership present along with trust and work engagement is imperative towards the achievement of organisational outcomes (Alok & Israel, 2012; Cummings, Hayduk, & Estabrooks, 2005). Within public health care, both internal and external challenges that employees experience hinder their ability to work optimally. Not having proper management structures in place can add to their burden. Therefore the objective of this study is to investigate the relationship between authentic leadership and work engagement along with the two trust referents (trust in supervisor, trust in co-worker) amongst health care workers to see the impact it will have if these resources were present.

This relationship is depicted in Figure 1 below.

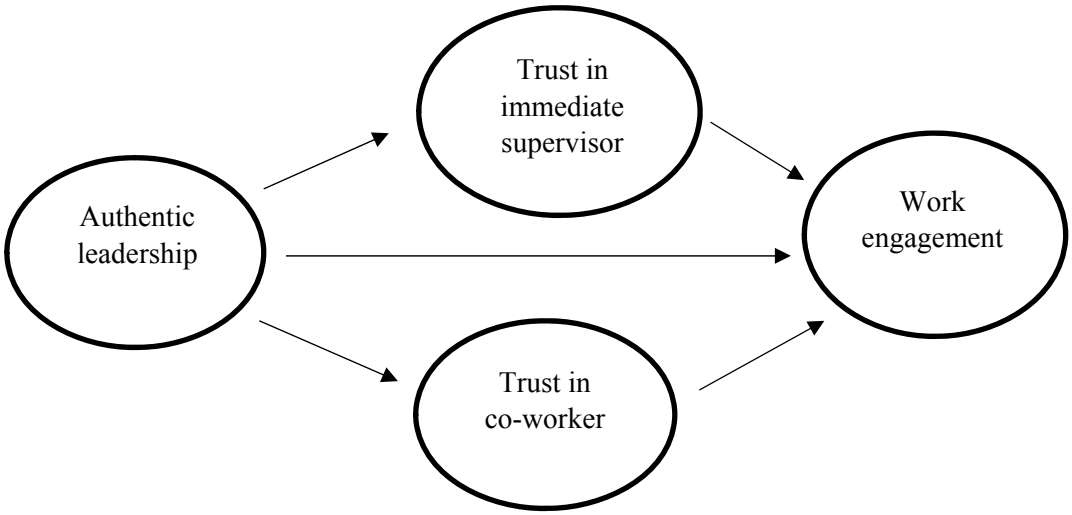

Figure 1: A proposed model of authentic leadership, work engagement and the indirect effects of trust.

1.2 Research Questions

Based on the problem statement, the following research questions are formulated:

- What is the relationship between authentic leadership, trust in the supervisor, trust in co-worker and work engagement, according to literature?
- What is the relationship between authentic leadership, trust in the supervisor, trust in co-worker and work engagement, amongst health care workers?
- Does authentic leadership, trust in supervisor, and trust in co-worker predict work engagement?
- Does trust in the supervisor indirectly affect the relationship between authentic leadership and work engagement?
- Does trust in co-worker indirectly affect the relationship between authentic leadership and work engagement?
- What recommendations can be made for future research and practice?

1.3 Research Objectives

The research objectives are divided into general and specific objectives.

1.3.1 General Objective

The general objective of this study is to explore the relationship between authentic leadership, trust and work engagement amongst health care workers.

1.3.2 Specific Objectives

The specific objectives are to:

- Conceptualise authentic leadership, trust in supervisor, trust in co-worker and work engagement, according to literature.
- Determine the relationship between authentic leadership, trust in supervisor, trust in co-worker and work engagement, amongst health care workers.

- Determine if authentic leadership, trust in supervisor, trust in co-worker predict work engagement.
- Determine the indirect effects of authentic leadership through trust in co-worker on work engagement.
- Determine the indirect effects of authentic leadership through trust in supervisor on work engagement.
- Determine future recommendations for practise.

1.4 Research Design

1.4.1 Research Approach

A quantitative approach was followed for the purpose of this study. According to Struwig and Stead (2011), research that is of quantitative nature involves large representative samples in which the data collection procedures used are structured, analysing data by means of statistics. A cross-sectional approach was followed as the data was collected once and did not stretch over a period of time (De Vos, Strydom, Fouché, & Delport, 2005). For the purpose of this study, secondary data was utilised.

1.4.2 Research Method

The research method used in this proposal consisted of two phases, namely a literature review and an empirical study. The results were presented in the form of a research article.

1.4.2.1 Literature Review

With phase one, a complete review was conducted in order to investigate the relationship between authentic leadership, trust and work engagement. Articles that are relevant to the study and that have been published between 2002 and 2016 were obtained and used; any older articles and book sources relevant to the topic were also used in limitation. All literature for this study was obtained by conducting computer searches via databases such as Academic Search Premier; Business Source Premier; PsycArticles; PsycInfo; EbscoHost; Google Scholar; Google Books; Emerald; ProQuest; SACat; SAePublications and Science Direct.

The main journals that were consulted due to their relevance to the topic of interest included the *Journal of Occupational Health Psychology, Journal of Managerial Psychology, Journal of Positive Psychology, Scandinavian Journal of Work Environment and Health, South African Journal of Industrial Psychology, Review of General Psychology, Work & Stress, Journal of Applied Psychology, Leadership Quarterly, Journal of Business Ethics, Journal of Nursing Management,* and *Journal of Trust Research.*

1.4.3 Research Participants

For the purpose of this study, the researcher obtained a sample size of 633 (N = 633) participants; this resulted in an estimated response rate of about 31% of the estimated 2000 respondents who had participated in the data collection from the various occupational groups within the public health care sector. A non-probability sampling technique, known as convenience sampling, was utilised by the primary researchers in order to obtain participants from the target population; a general volunteer-based method of selection for inclusion was used (De Vos et al., 2005; Struwig & Stead, 2011). The only prerequisite for participation in the data collection for this study was English literacy.

1.4.4 Measuring Instruments

Biographical Questionnaire. All participants were requested to complete a biographical questionnaire which allowed the researchers to gather information regarding various characteristics. These characteristics include the year of birth, age, gender, home language, years working in the organisation as well as current position.

Authentic Leadership Inventory (ALI) (Neider & Schriesheim, 2011). This measure was developed to investigate authentic leadership based on the theoretical framework of Walumbwa, Avolio, Gardner, Wernsing, and Peterson (2008). The ALI consists of four dimensions: Self-awareness (S), relational transparency (R), balanced processing (B), and internal moral perspective (M) - a total 14 items. All responses are recorded on a five-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Example items include “My leader describes accurately the way that others view his or her abilities” (S); “My leader clearly states what he/she wants” (R); “My leader carefully listens to alternative perspectives before reaching a conclusion” (B); and “My leader shows consistency between

his/her beliefs and actions" (M). Neider and Schriesheim (2011) reported Cronbach alpha coefficients ranging between 0.74 and 0.90, indicating acceptable reliability.

Workplace Trust Survey (WTS) (Ferres, 2003). The WTS survey was used to measure trust in two of the three dimensions: The immediate supervisor (12 items) and co-workers (12 items). Responses of this measure are recorded on a seven-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Example items include "I act on the basis that my manager displays integrity in his or her actions" (supervisor), and "I feel that I can trust my co-workers to do their jobs well" (co-worker). Ferres and Travaglione (2003) reported that the internal reliabilities for the immediate supervisor and co-worker were consistently high at 0.96 (supervisor) and 0.93 (co-worker).

Utrecht Work Engagement Scale (UWES) (Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002) is designed to measure work engagement on three dimensions of which two of the three dimensions were used in this study, namely dedication (five items) and vigour (six items). Responses of the UWES are scored on a seven-point frequency-rating scale, which varies from 0 (*never*) to 6 (*always*). Illustrations of the items are "I am bursting with energy every day in my work") - an item that falls under the dimension of vigour; and "My job inspires me" is an item that falls under the sub-scale of dedication. Cronbach's alpha coefficients of the UWES as reported by Schaufeli et al. (2002) are 0.91 and 0.88 for both subscales respectively.

1.4.5 Research Procedure

The research procedure for this study was carried out as follows: After permission had been obtained by the primary researchers from a representative of the Department of Health in the District, the researcher then provided management as well as all participants (employees) with a document explaining the objectives and importance of the study, also a consent letter requesting participation. Participants were given the option to complete the questionnaire at a place of their choice.

All questionnaires were distributed in envelopes and participants were given a total duration of four weeks to complete the questionnaires. Once they had completed the questionnaire, the participants were asked to place the completed questionnaires into a secured box at each hospital/clinic. Thereafter the gatekeeper returned the secured boxes to the researcher.

Participation in the study was completely voluntary, and the confidentiality and anonymity of participants were emphasised. The various hospitals within the health care sector would receive comprehensive feedback regarding the results once the study had been completed. Feedback to the various hospitals and clinics was provided by means of a presentation as well as a detailed report entailing the impact of this study on the organisation. Feedback was only provided once the data had been analysed. If any of the participants required individual feedback, this was made available on request. Lastly, unit level results were provided via focus groups.

1.4.6 Statistical Analysis

In order to investigate the current research, the statistical analysis for this study was completed by utilising SPSS 23 (IBM Corporation, 2015) and Mplus, 7.4 ((Muthén & Muthén, 1998-2016) programmes.

Structural equation modelling (SEM), also known as latent variable modelling, was used following a two-step modelling approach (Kline, 2011). SEM makes provision to test multiple relationships between latent and observed variables simultaneously. Firstly, the factorial validity of the measurement model was tested, whereby the measures (authentic leadership, trust in supervisor, trust in co-worker and work engagement) were entered into a measurement model with factor structures as originally proposed. Thereafter, it was compared to different combinations within those factor structures, without removing or correlating any items.

In doing so, the statistically best fitting measurement model was identified and used to develop further into the proposed final measurement model, which then preceded the structural model (where regression relationships were added). It is important to note that skewness and kurtosis were allowed for by using a maximum likelihood robust (MLR) estimator.

The indirect effects of authentic leadership on work engagement were also evaluated by using bootstrapping with a 95% confidence interval (Mokgele & Rothmann, 2014).

In order to evaluate the measurement and structural models in this study, the following fit indices were used to assess the model fit in both steps: Chi-square (χ^2), degrees of freedom (*df*), root means square error of approximation (RMSEA), the standardised root mean square residual (SRMR), and incremental fit indices, including the Comparative Fit index (CFI), and the Tucker-Lewis index (TLI) (Byrne, 2012; Hair, Babin, Black, & Anderson, 2010). CFI and TLI values higher than 0.95, were considered acceptable. RMSEA and SRMR values lower than 0.08 and 0.05, respectively, indicated acceptable fit between the model and the data (Hair et al., 2010).

