

**An investigation into the associative relationship between  
Transformational Leadership and Public Service Motivation in an Irish  
public service organisation**

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## **Abstract**

### **Purpose**

The purpose of this research is to investigate the relationship between Transformational Leadership and Public Service Motivation in an Irish public service organisation.

### **Findings**

The results of this study support 2 main findings. First, that there is no association between Public Service Motivation and Transformational Leadership. Second, that there is a small positive correlation between the age, job title/role and length of service and PSM and a negative correlation between PSM and education level.

### **Research limitations and implications**

The main limitations identified include the design of the research study, the sample size, the methods for data analysis and biases associated with self-reported data. The research was limited to a cross-sectional study, yielding a time-specific result. The sample, albeit of high quality, is relatively small in comparison to similar researches, consisting of employees of a single public service organisation. The implications of such limitations impact on the scientific and statistical significance of the results. For a more in-depth understanding of the relationship between Transformational Leadership and Public Service Motivation in Irish public service organisations, further research is required, involving other types of organisations, such as state departments, as well as other types of methodologies, such as longitudinal quantitative analysis.

### **Practical applications**

This research will benefit managers in Irish public service organisations by gaining an in-depth understanding of the relationship between Transformational Leadership and Public Service Motivation and knowledge of the most adequate management and HR practices and strategies which can be applied in today's public service organisations in order to increase employee motivation and performance.

### **Originality and value**

Having conducted an effective and valid literature research, this appears to be the first study of this kind conducted in Ireland. The study contributes to the existing body of knowledge around

the relationship between Transformational Leadership and Public Service Motivation by adding results from a new jurisdiction.

**Keywords**

Transformational Leadership, Public Service Motivation, Performance

## Declaration Form

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## Contents

Abstract.....	2
Declaration Form .....	4
Acknowledgements .....	5
<b>1. Introduction.....</b>	<b>8</b>
1.1. Academic background .....	8
1.2. Research gap and aim of research.....	11
1.3. Research context and research subject .....	12
1.4. Research approach.....	12
1.5. Research value.....	13
1.6. Structure of dissertation.....	13
<b>2. Literature review .....</b>	<b>15</b>
2.1. Public Service Motivation .....	15
2.2. Transformational Leadership .....	19
2.3. Transformational Leadership and Public Service Motivation .....	22
2.4. Conclusion .....	25
<b>3. Research question .....</b>	<b>27</b>
3.1. Research hypothesis .....	27
<b>4. Research methodology .....</b>	<b>28</b>
4.1. Introduction.....	28
4.2. Research philosophy .....	29
4.3. Research approach.....	29
4.4. Research strategy, method and time-horizons .....	29
4.4.1. Research sample.....	30
4.4.2. Research questionnaire characteristics.....	30
4.4.3. Research questionnaire design principles and content.....	31
4.4.4. Measuring Transformational Leadership.....	31
4.4.5. Measuring Public Service Motivation .....	32
4.4.6. Ethical considerations.....	32
4.5. Data collection and data analysis.....	33
4.5.1. Data collection and survey coding .....	33
4.5.2. Data analysis.....	35
4.5.2.1. Scale reliability analysis (Cronbach alpha test) .....	35
4.5.2.2. Normality analysis (Shapiro-Wilk values) .....	36
4.5.2.3. Correlation analysis .....	36

Scatterplot modelling.....	36
Pearson’s correlation analysis.....	36
Regression analysis .....	37
<b>4.6. Research limitations.....</b>	<b>37</b>
4.6.1. Design of the research study .....	37
4.6.2. Sample size.....	37
4.6.3. Methods for data analysis.....	38
4.6.4. Self-reported data .....	38
<b>5. Results .....</b>	<b>39</b>
5.1. Descriptive statistics.....	39
5.1.1. Descriptive statistics - Transformational Leadership.....	41
5.1.2. Descriptive statistics - Public Service Motivation .....	41
5.2. Scale reliability analysis.....	44
5.2.1. Transformational Leadership scale – reliability analysis results .....	44
5.2.2. Public Service Motivation scale – reliability analysis results .....	44
5.3. Normality analysis .....	44
5.4. Correlation analysis .....	45
5.4.1. Scatterplot modelling.....	46
5.4.2. Pearson’s correlation analysis.....	46
5.4.3. Regression analysis .....	47
5.5. Hypothesis – summary of results.....	48
<b>6. Discussion.....</b>	<b>49</b>
6.1. Academic discussion .....	49
6.2. Practical implications .....	50
6.3. Suggestions for future research .....	51
<b>7. Conclusion .....</b>	<b>52</b>
<b>8. References.....</b>	<b>54</b>
<b>9. Appendices.....</b>	<b>61</b>
Appendix 1: Research questionnaire and Cover Letter .....	61
Appendix 2: Reliability tests (Stata outputs).....	67
Appendix 3: Shapiro-Wilk test results (Stata outputs).....	70
Appendix 4: Kruskal-Wallis test results (Stata outputs).....	71
Appendix 5: Pearson’s correlation coefficient (Stata outputs) .....	73
Appendix 6: Linear regression analyses (Stata outputs).....	74
Appendix 7: Graphs.....	76
Appendix 8.....	91

# 1. Introduction

## 1.1. Academic background

Since the beginning of the 20<sup>th</sup> century, to varying degrees, public service reform has been high on the agendas of international organizations and national governments across developed countries. The review of literature conducted by Colgan et al., (2016, p. 35) indicates that the main drivers for implementing public service reform include development of flexible leadership, promoting public service values and management focused on outcomes. Over the past couple of decades, public service reform was accelerated by OECD initiatives, which no longer considered the modernization of public sector as an option but a necessity to ensure that ‘‘governments respond to changing societal needs and maintain competitiveness’’ in a rapidly changing socio-economic and political landscape (OECD, 2005). In this context, the OECD emphasized the need to shift towards a more goal-oriented public service, which requires ‘‘having a strong leadership to support the renewed change’’ (OECD, 2008).

In Ireland, the critical importance of leaders for the implementation of public service reform and the effective and efficient delivery of public services has been emphasized at various levels. In its State of Public Service series, the Institute of Public Administration, a well-established educational institution specialized in training public and civil servants, highlights the need for managers who can harness motivation of public service employees and identifies transformational leadership as the most important driver of employee motivation and performance (Institute of Public Administration, 2013a, 2013b). At government level, the focus on strengthening leadership across the public service and developing effective management strategies has been afforded increased attention in recent public service reform initiatives. ‘*The Strategic Management Initiative, Delivering Better Government*’ reform program (1996) refers to leadership as ‘a major ingredient in any change process’ and calls for intensified efforts to develop adequate strategies for managing public service employees. (Department of the Taoiseach, 1996). Further emphasis on implementing adequate public service management practices is given in the ‘*Transforming Public Services*’ (2008) initiative for public service reform: the key role of public service leaders is to ‘connect the efforts of individuals, units, teams’ and ‘motivate performance of all staff at all levels in the Public Service’ (Department of the Taoiseach, 2008). Finally, the ‘*Final Progress Report on the Public Service Reform*



*Plan*' (2017) recognizes the need for effective leadership to motivate public service employees (Department of Public Expenditure and Reform, 2017).

These developments have given new salience and prominence to the need to identify and implement effective leadership strategies adequate to managing employees working in the public sector. The development of such practices is inextricably linked to managers' ability to motivate employees and tap into their potential in order to increase work performance. Indeed, as argued by Mann (2006), identifying effective ways to harness employees' motivation is a challenging task for managers in any sector and begins with understanding what motivates workers. Motives, or intrinsic motivational factors, come from within and are powerful and unique to each individual. They are our internal drives, inclinations, needs and desires and form the 'source of action and determination that move us in certain directions and the source of meaning for our behavior' (Fairholm, 2001).

In this context, the distinctiveness or otherwise of the motives driving the work behavior of public sector employees, as opposed to private sector employees, needs to be considered. A growing body of research on work motivation suggests that, while some individuals are motivated by material factors such as salary, benefits, perks and promotion opportunities, others are driven by more altruistic and prosocial concerns, such as a desire to serve, contribute to society, have a positive impact on the lives of others or influence a cause to which they are strongly committed (Frey & Osterloh, 2005; Goshal, 2005; Gant, 2007; Steijn, 2008; Taylor, 2008; Bright, 2011). Paarlberg and Lavigna (2010) refer to these inclinations as 'other regarding' and assert that people displaying such inclinations are more attracted to employment in public service. This view is supported by other contributions, which found that people motivated by 'other regarding' concerns are more likely to pursue jobs associated with prosocial and altruistic motivations (Christensen & Wright, 2011) and that public employees with high 'other regarding' inclinations are less likely to be motivated by financial incentives (Bright, 2011). These findings are corroborated by earlier researches, which suggested that the public sector is more compatible with the 'other regarding' motivational bases of public service (Perry & Wise, 1990).

Admittedly, intrinsic motivational factors such as the desire to do good for others and 'expend effort to benefit other people' (Vandenabeele, 2008) are not the only criteria for individuals choosing to pursue or remain in the public service. Vandenabeele noted a tendency to associate

employment in the public sector with a better life-work balance and quality of life, while Perry & Honghedem (2010) identified extrinsic motivational factors linked to security of tenure, pension schemes and development opportunities. In discussing motives as the main source of action determining people's behavior, Burns (1978, p 64) argues that, despite the fact that motives are 'pushed' by generalised drives and 'pulled by more specific wants, needs, aspirations, goals and values', 'the main source of action, though, is still the response to internal requirements'.

Secondly, intrinsic motivational factors such as altruistic and prosocial concerns are not the exclusive appanage of individuals working in the public sector. Research has shown that an ethic of public service is not linked to a particular sector and that employees exhibit public service behaviour in both public and private sectors (Vandenabeele, 2008; Christensen & Wright, 2011). However, as noted by Wright and Grant (2010), there has been sufficient empirical evidence to argue that individuals motivated by intrinsic motivational factors linked to the desire to serve, contribute to the greater good of the community or society and have a positive influence on others are more likely to be found working in the public sector.

Academic studies which explored the concept of public service motivation have suggested that individuals attracted to work in public service have a 'predisposition to respond to motives grounded primarily or uniquely in public institutions or organisations' (Perry & Wise, 1990) and are motivated by "beliefs, values, and attitudes that go beyond self-interest and organizational interest to energize employees to do good for others and contribute to the well-being of organizations and society" (Perry & Honghedem, 2008). In noting the emphasis on achieving larger, collective goals, Wright & Pandey (2009) argued that transformational leadership is an appropriate approach for successfully managing and motivating public service employees. Transformational leadership uses inspirational motivation, idealized influence and intellectual stimulation to motivate employees to transcend own interests for the sake of collective, larger objectives (Trottier, et al., 2008) and achieve goals beyond their immediate self-interest (Belle, 2013; Dvir, et al., 2002). This assertion has been supported by the findings of several studies, which concluded that transformational leadership is an organisational factor associated with high levels of public service motivation (Wright, et al., 2011).

Building on the positive relationship between transformational leadership and public service motivation, academics have developed frameworks to facilitate the integration of public service

motivation theories and transformational leadership principles into coherent and implementable management strategies and human resources practices with application in real settings (Paarlberg & Lavigna, 2010; Paarlberg, et al., 2014; Paarlberg et al., 2017). These frameworks link value-based management practices with concepts from transformational leadership and public service motivation related dimensions.

The arguments outlined in this section highlight 2 key issues in relation to the challenges facing managers working in public sector organisations: on one hand, it is critical for managers to understand what motivates public service employees and, on the other hand, the need to build on this understanding and develop and implement managerial practices which foster and harness their motivation. In academic literature, these key issues correspond to two well established concepts: public service motivation and transformational leadership. In this context, the principal purpose of this study is to conduct a review of the academic literature on public service motivation and transformational leadership and investigate the correlations between them through an empirical research study performed in an Irish public service organisation.

## **1.2. Research gap and aim of research**

A theoretical issue that has dominated the academic discourse on public service motivation is the positive relationship between transformational leadership and public service employees' motivation and performance. This assertion has been tested through various research studies (Moynihan, et al., 2012; Wright & Pandey, 2009; Ronwold & Rohmann, 2009; Park & Rainey, 2008; Trottier, et al., 2008; Vandenabeele, 2008; Purvanova, et al., 2006). The majority of these researches have been conducted in the US, with some contributions from other jurisdictions, including Germany and Switzerland. In noting this, Paarlberg, et al. (2017) remarked on the need for 'diversity in geographic representation' and encouraged the trend of internationalisation as key to understanding to what extent public service motivation is influenced by cultural considerations. To this end, this research builds on the existing body of knowledge by adding findings from a new jurisdiction and contributes to the continuous development of the understanding of public service motivation and its relationship with transformational leadership.

The aim of this research is to explore the associative relationship between transformational leadership and public service motivation in an Irish public service organization. Public service motivation is measured using a multidimensional scale developed by James Perry (Perry, 1996), consisting of 24 Likert type statements grouped into four related dimensions: attraction to formulation of public policy, commitment to the public interest, self-sacrifice and compassion. Transformational leadership is measured using the Multifactor Leadership Questionnaire developed by Avolio and Bass (Avolio & Bass, 1999).

### **1.3. Research context and research subject**

This research is based on a survey of employees working in the Commission for Regulation of Utilities, an independent regulatory body established by the Electricity Regulation Act, 1999. The CRU is a public service organisation with regulatory remit over a wide range of economic, customer protection and safety responsibilities in energy, water and petroleum extraction and exploration. Commitment to public service and acting in the public interest are incorporated in the CRU's vision and values set out in the Strategic Plan (Commission for Regulation of Utilities, 2014, p.10). One of the key challenges for the CRU is to foster a culture of commitment to organisational values and maintain high levels of motivation and performance within the workplace. To address these challenges, the CRU has implemented a wide range of management and HR practices aimed at increasing organisational and individual performance levels. So far, the main focus of these practices has been the recruitment of high performers and expanding the experience and expertise of existing staff, through appropriate incentives schemes and training and skill development programmes. The implementation of practices and strategies developed based on intrinsic motivational factors and which appeal to the desire to serve, contribute to the greater good of the community or society and have a positive influence on others, would complement the CRU's efforts to date and benefit the organisation in terms of enabling performance through increasing employees' levels of motivation and commitment.

### **1.4. Research approach**

The research undertaken is underpinned by the public service motivation and transformational leadership literature examined in this paper. This study is primarily based on an empirical approach using a cross-sectional research design supported by an anonymous online quantitative questionnaire to collect subject data in order to measure transformational

leadership and public service motivation. Data collection focused on subjects from one Irish public service organisation, namely an independent regulatory body. A random approach was taken to distribute the questionnaire to all employees of the organisation, followed by a quantitative analysis on the data, performed by using an established data analysis and statistical software.

## 1.5. Research value

Gaining an in-depth understanding of the relationship between Transformational Leadership and Public Service Motivation will assist managers working in public service organisations to develop and implement adequate HR and management practices to harness public service motivation and increase employees' motivation and performance levels. This addresses the need for effective leadership strategies to motivate public service employees, which has been highlighted in the agenda of several Irish governments in the last two decades (Department of the Taoiseach, 1996; Department of the Taoiseach, 2008; Colgan, et al., 2016; Department of Public Expenditure and Reform, 2017).

Secondly, this study builds on the extant body of research which indicates a positive relationship between transformational leadership and public service employees' motivation and performance by adding findings from a new jurisdiction.

## 1.6. Structure of dissertation

This paper is structured in x sections:

**Section 1 Introduction** - positions the subject of this study in the current socio-political environment, which places significant emphasis on the need to understand what motivates public sector employees and the implementation of adequate leadership strategies and practices to harness this motivation.

**Section 2 Literature review** – explores the main academic views on Public Service Motivation and Transformational Leadership, together with frameworks to facilitate the integration of public service motivation theories and transformational leadership principles into coherent and implementable management practices.

**Section 3 Research questions** – sets out the research question and hypothesis, together with the objectives of this study.

**Section 4 Research methodology** – outlines the research philosophy, methodology and data collection and analysis methods.

**Section 5 Results** – details the results of this research.

**Section 6 Discussion** – discusses the results in the context of academic views from extant literature and identifies main implications from a practitioner’s perspective.

**Section 7 Conclusion** – concludes the study.

## 2. Literature review

The literature review is divided in 3 parts: the first part explores the concept of public service motivation, including intrinsic factors and types of rewards that motivate employees with a high level of public service motivation, instruments for measuring public service motivation levels and the impact of public service motivation on employees' performance. The second part discusses the concept of transformational leadership, focusing on the development of the concept, the relationship with public service motivation and measurement models. The literature review section closes with a discussion on three theoretical frameworks designed to facilitate the integration of public service motivation and transformational leadership practices into practical management and HR strategies, which can be applied by practitioners in today's public service organisations in order to increase employee motivation and performance.

### 2.1. Public Service Motivation

Public service motivation (PSM) theory provides valuable insight into the type of intrinsic factors and rewards which motivate employees based on their level of PSM (Perry & Wise, 1990). The concept of PSM first emerged through the work of Bruce Buchannan (Buchannan, 1975 cited in Brewer, et. al, 2000), who developed the construct to explain differences in job involvement levels between public and private sector employees. Buchannan's study found that public sector employees reported lower level of job involvement than their counterparts in the private sector due to, as argued by the author, frustration with bureaucratic 'red tape'.

In reviewing Buchannan's findings, Rainey (Rainey, 1975 cited in Brewer, et. al, 2002) conducted a similar study on reward preferences among managers working in the private and public sectors but introduced more direct questions in relation to public service. The results of a study found that, while both types of managers' preferences were influenced by the type of work performed and the type of organization they worked for, they responded differently to the notion of 'meaningful public service'. Private-sector managers, albeit somewhat motivated by prosocial considerations, did not perceive their work as public service. By contrast, public sector managers identified public service as an important aspect of their work.

The difference between the manner in which public and private sector managers relate to 'public service' led to the strengthening of the concept of PSM and prompted Rainey to call

for further research in order to define and measure public service motivation. Perry and Wise (1990) were the first to formulate a definition of PSM and described it as 'an individual's predisposition to respond to motives grounded primarily or uniquely in public institutions or organisations'. Building on Rainey's comparative study of motivation levels in public and private managers, the authors argued that specific motives are associated, primarily or exclusively, with public service: rational, norm-based and affective. Rational motives are grounded in 'individual utility maximisation' theory and suggest that individuals are attracted to public service for reasons that provide a benefit to themselves, such as policy making opportunities as a way of maximizing their own need for power. Norm-based motives are related to the desire to serve the public interest and 'a loyalty to duty and to the government as a whole' (Buchanan, 1975 as cited in Perry and Wise, 1990). Lastly, affective motives are linked to individuals' 'patriotism of benevolence' and a personal conviction that their work has social importance by protecting citizens' rights. Another research exploring individuals' motives for performing public service carried out by Brewer et al. (2000) identifies 4 distinct conceptions of PSM: samaritans, communitarians, patriots and humanitarian. Samaritans see themselves as 'guardians of the underprivileged' and are strongly motivated to help other people. Communitarians have a strong sense of loyalty to duty and believe that public service is 'one of the highest forms of citizenship'. Lastly, humanitarians are driven by a strong sense of social justice and public service and a desire to make a difference in society. The findings of this study support Rainey's theory that individuals have different conceptions vis-à-vis PSM and demonstrate that Perry & Wise's specific motives associated with PSM are relevant to all four PSM conceptions explored in the study.

In acknowledging that PSM behavior is well established in the field of public administration, Vandenberg, et al. (2006) note that the definition formulated by Perry and Wise is not widely accepted, and that different definitions for PSM have been developed by a number of academics. In attempting to create a universally accepted definition of PSM, the authors blend the 'beyond self interest and organisational interest' characteristics with the political aspect of PSM and motivational theories: 'the beliefs, values and attitudes that go beyond self-interest and organisational interest, that concern the interest of a larger political entity and that induce, through public interaction, motivation for targeted action'. Perry and Honghedem (2008, p.3) also define PSM in relation to the 'the beliefs, values, and attitudes that go beyond self-interest and organizational interest to energize employees to do good for others and contribute to the well-being of organizations and society'. The broad range of adjunct concepts covered by these



definitions undoubtedly highlight the complexity of the PSM construct and the multiplicity and interdependency of factors influencing public service motivation. Indeed, this complexity has been often remarked upon by several academics, who pointed out that 'PSM is hard to define and measure because of the complex nature of the construct' (Vandenabeele, et al., 2006).

Significant advances in the study of PSM have been made by attempts to translate it into a measurement scale. Perry, et al., 2010 identify four approaches adopted by academics for measuring PSM: (1) single survey items about public service, (2) unidimensional scales, (3) multidimensional scales and (4) behavioural proxies. Perry's multidimensional scale (Perry, 1996) is widely regarded as a major development in the measurement of PSM (Brewer, et al., 2000). The scale uses 24 Likert-type items grouped into four PSM related dimensions: attraction to formulation of public policy, commitment to the public interest, self-sacrifice and compassion. Attraction to public policy making refers to individuals' desire to work in the public sector for the opportunity to effect the formulation of policy in their communities. This dimension is underpinned by rational motives grounded in individual utility maximisation theory and suggest that individuals are attracted to public service for reasons that provide a benefit to themselves, such as policy making opportunities as a way of maximizing their own need for power (Perry & Wise, 1990). Commitment to public interest is related to an individual's desire to serve the interest of the community and the conviction that their work protects citizens' rights (Perry, 1996). Compassion, also referred to as 'patriotism of benevolence' (Frederickson & Hart, 1985), is grounded in affective motives and refers to individuals' love of 'others'. Finally, self-sacrifice is described as an individual's willingness to put the needs of others before personal interests.

Robustly tested for validity and reliability, Perry's scale represents a valuable tool for gathering empirical evidence about various aspects of PSM (Perry, 1996) and facilitates comparisons among national settings (Perry, et al., 2010). This framework of PSM measurement constitutes the source of further measurement instruments. Taylor (2007) designed an aggregate version of Perry's scale by combining the 24 Likert-type items into four dimensions (attraction to public policy, commitment to public interest, compassion and self-sacrifice) in order to determine the impact of PSM on work outcomes. In other instances (Moynihan & Pandey, 2007a, 2007b), the six PSM dimensions have been used in various combinations to examine the role played by organisations in shaping public service motivation and the impact of individual attributes, job characteristics and organisational variable on job satisfaction and job

involvement. Finally, the findings of Vandenberg's (2008) study on the validity of Perry's scale in a non US setting support the original dimensions of PSM construct and suggest an extension of the original model by including 'democratic dimension' as an additional component.

