

Investigating factors influencing employee engagement in a government department in Gauteng

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ABSTRACT

Purpose of the study: To investigate the factors which influence employee engagement levels of government officials in Gauteng.

Design/methodology/approach: Utilising a questionnaire based on the Utrecht engagement model, the researcher identified key focus areas for employee engagement. The department under study consisted of 150 employees with a response rate of 79 percent.

Findings: The results of the study revealed that while the government employees are absorbed and dedicated to their work, they nevertheless expressed neutral opinions regarding the extent of vigour shown in the department. Age and the number of years of service were noted to have a significant influence on employee engagement. The study furthermore showed no statistical evidence to suggest that gender, employee position, or educational level have a major influence on employee engagement.

Recommendations/value: The study underlines the need for continuing efforts to reinforce employee engagement, particularly as employees with greater experience / years of service are less engaged. In so far as the study was limited to a single department, similar studies should be undertaken at further government departments in order to generate a clear and holistic picture of overall government employee engagement levels.

Managerial implications: Given the regression analysis which suggests that more experienced employees are less engaged, management strategies to encourage continued and renewed engagement, rewarding the experience and service of employees, and further motivating them, is of paramount importance.

Keywords

Employee engagement; Job involvement; Leadership; Performance; Satisfaction

JEL Classification: D23, M12

1. INTRODUCTION

Employees in the South African public sector and in the public sector globally are crucial resources in providing services to citizens as per constitutional mandates, this is particularly true in the South African context where the public sector makes particularly limited use of digital or automated services. It is therefore critical that public sector employees are physically and psychologically healthy in order to provide the best service possible. Public sector employees are driven by the needs of citizens as they do not earn competitive salaries but instead are motivated by assisting vulnerable communities and making a difference in the lives of their fellow citizens. This is what Ali *et al.* (2021) refer to as intrinsic factors which motivate public service employees, and which encompass the perceived meaningfulness of their job, expressed in terms of their drive towards “prosocial activities and the desire to serve the public”. However, despite the intrinsic motivation that may be expressed by public sector employees, government must nevertheless take issues of employee wellness seriously as part of the overall strategic vision for public sector institutions, in so far as intrinsic motivators are not the only source of motivation driving employee engagement.

According to Banhwa *et al.* (2014), employers have come to realise that employees are major assets for the success of their business. However, in the public sector, employees are not yet recognised as valuable assets and consequently no strategies regarding employee engagement have been put into place. In the public sector, employees, in so far as they view their work as a calling rather than merely a job, are generally considered to be self-motivated, and are thus seen as not requiring employee engagement strategies in order to ensure their continued engagement.

According to Mafini and Dlodlo (2014), the South African public sector experiences a high number of service delivery challenges. These challenges include service delivery protests by frustrated citizens and other incidents which have caused damage to state buildings and critical resources. Through these protests, citizens seek to demand attention regarding

improved service delivery. This research is driven by the need to understand which factors influence employee engagement in a government department in Gauteng. It aims to identify key drivers and assess employee engagement levels in order to assist management in developing appropriate and relevant initiatives so that strategic objectives can be achieved all while providing efficient and effective services to citizens.

According to the Aon Hewitt Consulting report (2012), public sector employees understand their job expectations; public sector organisations therefore need to change their way of doing business by making employee needs a strategic component of their overall strategy and thus ensure that employees strive to provide effective and efficient services. Engaging employees can be a strategic internal control measure used by both private and public sector industries to better compete globally and to achieve desired strategic goals. Thus, by building a framework for the use of private sector strategies to better manage public sector employees, governments can aim to improve service delivery and valorise the efforts of public service employees.

2. THEORETICAL FRAMEWORK

Despite challenges related to unemployment, work is influenced by many factors, such as the conditions of work, team spirit among colleagues and opportunities available to employees allowing them to be creative enough and to explore new ideas using their own initiatives and talent, all of which influence engagement by harnessing and valorising employee efforts within the work environment. Sanneh and Taj (2015:71) assert that *“engaged employees are committed, dedicated, and invested in their work roles cognitively, psychologically and behaviourally.”* This can be contrasted to aggrieved employees, who in their disengagement “withdraw from their roles” which leads to the withholding of efforts, absenteeism, and staff turnover as they seek more fulfilling employment (Sanneh and Taj, 2015). According to the Aon Hewitt Consulting report (2011), employee engagement is the main critical factor that can influence the performance of an organisation and can be tested so as to measure the degree of employee commitment in assisting the organisation to achieve strategic objectives. The Aon Hewitt Consulting model of engagement (2015) furthermore indicates that engaged employees advocate for their organisation.