Furthermore, both the Akaike Information Criterion (AIC) and the Bayes Information Criteria (BIC) were used to compare the different measurement models. It is indicated that the lower the value, the better the model fit. Due to the use of the MLR estimator, competing models cannot be compared directly by using the chi-square values; therefore, the Satorra-Bentler chi-square difference test was performed in order to calculate the significance in the chi-square changes between the competing models (Satorra & Bentler, 2010).

1.5 Ethical Considerations

An ethics application was submitted to the ethics committee of the NWU for approval prior to data collection in the health care industry and had been approved (NWU-HS-2014-0146) as part of a larger research project.

It was essential for the purpose of this study for the research to be conducted in a fair and ethical manner. The adherence to ethics was of the utmost importance. Issues such as voluntary participation, informed consent, protection from harm, confidentiality and accountability were all taken into account. These concepts were fully explained to all the participants prior to their participation in the research.

1.6 Expected Contribution of the Study

1.6.1 Contribution for the Organisation

This study will enable the health care sector to gain a broader understanding of the importance of having the correct type of leader that warrants employees' trust; also the impact that it will have on the trust level of co-workers amongst one another and on the work engagement levels of employees.

By having a better understanding of how leadership can impact trust, work engagement and work performance, organisations can work together with its employees to achieve their goals by utilising a leadership style that is likely to assist them in reaching organisational goals. This study will also guide future interventions; it will further educate individuals on the concept of authentic leadership and the benefits thereof.

1.6.2 Contribution to Industrial-Organisational Psychology Literature

Due to the fact that authentic leadership is a relatively new concept which is being explored more and more, this study will contribute to the current literature in this filed. In order for authentic leadership to be fully understood and implemented, it requires more empirical work to be done on the topic.

1.6.3 Contribution for the Individual

The challenging work environment that health care workers are faced with, results in these individuals experiencing their job as something that is not a pleasurable experience. However, if awareness is created around the concept of authentic leadership and if individuals are exposed to more authentic leaders, it may increase the level of trust they have in their leaders, and could therefore result in their being more engaged in their work. If employees are seen to be more engaged in the work context, they are more likely to achieve organisational outcomes. Increased awareness regarding authenticity, trust in supervisor as well as trust in co-worker will lead to the further development of employees in the personal and professional domains.

This in turn, will also pave the way for experiencing trust in both the leader and co-worker which will also lead to an increase in feelings of happiness and fulfilment at work; less feelings of depression; and enhanced performance, energy, motivation to work, resilience, positive emotions and higher levels of engagement. It will create a climate where trust and work engagement are more likely to be experienced.

1.7 Chapter Division

The chapters in this mini-dissertation are presented as follows:

Chapter 1: Introduction
Chapter 2: Research article
Chapter 3: Conclusions, limitations and recommendations

1.8 Chapter Summary

Chapter one provided insight into the background and motivation for conducting this study; firstly, by looking at the challenges faced in this sector and ways to alleviate them. The aim of this study was therefore to investigate the role of leadership, specifically authentic leadership in the public health care sector. Based on previous literature and the motivation to do this study, research questions and research objectives were formulated. In order to answer these questions and achieve the objectives of the study, factors such as the research participants, collection of data, research design, the measuring instruments used and all ethical issues were carefully carried out.

Chapter 2 provides comprehensive literature on the variables in this study. Thereafter, the statistical analysis, the results of the study and a discussion thereof are presented. Lastly, the author looked at the implications for management, making recommendations for future research based on the findings.

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CHAPTER 2

RESEARCH ARTICLE

Authentic leadership, trust and work engagement amongst health care workers

ABSTRACT

In South Africa, the current state of public healthcare calls for urgent intervention in order to offer quality services to those in need. This sector requires the proper use of leadership, by means of employing an individual in a leadership positon who will be able to lead by example and conduct work in an authentic manner. The main aim of this study was to conduct a thorough investigation into the relationship between authentic leadership and work engagement, through the indirect effects of trust. In this study a non-experimental cross-sectional survey was used, with a total sample of 633 employees from various public health care institutes. Measuring instruments included the Authentic Leadership Inventory, Workplace Trust Survey and the Utrecht Work Engagement Scale. Structural equation modelling was utilised to assess the hypothesised measurement and structural models using Mplus. Both the trust referents (trust in co-worker and trust in supervisor) played a significant role in the relationship between authentic leadership and work engagement. Results indicated that authentic leadership through trust in co-worker had a greater indirect effect on work engagement than through trust in supervisor, although both showed a significant impact. It was also found that a direct path does not exist between authentic leadership and work engagement; however, factors such as trust in co-worker and trust in supervisor can help in strengthening the relationship between authentic leadership and work engagement in this sector. It is recommended that the public health care sector, develop interventions that will apply the principles of authentic leadership.

Keywords: Authentic leadership, trust, work engagement, public health care, public health care employees

INTRODUCTION

The evolution of healthcare standards in South Africa has been given a lot of focus over the years, dating back to 1950 when the foundations were created to ensure future developments in this sector (Health Systems Trust, 2013). However, to date developments have not yet been achieved, even after South Africa's transformation to a democratic country in 1994. As a result, the South African health care sector faces numerous internal and external challenges (Health Systems Trust, 2013; Okanga & Drotskie, 2015). The lack of successful implementation of workplace policies, increased safety issues, a lack of resources, poor management and a lack of trust in leaders (Benatar, 2013; George, Atujuna, & Gow, 2013) refer to the internal challenges. External challenges include the increasing population, higher responsiveness to patient needs, pressure on service delivery and client dissatisfaction (Salanova, Agut, & Peiro, 2005; Siedine et al., 2012).

According to Jooste and Jasper (2012), in comparison with other African countries, the amount of capital pumped into the South African health care sector is known as one of the largest; yet, despite the amount invested, this sector is still unable to deliver (Christian & Crisp, 2012; Stander, De Beer, & Stander, 2015). Research that has been conducted by the South African Department of Health (DoH, 2011) states that the medical burden is going to increase drastically in future; currently 83% of the population requires free medical treatment from public hospitals (Blecher, Kollipara, De Jager, & Zulu, 2011). The result is a phenomenal burden being placed upon individuals who are responsible for providing their services in this sector despite the ongoing challenges they are being faced with (Ashmore, 2013).

The public health care sector encompasses a volatile working environment. Employees in this environment are often overworked, conducting their work under negative circumstances due to a lack of proper management, a lack of resources and the inability of the employees to remain motivated and engaged (South Africa Department of Health, 2011). A study conducted by George et al. (2013) stated that employees in this sector feel highly pressured and overwhelmed by the number of tasks they are to carry out on a daily basis. Furthermore, Von Holdt and Murphy (2006) found that employees in this sector experience a large amount of stress, causing exhaustion and dissatisfaction in their work.

The question then arises how to ensure that employees remain productive and happy despite the daily pressures? (Pillay, 2009; Stander et al., 2015).

The Department of Health has recently included leadership as one of its main drivers to overcome the obstacles faced by individuals in this sector (South Africa Department of Health, 2011). Leadership can be seen as a valuable asset in identifying approaches to deal with the challenges in this sector and the attainment of organisational outcomes (Rego, Sousa, Marques, & Cunha, 2012). Being a leader and fulfilling this role in such a demanding work environment will not only assist employees in attaining employee and organisational outcomes, but will also serve as a resource that can be utilised in a positive manner (Bluemental, Bernard, Bohnen, & Bohmer, 2012; Greco, Laschinger, & Wong, 2006; Muchiri, 2011). A study by Wong, Cummings, and Ducharme (2013) shows the positive impact of leadership which can influence employees' performance levels through their attitudes and behaviours.

Kouzes and Posner (2007) identified authenticity as being the most critical component of effective leadership. The concept of an authentic leader simply means that leaders treat employees in a fair, transparent and honest manner (Walumbwa, Avolio, Gardner, Wernsing, & Petersen, 2008; Walumbwa, Wang, Wang, Schaubroeck, & Avolio, 2010); showing consistency between their morals, values and actions. The gaining of employees' trust is seen to be another vital element of effective leadership as trust is a fundamental element in ensuring co-operative relationships (Blau, 1964).

A leader that has the ability to be true to him or herself and others will not only focus on the tasks at hand, but also on relationship building with his or her subordinates. The aim is to therefore build trust through supportive actions, showing recognition and being honest with subordinates. Leadership has a drive to enable effective communication between employees and their superiors which can also be used to an advantage if trust is present (Wang & Hsieh, 2013; Wong & Cummings, 2009). Additionally, the challenges faced by the health care sector require a positive leadership style such as authentic leadership that will restore employee trust and work engagement (George, 2003).

Trust is seen as a crucial aspect when forming and maintaining any relationship, particularly in relationships between co-workers and with supervisors (Altuntas & Baykal, 2010).

When trust is created between co-workers and supervisors in everyday professional life, it may result in favourable consequences (Dirks & Ferrin, 2002). In the health care sector where there is a lack of resources and an increased demand for services, a factor such as trust is important; the absence thereof could be detrimental to the daily functioning and delivery of quality services (Nelson et al., 2014). If an employee perceives that he or she has an authentic trustworthy leader, this may result in a higher level of engagement (Engelbrecht, Heine, & Mahembe, 2014).

Work engagement is a pivotal factor in the success of an organisation. Engaged workers will be more committed to enjoy what they do and will be willing to go the extra mile for the organisation (Walumbwa, Christensen, & Hailey, 2011). Bearing in mind the beneficial outcomes of work engagement that is in line with organisational outcomes, authentic leadership and trust are important aspects in creating a work environment that fosters efficiency and effectiveness (Engelbrecht et al., 2014; Stander et al., 2015).

Despite acknowledging the positive effects of leadership, there is still a lack of such leadership within the public health care sector in the South African context. Fallatah and Laschinger (2016) found that one of the main reasons that leadership is not utilised in the most efficient manner could be that the individual, who takes on the leadership role, was not trained for it. Leaders in a work context are most likely trained to be in this position to ensure that administrative duties of being a leader to subordinates are taken care of; while neglecting the relational aspects of being a leader (Daire, Gilson, & Cleary, 2014). Therefore, despite what research has mentioned on the importance of effective leadership, there is limited research in this domain, particularly in public health care.

The purpose of this study is to investigate the impact of authentic leadership on work engagement in the public health care sector through the indirect effects of trust. This study is thus aimed at making a contribution to the limited research in this domain and creating awareness around authenticity.