In addition to academic contributions on PSM definitions and measurement, a significant number of scholars examined the relationship between PSM and performance. A growing body of literature argues that PSM has a positive impact on employee performance (Perry & Wise, 1990; Taylor, 2008; Perry & Honghedem, 2008; Perry, et al., 2010; Kim & Vandenberg, 2010) and that high levels of PSM lead to enhanced organizational performance (Rainey & Steinbauer, 1999; Brewer & Selden, 2000; Kim, 2005). In discussing behavioral implications of PSM, Perry and Wyse (1990) assert that an individual's level of PSM influences job choice and performance, as well as organizational performance and that, in a public service organization, PSM is positively related to individual performance. The authors' hypothesis was subsequently tested through multiple empirical researches, which yielded mixed results. An early study of federal employees in the US found a positive relationship between PSM and self-reported performance appraisal (Naff & Crum, 1999). The findings were supported, to some extent, by a subsequent study conducted by Alonso and Lewis (2001), which used pre-existing data from two data large samples of federal employees. Whilst PSM was found to be positively related to performance in one sample, which supported Perry and Wyse's (1990) hypothesis, no such evidence was found in the second sample. Following up on the contradictory results of those studies, Bright (2007) investigated whether PSM is positively associated to individual performance by using person-organisation fit as a mediating factor. The results of this survey, using employees randomly chosen from public organisations, indicated that PSM had no significant direct impact of performance.

Further studies tested Rainey and Steinbauer's (1999) assertion that PSM is a strong predictor of performance at organisational level, as opposed to individual level, using the same data samples. The first study (Brewer & Selden, 2000) found a positive and significant correlation between public service motivation and perceived organizational effectiveness. The second study, conducted by Kim (2005) using responses from public employees in South Korea, found that PSM was a significant positive influence on organizational effectiveness, supporting the results of Brewer and Selden (2000). Similar findings were identified in a research which used two dimensions of PSM, attraction to public policy and commitment to public interest, in a

sample of Swiss federal employees (Ritz, 2009). Whilst commitment to public service had a significant impact on performance, attraction to public policy did not. Positive associations between PSM and organizational citizenship behavior, as a facet of performance, were supported by subsequent studies in South Korea (Kim, 2009) and the US (Pandey, et al., 2008), and contradicted by others conducted in Denmark (Andersen, 2009), which found that high levels of PSM in both public and private health professionals did not affect performance, which did vary with professional norms and economic incentives.

Taken together, the results of these studies have failed to find a consistent correlation between PSM and performance, both at individual and organizational level. Reflecting on the lack of firm empirical support for their hypothesis, Perry and Wyse (2010), in an academic paper aptly titled ‘Revisiting the Motivational Basis of Public Service’, suggest further areas for future research, to include broader research methodologies, enhancing measurement for survey-based studies and applying PSM theories to improve organizational effectiveness.

## **2.2. Transformational Leadership**

Transformational leadership represents a leadership approach that causes *transformation* in individuals, social systems and workplaces, by creating valuable and positive change in followers. Applied in its authentic form, transformational leadership increases the motivation, morale and performance of followers through connecting their sense of identity and self to the mission and the collective identity of the organization, challenging followers to take greater ownership for their work.

Academic literature on the subject describes transformational leadership as a value based framework which responds to ‘the wants and needs, aspirations and values of followers’ (Burns, 1978, cited in Paarlberg & Lavigna, 2010) and a process by which leaders ‘develop, share and sustain a vision to elevate follower motivation to higher levels of performance’ (Jung & Avolio, 2000). According to Trottier et al. (2008), transformational leadership uses inspirational motivation, idealized influence and intellectual stimulation to motivate employees to transcend own interests for the sake of collective, larger objectives. Multiple observational studies have confirmed that transformational leaders inspire employees by appealing to their higher ideals and moral values and motivate them to achieve goals beyond their immediate self-interest (Belle, 2013; Dvir, et al., 2002).

The concept of transformational leadership was first introduced by Burns (1978) in his seminal work titled 'Leadership', a descriptive research on political leaders. The author identifies the intrinsic connection between the three elements of leadership: power, purpose and relationship as a major theme. In this context, leadership is defined as a 'relationship of power for a specific purpose that is consistent, or eventually consistent, with the motives, needs and values of both the leader and the led' (Burns, 1978). Motives, needs and values and their impact on purpose and behaviour feature prominently in Burns' work on developing the concept of leadership. Using psychological theories such as Maslow's hierarchy of needs and Kohlberg's stages of moral development, Burns asserts that leadership propels people to the higher levels of needs and moral development.

Burns' work is mostly remembered for establishing the concepts of transactional leadership and *transforming* leadership, which was later changed to *transformational* leadership by Bass (1990). The author argues that transactional leadership relies on an exchange type of relationship, a *give and take* between the leader and the follower – rewards or punishments in exchange for performance. Transactional leaders, referred to as *power wielders*, are solely focused on achieving their own purposes, regardless of whether their followers share their values, motives and purposes, and lack sensitivity towards the emotional needs of their followers. By contrast, transformational leaders appeal to the moral values of the followers. They motivate the followers by raising their level of consciousness and commitment to a purpose and inspire followers by shaping and addressing common values, needs and goals. Burns illustrates his theories on leadership by using the example of Hitler, as the epitome of the transactional leader, and Mao and Ghandi, as *transforming* leaders. Based on these views, the author defines transactional leadership as the process in which 'leaders and followers help each other to advance to a higher level of morale and motivation'.

Despite being published 40 years ago, Burns' theories on leadership still resonate today, being considered by academics and practitioners in the field of management 'the one book that ensconced in academia the legitimate field of leadership theory and practice' (Fairholm, 2001). Over the past 30 years, transformational leadership has become one of the most prominent theories of organisational behaviour (Wright, et al., 2011) and has been linked with various aspects of employee behaviour, such as performance and satisfaction (Bass & Riggio, 2006; Dumdum, et al., 2002; Trottier, et al., 2008), subjective and objective outcome criteria (Judge

& Piccolo, 2004), innovation and organisational change (Yukl, 2008) and public service motivation (Paarlberg, et al., 2014; Paarlberg & Perry, 2007; Perry & Wise, 1990; Wright & Pandey, 2009; Wright et al. 2012; Vandenaabeele, 2014; Kroll & Vogel, 2014).

Since its introduction, several academics have expanded on Burns' theory of transformational leadership. Bass (1990) and Yukl (1999) argue that transformational leadership enable followers to transcend beyond their self-interest by shaping their moral commitment and personal motives to become fully committed to a shared cause. According to Wright, et al (2012), transformational leaders solicit and inspire employee effort by raising their awareness of organisational mission and values. This approach appeals to employees' 'higher-order needs' by encouraging them to go beyond their own self-interest for the greater interest of the organisation or society. Further researches have validated the transformation aspect of this leadership approach, as indicated by Gardner (1998), who asserts that transformational leader – follower relationship transcends the standard contractual agreements and job description, as followers feel intrinsically motivated to evolve for common goals shared with the leader. In acknowledging that transformational leadership places greater emphasis on achieving larger collective goals as opposed to individual objectives, several academics argue that transformational leaders do apply transactional *tools*, but are capable of displaying leadership behaviours beyond the rewards in exchange for performance (Avolio & Bass, 1999; Bass & Riggio, 2006; Kroll & Vogel, 2014).

Building on Burns' leadership theories, Bass (1990) contrasts transactional and transformational leadership by explaining the psychological characteristics of each type of leader. The author asserts that transactional leaders contract exchange of rewards for effort, promise rewards for good performance and recognise achievements. They manage *by exception*, in either an active way, by monitoring deviations from rules followed by corrective action, or a passive way, by intervening only when standards are not met. Another trait of transactional leaders identified by Bass is *laissez-faire*, explained as abdicating responsibility and avoiding making decisions. By contrast, transformational leaders have charisma, they provide vision and sense of mission, instill pride and gain trust and respect. They inspire through communicating high expectations and expressing important purposes. Other characteristics are the use of intellectual stimulation and individual consideration. Bass describes intellectual stimulation as promoting intelligence and rationality and fostering a problem solving environment. Individual consideration refers to affording personal attention,

coaching and guiding. Bass' theory of transformational leadership, known as the Full Range of Leadership model, encompasses seven leadership characteristics: charisma, inspiration, intellectual stimulation, individualised consideration, contingent reward, management by exception and laissez-faire), and contends that leaders can show both transactional and transformational behaviours. This theory underpinned the first model of measurement of transformational leadership behaviours.

Since then, Bass' model has been tested and reviewed through comprehensive meta-analyses in various environments, resulting in recommendations to modify the components of the model (Bass & Avolio, 1990; Avolio & Bass, 1995; Yukl, 1999). Subsequently, two established refined versions emerged. The first model, developed by Bass and Avolio (1995), measures five transformational leadership characteristics: individual consideration, intellectual stimulation, idealised behaviour, idealised attribution and inspirational motivation. Individual consideration, typically displayed through empathy and mentorship, represents the leader's ability to understand their followers' individual and unique needs, and adapt their approach to be compatible with these. Intellectual stimulation refers to encouraging followers to be creative and innovative in approaching problems, by challenging old ways of doing things and playing an active part in the decision making process. Inspirational motivation is demonstrated by the leader through inspiring followers to commit to organisational goals and perform above expectations. Idealised behaviour and idealised attribution are related to the 'charisma' component of the original model and refer to the transformational leader gaining commitment from followers based on loyalty and admiration. Such commitment forms the basis of shared mission and values, which both the leader and their followers commit to achieving. The second model, developed by Bass & Riggio (2006), combines idealised behavior and idealised attribution into one component - idealised influence, which refers to the followers' admiration for the leader.

### **2.3. Transformational Leadership and Public Service Motivation**

Over the past 3 decades, academic literature on the subject has widely recognized transformational leadership as having a positive influence on a wide range of work related aspects of public service employment, including organisational citizenship behaviour (Podsakoff, et al., 2000), perception of goal importance and outcomes (Paarlberg & Perry, 2007) and commitment to public interest (Ritz, 2009). A large body of academic studies has indicated a positive relationship between transformational leadership and public service

employees' motivation and performance (Moynihan, et al., 2012; Wright & Pandey, 2009; Ronwold & Rohmann, 2009; Park & Rainey, 2008; Trottier, et al., 2008; Vandenabeele, 2008; Purvanova, et al., 2006).

An observational research study conducted by Purvanova et al. (2006) on US federal employees indicated that specific management practices have a direct influence on the relationship between transformational leadership and positive employee performance. The findings were supported by subsequent researches conducted in the US: the analysis of approximately 7,000 federal employees' responses to a Merit Principles Survey indicated that a combination of high transformational leadership and high PSM is strongly associated with organisational outcomes (Park & Rainey, 2008). Similar findings were the conclusion of a study into how transformational leadership fosters the use of performance information, which indicated that transformational leadership practices increase the perceived significance of organisational goals and hence have a positive influence on PSM (Moynihan, et al., 2012). The positive relationships between transformational leadership and PSM and performance has been replicated in other jurisdictions. A study measuring the effectiveness of transformational leadership practices in the domain of German non-profit orchestras concluded that transformational leaders foster performance in non-profit organisations by preventing negative emotions on their followers' side (Ronwold & Rohmann, 2009). Further empirical research studies have confirmed that PSM may be fostered and enhanced by specific types of human resource practices based on transformational leadership concepts (Giauque, et al., 2013; Kroll & Vogel, 2014; Vandenabeele, 2014). The positive relationship between transformational leadership and PSM identified in these studies support Wright and Pandey's (2009) argument that the emphasis on achieving larger, collective goals make transformational leadership more suited to the public sector.

However, despite growing evidence of the positive influence of public service motivation and transformational leadership on employees' performance, an increasing number of academics lament the lack of effective integration of PSM theories and transformational leadership practices into coherent and implementable management and HR strategies (Paarlberg, et al., 2014; Vandenabeele, 2014; Giauque, et al., 2013; Belle, 2013; Wright, et al., 2012; Paarlberg & Lavigna, 2010; Mann, 2006). Mann (2006) argues that there has been little progress in translating PSM research into recommendations that managers can use to improve employees' performance. In reviewing 20 years of PSM research, Ritz & Neumann (2012, cited in Institute of Public Administration, 2013a.) concluded that 'only a small portion of current research

provides action-based findings for public managers and human resource practitioners'. Similar concerns are raised by Paarlberg and Lavigna (2010), who highlight the need for effective management practices to harness the positive aspects of PSM and most recently by Paarlberg et al. (2014), who reiterate the call for the development of 'strategies that incorporate public service values across all levels of the organization's management systems'. The authors recommend a 'silver buckshot' approach, consisting of complementary tactics which work together and reinforce one another.

This lacuna has been alleviated to some extent by several academic contributions which focused on developing frameworks to facilitate the integration of PSM into effective management and HR strategies which enhance and harness motivation of public service employees. These strategies are grounded in and draw on concepts from transformational leadership, which represents an alternative to traditional management practices pertaining to transactional management approach based on "qui pro quo" exchange of rewards for performance. Drawing on well-established theoretical principles, such as transformational leadership, person-organization fit, socialization, job design and goal-setting theory, Paarlberg & Lavigna (2010) develop a framework of public values management consisting of ten value based management practices that reinforce and strengthen PSM levels. Building on this framework, Paarlberg, et al. (2014) proposed a set of managerial strategies covering five areas relevant to the motivation of employees' behavior: individual, job, workplace, organization and society. The authors argue that, by extending the model beyond traditional HR functions to include managing PSM values such as creating meaning and purpose in the job and integrating PSM into the organization's mission and strategy, the proposed management strategies are more likely to motivate individuals to engage in public service behavior.

A central theme emerging from both frameworks is the implementation and promotion of management and HR practices rooted in the concept of transformational leadership, by encouraging and rewarding leaders who communicate and model public service values. Both frameworks support the introduction of PSM elements into HR processes, by including PSM as a selection criteria for entry into public service employment, developing performance appraisal and monitoring systems which reflect and encourage PSM and designing a compensation system which aligns with organizational mission and employees' intrinsic motives. Another common theme is the integration of PSM into organizational mission and strategy, by formulating a mission and vision for the organization which connects with



employees' public service values and translating the mission into clear and meaningful goals. The involvement of society features heavily in the latter framework, which advocates for the development of institutional support for the incorporation of public service values into training curricula and raising societal awareness of public service values.

As recently as 2017, Paarlberg et al. following a review of PSM research since 2008, argue that academics have established a strong evidentiary foundation to guide practitioners in the development of management and HR strategies and systems to enhance PSM (Paarlberg, et al., 2017). Building on the previous frameworks for integration of transformational leadership and PSM into implementable management strategies, the authors put forward five *lessons* aimed at incorporating PSM more fully into management practices employed by public service organisations. Albeit not different from the practices developed in previous frameworks, these lessons have the added benefit of being supported by the results of empirical researches. In essence, the authors reiterate the importance of recruiting employees with high levels of PSM, creating a supporting work environment leveraging relationships between employees and ultimate beneficiaries, providing opportunities to new starts to learn about public service values and developing leaders who communicate and model public service values. Most notably, the authors argue that the results of their review provide evidence that empirical research confirms transformational leadership tactics that managers can use to address motivation levels of public service employees.

## **2.4. Conclusion**

A considerable amount of academic literature has been published on the concepts of Public Service Motivation and Transformational Leadership, with numerous studies having conclusively shown a positive relationship between transformational leadership and public service motivation (Moynihan, et al., 2012; Wright & Pandey, 2009; Ronwold & Rohmann, 2009; Park & Rainey, 2008; Trottier, et al., 2008; Vandenabeele, 2008; Purvanova, et al., 2006). Other studies have considered the relationship between each of these two constructs and employee and organizational performance. Whilst academics have strongly asserted the positive impact of Public Service Motivation on employee performance (Perry & Wise, 1990; Taylor, 2008; Perry & Honghedem, 2008; Perry, et al., 2010; Kim & Vandenabeele, 2010) and organizational performance (Rainey & Steinbauer, 1999; Brewer & Selden, 2000; Kim, 2005), empirical researches have yielded mixed results which could not establish a consistent

correlation between PSM and performance, both at individual and organizational level. (Naff & Crum, 1999; Alonso and Lewis, 2001; Kim, 2005; Ritz, 2009; Kim, 2009; Pandey, et al., 2008; Andersen, 2009). Intrigued by the lack of firm empirical support for the theoretical assertion supporting a positive relationship between public service motivation and performance, Perry and Wyse (2010) suggest that future research should include broader research methodologies and enhanced measurement for survey-based studies.

By contrast, the positive impact of Transformational Leadership on employee performance and performance related behaviour, such as satisfaction and objective outcome criteria, appears to have been conclusively supported by empirical research (Bass & Riggio, 2006; Dumdum, et al., 2002; Trottier, et al., 2008; Judge & Piccolo, 2004).

A growing body of academic research has focused on developing frameworks to facilitate the integration of public service motivation into effective management and HR strategies which enhance and harness motivation of public service employees. To date, academics have argued that such strategies need to be grounded in and draw on concepts from transformational leadership (Paarlberg & Lavigna, 2010; Paarlberg, et al., 2014; Paarlberg, et al., 2017). This assertion has been supported by findings of several empirical studies (Paarlberg, et. al., 2017). Building on previous empirical research supporting a positive relationship between Transformational Leadership and Public Service Motivation conducted mainly in the US, this study examines this relationship in an Irish setting, thus adding geographical diversity to the existing body of knowledge.

### 3. Research question

The positive impact of transformational leadership on public service motivation has been asserted by many scholars (Paarlberg & Lavigna, 2010; Trottier et al., 2008; Paarlberg et al., 2014) and supported by a large number of empirical studies (Dvir, et al., 2002; Purvanova, et al., 2006; Vandenabeele, 2008; Park & Rainey, 2008; Trottier, et al., 2008; Ronwold & Rohmann, 2009; Moynihan, et al., 2012; Belle, 2013). The extensive literature research underpinning this study indicates that the majority of the research studies examining the relationship between transformational leadership and public service motivation have been conducted in the US, with very few studies being carried out in other jurisdictions, such as Germany (Rowald & Rohmann, 2009), Switzerland (Vandenabeele, 2008) and South Korea (Kim, 2005). The literature review failed to identify similar studies in Ireland. In reviewing public service motivation research since 2008, Paarlberg et al. (2017) welcome diversity in geographical representation and argue that continuing the trend of internationalisation of research is key to a better understanding of public service motivation.

In this context, this study will empirically measure the relationship between transformational leadership and public service motivation in an Irish public service organisation, thus adding to the existing body of knowledge on the subject. By gaining an insight into the impact of transformational leadership on public service motivation, public service organisations in Ireland can review their leadership approach and practices to increase public service motivation and, thus, individual and organizational performance.

#### 3.1. Research hypothesis

The hypothesis will examine the positive relationship between Transformational Leadership and Public Service Motivation, as suggested by academic literature and supported by empirical research studies outlined in the literature review.

Hypothesis Transformational leadership is positively associated with PSM in the context of a public service organisation.
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#### **Analysis sub-objective**

This research also examines the impact of age, education level, job title and length of service on Public Service Motivation.

## 4. Research methodology

### 4.1. Introduction

Research methodology is significant from two perspectives: it reflects ontological and epistemological assumptions and translates these into guidelines for the selection of appropriate research methods (Long, 2014). There are three established research methodologies, widely accepted by academics: quantitative, qualitative and mixed methods (Creswell, 2014, p.3).

This section sets out the research methodology underpinning this study and explains why it is relevant to the aim of this research, which is to empirically measure the relationship between 2 variables – Transformational Leadership and Public Service Motivation. The Onion Model developed by Saunders, et al. (2007) is used to illustrate the rationale supporting the selection of each layer. This research adopted the positivist philosophy and the deductive approach, using a survey as research strategy. It is based on a cross-sectional study supported by a questionnaire as a tool for data collection a cross-sectional study. Data analysis was conducted using quantitative methods.

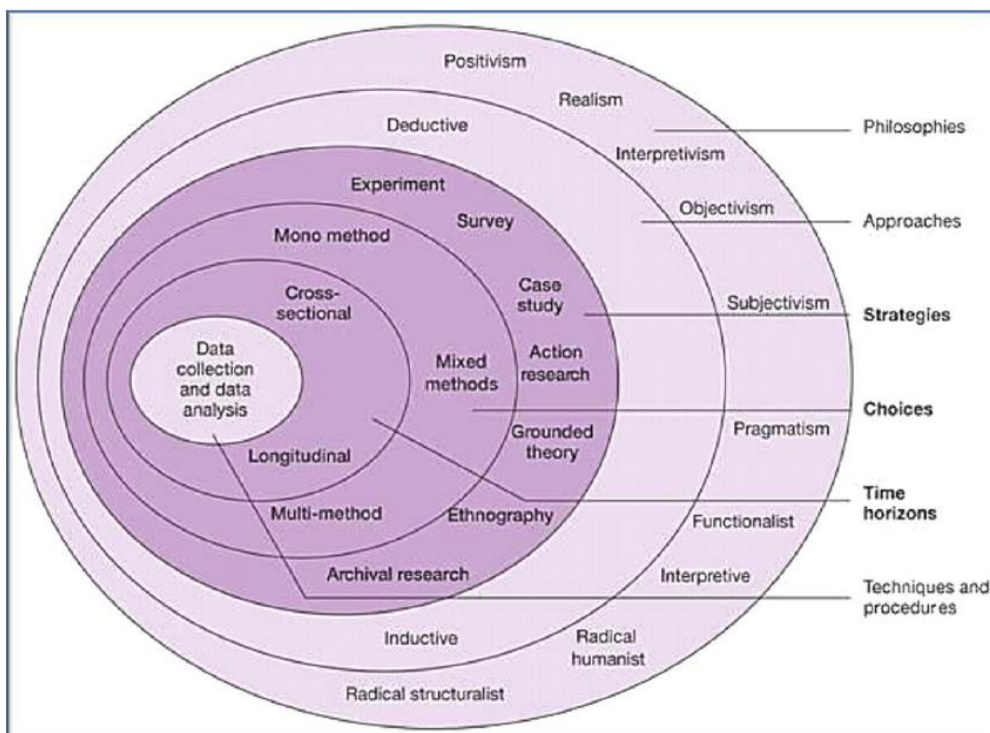


Figure 1: The Research Onion (Saunders, et al., 2007)

Source: ResearchGate [https://www.researchgate.net/figure/The-research-onion-Saunders-et-al-2012\\_fig2\\_282912642](https://www.researchgate.net/figure/The-research-onion-Saunders-et-al-2012_fig2_282912642)

## **4.2. Research philosophy**

Saunders, et al. (2007, p. 109) identify two main approaches to research philosophy: ontology, representing the researcher's view in relation to the nature of reality and epistemology, representing what constitutes acceptable knowledge in a field of study. The epistemological approach distinguishes between 3 main research perspectives: positivism, realism and interpretivism. Both positivism and realism rely on an objective and scientific approach to development of knowledge, based on collection and analysis of facts. Positivism is underpinned by the collection and analysis of observable data, followed by generalization of results. The positivist researcher remains detached from the process of data collection. By contrast, interpretivism is critical of generalization of results yielded by data analysis and emphasize the importance of the researcher getting involved with the research subjects in order to understand and interpret their actions.