Bedarkar and Pandita (2014:03) confirm that “*engaged employees are the best performers and can set their own goals and standards to achieve their work*”. The literature suggests that engaged employees strongly connect with their organisation. As Khusanova *et al.* (2021) underline in their consideration of Uzbek public service employees, intrinsically motivated public service employees “consider their work worth doing, feel excitement about addressing work-related issues and problems, and are highly driven to integrate different perspectives to come up with innovative ideas, which tends to guarantee enhanced work output.” Therefore, efficient, and effective work becomes second nature to them due to the attachment that they feel towards their employer, expressed in their desire to achieve institutional goals, and in the high levels of energy that employees consequently deploy in order to best achieve the desired outcome. Engaged employees do not do work for the sake of doing it, but thoroughly apply their minds and time in order to achieve the best results possible. Bakker and Demerouti (2008) suggest that engaged employees positively influence others by transferring their energy and by creating an overall positive team climate, thereby resolving issues regarding team dynamics.

Anitha (2014) concurs with the aforementioned literature in stating that employees are valuable resources in any organisation; employees thus require proper strategies to be put into place to in order to manage and monitor their engagement levels. Strategies such as annual surveys as a proactive measure rather than a reactive response allow management to better monitor employee engagement levels. Bakker (2011) further argues that engaged employees are those who are fully absorbed and dedicated to their work in full support of organisational goals. While literature also suggests that levels of engagement can differ from one employee to the other, Robertson-Smith and Markwick (2009:05) underline the fact that “*when employees are engaged, they are emotionally attached to their organization and proven to stay longer and perform better than other employees in the same organisation.*” For Ali *et al.* (2021) a positive emotional state arises out of job satisfaction, and from the “*appraisal of one’s job or job experiences,*” thus being a consequence of employee engagement in so far as this arises out of the valorisation of employee efforts, taken together with intrinsic motivating factors, and is “*negatively correlated to absenteeism, turnover and perceived stress*” (Ali *et al.* 2021).

According to Saks (2008:42), engagement is defined as the “*fulfilling and satisfying state of work which allows mind and body to connect during role performance and therefore connect*

at emotional level with the organisation." This connection is clearly observed through employee performance especially regarding the application of extra effort without specific instruction or expectations, as well as in employees who manifest sustained high energy levels and consistently produce work of superior quality. Engagement, given its clear benefits to the overall performance of the organisation, has been the subject of a significant amount of research and is principally related to human resource elements, which is an area of management focus. The results of this research have shown that certain similarities in key drivers and factors influencing employee engagement in various organisations exist.

The Department of Public Service and Administration Report (2007:27) argues that "*there are many contributing factors to current service delivery challenges in South Africa particularly in the public sector.*" Given the challenging service delivery environment, and in so far as employees generally have little to no control over changes in service delivery and manners in which the challenges can be met, employees may become disengaged. Drawing on this realisation, the present research seeks to identify and evaluate factors related to employee engagement in the selected government department, in an effort to improve service delivery through employee valorisation, countering the perceived poor levels of employee engagement. In this, South Africa is not an exception, and poor employee engagement is a cause for concern for most organisations.