Literature Review

Authentic Leadership

The premise of authentic leadership is seen as one of the basic constructs contributing to positive leadership (Avolio & Gardner, 2005; Rego et al., 2012). The authentic leadership framework is based on authenticity, meaning authentic leaders are those individuals who know who they are, who are true to the self and who do not act to become someone they are not. According to Walumbwa et al. (2008), authentic leadership can be defined as:

> A pattern of leader behaviour that draws upon and promotes both positive psychological capacities and positive ethical climate, to foster greater self-awareness, an internalised moral perspective, balanced processing of information, and relational transparency on part of the leaders working with followers, fostering positive self-development. (p. 94)

The above definition of authentic leadership puts forward the levels of awareness authentic leaders have in terms of the way they think and behave. If transparent authentic behaviour is practised, this will foster self-regulated behaviours of both leaders and employees, which in turn will result in a positive culture and climate (Luthans & Avolio, 2003; Walumbwa et al., 2008). Leaders that employ this leadership style burst with enthusiasm, practice morals and values that are acceptable and lead with both their hearts and their heads (Amunkete & Rothmann, 2015; Hsieh & Wang, 2015). Authentic leaders strive to behave in ways that will foster long-term meaningful relationships in order to build credibility and trust with employees which, in turn, will lead to the achievement of the desired outcomes (Norman, Avolio, & Luthans, 2010).

Authentic leadership consists of four sub-factors, namely self-awareness, balanced information processing, internalised moral perspective and relational transparency (Walumbwa et al., 2008). Self-awareness refers to being conscious of one's own motives, feelings and desires, and the ability to act upon these when leading others; being aware of the impact one may have on others (Kernis, 2003).

Balanced information processing refers to the degree to which leaders take into account all the necessary information in an objective manner, before reaching a sound conclusion (Kernis, 2003). Internalised moral perspective is driven by one's internal moral standards and values and aligning these with the leader's intentions and actions. In other words, the leader needs to be transparent to his/ her followers and lead by example (Avolio & Gardner, 2005). The fourth sub-factor of authentic leadership is relational transparency which refers to the leader portraying themselves in his or her purest form (authenticity), allowing the leader to understand and utilise his or her unique talents, strengths, weaknesses and values in such a way that it allows the leader to express his or her true emotions and feelings towards his or her followers (Bamford, Wong, & Laschinger, 2013).

A study conducted by Wang and Hsieh (2013) highlighted the importance of leadership, also pointing out that one of the main components of leadership is the leaders' ability to behave and treat their followers authentically. With recent studies, it has been seen that employees' attitudes, behaviour, and work morale have increased due to having an authentic leader present, resulting in outcomes such as work engagement and trust (Rego et al., 2012). These attitudes and behaviours are both seen in a positive light, resulting in positive work behaviour. If an employee perceives that they are being treated with honesty and trust, in turn they will go "the extra mile" in conducting their work; hence employees would be happier and more engaged in their work (Dash & Pradin, 2014). The topic of authentic leadership has been largely researched in both practical and academic fields; one of the most pivotal elements of being an effective leader is the ability of the leader to gain followers' trust, although much research is still needed in this field (Blau, 1964; Fallatah & Laschinger, 2016).

The Social Exchange Theory (SET) (Blau, 1964) states that the behaviour of an individual depends on the relationship between the leader and his subordinate in terms of give and take. This emphasises the concept of reciprocity, meaning that authentic leadership and trust can be seen as an exchange between leaders and their subordinates (Wang & Hsieh, 2013).

Trust

Norman et al. (2010) state that trust is seen to be one of the most influential factors that may impact the co-operation levels of individuals within a relationship. It is pivotal in today's fast paced environments for all organisational members to trust one another and their superiors, given the increased levels of complexity and uncertainty. One of the most challenging problems faced by the health care sector, amongst others, is relationship problems. These problems occur due to a lack of trust between co-workers and supervisors (Carstens & Barnes, 2006).

According to Ferres (2003), trust can be defined as the willingness of a person to trust another based on his or her perception of a trust referent (peer, supervisor, manager, leader, and organisation) as being caring, supportive and cognisant of others. For the purpose of this study, two sub-factors of trust were selected, namely trust in co-worker and trust in supervisor.

Trust in co-worker can be described as the ability of an individual to trust another in terms of one's actions, morals and behaviour (Ferres, 2003; Hsieh & Wang, 2015). This can be further conceptualised as the confidence one co-worker has in another to complete his or her work effectively (James, 2011). Ferres (2003) further states that trust in co-worker is also viewed as the support and appreciation colleagues receive from one another with regard to their work.

Trust in the immediate supervisor refers to the levels of support and assurance an employee receives from his or her supervisor (Ferres, 2003). Ferres and Travaglione (2003) conceptualise trust in the immediate supervisor as the ability of the supervisor to be open, fair and honest with his subordinates; who listens to employees' concerns and gives recognition for work well done. Studies conducted by Luthans and Avolio (2003) emphasise that authentic leadership constitutes authenticity as one of its most important factors contributing to the willingness of employees to trust in the co-worker and supervisor.

When trust is reciprocal and evident between employees and their superiors, employees are then willing to put in extra effort and go the extra mile for that organisation (Dash & Pradhan, 2014).

This will result in more favourable outcomes in terms of job performance and the attainment of organisational goals (Mayer & Gavin, 2005). A study conducted by Dirks and Ferrin (2002) concluded that employees who trust in their leader are most likely to have a higher drive for achievement. The presence of trust can be analysed from a psychological point of view; an employee's perceptions will determine the change and approval from the leader that will result in the employee being more engaged (Dannhauser, 2007). Wong, Laschinger, and Cummings (2013) found that trust has a positive impact on employees' engagement levels. In this instance, trust was viewed as a way of exchanging knowledge, information and ideas; therefore promoting a climate in which employees were engaged and productive.

Specifically, employees show trust by exercising the notion of repaying their supervisors, not in monetary terms, but by being engaged in their work and providing positive work-related outcomes (Karatepe, 2011).

Work Engagement

Work engagement is a prevalent topic in literature. It is seen as a positive organisational behavioural construct which has been linked to positive outcomes such as organisational commitment, increased performance and psychological well-being (Demerouti, Bakker, Jonge, Jansen, & Schaufeli, 2001; Jeung, 2011; Sonnetag, 2003). It was found that if there are proper processes, procedures and systems in place within the organisation which employees acknowledge as being fair, trustworthy and sensible, they will be more engaged (Wang & Hsieh, 2013). It can then be said that being an engaged employee means that the individual is enthusiastic, intrigued and interested in what he or she does and is therefore willing to contribute to the organisation's success (Albrecht, 2010).

Work engagement is defined by Schaufeli and Bakker (2004) as a "fulfilling, satisfying and positive work related state of mind, characterised by vigour, dedication and absorption" (p. 295). However, in more recent studies work engagement comprised only two dimensions, namely vigour and dedication (Stander & Mostert, 2013; Stander et al., 2015). Vigour refers to an individual's continued energy and positivity within his or her work role. This implies that an individual will work with enthusiasm and be positive in his/her work. Dedication is described as commitment, passion and pride that one has for one's job (Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002).

This implies that an individual sees his/her work as being important and providing him/her with a challenge to achieve goals and optimise current skills (Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002). Absorption refers to individuals who are fully engrossed in their work, implying that it would be difficult to convince such an individual to stop working. Therefore this type of an individual would work for hours on end without even realising how much time has gone by. The dimensions that constitute work engagement can be said to be the opposite of burnout, except for absorption as this does not imply the opposite of professional inefficacy (Schaufeli & Bakker, 2004). Absorption is now seen as a state of flow as opposed to a core component of work engagement (Schaufeli & Bakker, 2004).

Work engagement is the main driver in ensuring an organisation's competitive edge and the ability to remain sustainable and productive (Lin, 2009). According to Lin (2009), one of the antecedents of work engagement is trust. Trust is seen as a fundamental aspect between the employee, leader and the organisation, which has an influence on how the employee will view the work environment.

In a study carried out by Buckley (2011) on the effects that downsizing had on trust, it was found that if an employee experiences greater levels of trust, he or she will experience high levels of work engagement. Furthermore, a study conducted by Harter (2002) postulates that leadership is one of the largest contributing factors to work engagement.

In their study, Bakker and Demerouti (2007) found that a positive relationship exists between job resources and employees' levels of engagement. Authentic leadership serves as a resource; these leaders provide employees with resources (physical or emotional support) that will enable them to complete all their work given the necessary information. Bakker and Demerouti (2008) further state that these resources (physical or emotional support) have the potential to enhance work engagement as employees have what they need in order to complete their jobs with ease.

Within the public health care sector, an engaged workforce is needed in order to successfully overcome obstacles and challenges. It is therefore crucial to investigate means by which authentic leadership, trust and work engagement can be fostered in this environment, leading to positive outcomes amongst medical, support and administrative staff.

The relationship between the variables in this study (authentic leadership, trust in co-worker, trust in supervisor and work engagement can be supported by theoretic models and theories such as the Job Demand-Resources (JD-R) model (Bakker & Demerouti, 2007; Demerouti & Bakker, 2011) and the SET (Blau, 1964). The SET focuses on the relationship between individual employees and the organisation. Employees have the potential to form perceptions with regard to their superiors, colleagues and the organisation at large, which in turn influences their intentions, attitudes and behaviour (Godard, 2001). Furthermore, the underlying premise of this theory is based on the principle of reciprocity (i.e. a mutual exchange between two parties). In other words, if an individual perceives that he or she is treated with respect in a fair and ethical manner by the leader, he or she will in turn most likely trust in that leader, which will lead to positive outcomes such as work engagement and job satisfaction (Wang & Hsieh, 2013).

In such a strenuous environment, authentic leadership can be seen as a resource to deal with the challenges the health care sector is facing. The JD-R model has been largely researched in the domain of Industrial Psychology, comprising two factors (job demands and job resources) (Botha & Mostert, 2014). *Job demands* are referred to as factors within a job that will cause strain or discomfort to an individual, which could be linked to physiological or psychological costs. *Job resources* include any factors that will assist in alleviating job demands, leading to the attainment of goals (Demerouti & Bakker, 2011). Positioning these variables in the JD-R model, authentic leadership can be seen as an organisational resource, whereas work engagement can be seen as an outcome. Bearing in mind that the authentic leader always has his followers' best interests at heart, he or she will provide individual attention to his or her followers, which in turn will improve the trust relationship and work engagement of the employee (Neider & Schriesheim, 2011).

Based on the outline above and empirical work/studies that had been conducted, the following hypotheses were formulated:

Hypothesis 1: There are positive relationships between authentic leadership, trust in supervisor, trust in co-worker and work engagement.
Hypothesis 2: Authentic leadership, trust in supervisor, and trust in co-worker predict work engagement.

Hypothesis 3: Authentic leadership indirectly affects work engagement through trust in supervisor.
Hypothesis 4: Authentic leadership indirectly affects work engagement through trust in co-worker.