The positivist research approach has been selected for this study as it lends itself to quantitative research and empirical measurement (Tuli, 2010), which are used in this study to test the hypothesis and relationships between variables. The positivist philosophy aligns with 'realist/objectivist ontology and empiricist epistemology' (Tuli, 2010) and is underpinned by measurable experimentation and numerical evidence to validate the results of the study from an empirical perspective (Sarantakos, 2013). The researcher who adopts this philosophy when conducting research remains detached from the data subjects throughout the duration of the data collection exercise.

## **4.3. Research approach**

From the model developed by Saunders, et.al, 2007 (p.117), deduction was considered the most appropriate approach for this study. The deductive model of thinking used in quantitative studies, as argued by Creswell (2014, p.88), verifies a theory by examining hypothesis derived from it. Consistent with this approach, this study will test a hypothesis asserting a positive relationship between two variables, derived from the review of academic literature.

## **4.4. Research strategy, method and time-horizons**

This research is based on a cross-sectional study, using a survey as research strategy, supported by a questionnaire as a tool for data collection. Data analysis was conducted using quantitative

methods. This approach is consistent with other studies on Public Service Motivation and Transformational Leadership described in the literature review section.

#### **4.4.1. Research sample**

Sampling is a process by which the researcher selects a cluster from the general population with a view to inferring certain assumptions about the general population (Saunders, et al., 2007). Literature on the subject identifies two distinct approaches to sampling: increase the size of the sample to minimize the risk of error or collecting higher quality data from a smaller sample (Saunders, et. al., 2007, p.210). This study relies on the second approach, utilizing the employees of one Irish public sector organisation as a sample. To increase the quality of the sample, employees from all levels of the organisation were included (analyst and non-analyst positions, management and non-management, technical and non-technical and admin/HR).

#### **4.4.2. Research questionnaire characteristics**

For the purpose of this study, an anonymous online questionnaire was deemed the most appropriate tool for data collection due to several considerations. It allowed participants to preserve their identity and respond at any time during the active period, with minimum disruption to their work schedule. The questionnaire, hosted on Survey Monkey website, was distributed to all 105 employees of the public service organisation selected for the purpose of this study via electronic mail containing a link to the questionnaire per se, together with a cover note providing background to the purpose of the questionnaire. As the data subjects used in this study are computer literate, there was no risk of exclusion due to the method of distribution.

Previous research on questionnaires and delivery methods identified partial responses as one of the risks occurring during the data collection stage (Crawford, et al., 2001). In order to mitigate this risk and ensure the validity of responses, respondents were asked to complete all questions set out in the questionnaire.

As noted by Levin (2006), nonresponse is a common problem in surveys. To minimize nonresponse, 2 mail prompts, which included the link to the survey, were sent during the active period.

The survey yielded 73 responses within a 15 days active period, of which 67 were deemed to be valid following a check to ensure that all questions were completed. This represents a response rate of 63.8%, which exceeds estimates of 45% for web-based and 34% for mail-based surveys (Shih & Fan, 2008).

#### **4.4.3. Research questionnaire design principles and content**

The guiding principle which underpinned the design of the questionnaire is that the collection of quality data depends on the quality of the questions included in the questionnaire (Elias, 2015). The application of this principle is reflected in the design of the questionnaire, which leverages aspects of research questionnaires used in similar previous studies and uses established measurement scales for Transformational Leadership (Bass & Avolio, 1995) and Public Service Motivation (Perry, 1996) which have been statistically validated as reliable in terms of what they are measuring.

The questionnaire comprises of 36 questions. The first 6 questions are aimed at collecting socio-economic information about the data subject (age, gender, education level and length of service). This is based on questionnaires used in empirical researches which explored the concept of Public Service Motivation (Taylor, 2007). 5 questions (questions L2 to L6) are related to measuring Transformational Leadership, and 24 questions (questions PSM1 to PSM 24) were taken from the original Perry scale (1996).

#### **4.4.4. Measuring Transformational Leadership**

The Multifactor Leadership Questionnaire (MLQ) – the original model developed by Bass and Avolio (1995), measures Transformational Leadership (TL) against a 20 item scale and has a Cronbach  $\alpha$  of 0.92 (Bass & Avolio, 1995). This high score indicates that the scale is reliable. The authors qualify the aim of the model to be the identification of a group or individual displaying TL behavior, rather than supporting the identification of a transformational leader per se as it is used in this study. It has been used extensively in relevant research studies and is regarded as a valid and reliable scale (Awamleh & Gardiner, 1999). Bass (1999) remarks that the occurrence of TL behaviour is less prominent in ‘steady state’ environments and more easily identifiable in ‘crisis or growth’.

Variations of the initial MLQ model have been used in multiple research studies, including a shorter version containing 45 questions, including both TL and non TL sub-constructs. This study has used only the questions related to the 5 sub-constructs of TL (Idealised Behaviour, Idealised Attribution, Intellectual Stimulation, Inspirational Motivation and Individual Consideration), consistent with previous researches. The MQL model uses a 5 point scale ranging from 0 = Not at all to 4 = Frequently if not always.

#### **4.4.5. Measuring Public Service Motivation**

Since it was published in 1996, Perry's scale, or variations of it (Taylor, 2007), has been widely used in multiple research studies on PSM in various jurisdictions, including the US (Naff & Crum, 1999; Alonso and Lewis, 2001; Ritz, 2009; Pandey, et al., 2008), Switzerland (Vandenabeele, 2014) and South Korea (Kim, 2005; Kim, 2009).

This study uses 24 questions from Perry's scale grouped under 4 headings: attraction to public policy making (Questions PSM1, PSM2 and PSM3), commitment to public interest (Questions PSM4 to PSM9), compassion (Questions PSM10 to PSM16) and self-sacrifice (Questions PSM 17 to PSM24). Perry's scale uses a 5 point Likert scale (with 1 = Strongly Agree to 5 = Strongly Disagree) to represent individuals' attitudes towards each question. This approach has been adopted in most of the empirical researches on PSM to date (Perry & Wise, 1990; Vandenabeele, 2008).

Robustly tested for validity and reliability, Perry's scale represents a valuable tool for gathering empirical evidence about various aspects of PSM (Perry, 1996) and facilitates comparisons among national settings (Perry, et al., 2010). However, a limitation is often associated with the use of Perry's scale in its original format, related to potential difficulties in 'achieving a shared understanding of language when using the Perry scale outside of the United States' (Institute of Public Administration, 2013a.). To date, there have been no attempts to adapt the language used in the original scale for use in other jurisdictions.

#### **4.4.6. Ethical considerations**

As noted by (Panter & Sterba, 2011, p.213), ethical considerations and concerns arise at all stages in a research study. The ethical considerations pertaining to this study were limited to identity of participants, the purpose of the questionnaire, confidentiality of information, data protection issues and security of data, from distribution to collection, processing, storing and ultimately discarding the data. In order to mitigate such concerns, a suite of actions have been completed. The survey was distributed via a secure online method, using existing Intranet facilities available to the data subjects within the organisation. On completion of the active period of the survey, the data was collected, processed and stored on password protected devices. The data will be discarded responsibly in due course. From the outset, all participants were informed about the purpose of the questionnaire, data protection aspects and how the data will be used. It was confirmed that the questionnaire was anonymous and confidential and that



respondents could opt out at any time. No other ethical concerns were identified in relation to the questionnaire.

## 4.5. Data collection and data analysis

### 4.5.1. Data collection and survey coding

The survey data was collected using a questionnaire hosted on the Survey Monkey website. Post collection, the raw data generated by the Survey Monkey programme had to be *indexed* in order to convert it to a format compatible with Stata, the data analysis and statistical software which was used in this study. This involved assigning a variable name and measure type to each question in the questionnaire (Table 1), and *converting* the components of variables into numbers (Table 2). In this study, Public Service Motivation is the only dependent variable, with the rest being independent variables.

**Table 1: Variables measure and indexation**

VARIABLE	MEASURE
Age group (independent)	Scale
Gender (independent)	Nominal
Education (independent)	Ordinal
Title/role (independent)	Nominal
Experience/length of service (independent)	Scale
Transitional Leadership (independent variable)	Scale
Public Service Motivation (dependent)	Scale

**Table 2: Indexation of components of variables**

VARIABLE	COMPONENTS OF VARIABLE	INDEXATION
Age group	19 to 29	1
	30 to 39	2
	40 to 49	3
	50 to 59	4
	Over 60	There were no data subjects in this category
	Prefer not to say	0

Gender	Male	1
	Female	2
	Other	There were no data subjects in this category
Education	No formal education or training	There were no data subjects in this category
	Secondary level	1
	Technical or vocational	There were no data subjects in this category
	Advanced Certificate or completed apprenticeship	There were no data subjects in this category
	Higher Certificate	2
	Ordinary Bachelor Degree or National Diploma	3
	Honours Bachelor Degree / professional qualification or both	4
	Postgraduate Diploma/ Degree/ Masters	5
	Doctorate (Ph. D) or higher	6
Title/role	Graduate	There were no data subjects in this category
	Administrative personnel	1
	Officer	2
	Analyst	3
	Senior analyst	4
	Inspector/Senior inspector	5
	Manager/Acting up manager	6
	Senior manager/ Acting up senior manager	7
	Director/Acting up director	8
	Commissioner	9
Experience/length of service	Less than 5 years	1
	Between 5 and 10 years	2
	Between 10 and 15 years	3
	Over 15 years	4

Responses to Transformational Leadership questions (Questions L2 to L6) were indexed using a 5 point scale, as follows: 0 = not at all, 1 = once in a while, 2 = sometimes, 3 = fairly often and 4 = frequently, if not always. In line with the original model developed by Bass (1985), the total Transformational Leadership score for each data subject was calculated by adding the scores from each question.

Responses to Public Service Motivation questions (Questions PSM1 to PSM24) were also indexed using a 5 point scale, as follows: 1 = strongly agree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree. Consistent with the approach adopted to measuring Public Service Motivation using the original Perry scale, the indexation was reversed for questions PSM1, PSM2, PSM3, PSM4, PSM12, PSM15, PSM16 and PSM17. An average PSM was calculated using the total PSM values for each dimension (Perry, et al., 2010), together with a total PSM score (Steijn & Leisink, 2009).

#### **4.5.2. Data analysis**

This subsection sets out the statistical tests that have been conducted to validate the collected data and measure the strength of the relationship between Transformational Leadership (the independent variable) and Public Service Motivation (the dependent variable), as established in the hypothesis, as well as between other independent variables (e.g. age, education level, role, experience) and Public Service Motivation.

##### **4.5.2.1. Scale reliability analysis (Cronbach alpha test)**

The data collected was tested for reliability in respect of each measurement scale, to ascertain the validity and consistency of the questions contained in the survey. Gliem & Gliem (2003) recommend the calculation of Cronbach's alpha coefficient for internal consistency reliability when using Likert-type scales. Some academics recommend Cronbach Alpha values of minimum 0.7 to ensure reliability (DeVellis, 2012, p.109-110). However, a commonly accepted rule of thumb for Cronbach Alpha values is: " $\alpha \geq 0.9$  -Excellent,  $0.9 > \alpha \geq 0.8$  -Good,  $0.8 > \alpha \geq 0.7$  -Acceptable,  $0.7 > \alpha \geq 0.6$  -Questionable,  $0.6 > \alpha \geq 0.5$  -Poor,  $0.5 > \alpha$  -Unacceptable" (Gliem & Gliem, 2003).

The Cronbach Alpha values for each construct (Transformational Leadership and Public Service Motivation) were compared with cited values from relevant academic literature.

#### **4.5.2.2. Normality analysis (Shapiro-Wilk values)**

Razali & Wah, (2011) assert the importance of normal distribution of data as being the underlying assumption of statistical analysis methods, including regression analysis, which has been used in this study. The authors note that the Shapiro-Wilk test is a commonly established parametric test for examining normality of data and was originally designed for small sample sizes.

The results of the Shapiro-Wilk test indicated that education level and length of service data were not normally distributed (see Section 5.3), therefore a non-parametric test (Kruskal-Wallis test) was also performed. Unlike parametric tests, non-parametric tests are not based on the assumption that the outcome is normally distributed. It is generally accepted that non-parametric tests are less powerful than parametric tests.

The Kruskal-Wallis test was used to determine whether there are statistically significant differences between a group of independent variables (age, job title, educational level and length of service) on the dependent variable (PSM). This test is used when the dependent variable is measured on a continuous scale, as it is the case with this study, where PSM is measured on a 5 point Likert type scale.

#### **4.5.2.3. Correlation analysis**

The aim of this research is to test the associative relationship between 2 variables, namely Transformational Leadership and Public Service Motivation, and examine the strength of this relationship. This was done by way of 3 correlation tests: scatterplot modelling, Pearson's correlation analysis and regression analysis.

##### **Scatterplot modelling**

Scatterplot modelling is a useful statistical method to indicate the association between variables in a graphical format (Caldwell, 2010). The strength of the relationship between variables is represented by the scatterplot slope.

##### **Pearson's correlation analysis**

Another test used to measure the linear correlation between 2 variables is the Pearson correlation coefficient, or Pearson's  $r$  (Caldwell, 2010). It ranges in values between -1 (perfect negative correlation) and +1 (perfect positive correlation), with 0 representing no association between variables. Similar to Cronbach's Alpha test, several approaches have suggested converting Pearson's  $r$  values into descriptors, such as weak, moderate, or strong (Schober,

2018). The author suggests that, while this approach is arbitrary, there is general agreement that values less than 0.1 are negligible and values greater than 0.9 indicate a strong relationship.

### **Regression analysis**

Regression analysis is another type of statistical method which has been used in research studies seeking to identify and characterize the relationships between multiple variables (Schneider, et al., 2010). In this study, linear regression analysis will be used to understand which independent variable (e.g. Transformational Leadership, Age Group, Gender, Education, Length of Service) influences the dependent variable (Public Service Motivation).

## **4.6. Research limitations**

The limitations of a research study represent the characteristics of the study, such as sample size or design and methodology used to collect and analyze the data, which impact or influence the interpretation of the findings of the research (Price & Murnan, 2004). This subsection outlines the main limitations of this research study and interprets the potential impact that these have on results and conclusions. The key drivers underlying the limitations of the study include the required timelines for the completion of the study, budgetary constraints and access to data subjects.

### **4.6.1. Design of the research study**

Due to time constraints, this study adopted a cross-sectional research design which, by its nature, yields ‘snapshot’, or ‘a point in time’ results, with no indication of the sequence of events. This, in turn, reduced the capacity to draw definitive causal inferences between variables (Levin, 2006). In discussing the relationship between Transformational Leadership and Public Service Motivation, Belle (2013) suggests that longitudinal research studies may be used to triangulate the results from cross-sectional and field experiment designs. However, as noted by Levin (2006), cross-sectional designs are valuable as they may indicate associations that may exist and thus useful for future research.

### **4.6.2. Sample size**

As remarked by Lenth (2001), the size of the study needs to match the objective of the study and must be ‘big enough’ to achieve scientific and statistical significance. The author further draws attention to the pitfalls of ‘undersized’ samples, mainly in relation to having a reduced capacity to produce significant results. Practitioners have suggested estimates for margins of

error for sample sizes ranging from 10 to 10,000 and a formula for calculating same ( $1/\sqrt{N}$ , where N is the number of participants) (Niles, 2006). According to these guidelines, the margin of error for this study (67 participants) is 0.12 (12%).

The sample size used in this study was relatively small compared with similar previous research studies, which, in turn, impacts negatively on the representativity, generalizability and significance of its results.

#### **4.6.3. Methods for data analysis**

The aim of this study is to validate the associative relationship between 2 variables: Transformational Leadership (as the independent variable) and Public Service Motivation (as the dependent variable). This was done by using simple linear regression as one of the statistical tests applied to measure the strength of the relationship between the 2 variables. The introduction of one or more independent variables, such as organizational structure (Wright & Pandey, 2009), combined with the use of multiple linear regression, has the potential to provide a more in-depth understanding of the relationship between the 2 variables.

#### **4.6.4. Self-reported data**

Self-reported data from the staff within the organisation also has a number of limitations and biases, such as selective memory, exaggeration, which cannot be independently verified.

## 5. Results

This section outlines the results of the study. It includes descriptive statistics for the independent variables and dependent variables used in the study and the interpretation of results generated by the statistical analysis tests described in section 4. The independent variables are: age, education level, job title, length of service and Transformational Leadership (TL). Public Service Motivation (PSM) and its components, Attraction to Public Policy Making, Commitment to Public Interest, Compassion and Self-Sacrifice are the dependent variables.

### 5.1. Descriptive statistics

This sub-section provides descriptive statistics in relation to a number of independent variables used in the study, such as age, education level, job title and length of service, as well as each of the 2 constructs, TL (sub-section 5.1.1) and PSM (sub-section 5.1.2). Descriptive statistics are useful as they describe the basic features of the data in this study and provide the basis for the rest of the statistical analyses conducted for the purpose of this study. All graphs are contained in Appendix 7.

As indicated in Graph 1, the majority of respondents, just over 50%, were in the 30 to 39 age group. The largest number of respondents (approx. 65%) had achieved post graduate academic qualifications, 10% had a Ph. D or higher qualification and just over 10% held an Honors Bachelors' Degree (Graph 2). Over 50% of the respondents had worked for less than 5 years in the public sector. Approx. 19% of respondents worked in the public sector for a period between 5 and 10 years and approx. 17% for a period between 10 and 15 years (Graph 3).

Graph 4 indicates that the majority of respondents (30%) were analysts, followed by approx. 25% senior analysts and just under 20% employees holding a management position.

**Table 3: Sample characteristics**

<b>Characteristic</b>	<b>Response percentage</b>	<b>Response numbers</b>
Age		
19 to 29	17.81%	13
30 – 39	50.68%	37
40 – 49	24.66%	18
50 – 59	4.11%	3

Over 60	0.0%	0
Prefer not to say	2.74%	2
Total	100%	73
Gender		
Male	43.84%	32
Female	56.16%	41
Other	0.0%	0
Total	100%	73
Education level		
No formal education or training	0.0%	0
Secondary level	2.74%	2
Technical or vocational	0.0%	0
Advanced Certificate or completed apprenticeship	0.0%	0
Higher Certificate	4.11%	3
Ordinary Bachelor Degree or National Diploma	5.48%	4
Honours Bachelor Degree / professional qualification or both	12.33%	9
Postgraduate Diploma/ Degree/ Masters	65.75%	48
Doctorate (Ph. D) or higher	9.59%	7
Total	100%	73
Role (job title)		
Commissioner	1.37%	1
Director / Acting up Director	4.11%	3
Senior Manager / Acting up Senior Manager	1.37%	1
Manager / Acting up Manager	19.18%	14
Inspector / Senior Inspector (technical role)	4.11%	3
Senior analyst	24.66%	18
Analyst	30.14%	22
Officer	4.11%	3
Administrative personnel	10.96%	8



Graduate	0.0%	0
Total	100%	73
Length of service		
Less than 5 years	54.79%	40
Between 5 and 10 years	19.18%	14
Between 10 and 15 years	17.81%	13
Over 15 years	8.22%	6
Total	100%	73

### 5.1.1. Descriptive statistics - Transformational Leadership

This section provides descriptive statistics in relation to TL, including overall TL score as well as TL scores per age group, education level, job title and length of service. The total TL score for each data subject was calculated by adding the scores from each question. Using the same method, TL scores were calculated in respect of age group, education level, job title and length of service.

Graph 5 indicates that the max overall TL score is 20, which is lower than the max TL score measured on the Bass and Avolio scale (25). The most prominent display of TL behavior was perceived by respondents in the 19-29 age group, with respondents in the 40-49 age group perceiving the lowest level of TL behavior within the organisation. In average, all 4 age groups had a similar level of perception of TL behavior (Graph 6). Graph 7 indicates the highest level of education are associated with the highest perception of TL behaviour as well as the lowest. The highest perception of TL behaviour is associated with respondents with under 5 years of service in the public sector, followed closely by respondents in the other categories (Graph 9).

### 5.1.2. Descriptive statistics - Public Service Motivation

This section provides a summary of descriptive statistics in relation to PSM and its 4 components: Attraction to Public Policy Making (APPM), Commitment to Public Interest (CPI), Compassion (COMP) and Self-Sacrifice (SS).

### **Total PSM scores**

Graph 11 indicates that, in average, age groups 30-39 and 40-49 displayed the highest PSM levels, followed closely by respondents in the 50-59 category.

In average, the analysis indicates that there were no significant differences in the levels of PSM based on education level (Graph 12), with respondents on the highest education level (Ph. D) displaying the lowest PSM scores. The highest levels of PSM were displayed by respondents in management positions (Manager/Acting up Manager and Director) and Senior Analysts and Admin Personnel (Graph 13).

As shown in Graph 14, the highest average PSM levels were displayed by respondents who worked for a public service organisation for 5-10 years, followed closely by respondents in the 10-15 years category.

### **Total APPM scores**

In average, APPM levels did not vary significantly with age (Graph 15). Respondents in the 30-39 category displayed the highest APPM, as well as the lowest. Maximum levels of APPM were achieved by respondents holding Ph. D degrees (Graph 16), holding a management position (Graph 17) and with 5-10 years length of service.

### **Total CPI scores**

Graph 19 indicates that respondents in the age groups 30-39 and 40-49 were relatively equally committed to public interest, followed closely by 19-29 year olds. The highest levels of CPI were displayed by respondents holding higher education achievements (Honours Bachelors' Degree and higher) (Graph 20), performing Analyst or Senior Analyst and Admin roles (Graph 21) and with up to 10 years length of service in the public sector (Graph 22).