According to Crosby (2014:04), the "*public sector should change the focus and start appointing relevant employees from the recruitment stage that possess public sector values by using Batho Pele principles as a tool for selection and recruitment of employees.*" Batho Pele principles "*are consistent with the constitutional values of nurturing and upholding high standards of professional ethics effectively and proficiently for utilising resources, responding to people's needs and holding public administration accountable*" (Emily & Muyengwa, 2021). The view is that when appointing employees who already understand and share public service values, engagement will come more naturally to those employees. The public sector should also explore other ways to ensure that employees understand and connect with their organisational goals and objectives by clearly communicating service expectations and strategic goals to be achieved. The Gallup (2013) State of the Global Workplace Report, in categorising employees, across all sectors, according to three different levels of engagement (engaged, non-engaged, and actively disengaged) underlines the importance of both recruitment and of continued monitoring of employee engagement. By recruiting engaged

employees, the problem of employee engagement is forestalled, while the identification of employees or groups of employees who have become, or who are in the process of becoming, disengaged may allow palliative measures to be timeously taken, avoiding a situation of active disengagement. These measures may include positive extrinsic measures such as improved renumeration, or non-monetary incentives such as promotion, as well as intrinsic measures, related to the prosocial aspect of public service work, and psychological factors which may include efforts to improve the framing of information, and to move beyond a deleterious status quo that negatively impacts employee engagement (Ali *et al.*, 2021).

Literature furthermore suggests that, beyond the inherent engagement of employees, the work environment itself contains certain specific elements that may help motivate employees, in both a positive or negative sense. These factors are key to the organisation in so far as the work environment plays a constant underlying role in overall employee engagement. Mani (2011) considers that employee welfare, empowerment, growth, and interpersonal relationships as the key drivers of employee engagement whereas for Anitha (2014), important drivers of employee engagement include leadership, teamwork, training and development, compensation, organisational policies, and workplace well-being. This is echoed by Bedarkar and Pandita (2014) who claim that leadership, communication, and work-life balance are key contributing factors to overall employee engagement.

While, as Sundaray (2011) suggests, factors that influence employee engagement differ significantly from one organisation to another, there are nevertheless common factors that, regardless of the sector, influence overall employee engagement. Echoing the findings of Mani (2011), Anitha (2014), and Bedarkar and Pandita (2014), Sundaray (2011) lists recruitment, job design, career development opportunities, leadership, empowerment, equal opportunities and fair treatment, performance management, compensation benefits, health & safety, job satisfaction, communication, and work life balance as having a significant bearing on employee engagement. To this end, and in so far as employee engagement levels can be improved by the application of certain measures, and given that organisations may adopt various different strategies that are appropriate to their specific needs, building on the aforementioned factors influencing employee engagement, the following measures have been identified as avenues which may improve employee engagement on an organisational level: learning, development and training, assessment and recognition, building confidence and trust

in leadership, the promotion of two-way communication, building collaborative work teams, and wellness initiatives.

South African organisations are beginning to realise that employees are crucial assets that assist organisations to achieve and compete globally and while South African organisations have participated in several studies on employee engagement, South Africa nevertheless is reported to be among a number of countries which suffer the consequences of employee disengagement. Further to this point, the South African Human Capital Trends (2015) report, based on a study regarding employee engagement, suggests that South African employees are experiencing serious challenges in the workplace as they work under difficult conditions including both unsafe and highly pressurised work environments, coupled with long working hours. This is underlined by the Gallup Organisation (2013) report which further confirms that South Africa has the highest percentage of employees that are seen as actively disengaged or non-engaged employees, beyond the 85 percent global measure of actively disengaged or non-engaged employees. The major concern in the study of South African employee engagement that this report seeks to highlight is the relatively small percentage of employees that are actually actively engaged as compared to the significant number of actively disengaged employees, while taking the critical impact that engagement has on performance into consideration. The Gallup Organisation report (2013) further highlights the fact that, over and above the high levels of employee disengagement reported in the South African context, globally, the percentage of actively disengaged employees is higher than that of engaged employees, reflecting the serious challenges faced by organisations in relation to employee engagement due to non-existence employee engagement strategies and a lack of leadership in engaging employees. Globally, the Gallup organisation (2013) found that 85 percent of employees are considered to be actively disengaged or non-engaged; in the United States of America, 52 percent of employees are non-engaged while 18 percent are actively disengaged, with similar statistics being found in China. In order to attenuate this trend, it is therefore vital that all organisations understand and embrace the importance of employee engagement. The issue of engagement is, however, one that begins with management and organisational leadership who should strive to make engagement the expected way of life within the working environment.