Below is the proposed model based on the abovementioned hypotheses.

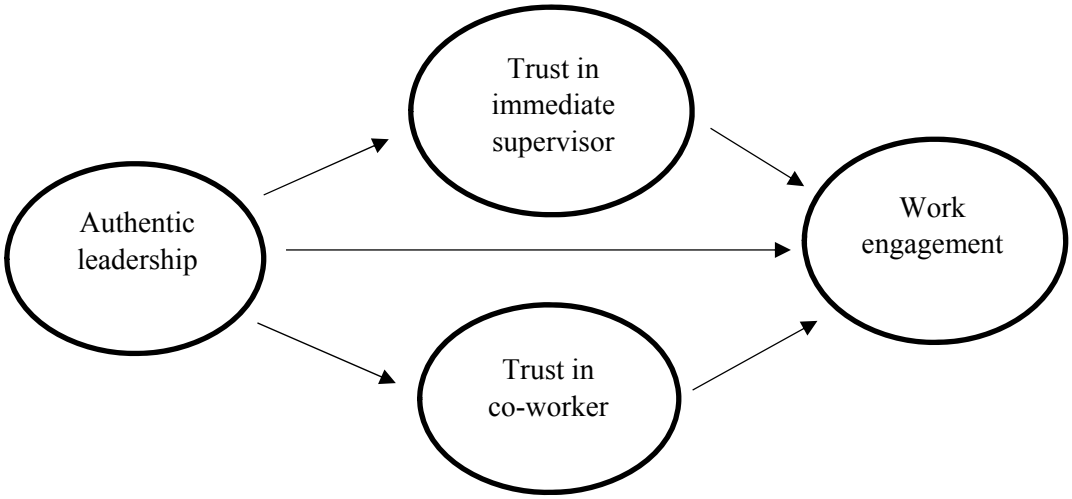

Figure 1: A proposed model of authentic leadership and work engagement with the indirect effects of trust

RESEARCH DESIGN

Research Approach

For the purpose of this study, a quantitative research approach was followed along with a cross sectional survey design. According to Struwig and Stead (2007), quantitative research involves large representative samples. A cross-sectional survey design refers to data that was collected at one point in time (De Vos, Strydom, Fouché, & Delport, 2011). Secondary data was utilised in this study; this refers to data that was collected by someone else, other than the researcher him or herself.

Research Method

Research Participants

Convenience sampling which falls under the category of non-probability sampling techniques was used (De Vos et al., 2011). In this type of sampling, participants were chosen based on their availability. The sample comprised respondents from various job levels, gender and race, and who are employed in the public health care sector within Gauteng.

In this study the researcher obtained a total sample size of 633 ($N = 633$), which resulted in a 31% response rate of the 2000 respondents that were targeted. The 2000 respondents comprised individuals from 27 public hospitals and clinics. One of the requirements for participation in this study was English literacy.

Table 1

Characteristics of the Participants

Item	Category	Frequency	Percentage
Gender	Male	121	20.4
	Female	473	79.6
Race	Asian	10	1.7
	Black	522	87.9
	Coloured	8	1.3
	White	49	8.2
	Other	5	0.8
Age	20-29 years	114	20.3
	30-39 years	136	24.2
	40-49 years	117	20.8
	50-59 years	149	26.5
	60-69 years	46	8.2
Language	English	39	6.6
	Afrikaans	42	7.1
	Setswana	43	7.3
	isiXhosa	40	6.8
	Xitsonga	6	1.0
	isiZulu	113	19.2
	Sesotho	263	44.7
	isiNdebele	3	0.5
	Tshivenda	3	0.5

	siSwati	7	1.2
	Sepedi	21	3.6
	Other	9	1.5
Qualification	Grade 12	156	29.8
	Diploma / Tertiary certificate	202	38.5
	University degree	122	23.3
	Post-graduate degree	44	8.4
Tenure – Organisation	<5 years	238	40.3
	5-9 years	117	19.8
	10-15 years	34	5.8
	15+ years	201	34.1
Tenure – Position	<5 years	275	47.7
	5-9 years	137	23.7
	10-15 years	54	9.4
	15+ years	111	19.2
Function	Management	94	17.4
	Specialist	65	12.0
	Administration	106	19.6
	Other	275	50.9

As indicated in Table 1, the minority of participants were male (20.4%) and a majority of female participation was evident (79.6%). The most represented racial group comprised black participants (87.9%), followed by white participants (8.2%). Sesotho was seen to be the most spoken/preferred language amongst the participants (44.7%), followed by isiZulu (19.2%). With regard to qualifications, the majority of the participants were in possession of a diploma (38.5%) in relation to the 23.3% of participants who held formal degrees. In addition, 47.7% of employees worked in their current position for less than 5 years. With regard to the functions that each employee held, specialists comprised 12.0%, management (17.4%) followed by administration (19.6 %), and lastly, the majority of the population indicated other (50.9%).

Measuring Instruments

In this study, the constructs of authentic leadership, workplace trust (trust in co-worker, trust in supervisor) and work engagement were measured by using a biographical questionnaire and three measuring instruments.

Biographical Questionnaire. A biographical questionnaire was completed, which enabled the researcher to gather information regarding the participants' demographic characteristics. The characteristics included aspects such as the participants' age, gender, home language, number of years working in the organisation and race, amongst others.

Authentic Leadership Inventory (ALI) (Neider & Schriesheim, 2011). This measure was developed to investigate authentic leadership based on the theoretical framework of Walumbwa et al. (2008). The ALI consists of four dimensions: Self-awareness (S), relational transparency (R), balanced processing (B), and internal moral perspective (M), with a total of 14 items. All responses are recorded on a five-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Example items include "My leader describes accurately the way that others view his/her abilities" (S), "My leader clearly states what he/she wants" (R), "My leader carefully listens to alternative perspectives before reaching a conclusion" (B), "My leader shows consistency between his or her beliefs and actions" (M). Neider and Schriesheim (2011) reported general scale acceptability and reliability with Cronbach's alpha coefficients ranging between 0.74 and 0.90.

Workplace Trust Survey (WTS) (Ferres, 2003). The WTS survey was used to measure trust in two dimensions, namely the immediate supervisor (12 items) and co-workers (12 items). Responses of this measure are recorded on a seven-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Example items include "I act on the basis that my manager displays integrity in his/ her actions" (supervisor), and "I feel that I can trust my co-workers to do their jobs well" (co-worker). Ferres and Travaglione (2003) reported that the internal reliabilities for the trust in immediate supervisor scale and trust in co-worker scale were consistently high at 0.96 (supervisor) and 0.93 (co-worker).

Utrecht Work Engagement Scale (UWES) (Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002) is designed to measure employee engagement on three dimensions of which two of the three dimensions were used in this study, namely dedication (five items) and vigour (six items). Responses of the UWES are scored on a seven-point frequency-rating scale, varying from 0 (*never*) to 6 (*always*). Example items include "I am bursting with energy every day in my work" - an item that falls under the vigour dimension, and "My job inspires me" - an item that falls under the sub-scale of dedication. Cronbach's alpha coefficients for the UWES range between 0.68 and 0.91 (Schaufeli et al., 2002).

Research Procedure

The study in question was part of a larger research project which focused on the well-being and work-related experiences of employees in the public health care sector. The research procedure for the study was carried out as follows: permission was gained from a representative of the Department of Health in a District to conduct the research. Management as well as participants was given a document explaining the objectives and importance of the study and a consent letter requesting participation. All questionnaires were then distributed in envelopes in the allocated venues in the different hospitals and clinics. Participants were given a total duration of four weeks to complete the questionnaires. Once they had completed the questionnaire, the participants were asked to submit the completed questionnaire in a secured box at the designated venue at each hospital and clinic. All the questionnaires were then collected and kept in a safe place.

Participants were assured that the results would only be utilised for research purposes and confidentiality and anonymity were emphasised. If any of the participants were unsure or had any questions, they were given the option to contact the project leader who was available to assist throughout the process. The study was approved by the North-West University's HHREC ethics committee.

Statistical Analysis

In order to investigate the current research, the statistical analysis for this study was completed by utilising the SPSS 23 (IBM Corporation, 2015) and Mplus 7.4 (Muthén & Muthén, 1998-2016) programmes.

Structural equation modelling (SEM), also known as latent variable modelling, was used following a two-step modelling approach (Kline, 2011). SEM makes provision to test multiple relationships between latent and observed variables simultaneously. Firstly, the factorial validity of the measurement model was tested, whereby the measures (authentic leadership, trust in supervisor, trust in co-worker and work engagement) were entered into a measurement model with factor structures as originally proposed by the authors.

Thereafter, the model was compared to different combinations within those factor structures, without removing or correlating any items. In doing so, the statistically best fitting measurement model was identified and used to develop further into the proposed final measurement model, which then preceded the structural model (where regression relationships were added). It is important to note that skewness and kurtosis were allowed for by using a maximum likelihood robust (MLR) estimator. The indirect effects of authentic leadership through the two trust referents on work engagement were also evaluated by using bootstrapping with a 95% confidence interval (Mokgele & Rothmann, 2014).

In order to evaluate the measurement and structural models in this study, the following fit indices were used to assess the model fit in both steps: Chi-square (χ^2), degrees of freedom (*df*), root means square error of approximation (RMSEA), the standardised root mean square residual (SRMR), and incremental fit indices, including the Comparative Fit index (CFI) and the Tucker-Lewis index (TLI) (Byrne, 2012; Hair, Babin, Black, & Anderson, 2010).
CFI and TLI values higher than 0.95, were considered acceptable. RMSEA and SRMR values lower than 0.08 and 0.05 respectively indicated acceptable fit between the model and the data (Hair et al., 2010).

Furthermore, both the Akaike Information Criterion (AIC) and the Bayes Information Criterion (BIC) were used to compare the different measurement models. It is indicated that the lower the value, the better the model fit. Due to the use of the MLR-estimator, competing models cannot be compared directly by using chi-square values; therefore, the Satorra-Bentler chi-square difference test was performed in order to calculate the significance in the chi-square changes between the competing models (Satorra & Bentler, 2010).

RESULTS

In the results section, the competing measurement models which modelled the relationships between authentic leadership, trust and work engagement will first be reported, including post-hoc development of the measurement model. Second, the results of the alternative structural models will be analysed. Thereafter, the results of testing for indirect effects will be reported.

Testing Measurement Models

As mentioned, the factorial validity of the measurement model was tested, whereby the measures (authentic leadership, trust in supervisor, trust in co-worker and work engagement) were entered into a measurement model with factor structures as originally proposed by the authors (Ferres, 2003; Neider & Schriesheim, 2011; Schaufeli et al., 2002), which was then compared to different possible variations of those factor structures. Thereafter, a three-factor measurement model as well as three alternative models was tested to evaluate the best fit to the data.