### **Total COMP scores**

In average, Compassion levels did not vary significantly in relation to age, education level, job title and length of service. The highest Compassion levels were displayed by respondents in the 30-39 and 40-49 age groups (Graph 23). Respondents holding a Ph. D or higher education qualification displayed the highest level of Compassion (Graph 24). Highest Compassion scores were registered by respondents holding an Analyst, Senior Analyst or Manager/Acting up Manager roles (Graph 25) and those who have worked for less than 15 years for a public service organisation (Graph 26).

### **Total SS scores**

In average, there were no significant variations in SS levels amongst respondents based on age, education level, job title and length of service. Graph 27 indicates that the highest average SS scores were registered in the 19-29 and 40-49 age groups, with slightly lower scores for the other 2 age categories. Respondents holding the highest education qualification (Ph. D and higher) registered the highest SS score (Graph 28). Graphs 29 indicates that the highest SS levels were registered by respondents holding Admin and Analyst roles. As shown in Graph 30, the SS scores decreased in relation to the number of years worked in a public service organisation.

### **International comparison**

Vandenabeele & Van de Walle (2008) analyzed international patterns in public service motivation in 38 countries based on a series of questions from the 2004 International Social Survey Program (ISSP) citizenship module on the relationship between citizens and the state, including political efficacy, interest in politics, public service and qualities of a good citizen. Acknowledging that ISSP is not a scale designed to measure public service motivation, the authors construct a composite public service motivation scale based on average scores of the 4 components of public service motivation. The analysis resulted, inter alia, in a table showing average country scores for PSM and its constituting dimensions. The table, replicated in Appendix 8, enables comparison with the results of this study.

To allow comparison between the results of this study and the results yielded by the study carried out by Vandenabeele and Van de Walle, the average scores for PSM and its components were re-calculated using individual scores per question (Table 4).

**Table 4: Average scores for PSM and its components**

Research study	Average APPM	Average CPI	Average COMP	Average SS	Average PSM
Vandenabeele & Van de Walle	4.99	n/a	5.81	4.79	5.28
This study	3.3	3.72	3.72	3.45	3.55

## 5.2. Scale reliability analysis

This section details the results of the reliability tests conducted in relation to each of the 2 constructs: Transformational Leadership and Public Service Motivation, including its 4 components. The reliability of the data was tested using the Cronbach's alpha analysis. All the outputs of the reliability analysis generated by Stata are included in Appendix 2.

### 5.2.1. Transformational Leadership scale – reliability analysis results

The TL scale had a Cronbach alpha of 0.7866, which exceeds the minimum reliability threshold of 0.7 suggested by DeVellis (2012).

### 5.2.2. Public Service Motivation scale – reliability analysis results

The Cronbach alpha for the PSM scale was 0.8328. The values for the Cronbach alpha of each of its constituent components are listed below:

Attraction to Public Policy Making	0.5412
Commitment to Public Interest	0.7384
Compassion	0.6932
Self-Sacrifice	0.6946

The Cronbach alpha score for the PSM scale and Commitment to Public Interest were greater than the minimum reliability threshold of 0.7. The difference between the values for the Cronbach alpha calculated in respect of Compassion and Self-Sacrifice and the minimum threshold were minimal. Attraction to Public Policy Making was the PSM component with a Cronbach alpha value of less than 0.7. Based on the rule of thumb suggested by Gliem & Gliem (2003), a Cronbach alpha value between 0.5 and 0.6 albeit poor, is acceptable.

A Cronbach alpha value for the entire data set was also calculated, indicating a value of 0.8068, which also exceeds the 0.7 reliability threshold.

## 5.3. Normality analysis

This section details the results of the normality tests conducted in relation to PSM and its 4 components. The normality of the data was tested using the Shapiro-Wilk test and the Kruskal-Wallis test. All the outputs of the normality analysis generated by Stata are included in Appendix 3 (Shapiro-Wilk test) and Appendix 4 (Kruskal-Wallis test).

A summary of the Shapiro-Wilk test results is set out below:

**Table 6: Summary of the Shapiro-Wilk test results**

PSM	By age	By education level	By job title	By length of service
Probability (p values)	0.78822	0.00000	0.09979	0.00143

If the p value is  $> 0.05$ , we cannot reject the null hypothesis that the data is normally distributed. If the p value is  $< 0.05$  we can reject the null hypothesis that the data is normally distributed. The results suggest that we **can** reject the null hypothesis that length of service and education are normally distributed and **cannot reject** the null that PSM, age and position are normally distributed.

A summary of the Kruskal-Wallis test results is set out below:

**Table 7: Summary of Kruskal-Wallis tests results**

PSM	By age	By education level	By job title	By length of service
Probability (p values)	0.3981	0.1112	0.4425	0.0188

The probability values (p values) indicate the statistical significance of the Kruskal-Wallis test. The significance level of the independent variables *age*, *education level* and *job title/role* is above 0.05, and, therefore, there is no statistically significant difference in the median PSM (dependent variable) between the different groups of the independent variables.

The significance level of the independent variable *length of service* is 0.0188 (i.e.  $p = .0188$ ), which is below 0.05, and, therefore, there is a statistically significant difference in the median PSM (dependent variable) from the independent variable (length of service).

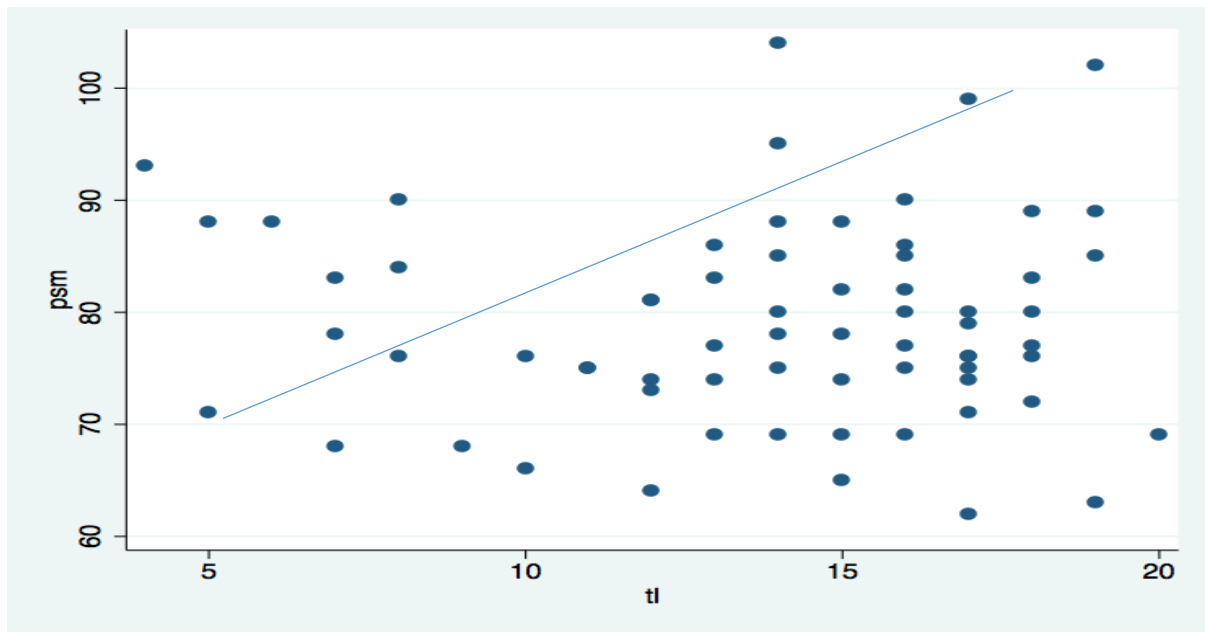
## 5.4. Correlation analysis

This section sets out the results of the analysis carried out to test the associative relationship between TL and PSM, and between PSM and other independent variables (age, education level, job title/role and length of service).

### 5.4.1. Scatterplot modelling

In a scatterplot, the closer the data points come to a straight line, the higher the correlation between the variables. The results of the scatterplot analysis (Figure 1) indicate that PSM, the dependent variable, is not influenced by TL, the independent variable.

**Figure 1: PSM – TL scatterplot analysis result**



### 5.4.2. Pearson’s correlation analysis

This test was conducted to measure the strength of association between PSM and four independent variables: age group, education level, job title/role and length of service.

A summary of Pearson’s correlation tests is set out in Table 7 and the outputs of the analysis generated by Stata are included in Appendix 5.

**Table 7: Summary of Pearson’s correlation tests**

PSM-independent variable	PSM-age	PSM-education level	PSM-job title/role	PSM-length of service
Pearson correlation coefficient (r)	0.1174	-0.1356	0.0884	0.0969

A positive value of the correlation coefficient indicates a positive correlation between the independent variable (age, job title/role and length of service) and the dependent variable

(PSM). The negative value ( $r = -0.1356$ ) indicates a negative correlation between PSM and education level.

Pearson’s correlation coefficient determines the strength of the correlation. Albeit there are no established rules to interpret strength of association between variables, some guidelines are provided by (Cohen 1988, p.115):  $0.1 < |r| < .3$  represents a small correlation,  $0.3 < |r| < .5$  a medium correlation and  $|r| > .5$  a large/strong correlation, where  $|r|$  is the absolute value of  $r$ . Based on these guidelines, there is a small positive correlation between PSM and age, job title and length of service and a small negative correlation between PSM and education level.

### 5.4.3. Regression analysis

A number of linear regression analyses were conducted in order to test the associative relationship between TL and PSM and predict the influence of a number of independent variables (age, education level, job title/role and length of service) on PSM.

The summary of the linear regression analyses results are summarized below, and the outputs of the analysis generated by Stata are included in Appendix 6.

**Table 8: Summary of linear regression analyses results**

Independent variable – dependent variable	p value	R squared value
TL and PSM	0.9075	0.0002
Age group and PSM	0.3442	0.0138
Education level and PSM	0.2738	0.0184
Job title/role and PSM	0.4768	0.0078
Length of service	0.4355	0.0094

A p value lower than 0.05 shows a statistically significant relationship between the 2 variables. The R squared indicates the amount of variance of the dependent variable PSM explained by each of the independent variables.

The p and R squared values in Table 8 indicate that the relationship between TL and PSM is not statistically significant and that TL explains 0.02% of PSM. Similarly, there is no statistically significant relationship between age, education level, job title or length of service and PSM. The R squared values show that 1.38% of PSM is explained by age, 1.84% by education level, 0.78% by job title and 0.94% by length of service.

## **5.5. Hypothesis – summary of results**

The results of the scatterplot analysis indicate that there is no association between PSM and TL. This finding is supported by the results of the regression analysis, which show that the relationship between TL and PSM is not statistically significant (p value higher than 0.05).

Based on these results, the hypothesis of the study is rejected.

The results of the Pearson correlation test indicate a small positive correlation between the age, job title/role and length of service and PSM and a negative correlation between PSM and education level. The results of the regression analysis indicate that there is no statistically significant relationship between age, education level, job title or length of service and PSM.



## 6. Discussion

### 6.1. Academic discussion

The dominant view within the extant academic literature supports a positive association between Transformational Leadership and Public Service Motivation and employee performance, both from an empirical (Moynihan, et al., 2012; Wright & Pandey, 2009; Ronwold & Rohmann, 2009; Park & Rainey, 2008; Trottier, et al., 2008; Vandenabeele, 2008; Purvanova, et al., 2006) and academic perspective (Paarlberg & Lavigna, 2010; Paarlberg, et al., 2014; Perry & Wise, 1990). Notwithstanding this, Vandenabeele (2014) notes that some academics have remained skeptical on whether Transformational Leadership is indeed suited or effective in the public sector, citing reasons associated with beaurocratic control systems which inhibit transformational leadership behaviour. Others identified value conflict as a potential limiting factor in the positive relationship between Transformational Leadership and Public Service Motivation (Krogsgaard, et al., 2014). A large number of studies explored the role of mediating factors to explain the association, or absence of, between Transformational Leadership and Public Service Motivation, such as mission valence (Wright, et al., 2012), organisational structure (Wright & Pandey, 2009) and person-organisation fit (Bright, 2007).

The present study examined the relationship between Transformational Leadership and Public Service Motivation, starting from a hypothesis which supports the dominant view in the academic literature regarding the positive association between the 2 concepts.

Contrary to expectations, the results of this study indicate that Transformational Leadership is not positively associated with Public Service Motivation. There are several possible explanations for this result. Firstly, as referenced earlier, transformational leadership is more likely to assert itself in times of crisis (Bass, 1999), there is nothing to suggest at the time of this cross sectional study that the organisation (a regulatory agency) was experiencing anything significantly outside of the status quo. Secondly, the author further notes that transformational leadership behavior is more likely to manifest in organizations with a culture conducive to creativity, risk taking and innovation. The development of such culture may be restricted by significant legislative, procedural and governance requirements placed on a regulatory agency. Thirdly, a possible explanation may be related to the impact of organizational structure and context on the relationship between Transformational Leadership and Public Service Motivation. As noted by Wright & Pandey (2009), public service organisations are associated with hierarchical distribution of authority and formalization of work through rules and

regulations, which, in turn, may impede the need and effectiveness of transformational leadership behavior.

An important observation can be drawn from the comparison between the results of this study and the results of the study carried out by Vandenabeele and Van de Walle (2008). While due consideration must be given to the fact that the authors use a different method to measure PSM, the average PSM score for Ireland identified in their study is much higher than that identified for the public service organisation used in this study.

Albeit not the main focus of this research, some findings are worthy of note due to their practical implications. Firstly, the study found a small positive correlation between the length of service and PSM, which supports the view that PSM levels increase with age (Steijn & Leisink, 2009). Secondly, the lowest scores for PSM and 3 of its components (attraction to public policy making, compassion and commitment to public interest) were associated with data subjects in the 20-29 and 30-39 age groups and holding analyst and senior analyst positions. This is important given that the majority of employees in the organisation are aged between 20 and 39, and that policy development, a core work of the organisation, is done by analysts and senior analysts. Furthermore, noting Perry's (1996) description of "compassion" and "commitment to public interest" in the context of consumer protection, which is one of the main functions of the organisations, it can be argued that the people responsible for discharging this function ought to have high scores for these two elements of PSM. It is encouraging to note that employees holding management positions have higher scores associated with compassion and commitment to public interest.

## **6.2. Practical implications**

The main finding of this research was that Transformational Leadership is not positively associated with Public Service Motivation. This finding was unexpected and suggests that there is no correlation between the 2 concepts, contrary to the dominant view in the academic literature on the subject. Notwithstanding this, there is sufficient empirical and theoretical evidence to support 2 main assertions relevant for practical implications of this study. Firstly, that Transformational Leadership has a positive influence on Public Service Motivation and employees' performance and secondly, that Transformational Leadership is suitable for application in public service organisations. A second finding, and one of some concern, is the

low scores for PSM, compassion and commitment to public interest being associated with the majority of relevant employees in the organisation.

From a management perspective, these findings highlight the need to increase PSM levels within the workforce by implementing adequate leadership practices aimed at nurturing PSM. The management practices suggested by Paarlberg, et al. (2017) may be relevant in this regard: using PSM as a recruitment criterion, facilitating PSM through cooperation in the workplace, conveying the significance of the work and displaying leadership based on public service values. As noted earlier in the study, specific frameworks have been developed to facilitate the integration of public service motivation theories and transformational leadership principles into coherent and implementable management strategies and human resources practices with application in real settings (Paarlberg & Lavigna, 2010; Paarlberg, et al., 2014; Paarlberg et al., 2017). The organisation could review its current management and HR practices to benefit from some of the recommendations included in those framework. In particular: promoting leaders who communicate and model public service values, placing more emphasis on PSM as a selection criterion and developing performance appraisal and monitoring systems which reflect and encourage PSM.

Finally, while acknowledging limitations associated with legislative, procedural and governance requirements placed on the organisation, it would be worth exploring ways in which it can foster an environment conducive to the development and manifestation of transformational leadership behavior, by highlighting its consultative style of management, as suggested by Bass (1999).

### **6.3. Suggestions for future research**

This study could be expanded to cover multiple Irish public sector organisations rather than focusing on one. For a more in-depth understanding of the relationship between Transformational Leadership and Public Service Motivation in Irish public service organisations, further research is required, involving other types of organisations, such as state departments, as well as other types of methodologies, such as longitudinal quantitative analysis.

## 7. Conclusion

The need to identify and implement effective leadership strategies adequate to managing employees working in the public sector is a significant feature on the Government's reform agenda for the public sector. A salient element of such strategies is understanding what motivates employees working in the public sector. A large body of academic literature corroborated by empirical evidence suggests that Transformational Leadership is positively associated with public service motivation and has a positive influence on the level of motivation and performance of employees working for public service organisations. Building on the positive relationship between the 2 concepts, academics have developed frameworks to facilitate the integration of public service motivation theories and transformational leadership principles into coherent and implementable management strategies and human resources practices with application in real settings.

This study examined the relationship between Transformational Leadership and Public Service Motivation in an Irish public service organisation. Contrary to expectations, its findings do not support the dominant view in the extant literature, being unable to identify a statistically significant correlation between the 2 concepts. In addition, the results showed low PSM levels in respect of certain categories of employees who, given the nature of their job, were expected to display higher PSM scores. A potential explanation relates to the organisational culture and structure, which may impede the development and manifestation of transformational leadership behaviour.

Notwithstanding the results, theoretical and empirical work has established a strong evidentiary foundation to support the assertion that Transformational Leadership is positively correlated with Public Service Motivation and has a positive influence on performance in public service organisations. Based on this, the main practical implications of this study are mainly concerned with recommendations to the organisation to review its current management and HR practices to increase PSM levels and place more emphasis on consultative leadership processes.

Given the size of the sample used in this study, the results do not carry scientific and statistical significance, therefore generalisations cannot be made. However, the study does contribute to the body of knowledge by adding findings from a new jurisdiction and contributes to the

continuous development of the understanding of public service motivation and its relationship with transformational leadership.

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## 9. Appendices

### Appendix 1: Research questionnaire and Cover Letter

Dear colleagues,

I am seeking your support in finalising my Master's dissertation. You can help me by completing the attached questionnaire. The aim of my research is to investigate the relationship between transformational leadership and public service motivation in an Irish public service organisation. The research will be based on the results from this questionnaire.

The questionnaire will take approximately 10 minutes to complete and consists of easy, tick-box questions. It is split in 4 parts: the first 2 parts are about you (age, gender, length of service) and your role (grade). The 3rd part is about the leadership style of a person selected by you from within the organisation. The 4th part is aimed at measuring your public service motivation level. Further information is provided in the questionnaire.

**It would be great to have the responses back by 28<sup>th</sup> June 2018.** This will help enormously by giving me more time to process the results of the questionnaire and write up the findings and recommendations.

You may choose to opt out of the survey at any time. All questions must be answered, otherwise the response is not valid.

Your time and help are appreciated.  
If you have questions please contact me.

The questionnaire can be found by following the link below;  
<https://www.surveymonkey.com/r/WYTQBPI>

Thank you in advance,  
Dana

#### Data Protection information

**All responses are anonymous and confidential. The collected data will only be used for this research and shared only with my supervisor and the statistics support officer in the National College of Ireland. All reasonable efforts have been made to collect and process data in a secure manner.**

**I hereby confirm that I am requesting completion of the survey in a personal capacity and not as a CRU staff member, and that I am the data controller or the data collected. CRU staff that will be completing the questionnaire will do so in their personal capacity and not as CRU staff.**

**If you use the CRU system to complete the questionnaire, please delete all information related to the questionnaire once sent. Alternatively, you can use your personal email account.**

#### Dana Paraschiv

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## RESEARCH QUESTIONNAIRE

### About you

**D1. Which age group are you in?**

- 19 to 29
- 30 to 39
- 40 to 49
- 50 to 59
- Over 60
- Prefer not to say

**D2. Which is your gender?**

- Male
- Female
- Other

**D3. What is your highest education level achieved?**

- No formal education or training
- Secondary level
- Technical or vocational
- Advanced Certificate or completed apprenticeship
- Higher Certificate
- Ordinary Bachelor Degree or National Diploma
- Honours Bachelor Degree / professional qualification or both
- Postgraduate Diploma/ Degree/ Masters
- Doctorate (Ph. D) or higher

### About your role

**R1. Are you currently in employment?**

- Yes
- No
- Prefer not to say

**R2. Which title best describes your role level?**

- Commissioner
- Director / Stand up Director
- Senior Manager / Stand up Senior Manager
- Manager / Stand up Manager
- Inspector / Senior Inspector (technical role)
- Senior analyst
- Analyst
- Officer
- Administrative personnel
- Graduate

**R3. Length of service**

- Less than 5 years
- Between 5 and 10 years
- Between 10 and 15 years
- Over 15 years

<b>Leadership style</b>
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The following questions are based on the Multifactor Leadership Questionnaires (MLQ) developed by Avolio and Bass, except question L1. The offline usage is licensed by Mind Garden 2017.

Please select a leader within the organisation and complete the questions in relation to that person. The questions are aimed at describing the leadership style of leader that you have selected, as you perceive it.