On an international level, the public sector experiences dynamic issues in relation to the specific culture and engagement required by public service. The solution to public sector

challenges lies in engaging public sector employees; this is supported by the studies undertaken regarding Australian public sector employees that reflected that the need for psychological connection and individual satisfaction at work. Consequently, as the South African public sector strives to provide efficient and effective services to citizens through the continuous transformation of the entire public sector and through the improvement of human resource management, in enabling employees to be better equipped to deal with the demands and pressures inherent in their jobs, a parallel can be drawn to one of the key questions facing industry in the highly competitive, winner takes all, international business environment (Sewdass, 2012). The importance of employee engagement, is this parallel, and it has come to be seen as critical to the ongoing success of an organisation in so far as it can assist in addressing lacklustre service and unnecessary wait times by increasing overall productivity through better employee engagement. That is to say that, from a public service standpoint, employee engagement elements are critical; engagement is required and expected of a public servant in order to provide efficient and effective service (Eldor & Vigoda-Gadot, 2013), the amelioration of which improves service delivery more generally.

That is to say that public organisations require energetic employees who serve with passion and pride and therefore need to be physically and mentally engaged (Eldor & Vigoda-Gadot, 2012). Indeed, research has shown that employee engagement has a direct impact on service delivery and client satisfaction as a result of the emotional state of mind of the employees providing the service (Bakker & Demerouti, 2008). As part of public sector transformation goals and national development goals, employee engagement in the public sector remains a key strategic issue that can assist in changing the face and future of public sector performance. To this end, Eldor and Vigoda-Gadot (2013) suggest that the public service should implement strategies in order to obtain improved results specifically in relation to employees' key result areas and to enhance service delivery.

The proposed strategies that can assist organisations in improving service delivery are employee engagement as a selection criterion, the promotion of the social significance of the job, as well as the promotion of engagement through leadership. This can help counter what Bakker and Demerouti (2008:215) describe as disengaged employees who "*physically showing their unhappiness in the organisation.*" Disengaged employees have no emotional connection to their job responsibilities and are not ashamed to make their dissatisfaction known. Furthermore, the effects of disengaged employees have significant cost implications

as their negative energy can deleteriously influence client perception regarding the organisation and directly affect the revenues of the organisation. Baumruk (2004:49) argues that "*disengaged employees are not interested in providing new ideas regarding the organisation, they are busy with their own agenda against the organisation objectives.*" It is therefore critical that organisations identify early symptoms of employee disengagement and take ameliorative measures so as to counter the problem at an early stage, as emphasised by Markos and Sridevi (2010) who suggest both pre-emptive measures and early intervention as among the best strategies for countering employee disengagement. Extant literature more generally reflects the consideration that by placing a premium on the employee quality of life, through the implementation of employee engagement strategies, better performance results can be achieved.

3. RESEARCH METHODOLOGY

3.1 Research objective

The purpose of the study was to determine the degree to which employees are engaged and to identify drivers of employee engagement thereby understanding the factors influencing employee engagement in a government department in Gauteng.

Hypotheses of the study:

- H1: Employee engagement levels are similar across different employee age groups, job positions, number of years worked, and different educational levels.
- H2: Engaged employees display different organisational behaviours as compared to disengaged employees.
- H3: There is a significant relationship between employee engagement and other constructs such as organisational culture, performance, leadership, and customer satisfaction.

3.2 Research design

A quantitative, cross-sectional research design, encompassing a survey, was adopted, and distributed to employees in a government department in Gauteng. The quantitative nature of

this design enabled statistical validation, permitting the analysis of inferential statistics, allowing the elucidation of relationships and patterns in the data. Furthermore, the cross-sectional nature of the research allowed for multiple data points to be captured for analysis, and the use of an anonymous survey aided in ensuring the validity of results encouraging employees to answer in a truthful manner, given the sensitive nature of the subject matter.

3.3 Population and sample size

This study was conducted at a government department in Gauteng and focused on employee engagement. The department has a population of 150 employees based in the provincial office in Gauteng. Sekaran and Bougie (2013) provide a guide to the different sample sizes required for different population sizes. According to Sekaran and Bougie (2013), the corresponding minimum sample size for a population of 150 is 108, thereby confirming that the sample size of 118 is more than adequate for the study.