Model 1 consisted of three second order latent variables: a) authentic leadership, which consisted of four first order latent variables: self-awareness (measured by three observed variables), relational transparency (measured by three observed variables), balanced processing (measured by four observed variables), and moral perspective (measured by four observed variables); b) trust, which consisted of two first order latent variables: trust in supervisor (measured by nine observed variables) and trust in co-worker (measured by twelve observed variables); c) work engagement which consisted of two first order latent variables: vigour (measured by three items) and dedication (measured by three items). The results for Model 1 indicated a poor fit with the data and therefore did not work. The fit statistics were as follows: AIC = 65014.940 and BIC = 65622.03.

Model 2 was specified with authentic leadership having four first order latent variables, trust with two first order latent variables, but work engagement now became a one-factor first order latent variable. Despite doing this, the model fit was still not good, having the following fit statistics: AIC = 65014.084 and BIC = 65603.451. The model did not seem to show the best possible fit to the data as most of the indices did not meet the minimum required criteria.

Both Model 1 and Model 2 experienced problems as the latent variable covariance matrix was not positively definite, with untrustworthy fit indices and therefore could indicate one of the following problems: a negative variance/residual for a latent variable, a correlation greater or equal to one between two latent variables, or a linear dependency between two latent variables. It is not uncommon to find a poor fit of the proposed model given the complexity of SEM (Byrne, 2012; Field, 2013). This called for the model to be re-specified in order to obtain a better fit.

Model 3 was specified with authentic leadership being one first order latent variable (measured by 14 observed variables), trust with two first order latent variables: trust in co-worker (measured by 12 observed variables) and trust in supervisor (measured by nine observed variables), and work engagement with two first order latent variables, namely vigour (measured by three observed variables) and dedication (measured by three observed variables). The model then indicated the following fit statistics: $\chi 2 = 1951.35$; $p < 0.01$; $df = 769$; CFI = 0.90; TLI = 0.89; RMSEA = 0.05; SRMR = 0.05; AIC = 65032.91; and BIC = 65622.28. The fit was good, but could be improved.

Model 4 was then specified with authentic leadership being one first order latent variable (measured by fourteen observed variables), trust as two separate first order latent variables, namely trust in co-worker (measured by 12 observed variable) and trust in supervisor (measured by nine observed variables), and work engagement as one first order latent variable (measured by six observed variables).

The model then displayed the following fit statistics: $\chi^2 = 1956.24$; $p < 0.01$; $df = 773$; CFI = 0.90; TLI = 0.89; RMSEA = 0.05; SRMR = 0.05; AIC = 65032.05; and BIC = 65603.70. Of the four initial measurement models, these fit statistics indicated the best fit to the data; however, the analysis continued in order to improve the current fit statistics. Table 2 indicates a summary of the fit statistics of the 4 measurement models.

Table 2

Fit Statistics of Initial Measurement Models

Model	χ^2	*Df*	AIC	BIC	CFI	TLI	RMSEA	SRMR
Model 1	Non-positive definite latent variable covariance matrix - unreliable fit statistics							
Model 2	Non-positive definite latent variable covariance matrix - unreliable fit statistics							
Model 3	1951.35	769	65032.91	65622.28	0.90	0.89	0.05	0.05
Model 4	1956.24	773	65032.05	65603.70	0.90	0.89	0.05	0.05

χ^2 = chi-square; *df* = degrees of freedom; AIC = Akaike Information Criterion; BIC = Bayesian Information Criterion; TLI = Tucker-Lewis index; CFI = Comparative Fit index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual

Model 1 and Model 2 were seen to be problematic and therefore could not be credibly used for comparison. Model 3 and Model 4 were then compared using the Satorra-Bentler difference test (Satorra & Bentler, 2010), which indicated the following: difference in chi-square: 5.26; and difference in degrees of freedom: 4. According to Table 3, there was a significant improvement from Model 3 to Model 4. Thus, Model 4 was used for further development as it also produced lower AIC and BIC values.

Table 3

Difference Testing for Changes in Chi-square in Initial Measurement Models

Model	$\Delta \chi^2$	Δdf	*p*-value
Model 4	5.26	4	0.26

** p < 0.01

Post-hoc Analysis of the Measurement Model

The model was further developed and the following items were removed: Two items from the authentic leadership inventory (AL5: "My leader uses his or her core beliefs to make decisions"; and AL11: "My leader is clearly aware of the impact he/she has on others"); five items from the WTS scale (WT5: "I feel that my supervisor keeps personal discussions confidential"; WT 6: "I think that my co-workers act reliable from one moment to the next"; WT11: "Employees at my organisation generally feel that co-workers appreciate their quality performance"; WT14: "Most employees at my organisation believe that co-workers will be supportive if problems arise" and WT25: "I will act on the foundation that my co-workers display ethical behaviour"). The abovementioned items were removed due to the fact that they were problematic in terms of one or more of the following: low factor loadings, cross loadings, or too many error correlations between different variables and/or items (Field, 2013; Iacobucci, 2009).

Due to high modification indices (MIs), the following items' error variances were correlated: AL1 ("My leader clearly states what he/she means") with AL2 ("My leader shows consistency between his or her beliefs"; MI = 115.69); AL3 ("My leader asks for ideas that challenge his or her core beliefs") with AL4 ("My leader describes accurately the way that others view his or her abilities"; MI = 87.09); ENG3 ("At my job, I feel strong and

vigorous") with ENG4 ("I am enthusiastic about my job"; MI = 25.80); WT29 ("I feel that I can trust my co-workers to do their jobs well") with WT30 ("I believe that my co-workers give me all the information to assist me at work"; MI = 97.62).

Competing Measurement Models

The proposed post-hoc measurement model was then compared to three competing models (including the same error correlations as Model 1), which consisted of the following: Model 2 encompassed authentic leadership as a one-factor structure; work engagement was presented as a one-factor structure; trust was presented as a two-factor structure. As seen in Table 4, Model 2 then indicated the following fit statistics: $\chi^2 = 1502.03$; $p < 0.01$; $df = 520$; CFI = 0.90; TLI = 0.89; RMSEA = 0.05; SRMR = 0.06; AIC = 54310.79; and BIC = 54793.80. Model 3 followed in the same manner with a few changes, authentic leadership was included as a one-factor model; work engagement was presented as a two-factor model and trust was presented as a two-factor model.

As seen in Table 4, Model 3 then indicated the following fit statistics: $\chi^2 = 1012.73$; $p < 0.01$; $df = 514$; CFI = 0.95; TLI = 0.94; RMSEA = 0.04; SRMR = 0.04; AIC = 53692.50; and BIC = 54202.10. Model 4 comprised a similar structure with authentic leadership being included as a one-factor model; work engagement was presented as a two-factor model; and trust was presented as a one-factor model. Model 4 then indicated the following fit statistics: $\chi^2 = 1519.86$; $p < 0.01$; $df = 518$; CFI = 0.90; TLI = 0.89; RMSEA = 0.06; SRMR = 0.06; AIC = 54340.04; and BIC = 54831.92.

According to Table 4, Model 1 indicated a slightly better fit as opposed to the other three models. A direct comparison with the chi-square cannot be used as an indicator of a better fit, due to the use of the MLR-estimator. By utilising the Satorra-Bentler chi-square difference test, one was able to determine if Model 1 presented a significantly better fit to the data in addition to the fit statistics of the competing measurement models, described in Table 4 (Satorra & Bentler, 2010). Table 4 indicates a summary of the fit statistics of the four competing measurement models.

Table 4

Fit Statistics of Competing Measurement Models

Model	χ^2	*df*	AIC	BIC	CFI	TLI	RMSEA	SRMR
Model 1	994.87	517	53661.77	54158.08	0.95	0.95	0.04	0.04
Model 2	1502.13	520	54310.79	54793.80	0.90	0.89	0.05	0.06
Model 3	1012.73	514	53692.50	54202.10	0.95	0.94	0.04	0.04
Model 4	1519.86	518	54340.04	54831.92	0.90	0.89	0.06	0.06

χ^2 = chi-square; *df* = degrees of freedom; AIC = Akaike Information Criterion; BIC = Bayesian Information Criterion; TLI = Tucker-Lewis index; CFI = Comparative Fit index; RMSEA = root mean square error of approximation; SRMR = standardized root mean square residual

According to Table 5, Model 1 fitted the data significantly better than the competing models. Consequently, Model 1 was used as the basis to test the structural model.

Table 5

Difference Testing for Changes in Chi-square in Competing Measurement Models

Model	$\Delta\chi^2$	Δdf	*p*-value
Model 2	332.02	3	0.00**
Model 3	25.41	-3	0.00**
Model 4	160.75	1	0.00**

** $p < 0.01$

Structural Model

The descriptive statistics, reliabilities and correlations of authentic leadership, trust in co-workers, trust in supervisor and work engagement are reported in Table 6. All the measures used in this study indicated to be reliable, ranging from 0.88 to 0.93, which shows good internal consistency. All the relationships between the variables in the measurement model were found to be practically and statistically significant in the expected directions. Therefore, as seen in Table 6, hypothesis 1 was accepted. It is important to note the difference in the scales when interpreting the means and standard deviations for the different variables as seen in Table 6. These scales range from 1-5 for authentic leadership and the two trust referents, and 1-7 for work engagement.

Table 6

Descriptive Statistics, Reliability Coefficients, and Correlations

Variable	M	SD	ρ	1	2	3
1. Authentic leadership (1-5)	3.38	0.94	0.93	-		
2. Work-trust: Supervisor (1-5)	3.58	0.97	0.92	0.84‡**	-	
3. Work-trust: Co - worker (1-5)	3.54	0.80	0.89	0.54‡**	0.74‡**	-
4. Work engagement (1-7)	5.50	1.30	0.88	0.35†**	0.42†**	0.48†**

* $p < 0.05$
** $p < 0.01$
† $r > 0.30$
‡ $r > 0.50$

Model 1 of the competing measurement models indicated the best fit, thus it was used as the basis for the structural model. In this regard, three structural models were created: Model 1 (including all direct and indirect pathways); Model 2 (including only direct pathways); and Model 3 (including only indirect pathways).

Model 1 included pathways between all four constructs: Authentic leadership through trust in supervisor and trust in co-worker respectively to work engagement; authentic leadership had a direct pathway to work engagement, additionally the correlation between trust in supervisor and trust in co-worker was also included as it originally came from the same questionnaire. The fit statistics of Model 1 were: $\chi^2 = 994.87$; $p < 0.01$; $df = 517$; CFI = 0.95; TLI = 0.95; RMSEA = 0.04; SRMR = 0.04; AIC = 53661.77; and BIC = 54158.08.