**L1. Which best describes you:**

- I am at a higher organisational level than the person I am rating
- The person I am rating is at my organisational level
- I am at a lower organisational level than the person I am rating
- I do not wish my organisational level to be known

The following section has descriptive statements relating to the person you have selected to rate. Judge how frequently each statement fits the person you are rating. Mark only one box using the following rating scale:

0 = not at all

1 = once in a while

2 = sometimes

3 = fairly often

4 = frequently, if not always

*The person I am rating.....*

**L2. Re-examines critical assumptions to question whether they are appropriate**

0	1	2	3	4

**L3. Talks about their most important values and beliefs**

0	1	2	3	4

**L4. Seeks differing perspectives when solving problems**

0	1	2	3	4

**L5. Talks optimistically about the future**

0	1	2	3	4

**L6. Instils pride in me for being associated with him/her**

<b>Public service motivation</b>
----------------------------------

0	1	2	3	4

The following section is aimed at measuring public service motivation (PSM), based on a scale developed by James Perry (1996). It consists of descriptive statements related to ***your understanding and perceptions***. Judge how accurately each statement fit you. Mark only one box using the following rating scale:

Strongly disagree

Disagree

Neutral

Agree

Strongly agree

**PSM 1. Politics is a dirty word**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**PSM 2. The give and take of public policy making doesn't appeal to me**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**PSM 3. I don't care much for politicians**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**PSM 4. It is hard for me to get intensely interested in what is going on in my community**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**PSM 5. I unselfishly contribute to my community**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**PSM 6. I consider public service my civic duty**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**PSM 7. Meaningful public service is very important to me**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**PSM 8. It is difficult for me to contain my feelings when I see people in distress**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree



**PSM 9. I would prefer seeing public officials do what is best for the whole community even if it harms my interests**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**PSM 10. Most social programmes are too vital to do without**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**PSM 11. I am often reminded by daily events of how dependent we are on one another**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**PSM 12. I am rarely moved by the plight of the underprivileged**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**PSM 13. To me, patriotism includes seeing to the welfare of others**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**PSM 14. I have little compassion for people in need who are unwilling to take the first step to help themselves**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**PSM 15. There are few public programs that I wholeheartedly support**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**PSM 16. I seldom think about the welfare of people I don't know personally**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**PSM 17. Doing well financially is definitely more important to me than doing good deeds**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**PSM 18. Much of what I do is for a cause bigger than myself**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**PSM 19. Serving other citizens would give me a good feeling even if no one paid me for it**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**PSM 20. Making a difference in society means more to me than personal achievements**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**PSM 21. I think people should give back to society more than they get from it**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**PSM 22. I am prepared to make enormous sacrifices for the good of society**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**PSM 23. I am one of those rare people who would risk personal loss to help someone else**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

**PSM 24. I believe in putting duty before self**

Strongly disagree	Disagree	Neutral	Agree	Strongly agree

## Appendix 2: Reliability tests (Stata outputs)

### Cronbach alpha values for Transformational Leadership

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem correlation	alpha
12	67	+	0.7020	0.5167	0.4443	0.7618
13	67	+	0.7341	0.5624	0.4247	0.7470
14	67	+	0.7321	0.5594	0.4259	0.7480
15	67	+	0.7303	0.5569	0.4270	0.7488
16	67	+	0.7742	0.6213	0.4002	0.7274
Test scale					0.4244	0.7866

### Cronbach alpha values for Attraction to Public Policy Making

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem correlation	alpha
psm1	67	+	0.6542	0.2468	0.4294	0.6008
psm2	67	+	0.7337	0.3717	0.2572	0.4092
psm3	67	+	0.7785	0.4508	0.1601	0.2759
Test scale					0.2822	0.5412

### Cronbach alpha values for Commitment to Public Interest

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem correlation	alpha
psm4	67	+	0.6840	0.4788	0.3695	0.7010
psm5	67	+	0.6356	0.4125	0.3977	0.7254
psm6	67	+	0.7971	0.6460	0.3036	0.6356
psm7	67	+	0.7437	0.5648	0.3348	0.6681
psm9	67	+	0.6347	0.4112	0.3983	0.7258
Test scale					0.3608	0.7384

### Cronbach alpha values for Compassion

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem correlation	alpha
psm8	67	+	0.5938	0.4197	0.2137	0.6555
psm10	67	+	0.5681	0.3878	0.2193	0.6628
psm11	67	+	0.6871	0.5393	0.1937	0.6271
psm12	67	+	0.6955	0.5505	0.1919	0.6244
psm13	67	+	0.5359	0.3488	0.2262	0.6717
psm14	67	+	0.5009	0.3070	0.2337	0.6810
psm15	67	+	0.4004	0.1914	0.2553	0.7058
psm16	67	+	0.5274	0.3385	0.2280	0.6740

Test scale | 0.2202 0.6932

### Cronbach alpha values for Self-Sacrifice

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem correlation	alpha
psm17	67	+	0.5727	0.3515	0.2961	0.6778
psm18	67	+	0.5427	0.3140	0.3075	0.6894
psm19	67	+	0.5912	0.3750	0.2891	0.6704
psm20	67	+	0.7242	0.5542	0.2390	0.6109
psm21	67	+	0.6877	0.5032	0.2527	0.6284
psm22	67	+	0.6559	0.4598	0.2647	0.6429
Test scale					0.2749	0.6946

### Cronbach alpha values for the entire data set

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem correlation	alpha
12	67	-	0.1155	0.0248	0.1438	0.8137
13	67	-	0.2085	0.1194	0.1407	0.8097
14	67	+	0.1058	0.0150	0.1441	0.8141
15	67	-	0.2045	0.1153	0.1408	0.8099
16	67	+	0.1393	0.0489	0.1430	0.8127
psm1	67	+	0.2339	0.1455	0.1398	0.8086
psm2	67	+	0.4044	0.3242	0.1340	0.8010
psm3	67	+	0.3625	0.2798	0.1355	0.8029
psm4	67	+	0.4917	0.4181	0.1311	0.7968
psm12	67	+	0.5049	0.4324	0.1306	0.7962
psm14	67	+	0.4973	0.4242	0.1309	0.7966
psm15	67	+	0.2320	0.1435	0.1399	0.8087
psm16	67	+	0.3981	0.3176	0.1343	0.8013
psm17	67	+	0.4961	0.4229	0.1309	0.7966
psm5	67	+	0.6358	0.5767	0.1262	0.7897
psm6	67	+	0.6071	0.5447	0.1272	0.7912
psm7	67	+	0.5923	0.5284	0.1277	0.7919
psm8	67	+	0.4632	0.3872	0.1321	0.7982
psm9	67	+	0.5222	0.4513	0.1301	0.7954
psm11	67	+	0.5129	0.4411	0.1304	0.7958
psm10	67	+	0.4657	0.3900	0.1320	0.7981
psm13	67	+	0.4694	0.3940	0.1318	0.7979
psm18	67	+	0.4431	0.3656	0.1327	0.7992
psm19	67	+	0.3934	0.3126	0.1344	0.8015
psm20	67	+	0.5864	0.5218	0.1279	0.7922
psm21	67	+	0.4269	0.3483	0.1333	0.7999
psm22	67	+	0.4882	0.4144	0.1312	0.7970
Test scale					0.1339	0.8068

## Cronbach alpha values for PSM

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem correlation	alpha
psm1	67	+	0.2432	0.1495	0.1958	0.8364
psm2	67	+	0.4337	0.3505	0.1864	0.8279
psm3	67	+	0.3831	0.2963	0.1889	0.8302
psm4	67	+	0.5023	0.4248	0.1830	0.8247
psm12	67	+	0.5105	0.4337	0.1826	0.8243
psm14	67	+	0.5348	0.4604	0.1814	0.8231
psm15	67	+	0.2202	0.1257	0.1969	0.8374
psm16	67	+	0.4328	0.3494	0.1864	0.8280
psm17	67	+	0.4856	0.4066	0.1838	0.8255
psm5	67	+	0.6217	0.5569	0.1771	0.8189
psm6	67	+	0.6119	0.5459	0.1776	0.8193
psm7	67	+	0.6005	0.5332	0.1782	0.8199
psm8	67	+	0.4565	0.3751	0.1853	0.8269
psm9	67	+	0.5196	0.4438	0.1822	0.8239
psm11	67	+	0.5266	0.4513	0.1818	0.8235
psm10	67	+	0.4594	0.3782	0.1851	0.8267
psm13	67	+	0.4788	0.3992	0.1842	0.8258
psm18	67	+	0.4368	0.3537	0.1863	0.8278
psm19	67	+	0.4226	0.3385	0.1869	0.8284
psm20	67	+	0.5817	0.5122	0.1791	0.8208
psm21	67	+	0.4308	0.3473	0.1865	0.8281
psm22	67	+	0.4643	0.3834	0.1849	0.8265
Test scale					0.1846	0.8328

### Appendix 3: Shapiro-Wilk test results (Stata outputs)

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
psm	67	0.97754	1.335	0.626	0.26567
age	67	0.98836	0.691	-0.800	0.78822

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
psm	67	0.97754	1.335	0.626	0.26567
edu	69	0.80922	11.607	5.327	0.00000

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
psm	67	0.97754	1.335	0.626	0.26567
position	67	0.96959	1.806	1.283	0.09979

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
psm	67	0.97754	1.335	0.626	0.26567
exp	67	0.93341	3.956	2.983	0.00143

## Appendix 4: Kruskal-Wallis test results (Stata outputs)

### Kruskal-Wallis test PSM and age group

age	Obs	Rank Sum
0	1	32.00
1	12	287.00
2	34	1248.00
3	17	611.50
4	3	99.50

chi-squared = 4.059 with 4 d.f.  
probability = 0.3981

chi-squared with ties = 4.068 with 4 d.f.  
probability = 0.3968

### Kruskal-Wallis test PSM and education level

edu	Obs	Rank Sum
1	1	63.00
2	3	99.50
3	4	182.50
4	7	161.00
5	45	1617.50
6	7	154.50

chi-squared = 8.947 with 5 d.f.

### Kruskal-Wallis test PSM and education level

edu	Obs	Rank Sum
1	1	63.00
2	3	99.50
3	4	182.50
4	7	161.00
5	45	1617.50
6	7	154.50

chi-squared = 8.947 with 5 d.f.  
probability = 0.1112

chi-squared with ties = 8.967 with 5 d.f.  
probability = 0.1104

### Kruskal-Wallis test PSM and job title

position	Obs	Rank Sum
1	6	217.50
2	3	91.50
3	21	623.50
4	15	566.00
5	3	51.50
6	14	508.50
7	1	61.50
8	3	98.50
9	1	59.50

chi-squared = 7.908 with 8 d.f.  
probability = 0.4425

chi-squared with ties = 7.926 with 8 d.f.  
probability = 0.4408

### Kruskal-Wallis test PSM and length of service

exp	Obs	Rank Sum
1	35	996.50
2	14	647.50
3	13	504.00
4	5	130.00

chi-squared = 9.973 with 3 d.f.  
probability = 0.0188

chi-squared with ties = 9.995 with 3 d.f.  
probability = 0.0186



## Appendix 5: Pearson's correlation coefficient (Stata outputs)

### Pearson's test PSM and age

```
          |      psm      age
-----+-----
psm |      1.0000
age |      0.1174      1.0000
. pwcorr psm edu
```

### Pearson's test PSM and education level

```
          |      psm      edu
-----+-----
psm |      1.0000
edu |     -0.1356      1.0000
```

### Pearson's test PSM and job title

```
          |      psm position
-----+-----
psm |      1.0000
position |      0.0884      1.0000
```

### Pearson's test PSM and length of service

```
          |      psm      exp
-----+-----
psm |      1.0000
exp |      0.0969      1.0000
```

## Appendix 6: Linear regression analyses (Stata outputs)

Source	SS	df	MS	Number of obs =	67
Model	1.13164783	1	1.13164783	F( 1, 65) =	0.01
Residual	5409.85343	65	83.2285143	Prob > F =	0.9075
				R-squared =	0.0002
				Adj R-squared =	-0.0152
Total	5410.98507	66	81.9846223	Root MSE =	9.123

psm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
t1	-.0331383	.2841911	-0.12	0.908	-.6007071 .5344306
_cons	79.44406	4.091009	19.42	0.000	71.27376 87.61437

Source	SS	df	MS	Number of obs =	67
Model	1.13164783	1	1.13164783	F( 1, 65) =	0.01
Residual	5409.85343	65	83.2285143	Prob > F =	0.9075
				R-squared =	0.0002
				Adj R-squared =	-0.0152
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psm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
t1	-.0331383	.2841911	-0.12	0.908	-.6007071 .5344306
_cons	79.44406	4.091009	19.42	0.000	71.27376 87.61437

Source	SS	df	MS	Number of obs =	67
Model	99.549569	1	99.549569	F( 1, 65) =	1.22
Residual	5311.43551	65	81.7143924	Prob > F =	0.2738
				R-squared =	0.0184
				Adj R-squared =	0.0033
Total	5410.98507	66	81.9846223	Root MSE =	9.0396

psm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
edu	-1.22427	1.109192	-1.10	0.274	-3.439479 .9909394
_cons	84.7227	5.314317	15.94	0.000	74.10927 95.33612

Source	SS	df	MS	Number of obs =	67
Model	42.2995103	1	42.2995103	F( 1, 65) =	0.51
Residual	5368.68556	65	82.5951625	Prob > F =	0.4768
				R-squared =	0.0078
				Adj R-squared =	-0.0074
Total	5410.98507	66	81.9846223	Root MSE =	9.0882

psm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]
position	.4312336	.6025904	0.72	0.477	-.7722226 1.63469
_cons	77.22152	2.702899	28.57	0.000	71.82346 82.61958

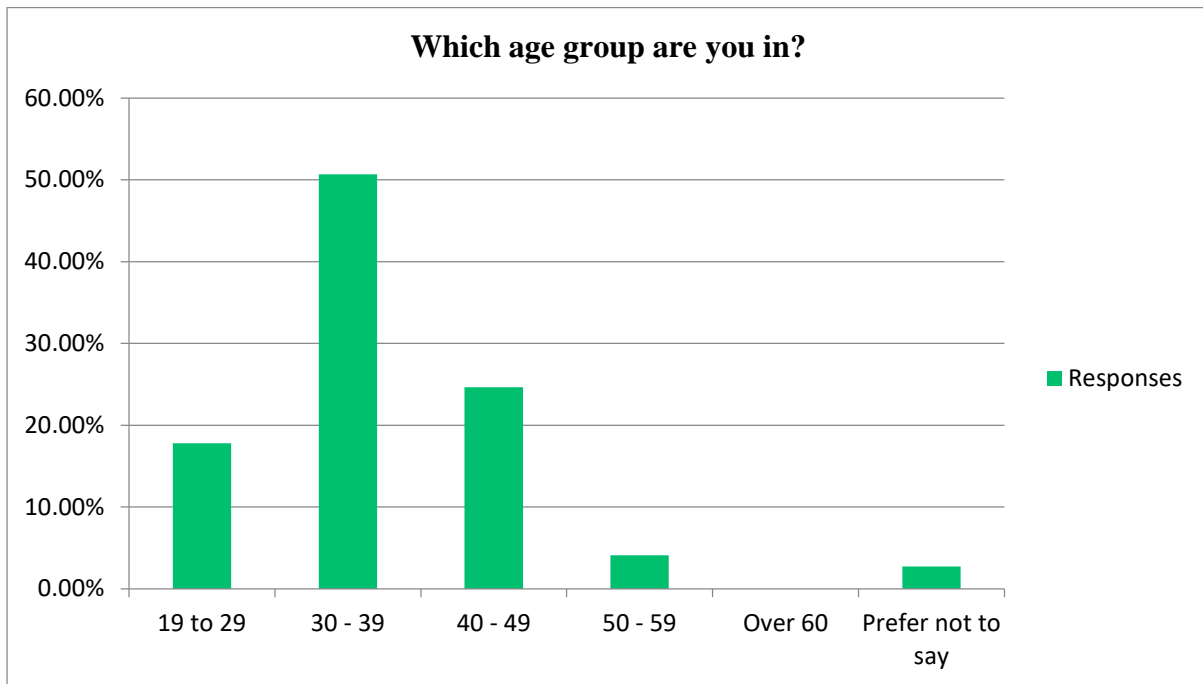
Source	SS	df	MS			
Model	42.2995103	1	42.2995103	Number of obs =	67	
Residual	5368.68556	65	82.5951625	F( 1, 65) =	0.51	
Total	5410.98507	66	81.9846223	Prob > F =	0.4768	
				R-squared =	0.0078	
				Adj R-squared =	-0.0074	
				Root MSE =	9.0882	

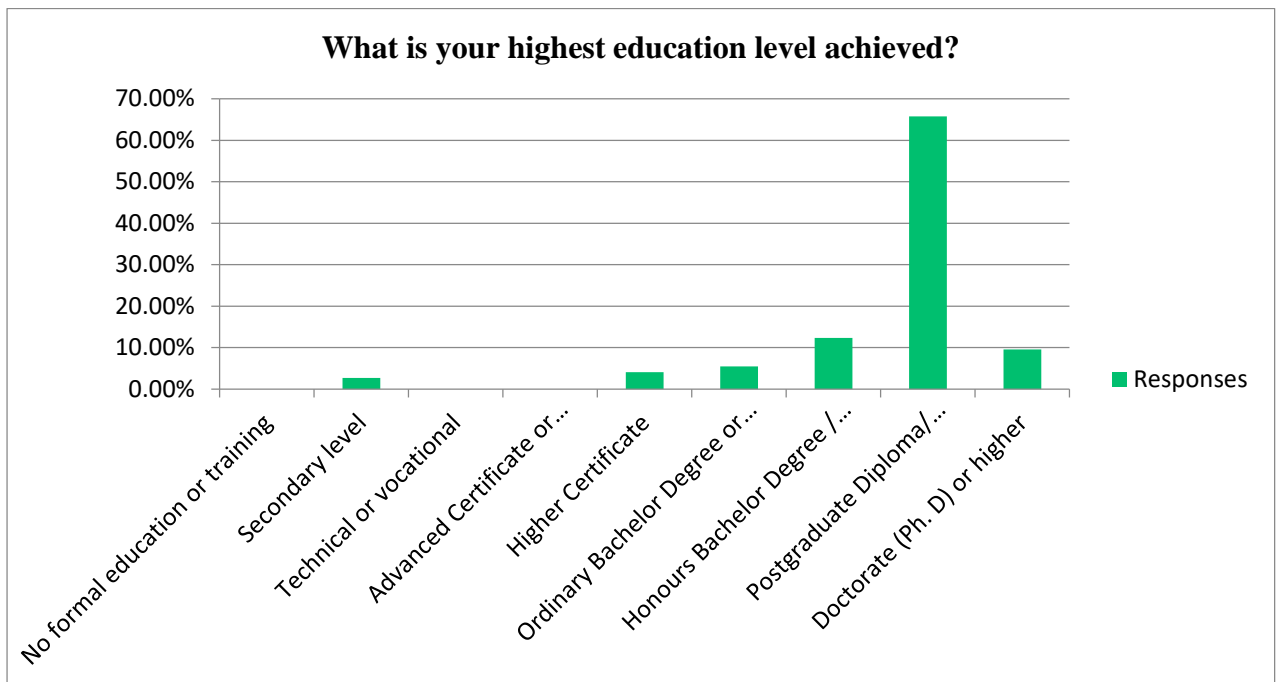
psm	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
position	.4312336	.6025904	0.72	0.477	-.7722226	1.63469
_cons	77.22152	2.702899	28.57	0.000	71.82346	82.61958

## Appendix 7: Graphs

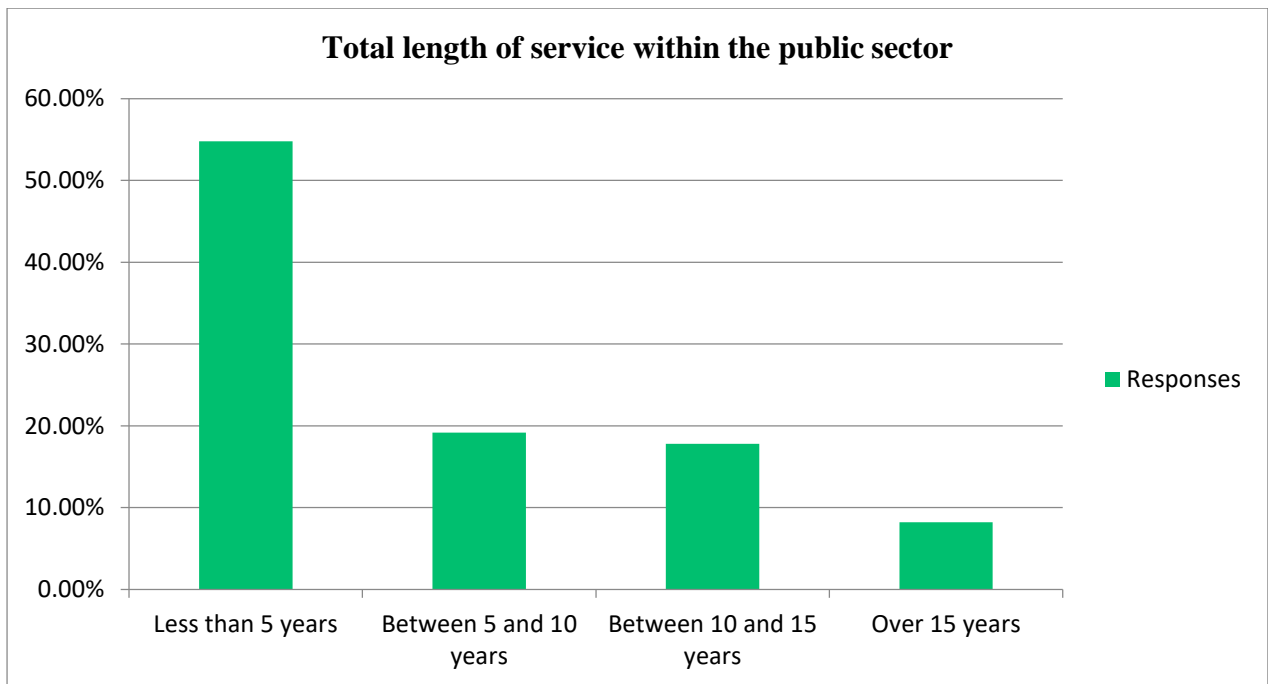
**Graph 1: Respondents grouped based on age**



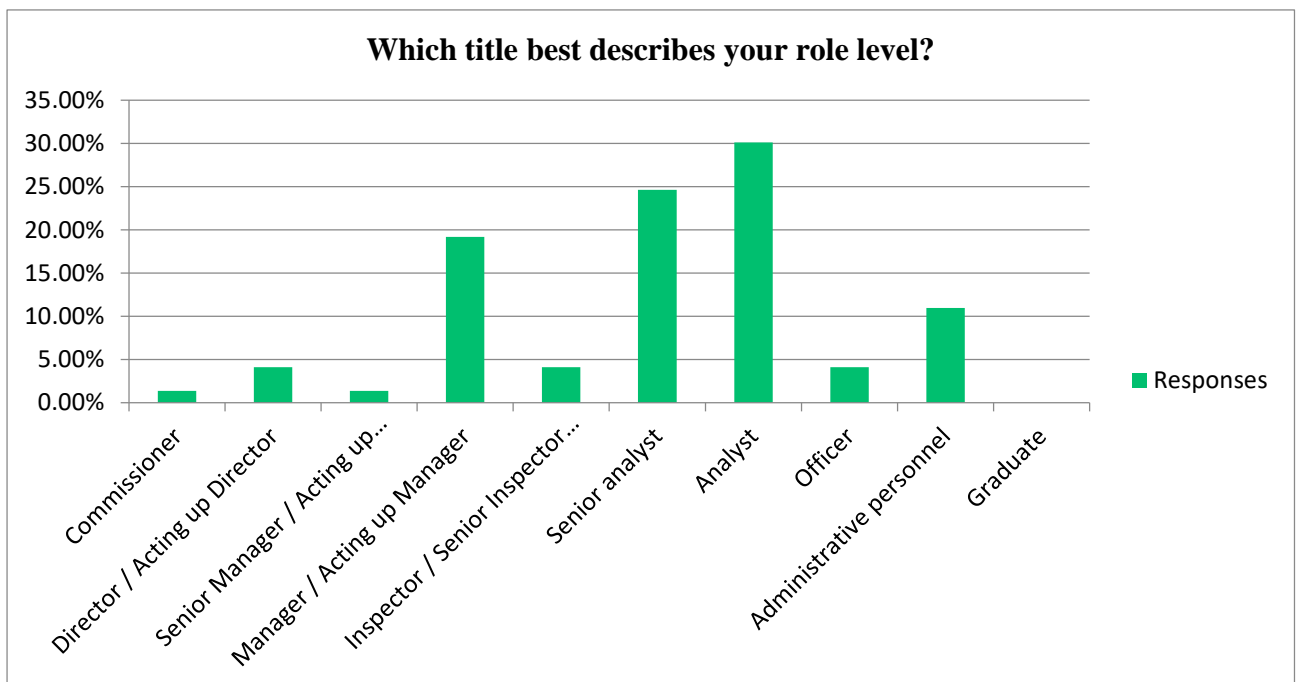
**Graph 2: Respondents grouped based on level of education**