3.3.1 Sampling

In so far as Sekaran and Bougie (2011:266) assert that “sampling is the process that assists in selection of relevant and appropriate elements from the population study in order to understand critical attributes that assist in generalisation of those attributes.”. Van der Stoep and Johnston (2009) suggest that sampling is divided into probability and non- probability sampling. In probability sampling, each member of the group is guaranteed to be selected as all members have a chance of selection; in this study a probability sampling known as simple random sampling was adopted given the ease of use and the accuracy of representation that this sampling method affords.

3.4 Measuring instrument and data collection

This study utilised a questionnaire as a data collection method in order to determine engagement levels of employees and to identify key drivers and factors that influence employee engagement in a government department in Gauteng. According to Sekaran and Bougie (2011), questionnaires are “written sets of questions on which respondents record their views.” Data was collected using the Utrecht work engagement scale an adaptation of Schaufeli *et al.*, (2006), measuring instrument to investigate the influence of factors on employee engagement. The questionnaire consisted of 2 sections, Section 1, which aimed to

obtain a profile of the respondents, included biographical data relating to gender, age, position, years of service, educational qualifications and position in the department and was measured on a nominal scale. Section 2 investigated the factors influencing employee engagement and consisted structured questions using closed ended questions relating to 3 dimensions, Vigour, dedication and absorption. Items were measured on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5).

After permission had been obtained from the government department in Gauteng to conduct the study, questionnaires were distributed to employees via email and returned to the researcher by means of submission into a research box that was placed in the department. Prior to data collection, the questionnaire was pilot tested by a team of subject matter experts, senior management, the researcher's supervisor, and the researcher so as to determine its content, relevance, and to indicate whether any unclear or ambiguous questions were present. The purpose of the pilot study was also to investigate the feasibility of the proposed procedure, to detect possible flaws in the measurement procedures, to determine the suitability of the questionnaire, and to make any necessary changes to the procedure before undertaking the final study. Thus, twenty questionnaires were distributed to various categories of employees that reflected the demographics of those included in the main study. The pilot study revealed that the respondents understood the instructions and there were no confusing questions. Further changes to the questionnaire were not necessary. The pilot study confirmed, *inter alia*, the adequacy of the procedures and questions.

The questionnaire was emailed to employees; the respondents were requested to complete the questionnaire and return it to the researcher by submitting it into research boxes that were placed in the department. All questionnaires were accompanied by a covering letter which described the nature and objectives of the study and assured the respondents that the responses would be kept confidential. Respondents were satisfied with the nature of the questionnaire and did not voice any concerns. However, some respondents were reluctant to complete the questionnaire due to a lack of feedback by management regarding previous studies that had been undertaken. A total of 150 questionnaires were administered; 118 were returned with a response rate of 79 percent. The appropriate statistical analyses were performed on the data in order to obtain results of the study.

3.5 Data analysis

The data from the completed questionnaires were coded as per variables and captured in SPSS, version 24, which is an international standard statistical software program. Data were analysed, through both descriptive and inferential statistics, using SPSS V24.

3.5.1 *Descriptive Statistics*

Descriptive analysis in this study was performed in order to obtain the frequency distribution of demographic variables, which were gender, age, race, position at work, work experience, and education level. The influence of biographical variables on employee engagement and details regarding the background profile of participants was analysed. Data were subjected to a normality test, and it was established that there was no violation of the normality assumption.

3.5.2 *Inferential Statistics*

Saunders *et al.* (2012:682) describe statistical inference as "*the process of coming to conclusions about the population on the basis of data describing a sample drawn from that population.*" Several tests, such as regression analysis, chi square, and abnormality tests were undertaken. Furthermore, ANOVA was used to test the hypotheses of the study. Inferential statistics are of particular importance to this study given the aim of understanding the relationships between several variables and their overall effect on employee engagement.

4. FINDINGS

The findings of the study are discussed next.

4.1. Biographical information

Table 1 differentiates the sample on the basis of biographical data (gender, age, position, service in years, and education level and region).