Model 2 included pathways directly impacting on work engagement: Authentic leadership to work engagement; trust in supervisor to work engagement; trust in co-worker to work engagement; and the correlation between trust in supervisor and trust in co-worker still remained. (i.e. the pathways from authentic leadership through trust in supervisor and trust in co-worker were restrained to zero).The fit statistics of Model 2 indicated a worse fit than Model 1 which can be seen in Table 7 below. Model 3 included the following pathways: authentic leadership through trust in supervisor and trust in co-worker respectively, authentic leadership through trust in supervisor to work engagement; authentic leadership through trust in co-worker to work engagement; the correlation between the two trust constructs remains. The fit statistics of Model 3 were: $\chi^2 = 996.02$; $p < 0.01$; $df = 518$; CFI = 0.95; TLI = 0.95; RMSEA = 0.04; SRMR = 0.04; AIC = 53660.79; and BIC = 54152.66.

Table 7

Initial Framework for Fit Indices and Standardised Path Coefficients

Measures		Direct and indirect pathways (Model 1)	Direct pathways (Model 2)	Indirect pathways (Model 3)
Fit indices	χ^2	994.87	1437.36	996.02
	Df	517	519	518
	AIC	53661.77	54226.45	53660.79
	BIC	54158.08	54713.90	54152.66
	CFI	0.95	0.90	0.95
	TLI	0.95	0.90	0.95
	RMSEA	0.04	0.05	0.04
	SRMR	0.04	0.22	0.04
Direct effects on work engagement	Authentic leadership	0.09	0.08	-
	Work-trust: Supervisor	0.05	0.08	0.16*
	Work-trust: Co-worker	0.39**	0.40**	0.37**
Direct effects on work-trust: supervisor	Authentic leadership	0.84**	-	0.84**
Direct effects on work-trust: co-worker	Authentic leadership	0.54**	-	0.54**

* $p < 0.05$

** $p < 0.01$

Table 7 summarises the fit statistics of the three structural models. To confirm that Model 3 has a better fit than Models 1 and 2, the Satorra-Bentler difference test was used. As seen in Table 8, Model 2 - as expected - shows a significant difference in χ^2, indicating a poorer fit to the data. The following changes in chi-square were found between Model 1 and Model 3: $\chi^2 = 0.95$, $df = 1$, $p < 0.33$. The results indicated that Model 2 fits the data significantly poorer than Model 1. Model 3 was, however, marginally better than Model 1, therefore it was decided to retain Model 3 as the best-fitting model. Based on the latter finding and the slightly lower AIC and BIC values of Model 3, it was decided that Model 3 be used for further statistical analysis.

Table 8

Difference Testing for Changes in Chi-square in Competing Structural Models

Model	$\Delta \chi^2$	Δdf	*p*-value
Model 2	325.62	2	0.00**
Model 3	0.95	1	0.33

** $p < 0.01$

Figure 3 below provides a graphical illustration of the standardised path coefficients for the best fitting model used to test the indirect effects. Only statistically significant paths are shown in the figure.

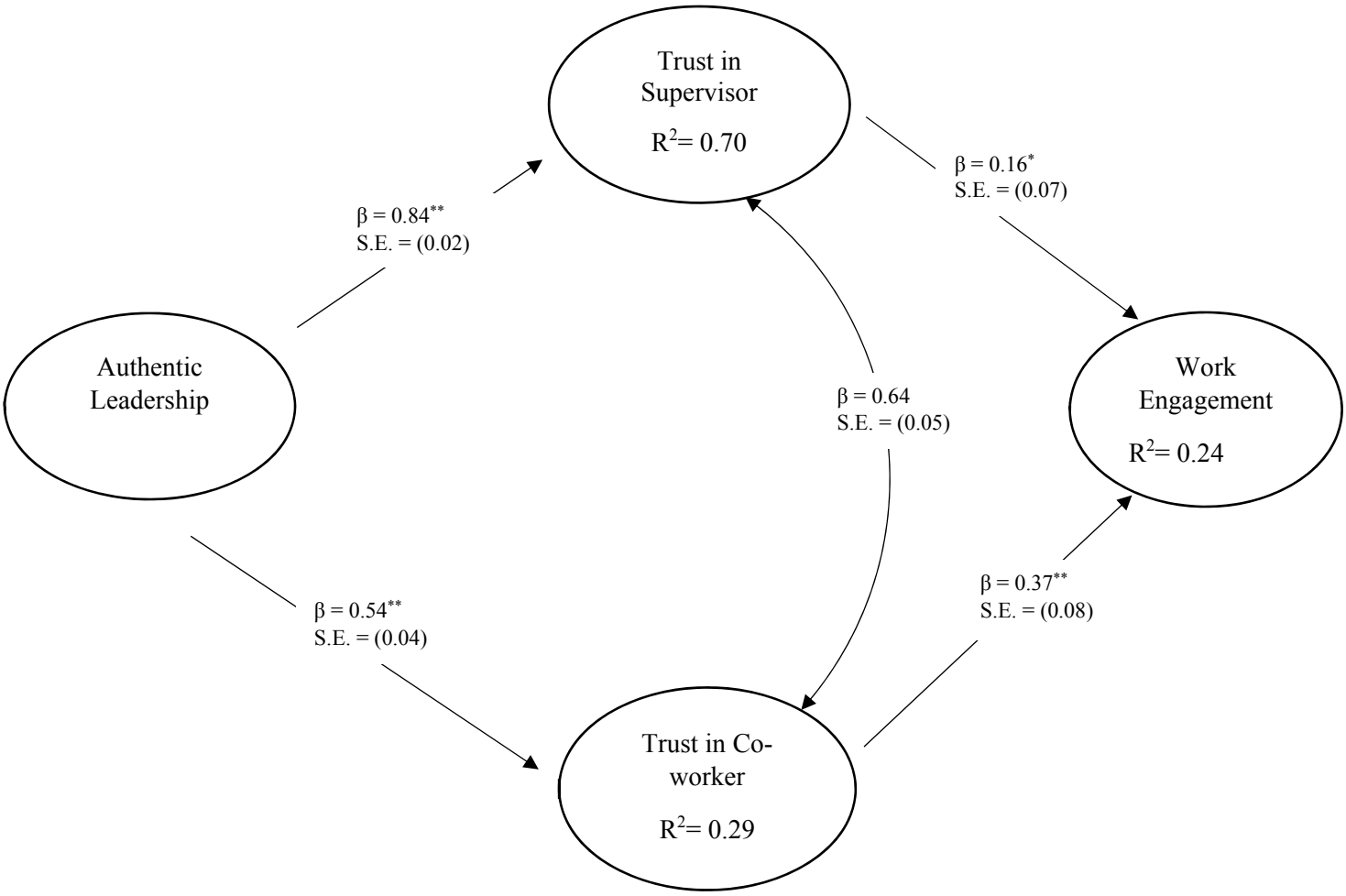

Figure 2. The structural model of authentic leadership, trust in supervisor, trust in co-worker, and work engagement

From Figure 3, the structural model indicated that 29% of the variance in trust in co-worker could be explained by authentic leadership and 70% of trust in supervisor could be explained by authentic leadership. Furthermore, it was found that trust in co-worker and trust in supervisor explained 24% of the variance in work engagement in this study.

Hypothesis 2 proposed that work engagement could be predicted by authentic leadership, trust in supervisor and trust in co-worker. Based on the analysis of the structural model, it was found that authentic leadership, trust in supervisor and trust in co-worker did indeed precede work engagement. However, hypothesis 2 was partially accepted, due to the fact that authentic leadership was only a predictor of work engagement through the two trust referents (trust in co-worker and trust in supervisor) and did not have a direct impact on work engagement.

Indirect Effects of Authentic Leadership

The potential indirect effects of authentic leadership through trust in co-worker and trust in supervisor were determined by utilising bootstrapping (with 5 000 samples). In the measurement model, it was found that a significant relationship exists between authentic leadership and work engagement ($\beta = 0.35^{**}$), however the direction of authentic leadership preceding work engagement could not be confirmed by the structural model which indicated ($\beta = 0.09$). Furthermore, as a significant relationship does exist between authentic leadership and work engagement, it was decided to investigate authentic leadership's possible indirect effects on work engagement. As shown in Table 9, authentic leadership through trust in supervisor to work engagement resulted in an estimate of 0.14^{*}, with p smaller than 0.05. Secondly, authentic leadership through trust in co-worker to work engagement resulted in an estimate of 0.22^{**}, with p smaller than 0.01.

Based on the results, authentic leadership through trust in co-worker implied a greater indirect effect on work engagement than authentic leadership through trust in supervisor, although both indicated a significant impact. According to the results in Table 9, hypotheses 3 and 4 were therefore accepted.

Table 9

Indirect Effects of Authentic Leadership

Variable	Work-trust:Supervisor			Work-trust:Co-worker		
	Est.	SE	95% CI	Est.	SE	95% CI
Work engagement	0.14*	0.06	[0.03, 0.25]	0.22**	0.04	[0.14, 0.31]

DISCUSSION

The aim of this study was to investigate the impact of authentic leadership on work engagement in the public health care sector through the indirect pathways of trust in co-worker and trust in supervisor of medical and support staff from various public medical institutes (hospitals and clinics) in a District. The research was carried out with the intention of creating a clear understanding of the benefits that authentic leadership might bring about; therefore, resulting in being able to foster a work environment characterised by trust and work engagement. This is of utmost importance given the challenges (i.e. work inefficiencies, lack of resources, poor working conditions and a lack of trust in leadership) faced by the South African public health care sector (Christian & Crisp, 2012; Stander et al., 2015).

Based on the results of the measurement model, it was found that positive relationships exist between authentic leadership, trust in co-worker, trust in supervisor and work engagement; therefore, hypothesis 1 was accepted. This means that if any of the variables above increase, it is likely that the other variables will also increase (i.e. higher levels of authentic leadership are associated with higher levels of trust and higher levels of work engagement). This is supported by a study conducted by Wang and Hsieh (2013) who found that employee work motivation comes directly from the trust relationship employees have with their supervisors; implying that if employees experience trust with their supervisors, they will exhibit higher levels of work engagement.

Furthermore, the positive relationship found between authentic leadership and the two trust referents indicates that the higher the levels of authentic practices by the leader, the higher the levels of trust will be. These findings are congruent to what other studies have found (Engelbrecht et al., 2014; Stander et al., 2015; Wang & Hsieh, 2013).