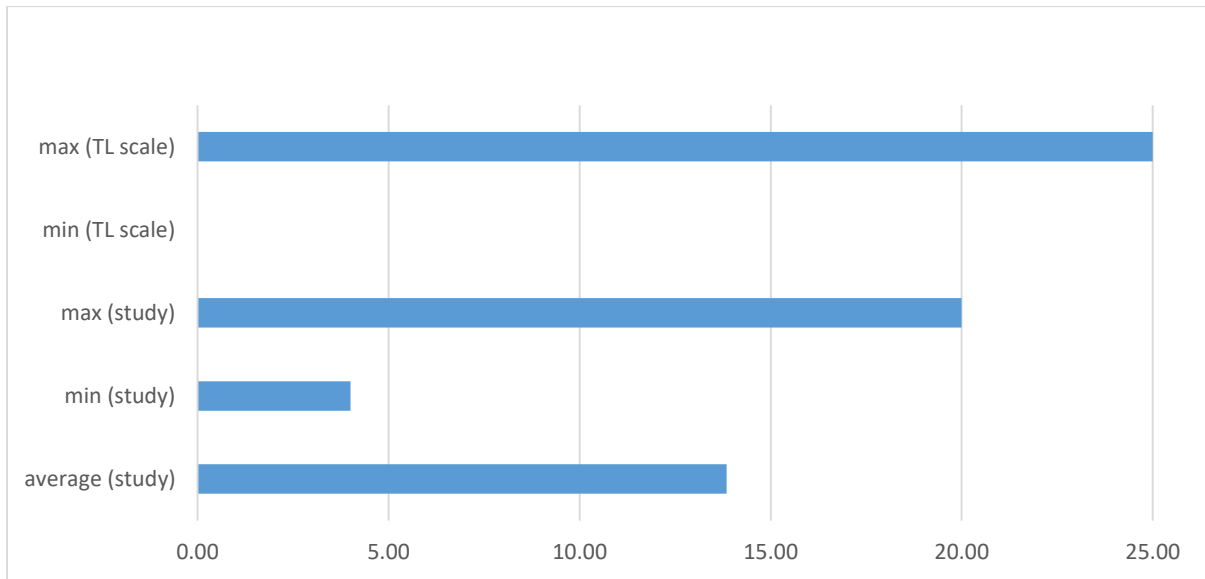
**Graph 3: Respondents grouped based on length of service in the public service**



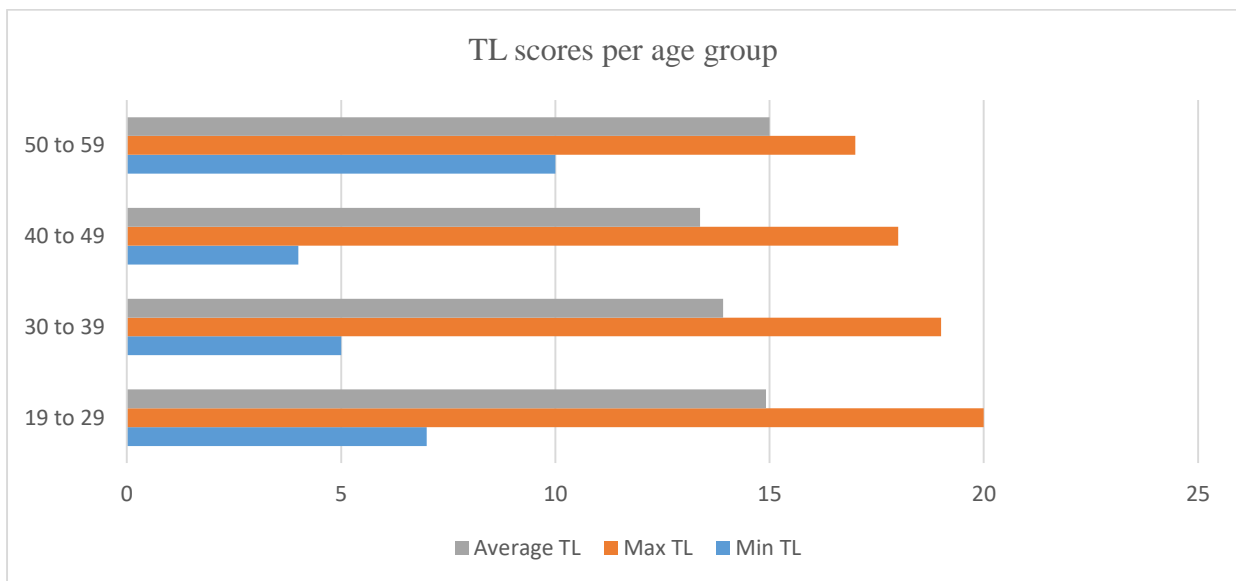
**Graph 4: Respondents grouped based on role within the organisation**



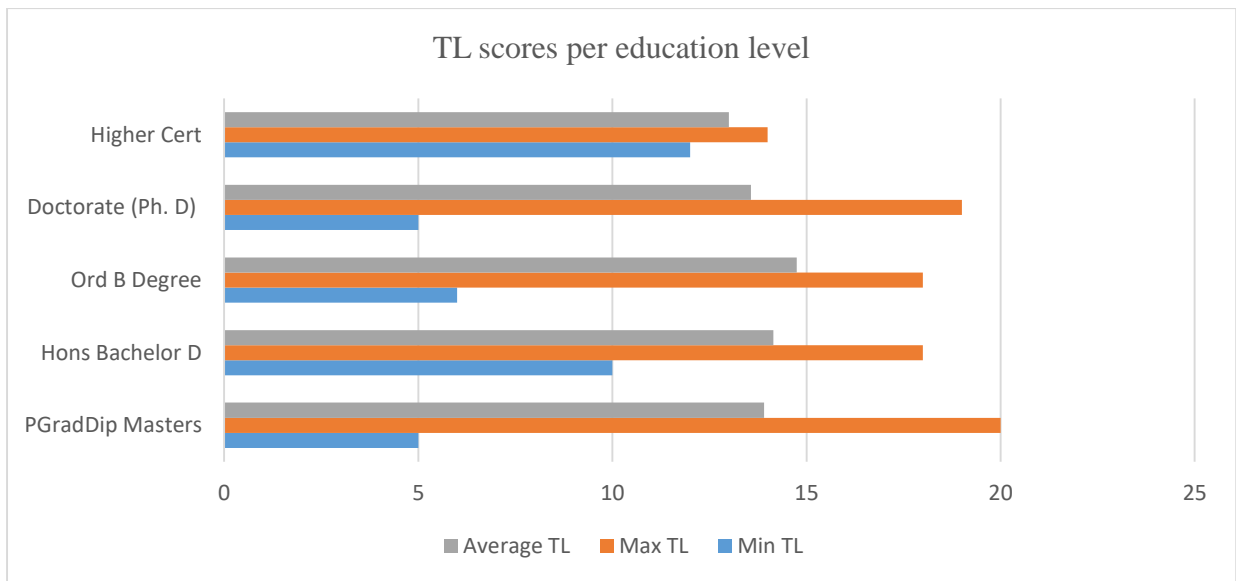
**Graph 5: Total Transformational Leadership scores**



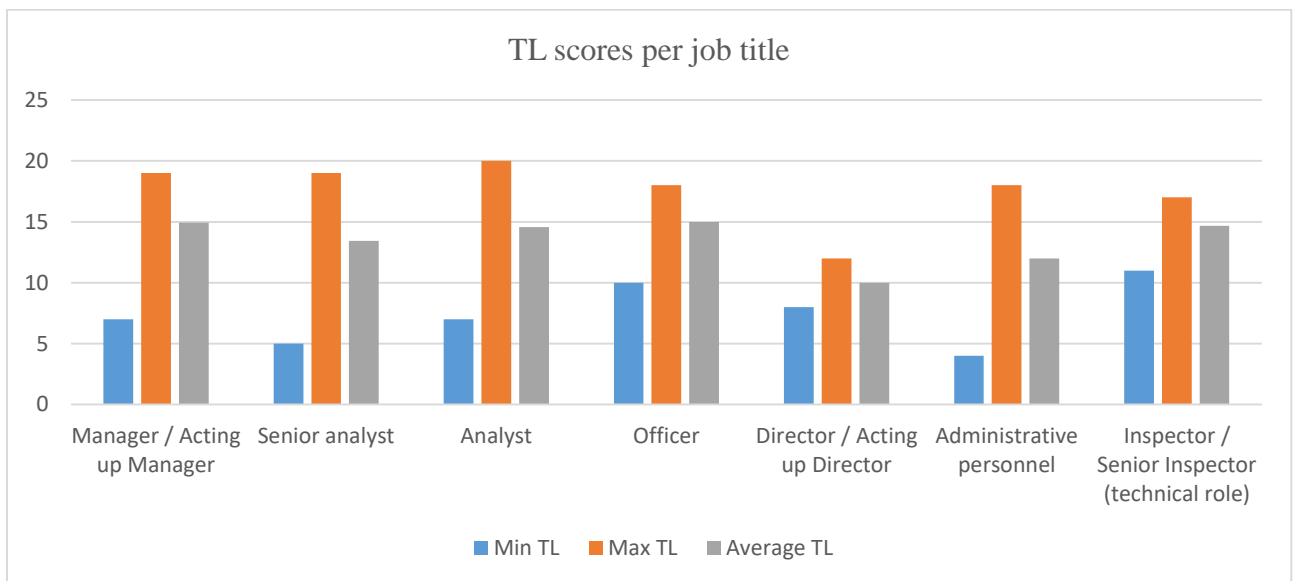
**Graph 6: Transformational Leadership scores per age group**



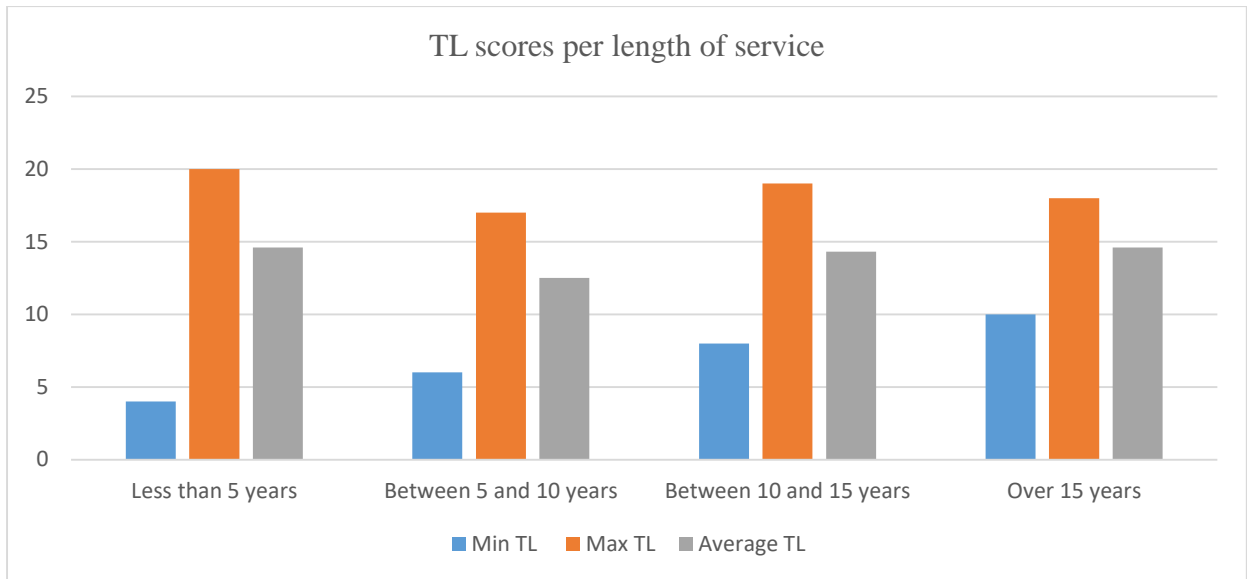
**Graph 7: Transformational Leadership scores per education level**



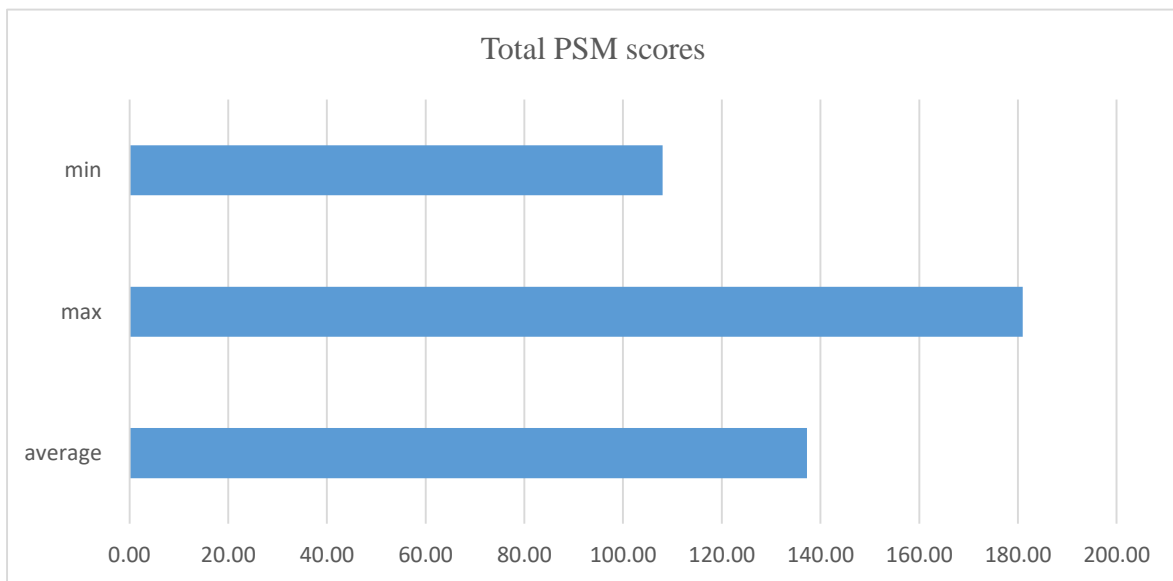
**Graph 8: Transformational Leadership scores per job title**



**Graph 9: Transformational Leadership scored per length of service**

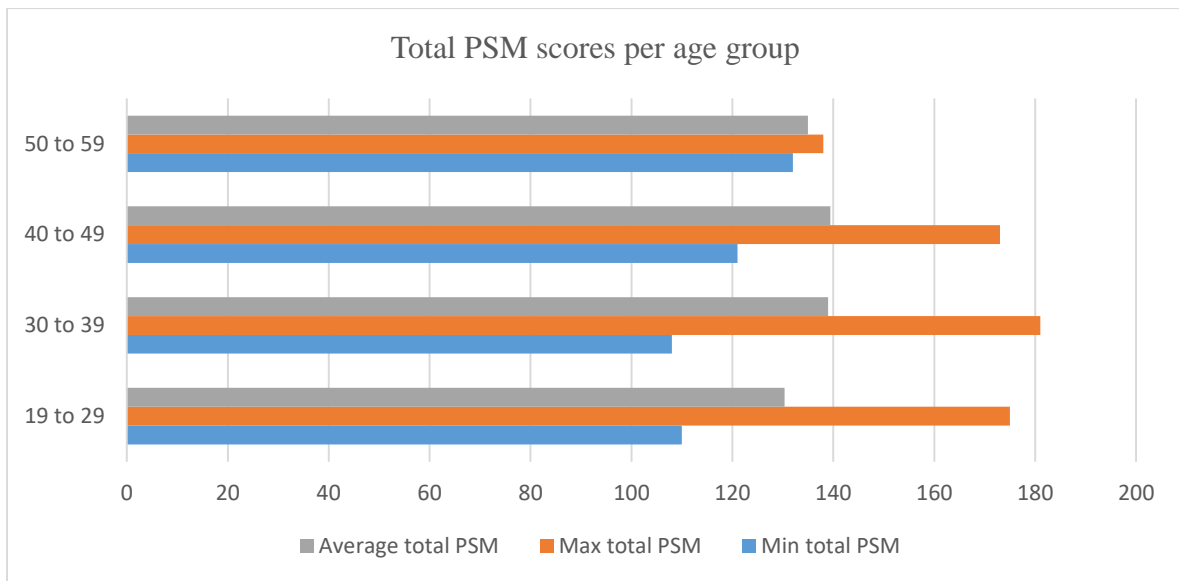


**Graph 10: Total PSM scores**

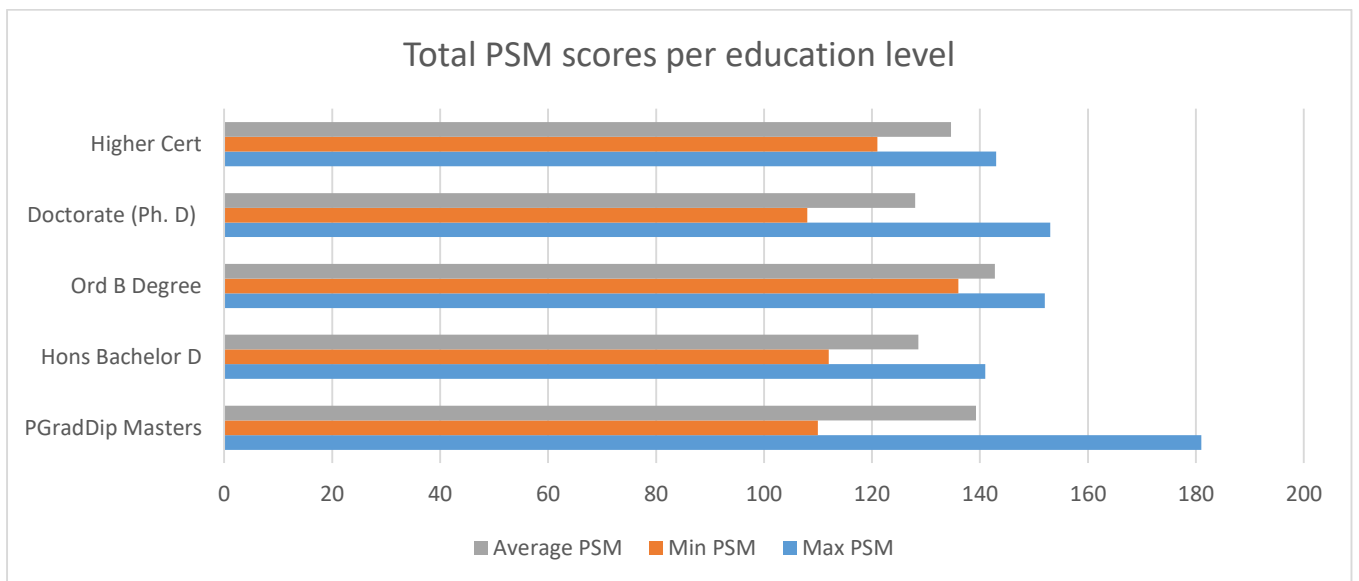




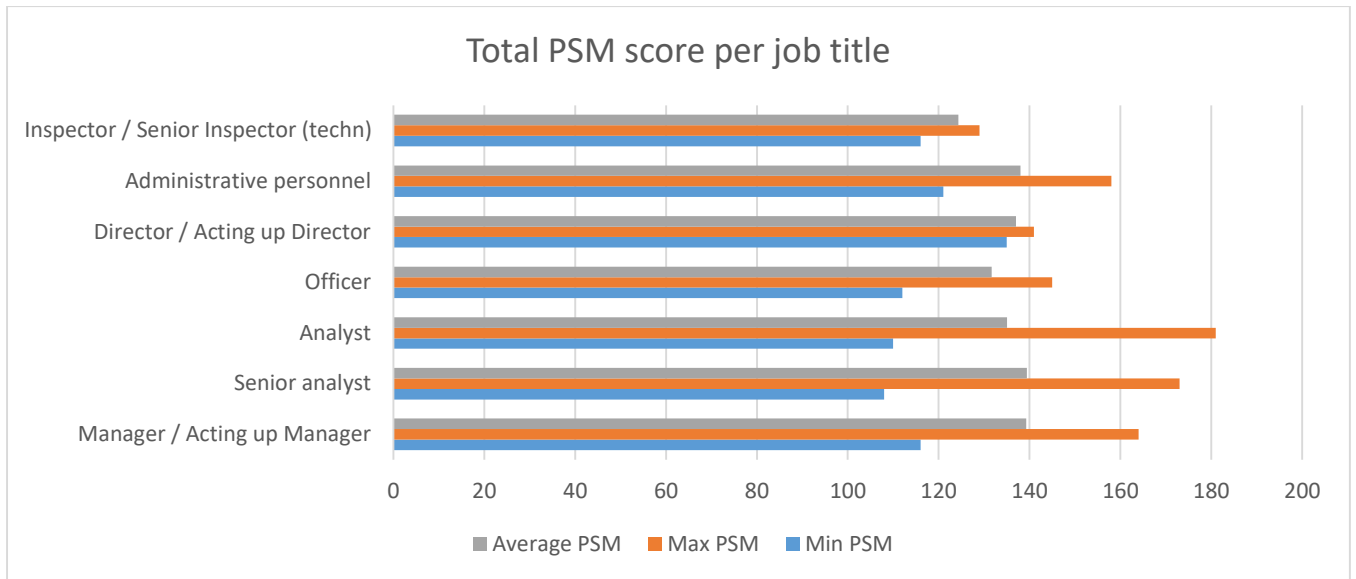
**Graph 11: Total PSM scores per age group**