Table 1: Biographical Information

Biographical Information	Frequency	Percentage
Gender		
Female	57	48.3
Male	61	51.7
Age in years		
25 and below	3	2.5
26–35	42	35.6
36–45	49	41.5
46–55	20	16.9
56–65	4	3.4
Position		
Senior Management	1	0.8
Middle Management	41	34.7
Operational Staff	76	64.4
Service in years		
1–5 years	34	28.8
6–10 years	35	29.7
11–19 years	32	27.1
20–29 years	11	9.3
30+ years	6	5.1
Education level		
Grade 12	39	33.1
Diploma or 3-year degree	48	40.7
Degree (e.g., Advanced diploma, B.Tech and BCom/BSc or Honours)	25	21.2

Master's Degree or MCom	6	5.1
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Source: Compiled by researchers to show biographical information on the respondents

Table 1 indicates that out of 118 participants, about 52 percent of respondents were male in comparison to 48 percent who were female. The majority (about 41.5%) of the respondents were in the 36 to 45 age group while the 26 to 35 age group comprised 35.6 percent of participants, and the smallest demographic group was comprised of those younger than 25 years of age (2.5%). Employees over 55 years old represented 3.4 percent of total respondents. The majority of respondents were operational staff members (64%), while middle managers contributed about 35 percent to the total number of respondents. Senior managers were the least represented employee group comprising about 1 percent of total respondents. 29.7 percent of the respondents have been working in the department for more than five years, while about 9.3 percent have been working in the department for more than 20 years. Participants in possession of a degree are the most significant respondent group as measured by education, contributing about 40.7 percent to the total, with 21.2 percent of respondents holding a four-year degree. This means that 67 percent of respondents were in possession of a diploma or degree up to the Master's level. Respondents with a Grade 12 (final school year) certificate accounted for about 33.1 percent of the total.

4.2. Testing normality assumption

The normality of data is often assumed in multivariate analysis; it is generally assumed that data distribution in all linear combination of items is normally distributed and if the variation from normal distribution is significantly large, the results of statistical tests are invalid as normality is required in most statistical procedures. Normality of data in this study was tested using Kolmogorov-Smirnov and Shapiro-Wilk tests as shown in Table 2.

Table 2: Testing normality assumption using Kolmogorov-Smirnov and Shapiro-Wilk tests

Attribute	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
Gender	0.349	118	0.136	0.636	118	0.111
Age	0.219	118	0.349	0.870	118	0.924

Position	0.411	118	0.595	0.631	118	0.887
Service	0.196	118	0.446	0.878	118	0.210
Education	0.229	118	0.778	0.844	118	0.782
Vigour1	0.217	118	0.521	0.887	118	0.524
Dedication1	0.248	118	0.928	0.837	118	0.445
Absorption1	0.244	118	0.443	0.882	118	0.308
Vigour2	0.220	118	0.214	0.874	118	0.145
Vigour3	0.235	118	0.117	0.874	118	0.144
Absorption2	0.183	118	0.175	0.912	118	0.985
Dedication2	0.235	118	0.958	0.886	118	0.472
Vigour4	0.209	118	0.808	0.895	118	0.126
Vigour5	0.240	118	0.162	0.871	118	0.102
Dedication3	0.284	118	0.217	0.829	118	0.215
Absorption3	0.251	118	0.283	0.868	118	0.737
Dedication4	0.270	118	0.934	0.874	118	0.141
Dedication5	0.212	118	0.330	0.904	118	0.398
Vigour6	0.199	118	0.184	0.903	118	0.341
Vigour7	0.238	118	0.359	0.888	118	0.642
Vigour8	0.202	118	0.837	0.905	118	0.451
Dedication6	0.268	118	0.211	0.843	118	0.724

Source: Compiled by researcher

The results indicated that Kolmogorov-Smirnov and Shapiro-Wilk tests were not significant ($p > 0.05$) for each variable that was considered in the study, as indicated in Table 3. This means that data were approximately normally distributed and therefore the normality assumption was not violated.