Additionally, a study conducted by Errazquin (2013) reflects the positive influence that authentic leadership has on trust in the supervisor. Studies have suggested that trust in ones co-workers can directly be linked to interpersonal helping behaviours (Cho & Park, 2011).

It makes sense to say that if employees perceive their leader to be authentic, it will in turn increase their levels of trust, resulting in a willingness to go the extra mile and accomplish their tasks, also increasing their work engagement levels.

According to a study carried out by Hsieh and Wang (2015), employees' engagements levels are likely to increase if they are treated in a sincere manner. In other words, if an employee is treated well by the supervisor, he or she will in turn trust the supervisor and use this as a resource to conduct his or her work in this challenging environment, resulting in the employee's ability to remain satisfied, committed and productive (Dirks & Ferrin, 2002).

Hypothesis 2 of this study proposed that authentic leadership, trust in co-worker and trust in supervisor predicted work engagement. According to the findings in this study, it was found that direct pathways do exist from trust in supervisor and trust in co-worker to work engagement; however, not directly from authentic leadership to work engagement. Therefore, hypothesis 2 was partially accepted. In this study, 24% of the variance in work engagement was explained by trust in co-worker, trust in supervisor. This means that authentic leadership might only be a predictor of work engagement through the two trust referents (trust in co-worker and trust in supervisor).

These findings are in line with previous studies that found authentic leadership to be an antecedent of work engagement through trust (i.e. Hsieh & Wang, 2015; Wang & Hsieh, 2013). As leaders have the ability to act and behave in a truthful and open manner with their subordinates, this will lead to higher levels of trust between the leader and subordinates, resulting in employees being more engaged (Ilies, Morgeson, & Nahrgang, 2005).

Hypothesis 2 of this study delivered an interesting stance as the author was of the belief and proposed that a predictive relationship would exist from authentic leadership to work engagement. However, the findings stated otherwise. This implies that even if an authentic leader is present, this may not necessarily impact the employee's level of work engagement, but through trust in co-worker and trust in supervisor it can.

A possible reason for this could be due to shift work (whereby a co-worker may take the role of being the leader for that shift, so then there is not a designated person that employees can refer to as their leader) (Goldblatt, Granot, Admi, & Drach-Zahavy, 2008). Consequently, the current sample comprises employees in the health care sector which means that these employees know that they are in a profession in which they need to provide services to others, in most cases, the less fortunate. Therefore, leadership aspects may not affect how engaged they are at work (Personal communication, November 3, 2016).

Additionally, components of authentic leadership such as relational transparency and internal moral perspective are positively related to a subordinate's trust in the leader. In studies by Bamford et al. (2013) and Hassan and Ahmed (2011), it was found that trust between leader and subordinate also positively predicts employee work engagement. Based on the results of this study, the findings show that authentic leadership through trust in co-worker had a greater indirect effect on work engagement than through trust in supervisor, although both showed a significant impact. Based on the statistical findings, hypotheses 3 and 4 were therefore accepted. A possible explanation for the above finding could be that employees interact more with one another; therefore creating a dependency and using one another to achieve their daily tasks. The interaction with their supervisors may be limited; based on the challenging work environment, healthcare employees are unable to work closely with management (Goldblatt et al., 2008). Leaders may not always have the time to interact with their subordinates; instead their focus is just to ensure that all administrative aspects of the job are accounted for.

Furthermore, trust is voluntary and is based on the individual's attitudes, perceptions and expectation of the relationship between the parties (Gilson, 2003). Employees may not always perceive their leader to be trustworthy, therefore decreasing the levels of trust that employees have for their supervisor. This could be a possible reason as to why authentic leadership had a greater indirect effect through trust in co-worker, as opposed to trust in supervisor. According to S. Scholtz (Personal communication, November 3, 2016), a nurse who previously worked in this environment, another reason could be that employees see their co-workers as fulfilling the role of a leader (due to being the shift leader at a specific point in time) in assisting them to overcome the hurdles associated with daily activities; hence the greater effect of trust.

According to Lencioni (2005), who specialises in teams and the dysfunctions that teams may experience, if employees trust one another, they will be more willing to open up and deal with their fears, creating a culture of growth and development. This may further support the findings of why trust in co-worker had a greater indirect effect on work engagement than trust in supervisor.

In a study in Taiwan, Hsieh and Wang (2015) found that the effect of authentic leadership on employee engagement was fully mediated through trust. Overall, it was found that trust in general has the ability to mediate employees' attitudes and behaviours. In this instance, employees' attitudes will determine whether they will trust in their leader and their behaviour can be seen as an outcome of being engaged (Clapp-Smith, Vogelsang, & Avey, 2009). Additionally, it can be debated that an employee who has trust in the supervisor and trust in the co-worker will be happier in an authentic organisational culture. This will allow employees to carry out their job tasks being fully engaged.

The findings of this study are congruent to the SET of Blau (1964). If an employee perceives that he or she is being treated fairly, this can result in reciprocity taking place which will facilitate organisational outcomes (i.e. work engagement). If the leader behaves in a transparent manner and indicates that he or she trusts the employee, this in turn will create trust amongst co-workers; therefore employees will be willing to go the extra mile. Through role modelling the leader has the power to create and foster transparent relationships between co-workers (Avolio, Gardner, Walumbwa, Luthans, & May, 2004), enhancing the consistency between co-workers' actions and behaviours. This can then lead to higher levels of trust amongst co-workers, enabling them to do more with less which could result in higher levels of work engagement and productivity.

Overall, based on the findings in this study, factors such as authentic leadership, trust in co-worker, trust in supervisor and work engagement are all vital aspects towards ensuring a productive work environment. However, it was found that even though a direct pathway does not exist between authentic leadership and work engagement, factors such as trust in co-worker and trust in supervisor can help strengthen the relationship between authentic leadership and work engagement.

Limitations and Recommendations for Future Studies

There were a number of limitations evident in this study which should be taken into account when interpreting the results. Firstly, it is important to note that the study was cross sectional in nature; the data was collected at one point in time and not over a period. This may create potential problems and limit the ability to make causal inferences. Cross sectional design may also lead to common method bias.

Secondly, two of the measuring instruments used in this study - the ALI and WTS - were not developed in a South African context. This could be the reason why some of the model fit statistics were so poor, where certain items needed to be removed or correlated. A recommendation to address this limitation is to conduct validation studies in South African organisations in order to test the factor structures and validate the norm groups of these measuring instruments for the South African population.

Thirdly, use of self-report surveys was the only source of information the researcher had. This may serve as a limitation due to the fact that these types of surveys look at how the participant views the construct (perception) and might not measure the actual construct content. The test battery used in this study was very long and this could have resulted in participants' answers based on convenience as opposed to giving any thought to the questions.

The sample of this study was limited to medical and non-medical staff in the public sector. Future studies carried out in this environment would benefit by narrowing down the population (Stander et al., 2015) to a specific target group (e.g. nurses) or even conducting a study with the same variables on medical and non-medical staff in the private sector. This will facilitate comparative studies (Coxen, Van der Vaart, & Stander, 2016).

Implications for Management

The variables in this study (authentic leadership, trust in co-worker, trust in supervisor and work engagement) are all things that can contribute and add value to the health care sector and the manner in which it operates.

Having authentic leadership present in this demanding workplace could serve as a personal resource to employees. This can allow them to work more efficiently and effectively, resulting in better quality services being offered to patients.

Authentic leadership is also seen as a contributing factor through trust to ensure work engagement. Thus, in order for positive outcomes and organisational goals to be achieved, the notion of authentic leadership needs to be applied. Management in this sector should develop interventions that focus on developing managers to behave in an authentic manner; focus should be put on relational aspects as opposed to administrative duties of managers.

Possible interventions could include structured leadership programmes that encompass behaviours, competencies and attitudes needed to develop a good leader. The organisation could focus on other leadership development methods such as mentoring and coaching. It is vital for public health care institutions to fully understand what the indirect effects of authentic leadership on work engagement through the two trust referents mean, in order for these institutions to develop interventions to promote such behaviours. A possible intervention could be to create awareness and knowledge of the constructs as well as evidence-based interventions linked to the findings. This will also promote a better climate in these institutions whereby employees will see that the feedback they give to management is not in vain.

Due to the fact that employees in this sector work shifts and do not always get time to interact with their colleagues and superiors, it might be beneficial to identify interventions that will increase the team morale; team spirit will enhance trust in co-workers and trust in supervisors. This can be achieved by having teambuilding activities, providing regular feedback to employees, and hosting focus groups in the different departments. By doing such, employees will feel that management has their best interests at heart, resulting in better work performance.

Conclusion

This study was carried out with the following intention in mind: a) to create awareness around the positive effects of having the correct leader (authentic leader) present; and b) to produce knowledge on the topic for future use.

The economic state of South Africa is of concern, with large gaps between low, middle and high income earners; these public medical institutions are deemed pivotal to individuals who require medical care, but cannot afford private health care (Dookie & Singh, 2012). Bearing in mind the challenging environment of the public health care sector, the lack of resources and the demands made on medical staff, having a fully engaged and productive workforce is essential (Christian & Crisp, 2012; Stander et al., 2015).

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CHAPTER 3

CONCLUSIONS, LIMITATIONS AND RECOMMENDATIONS

Chapter 3 presents the conclusion of the study according to the specified general and specific objectives. Additionally, the limitations of this research are discussed and recommendations for future practice and future research are made.

3.1 Conclusions

The general objective of this research was to investigate the relationship between authentic leadership and work engagement through the indirect effects of trust. Having leadership present in the public health care sector was recognised as one of the core standards for the establishment of better health care services in South Africa (Department of Health [DoH], 2011). In a study conducted by Gilson and Daire (2011), the importance of leadership and its contributions were emphasised; the authors stating the following:

> Leadership is a necessary element of strong health systems, and so it is vital that South Africa nurtures and sustains leaders who can work strategically within their complex environments to develop a rights-based health system that promotes health equity. (p. 69)

The above quote implies that leadership, if applied correctly, could serve as a buffer or resource to individuals who work in this sector. This will assist in the attainment of workplace outcomes such as work engagement, job satisfaction, and trust, also offering specific better quality health care services (Wong, Cummings, & Ducharme, 2013).

Based on the empirical results and findings in the two chapters, the following conclusions were made:

The first objective was to conceptualise authentic leadership, trust in supervisor, trust in co-worker and work engagement, according to literature.

According to literature (i.e. Bass & Avolio, 1993; Engelbrecht, Hein, & Mahembe, 2014; Stone, Russell, & Patterson, 2004), a number of studies have been done on the various types of leadership; however, in recent times the focus has shifted to positive forms of leadership (Engelbrecht et al., 2014) such as authentic leadership. The topic of authentic leadership has been given a lot of attention academically as well as in the workplace (Hsieh & Wang, 2015; Men & Stacks, 2014). Authentic leadership consists of four constructs (Walumbwa, Avolio, Gardener, Wernsing, & Peterson, 2008), namely self-awareness, balanced processing, relational transparency and internalised moral perspective.