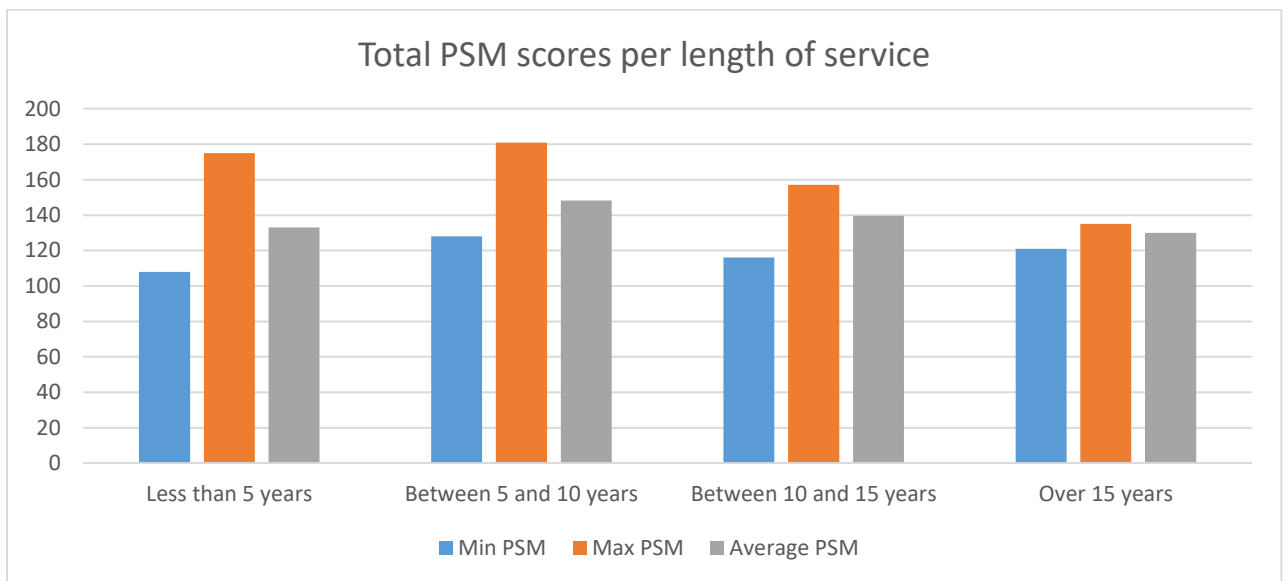
**Graph 12: Total PSM scores per education level**



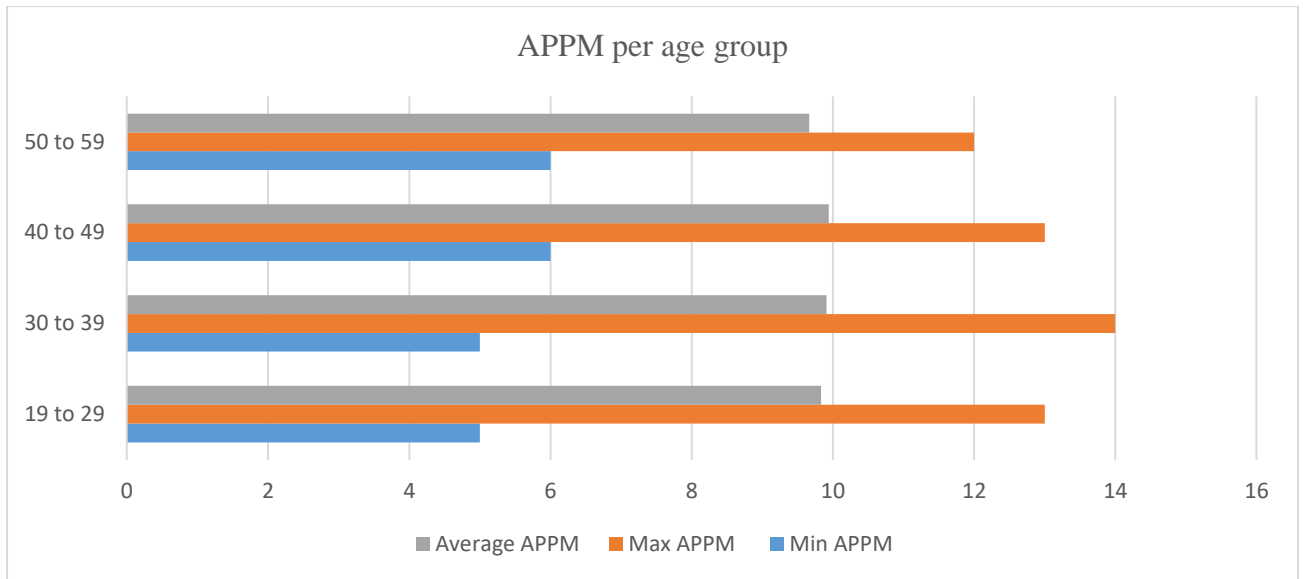
**Graph 13: Total PSM scores per job title**



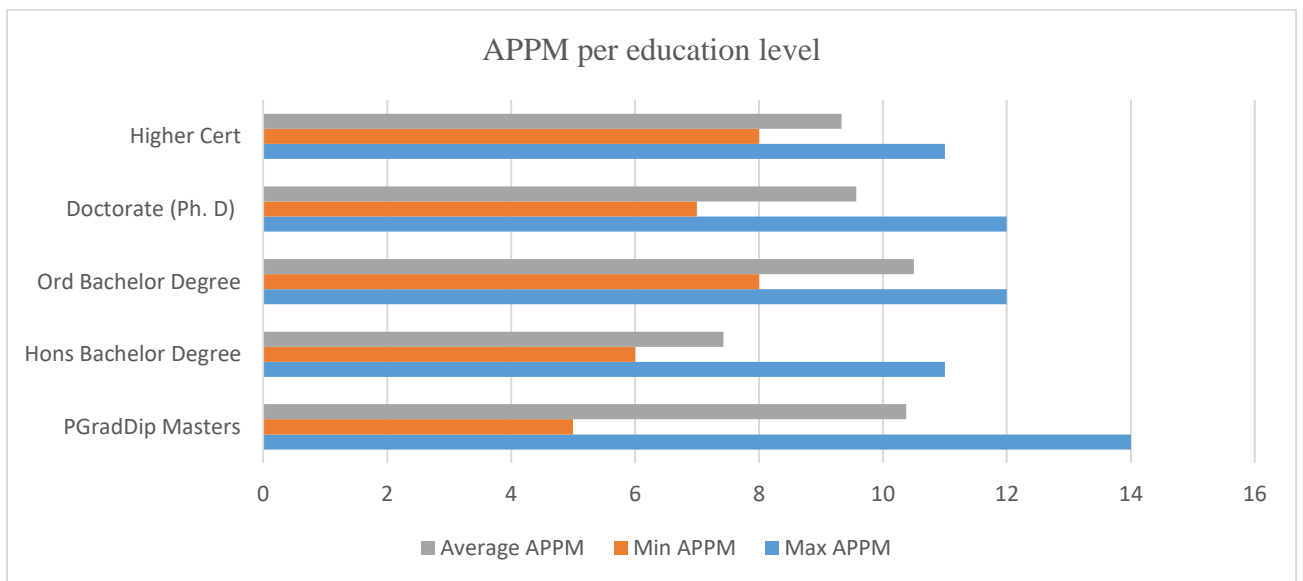
**Graph 14: Total PSM scores per length of service**



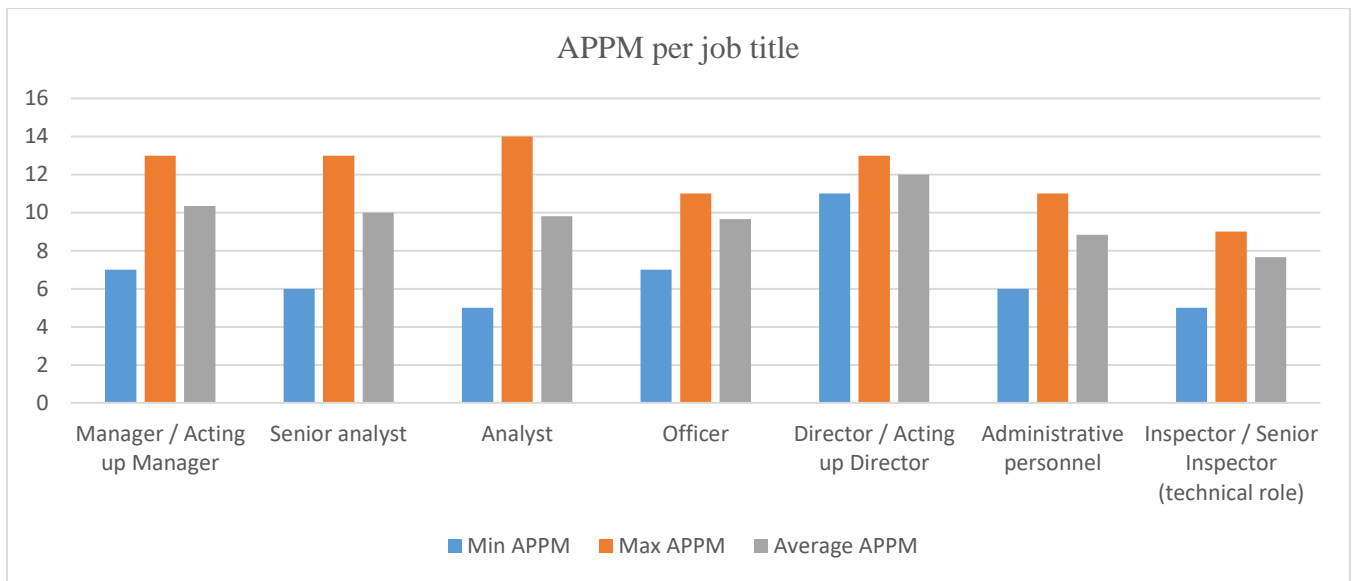
**Graph 15: APPM scores per age group**



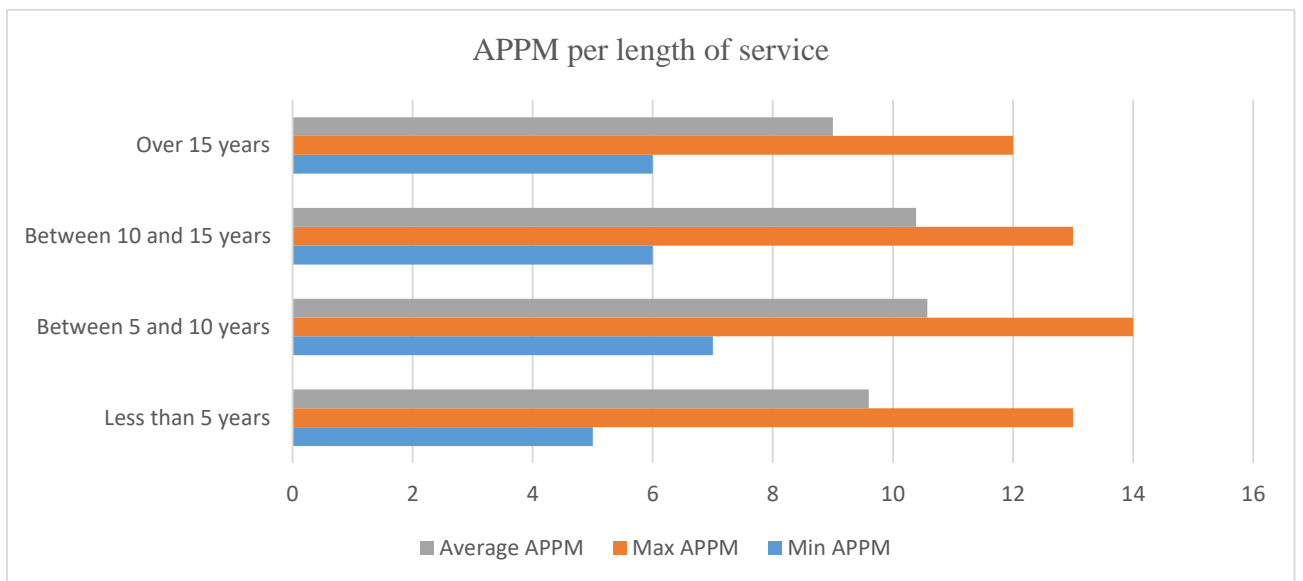
**Graph 16: APPM scores per education level**



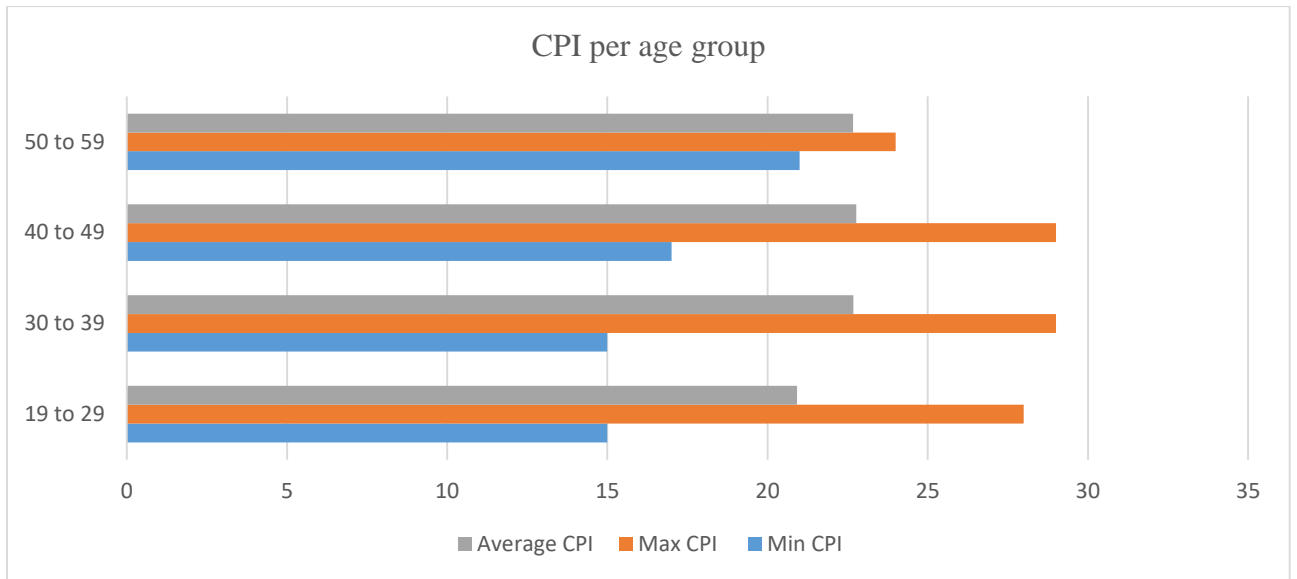
**Graph 17: APPM scores per job title**



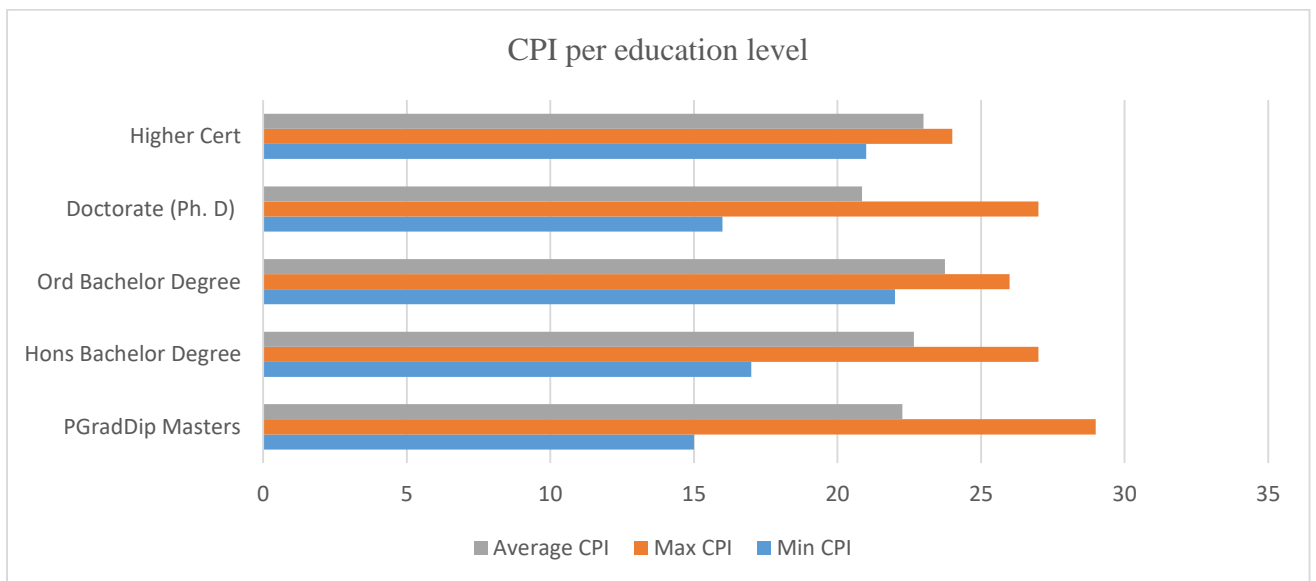
**Graph 18: APPM scores per length of service**



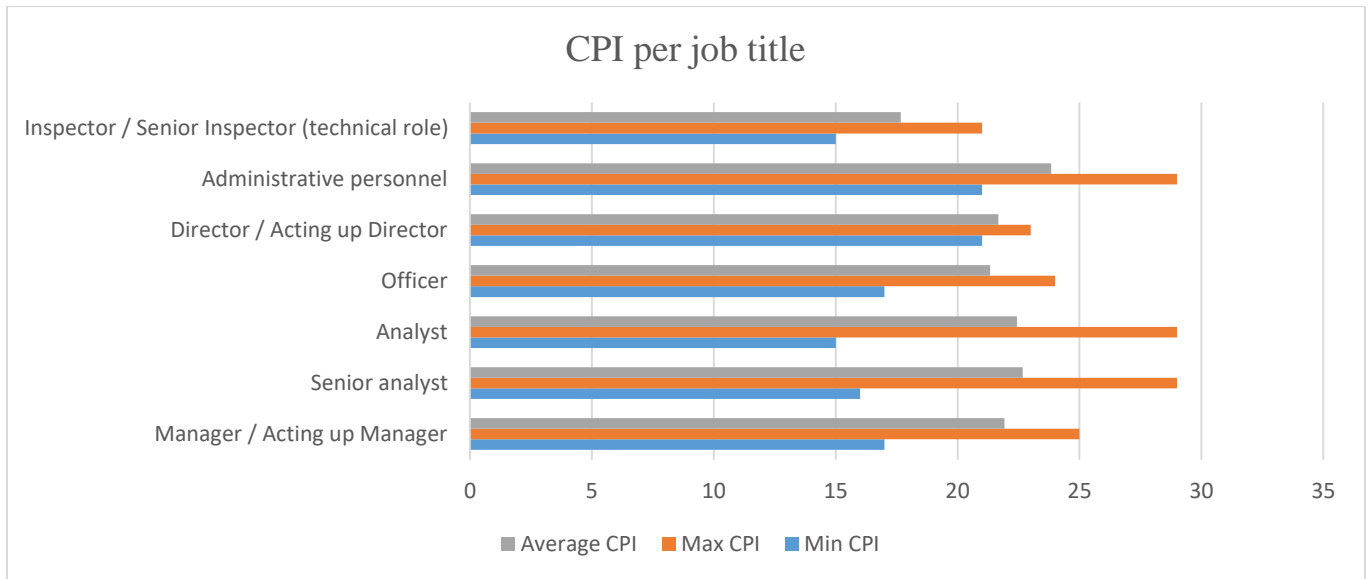
**Graph 19: CPI scores per age group**



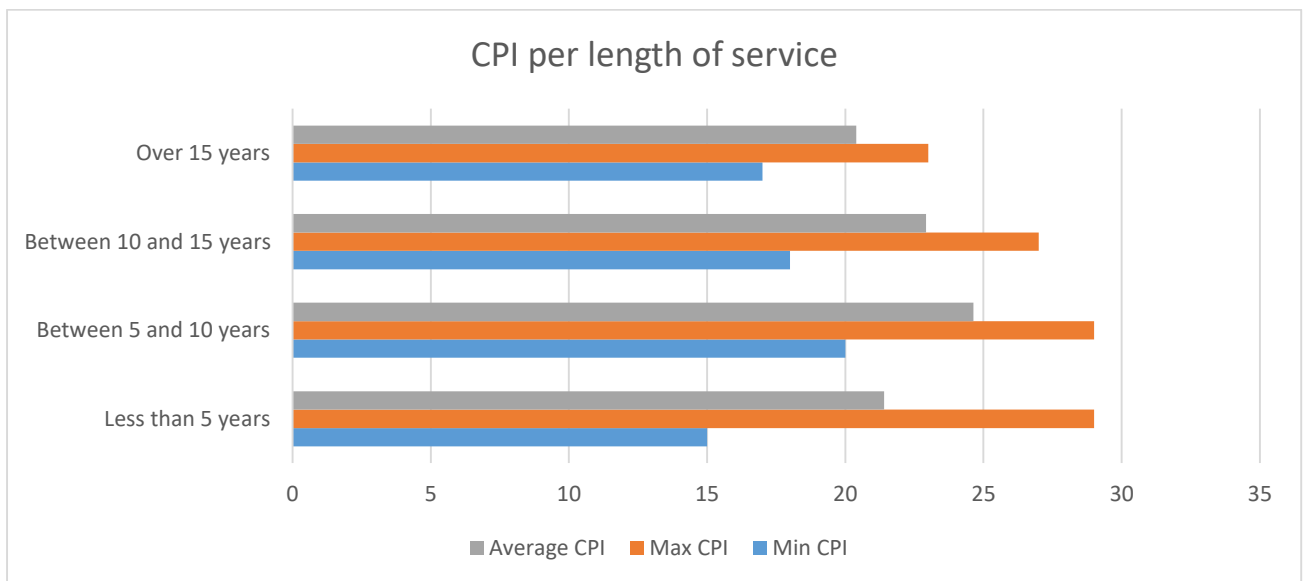
**Graph 20: CPI scores per education level**