4.3. Engagement attributes

Engagement level was measured using vigour, dedication, and absorption in relation to the model used in the study. The results reflect that participants were of the view that employees were perceived to be dedicated and absorbed with their work within the government department in Gauteng with the results showing high and favourable mean scores of 3.7 and 3.5, compared to a maximum possible score of 5. Participants further expressed neutral opinions concerning vigour towards their work within the government department. The mean score for vigour was neutral at 3.4, in relation to a maximum possible score of 5. Table 3 shows the degree of employee engagement in the government department.

Table 3: Degree of employee engagement in a government department in Gauteng

Engagement attribute	Mean	STDEV	STDEV/Mean %	Skewness
Vigour	3.4	0.745	21.7	-0.715
Dedication	3.7	0.775	20.8	-0.858
Absorption	3.5	0.816	23.4	-0.591

Source: Compiled by researcher

Furthermore, the results in Table 3 showed that participants expressed homogenous opinions on vigour, dedication, and absorption in so far as the associated standard deviations were between 20 percent and 24 percent of the associated mean values. Values for skewness reflects normal ranges of 1 as presented in Table 3.

4.4. Chi Square test

Table 4 demonstrates the relationship between employee engagement and other variables such as gender, age, position, service, and educational level was calculated in reference to the Chi square, likelihood ratio, and Cramer's V Coefficient tests.

Table 4: Relationship between service and engagement elements using chi square test

Attributes	Pearson Chi-Square		Likelihood Ratio		Cramer's VCoefficient
	Df	Sig.	Df	Sig	
Gender * VIGOUR	22	0.22	22	0.04	0.48
Gender * DEDICATION	22	0.74	22	0.59	0.36
Gender * ABSORPTION	12	0.99	12	0.97	0.18
Gender * ENGAGEMENT	98	0.39	98	0.00	0.39
Age * VIGOUR	88	0.26	88	0.57	0.45
Age * DEDICATION	80	0.93	80	0.95	0.36
Age * ABSORPTION	48	0.07	48	0.37	0.36
Age * ENGAGEMENT	98	0.49	98	0.01	0.91
Position * VIGOUR	44	0.34	44	0.46	0.45
Position * DEDICATION	40	0.65	40	0.81	0.39
Position * ABSORPTION	24	0.75	24	0.72	0.28
Position * ENGAGEMENT	98	0.17	98	0.01	0.95
Service * VIGOUR	88	0.05	88	0.19	0.49
Service * DEDICATION	80	0.43	80	0.31	0.42
Service * ABSORPTION	48	0.07	48	0.03	0.37
Service * ENGAGEMENT	98	0.81	98	0.02	0.88

Source: Compiled by researcher

Table 4 shows the relationships between employee engagement, gender, age, position, and service in government department (as measured in years). It can be observed that minimum

cell counts in each of the pairwise relationships in Table 4 were violated. This means that the likelihood ratio was a more appropriate test for the above-mentioned pairwise comparison and not the Chi Square test statistic. Using the likelihood ratio, the pairwise association between gender and engagement, age and engagement, position and engagement, gender and vigour, and service and engagement were all significant ($p < 0.05$). Pairwise associations of age and engagement, position and engagement, and years of service and engagement had positive and strong associations with high Cramer's V coefficient of associations that were significant ($p < 0.05$) and greater than 0.85.

Cramer's V coefficient measures the degree of association between variables under investigation. Cramer's coefficient runs from -1 to +1. The greater the degree of association between variables of interest the higher the values of Cramer's coefficient. Gender and engagement demonstrated moderate levels of association, with a moderate Cramer's coefficient of 0.39, which was nevertheless significant ($p < 0.05$). The associations among the remaining pairs were not significant and had either moderate or low Cramer's V coefficients, as illustrated in Table 4.

4.5 Regression analysis

Table 5 is based on the regression analysis of the five factors of employee engagement

Table 5: Determination of the influence of five factors on employee engagement

Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	3.549	0.659		5.384	0.000
Gender	0.131	0.134	0.090	0.976	0.331
Age	0.258	0.110	0.305	2.343	0.021
Position	-0.179	0.158	-0.123	-1.134	0.259
Service	-0.148	0.082	-0.232	-1.798	0.045

Education	-0.061	0.088	-0.073	-0.692	0.490
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Source: Compiled by researcher

Based on the regression analysis in Table 5, it can be observed that age and service had a significant ($p < 0.05$) influence on employee engagement. It should be noted that the coefficient of service in the regression equation is negative. This suggests that more experienced employees are less engaged at work. There was no statistical evidence to suggest that gender, position at work and educational level had a significant ($p > 0.05$) influence on employee engagement.