These characteristics that constitute an authentic leader facilitate the relationship between the leader-follower, resulting in an exchange (reciprocity). Stander, De Beer, and Stander (2015) further stated that a central aspect to the concept of authentic leadership is that it is relational in nature. In this instance, the leader would have good interpersonal relationships with his followers, allowing him to motivate, encourage and provide individual attention to them (Neider & Schriesheim, 2011). Furthermore, the authentic leader draws from his or her own psychological capacities and, in turn, influences the levels of trust of his or her subordinates.

Trust is seen as a voluntary action. An individual is likely to trust another based on his or her perceptions of the individual and the actual behaviour that the individual portrays (Ferres, 2003). The concept of trust can be defined as the nature of an individual to be vulnerable to the behaviour and actions of another, while having the perception that the other person will behave in a manner that is important to the trustor (Clapp-Smith, Vogelsang, & Avey, 2009; Salamon & Robinson, 2008). Furthermore, trust in supervisor refers to the amount of support, feedback and assurance one receives from one's supervisor. Trust in co-worker, on the other hand, refers to one trusting another in terms of one's actions and behaviour (Ferres, 2003; Hsieh & Wang, 2015). In a work context, trust in co-worker can be further defined as the level of confidence one co-worker has in another to complete the task (James, 2011).

Within the public health care sector, greater levels of trust by both co-workers and trust in supervisors are needed to overcome the obstacles faced. To successfully overcome these obstacles will depend on the leaders in the organisation's ability to instil extensive trust within their subordinates. As a result of this reciprocal trust relationship between authentic leaders and their subordinates, this can result in higher levels of work engagement (Engelbrecht et al., 2014).

Work engagement is an important aspect to consider in ensuring optimal functioning. An engaged worker will be more committed and be willing to go the extra mile for the organisation (Walumbwa, Christensen, & Hailey, 2011). Work engagement refers to a positive state of mind characterised by vigour, dedication and absorption in conducting one's work (Bakker & Demerouti, 2008). Employees who experience work engagement are completely absorbed by their work and conduct their tasks with higher levels of enthusiasm and drive. The attainment of work engagement has become very important to ensure the success of an organisation.

According to literature (Lockwood, 2007; Stander et al., 2015), work engagement has a positive impact on business, role performance, productivity and organisational success. With this said, the relationship between authentic leadership, trust and work engagement is important towards fostering a work environment characterised by efficiency and effectiveness (Engelbrecht et al., 2014; Stander et al., 2015).

The second objective was to investigate the relationship between authentic leadership, trust in supervisor, trust in co-worker and work engagement amongst health care workers.

The results in this study indicated that a strong positive relationship with a large effect of 0.84^{**} ($r > 0.50$) exists between authentic leadership and trust in supervisor. This implies that if an authentic leader is present and behaves in an authentic manner, employees will trust more in their supervisor. Authentic leadership and trust in co-worker also have a positive relationship with a large effect of 0.54^{**} ($r > 0.50$), indicating a strong relationship. The relationship between trust in supervisor and trust in co-worker resulted in a large effect of 0.74^{**} ($r > 0.50$). Additionally, trust in supervisor and work engagement was 0.42^{**} and trust in co-worker and work engagement at 0.48^{**} medium effect ($r > 0.30$). The reported values refer to the standardised estimates of these relationships. The relationship between authentic leadership and work engagement resulted in medium effect of 0.35^{**} as ($r > 0.30$).

This indicates that the relationship between authentic leadership and work engagement is not as strong as the relationship between authentic leadership and the two trust referents in the study. Nevertheless, all the variables in this study share practically and statistically significant relationships.

This means that if one of these variables increases, it will lead to an increase in the behaviour of the other and vice versa. According to the results in this study, it is evident that variables such as authentic leadership, trust in co-worker, trust in supervisor and work engagement are all factors that can assist employees of the health care sector to overcome the problems they are faced with and identify workable solutions to move forward. It is the duty of top management in this sector to put together interventions that can foster these relationships in a positive way and that can be used to their advantage.

The third objective was to investigate whether authentic leadership, trust in supervisor, and trust in co-worker predicted work engagement.

Structural equation modelling indicated that authentic leadership did not predict work engagement directly in this study. In a study by Harter, Schmidt, and Hayes (2002), it was suggested that leadership - specifically authentic leadership - can be seen as one of the predictors of work engagement; however, this was not evident in this study. Authentic leadership will predict work engagement through one of the trust referents. This means that irrespective of whether an authentic leader is present, this will not influence the work engagement levels of employees. Furthermore, the two trust referents were found to precede work engagement with trust in supervisor at ($\beta = 0.16$, $p < 0.05$) and trust in co-worker at ($\beta = 0.37$, $p < 0.01$) respectively.

This indicates that both the trust referents are significant for predicting work engagement at different significance levels, meaning that if employees trust one another, the result will be higher levels of work engagement than with trust in the supervisor. This is line with a study conducted by Laschinger, Wong, and Grou (2013) which found a link between authentic leadership and positive outcomes (i.e. work engagement) in the health care environment.

The fourth objective was to determine the indirect effects of authentic leadership through trust in co-worker on work engagement.

Authentic leadership through trust in co-worker on work engagement was statistically significant at ($\beta = 0.22$, $p < 0.01$, 95% CI [0.14, 0.31]). The indirect effects of trust in co-worker were greater than the indirect effect of trust in supervisor.

A plausible explanation for this could be that employees have limited contact with their supervisors and interact more with their co-workers. Based on employees' perception, colleagues are seen as individuals who have their best interests at heart; hence they will trust them more. It can thus be argued that if an employee has trust in his or her co-worker, he or she will be more interested in partaking and applying an authentic leadership culture that fosters work engagement.

The fifth objective was to determine the indirect effects of authentic leadership through trust in supervisor on work engagement.

According to this study, it was found that an indirect effect of authentic leadership through trust in supervisor on work engagement does exist - with a small effect ($\beta = 0.14$, $p < 0.05$, 95% CI [0.03, 0.25]). The degree of trust and confidence subordinates have in their supervisor will be determined by whether or not the subordinate perceives the leader to be authentic and trustworthy (Engelbrecht et al., 2014). Additionally, if the subordinate sees that he or she is rewarded and given recognition for his or her efforts, the trust that he or she has in the supervisor will increase; leading to the employee being more engaged (Wong, Laschinger, & Cummings, 2010).

Within the challenging environment of the public health care, a supervisor is not very welcomed; the picture that employees create of their supervisors is not a good one. They see the supervisor as a person who draws up rosters and makes sure employees report for their shift on time, instead of seeing the leader/ supervisor as someone who provides guidance and assistance.

In the public health care sector, the relationship between supervisors and their subordinates is something that should be looked into; even though a significant relationship exists, it can be improved by leaders spending more time on relational aspects of leadership and acting as a role model. This means that leaders should engage with their subordinates by doing the work that they do, providing guidance if someone does not know how to complete a certain task, which will possibly result in a positive impact on the levels of trust in supervisor and work engagement.

3.2 Limitations of the Study

The study was cross sectional in nature, meaning that the data was collected at one point in time; this limits the identification of cause-and-effect relationships. In this instance, longitudinal studies are important to establish whether the relationship between the variables in this study would remain the same or change.

Potential language barriers may have occurred as the measures in the test battery were only conducted in English; this may not be everyone's first language. Self-report surveys may also pose a limitation. This could result in common method bias (Podsakoff, Mackenzie, Lee, & Podsakoff, 2003) based on the nature of the data collection.

Two of the measuring instruments used in this study were not developed for application in a South African context, namely the ALI and the WTS, which could explain the poor model fit statistics of some of the models.

Finally, the last limitation identified within in this study was a theoretical limitation, in the sense that the study did measure to see whether authentic leadership is practised in the organisation, but from an employee perspective.

3.3. RECOMMENDATIONS

3.3.1 Recommendations for Practice

Hospitals in the public sector would like to improve their current situation, but in order for them to do so and become better service providers, they need to recognise the importance of having the correct type of leadership. One of the aims of the study in question was to create awareness around the concepts of authentic leadership, trust in co-worker, trust in supervisor and how these can benefit both the individual and the organisation. The following are possible recommendations to the public health care sector that can assist in providing quality health care services (Wong, Wong, & Ngo, 2012).

The findings of the current study indicate that authentic leadership is a contributing factor through trust to ensure work engagement. Subsequently, employees need to be aware of the benefits of trusting in their immediate supervisor and how this will facilitate their levels of engagement in the workplace. The findings of this study may also contribute to the selection of new leaders in this sector as well as the development of the current leaders. A possible recommendation for management in this sector is to develop interventions that focus on developing its managers; specific focus should be put on relational aspects as opposed to administrative duties of managers.

Due to the challenges facing this sector, the perception that external individuals have of the public health care system is appalling (e.g. inability to deliver quality efficient health care services, no resources available, fatalities etc.); employees can play a role in overcoming and improving the reputation.

Many employees in public health care work shifts due to the nature of this sector; therefore employees are not always able to interact with their colleagues and superiors. It might be beneficial to identify interventions that will increase the team morale and team spirit which in turn will enhance trust in co-workers and trust in supervisors. This can be achieved by having team building activities, providing regular feedback to employees, and hosting focus groups in the different departments.

3.3.2 Recommendations for Future Research

In order to overcome the challenge of using cross sectional data, this current study could be turned into a longitudinal study to determine if the relationships between authentic leadership, trust in co-worker, trust in supervisor and work engagement remain the same or change over a period of time.

It would be recommended that validations studies be conducted on the authentic leadership inventory and the workplace trust survey in order to test the factor structures and validate the norm groups of these measuring instruments for the South African population. This will create a better understanding of the questionnaire items for future use.

Additionally, in the current study the majority of the participants' first language was not English; therefore the questionnaires may be translated into other South African languages to combat possible exclusion or language barriers.

Furthermore, future studies could include larger samples from different geographic areas. This will assist in making generalisations of the results. In this study trust in co-worker and trust in supervisor were used as a mediator; perhaps in future it can be utilised as a moderator to see the impact it has on the relationship between the variables. In order for comparisons to be made, conducting a study with the same variables on medical and non-medical staff in the private sector could be considered in future.

3.4 Chapter Summary

This chapter provided conclusions that were reached with regard to the theoretical and empirical objectives of the study. Furthermore, the limitations of the study were discussed and recommendations for practice and future research were made.

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