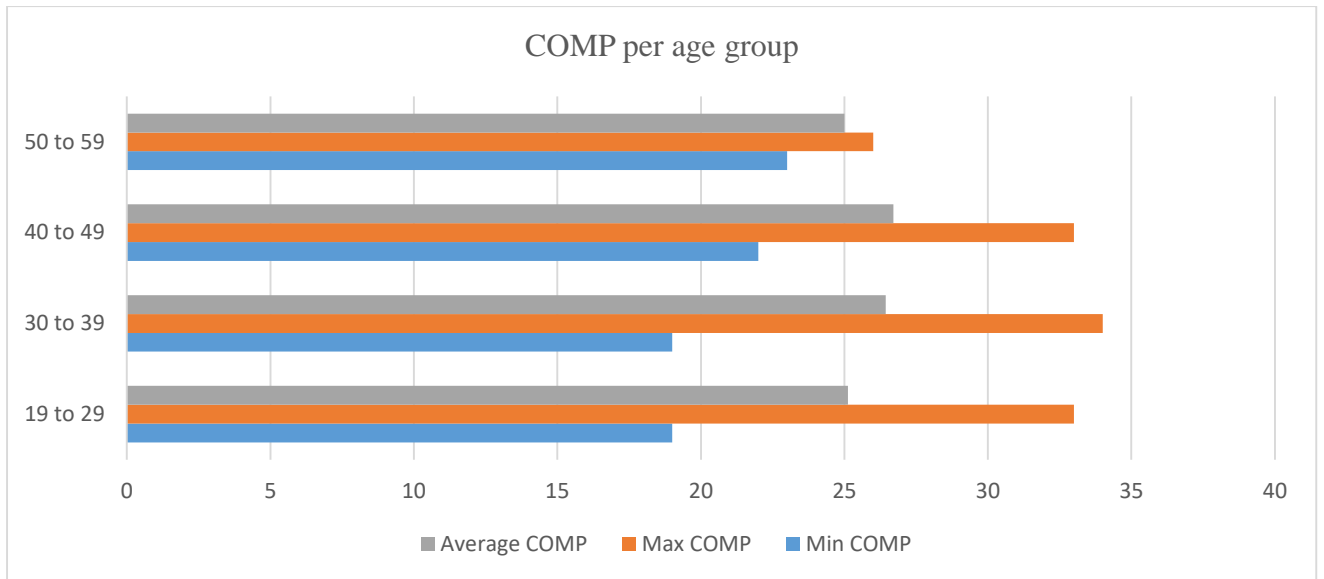
**Graph 21: CPI per job title**



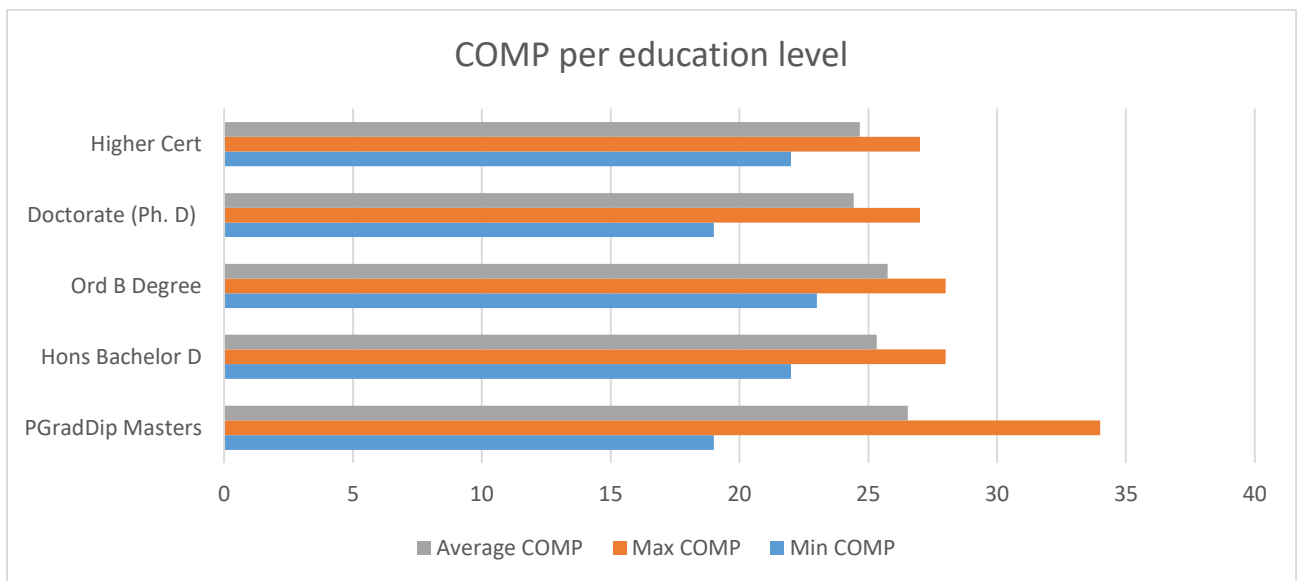
**Graph 22: CPI scores per length of service**



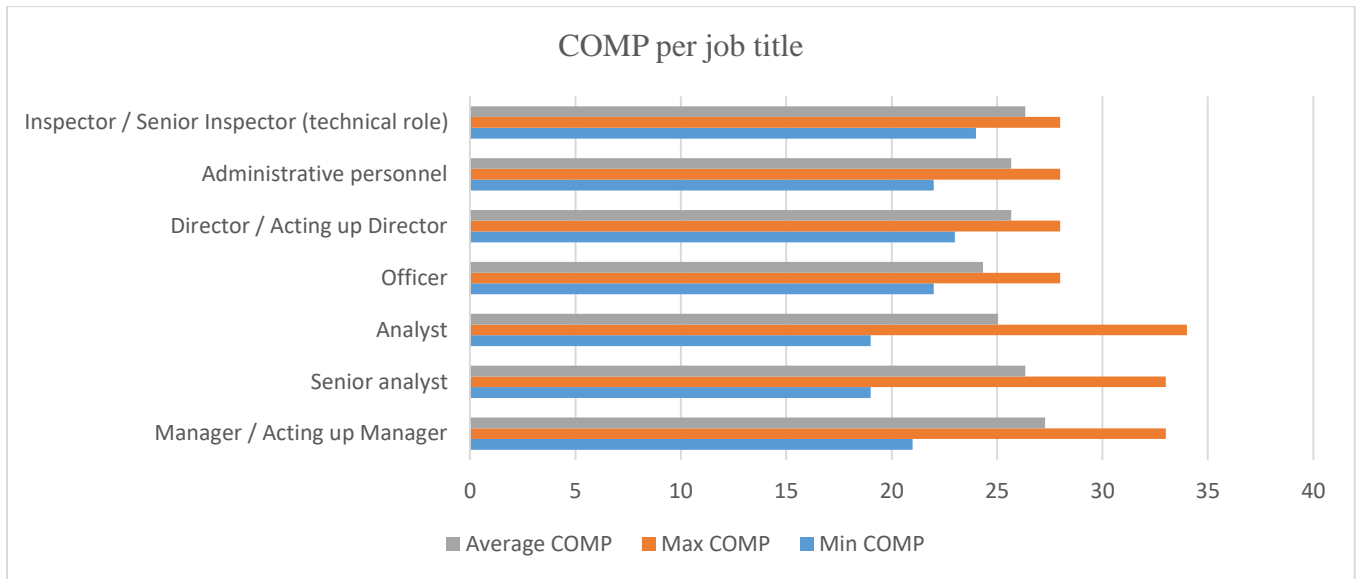
**Graph 23: Compassion scores per age group**



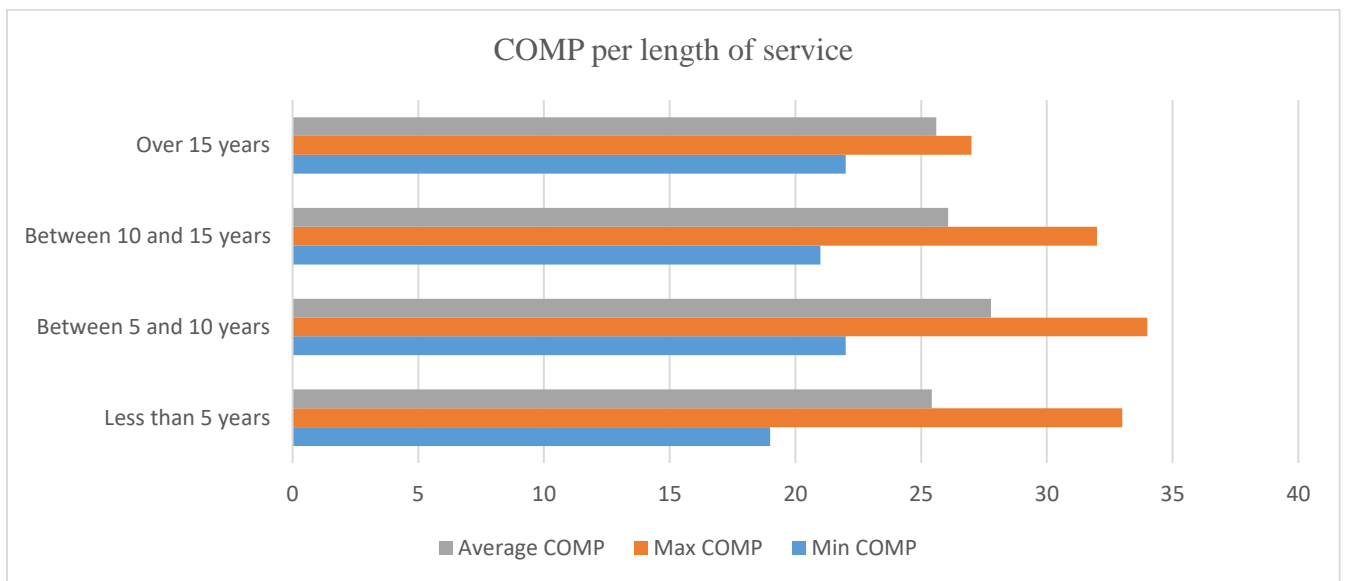
**Graph 24: Compassion scores per education level**



**Graph 25: Compassion scores per job title**

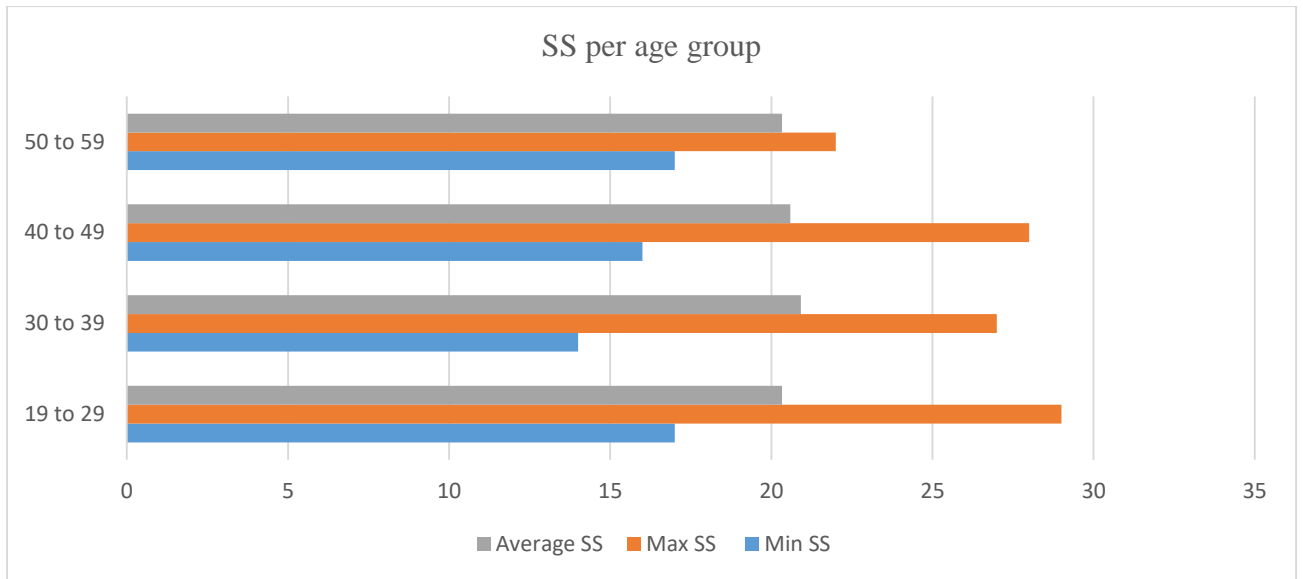


**Graph 26: Compassion scores per length of service**

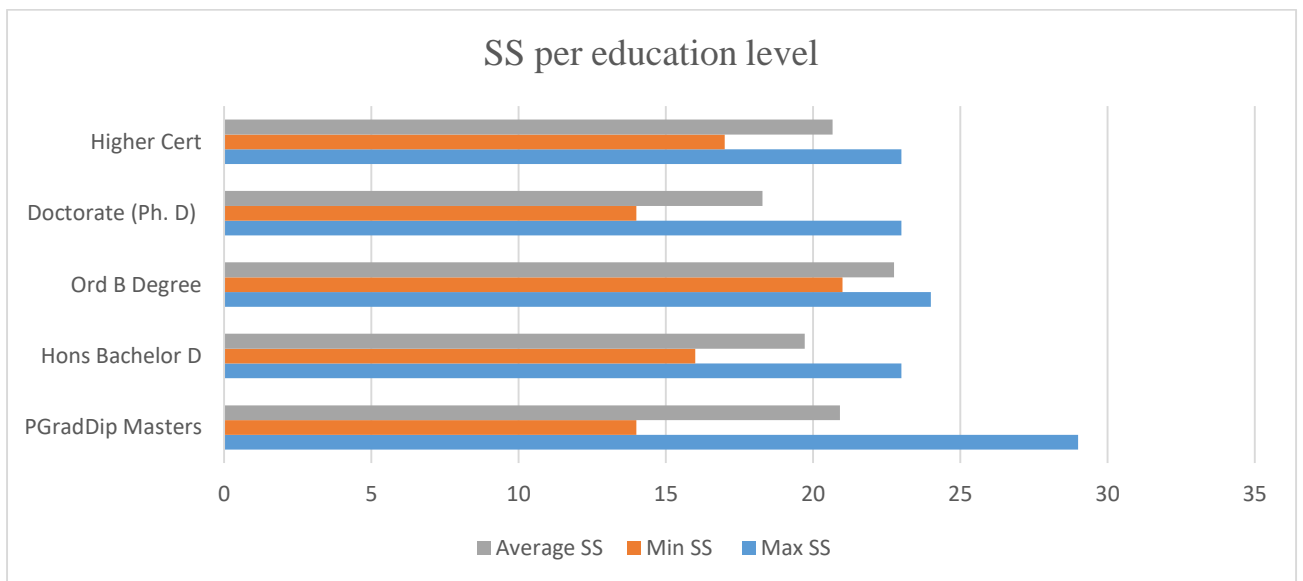




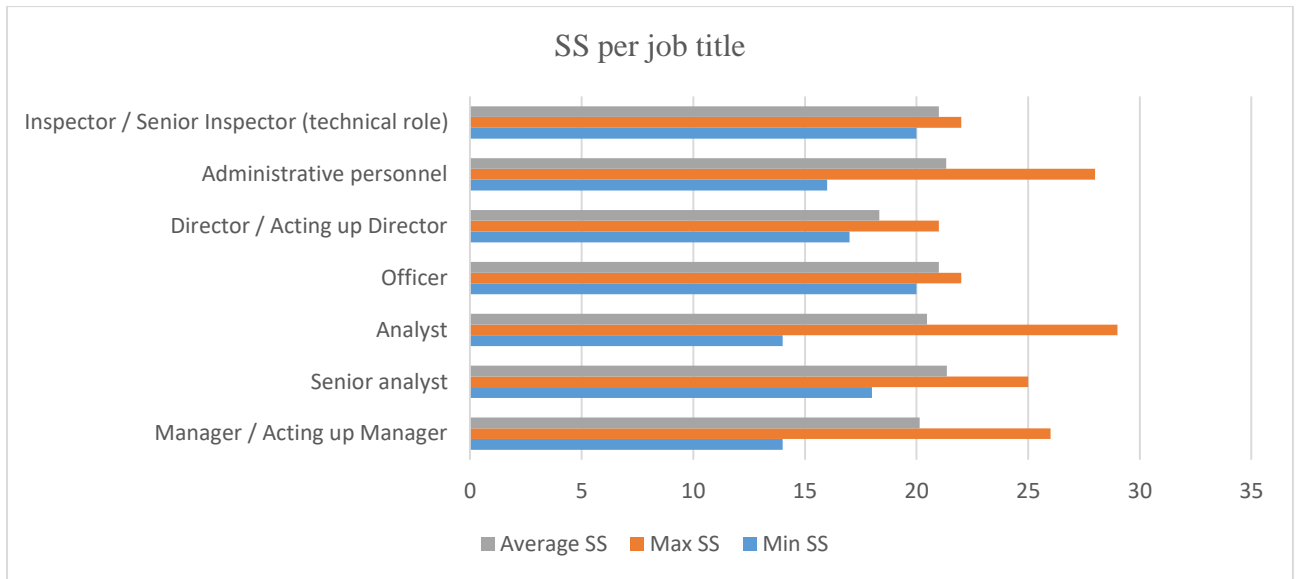
**Graph 27: Self-sacrifice scores per age group**



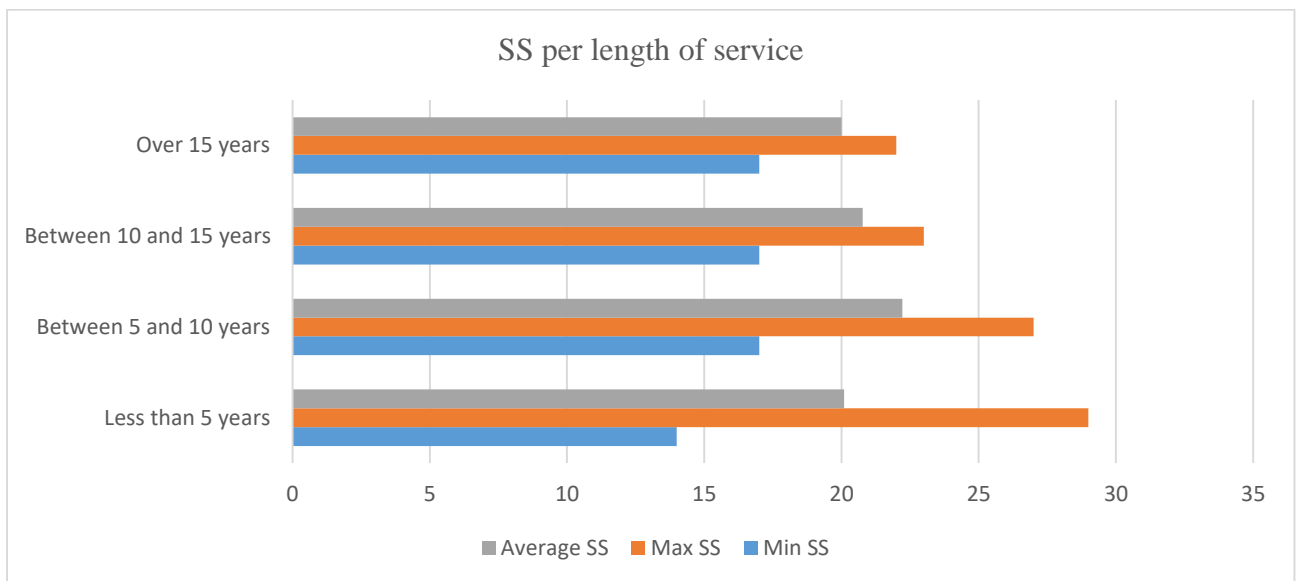
**Graph 28: Self-sacrifice scores per education level**



**Graph 29: Self-sacrifice scores per job title**



**Graph 30: Self-sacrifice scores per length of service**



## Appendix 8

### Average country scores for PSM and its constituting dimensions

Source: Vandenabeele, W. and Van de Walle, S. (2008), *International Differences in Public Service Motivation: Comparing Regions Across the World*

<b>Country (Region)</b>	<b>PSM</b>	<b>Politics and policy</b>	<b>Compassion</b>	<b>Self-sacrifice</b>
Australia (AUS)	5.25	5.20	5.36	5.12
Austria (WEU)	5.16	4.84	5.48	5.08
Brazil (SAM)	5.49	5.15	6.35	4.36
Bulgaria (EEU)	4.17	3.90	5.12	2.57
Canada (NAM)	5.31	5.45	5.34	4.98
Cyprus (SEU)	5.09	5.06	5.49	4.34
Czech Rep (EEU)	3.97	3.74	4.40	3.59
Denmark (NEU)	4.90	4.65	5.28	4.61
Finland (NEU)	4.22	3.77	4.66	4.14
Flanders (WEU)	4.40	4.18	4.81	4.10
France (WEU)	4.84	4.83	5.03	4.54
Germany (WEU)	4.72	4.49	5.13	4.32
Great Britain (WEU)	4.58	4.30	4.96	4.28
Hungary (EEU)	4.13	3.90	4.34	4.25
Ireland (WEU)	5.28	4.99	5.81	4.79
Israel (MEA)	5.10	5.27	5.46	4.00
Japan (ASI)	4.74	4.82	4.86	4.33
Latvia (EEU)	4.34	4.08	4.85	3.74
Mexico (SAM)	5.50	5.39	6.34	4.02
Netherlands (WEU)	4.94	4.90	5.29	4.27
New Zealand (AUS)	4.65	4.67	4.73	4.42
Norway (NEU)	4.83	4.83	5.17	4.13
Philippines (ASI)	5.56	5.82	5.63	4.87
Poland (EEU)	5.03	4.88	5.66	3.85
Portugal (SEU)	5.63	5.33	5.93	5.53
Rep of Chile (SAM)	5.33	4.89	6.27	4.13
Russia (EEU)	4.57	4.69	4.74	3.94
Slovak Rep (EEU)	4.59	4.08	5.30	4.17
Slovenia (EEU)	4.83	4.29	5.33	4.87
South Africa (AFR)	5.51	5.41	5.62	NA
South Korea (ASI)	4.93	5.03	4.71	5.15
Spain (SEU)	5.40	4.85	5.94	5.36
Sweden (NEU)	4.77	4.68	4.96	4.55
Switzerland (WEU)	4.98	4.61	5.38	4.91
Taiwan (ASI)	5.00	4.86	5.24	4.78
United States (NAM)	5.29	5.38	5.43	4.81
Uruguay (SAM)	5.42	5.18	6.11	4.46
Venezuela (SAM)	5.44	5.20	6.55	3.47