4.6 Analysis of variance (ANOVA)

The adequacy of the regression model above was evaluated using Analysis of Variance (ANOVA) and R² presented in Table 6.

Table 6: Determination of regression model adequacy using ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	4.106	5	0.821	1.587	0.169
Residual	57.951	112	0.517		
Total	62.058	117			

Source: Compiled by researcher

Table 6 provides details concerning the analysis of model adequacy using R² values of the regression model that was applied in the study. An R² of about 25.7 percent was achieved. This means that only about 26 percent of the variation in employee engagement was explained by age, gender, position, years of service and educational level. The R² value of about 26 percent is low and serves only to explain that more independent variables that can have a significant influence on employee engagement need to be considered. The remaining 74 percent may be due to factors that lie outside the jurisdiction of this study.

To determine which of the variables considered in this study had an impact on employee engagement, it was necessary to compute the Beta values for each variable as depicted in Table 4.5. The Beta values indicate that age with a Beta value of 0.305 and position with a Beta value of -0.123 were significant in explaining the variance in employee engagement.

5. CONCLUSIONS

5.1. Demographic Data

The results of the study suggested that the pairwise association between gender and engagement, age and engagement, position and engagement, and service and engagement were all significant ($p < 0.05$). In particular, all the above-mentioned pairwise associations had positive and strong associations with a high Cramer's V coefficient of association which was greater than 0.85. The findings are in support of the theory that states that employee engagement is positively associated with age, gender, and occupation as well as experience. The findings of the study indicate a moderate and yet significant ($p < 0.05$) level of association between gender and engagement. Using multiple regression analysis, the current study further showed that age and service had a significant ($p < 0.05$) influence on employee engagement.

5.2. Employee engagement

The chi square test showed that the pairwise association between gender and engagement, age and engagement, position and engagement, gender and vigour, and service and engagement were all significant ($p < 0.05$). Pairwise associations of age and engagement, position and engagement, and service and engagement had positive and strong associations with a high Cramer's V coefficient of association that was significant ($p < 0.05$) and greater than 0.85. The findings of the study showed that gender and engagement had a moderate level of association with a modest Cramer's coefficient of 0.39, which was significant ($p < 0.05$). Based on regression analysis, it was observed that age and number of years in service had a significant ($p < 0.05$) influence on employee engagement. There was no statistical evidence to suggest that gender, position at work, and educational level had significant ($p > 0.05$) influence on employee engagement. While high and significant levels of associations were established between age and engagement, position and engagement, gender and vigour, and

service and engagement, a moderate level of association between gender and engagement was established in the study.

5.3. Managerial implications and recommendations

Management within the government department in Gauteng should ensure that an employee engagement policy is developed and incorporated into the organisational operational structure; managers should be made accountable for engagement. Non-monetary rewards such as time off from work, new opportunities etc., should be considered for employees that show good performance and engagement, this is particularly important within the public sector given budgetary constraints. Improved communication to employees and timely feedback from them should be ensured and realistic training goals should be set and implemented with fair opportunities for self-development coupled with fair remuneration that is commensurate with employee qualifications and work experience being recommended. Given the regression analysis which suggests that more experienced employees are less engaged, management strategies to encourage continued and renewed engagement, rewarding the experience and service of employees, and further motivating them, is of paramount importance.

5.4 Limitations and recommendations for future research

This study was essentially limited by the quantitative nature of the study in so far as only about 26 percent of the variation in employee engagement was explained by age, gender, position, years of service and educational level. Further qualitative research should be conducted in order to understand the nature of the variables which represent the remaining 74 percent of the variation in employee engagement. This future study should be coupled with further quantitative studies in order to evaluate the pertinence of the given variables. Further limitations of this study, and avenues for further research, include the generalisation of the study across other government departments and in other cities and provinces, with a larger sample size, in order to further establish the reliability of the findings of this study.

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