

Greater Than the Sum of its Parts:

Exploring the Concept of Team Engagement and How It Emerges in the Public Sector

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Michelle Stiphout
3962563
Email: m.l.stiphout@students.uu.nl

First reader: dr. Ben Kuipers (EUR)
Second reader: dr. Sandra Groeneveld (EUR)
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Utrecht University



Preface

Five years ago I became interested in the study of people at work. Having been exposed to many different opportunities, challenges, work environments, and interpersonal relationships and conflicts within the same organization I became very interested in if and how those aspects of work could be planned, controlled or manipulated. While I was originally focusing on all the 'bad' that can occur at work, I finally realized that I did not want to study what can go wrong in the workplace, but what can go right. We spend most of our adult life working, and having spoken and worked with people who love and those who hate their jobs, I felt that studying why that is would be a very interesting and relevant field of research.

When I first met with Ben and Sandra to discuss working together for my tutorial paper I introduced my study interests as "I want to study what makes people happy at work." They responded with, "have you heard about work engagement?" which took me down a rabbit hole which I hope to be emerging from any day now. Work engagement, and ultimately team engagement, focuses on the positives which come from people being energized, passionate and motivated by their work. Everyone has experienced engagement towards some kind of work, but being able to put your finger on exactly what it is and what causes it is what I set out to study. This paper allowed me to just scratch the surface of the dynamic concept of team engagement, but I know that what I have discovered will go with me in my future endeavours as I seek to always try to be an engaged worker and hopefully part of an engaged team.

I would not have survived to this point in my Master's thesis without the help of a team of my own. First of all, my supervisors Ben and Sandra have been amazing tutors and mentors throughout this research adventure. They have allowed me to explore my interests while giving me the much-needed support and direction that I require. I feel very blessed to have had them in my corner. Secondly, to the survey and interview participants, this thesis wouldn't exist without my data – so thank you. I must also thank Brenda, Joost, and Josh for their help during my analysis, reviewing my thesis and helping me prepare for my defense.

To my classmates from the Research Master's program; I have enjoyed the company and learnt something from each and every one of you – I'm glad we were able to take on this program together. In addition, I would also like to thank the professors in the program. I feel very honored to have been able to learn from you. My friends and family are the next to thank. Those both near and far have supported, encouraged and kept me sane over the past two years. I extend a special thanks to my Aunt and Uncle who brought me into their home when I started my cross-continental journey and always made sure that I had my necessary boosters of family time.

Last but not least, an enormous thank you to my parents for their continued and unwavering support of their adult child returning to school. And finally to my editor, confidant, cheerleader and sushi supplier – Matt, to you my gratitude is endless.

Executive Summary

“We may wonder why something as tangible as ‘team spirit’ or a feeling of ‘team work’ develops in some teams and not others.” This is an important question as teams are increasingly becoming a necessary component of many employees’ work lives. Work teams have been found to be able to accomplish more and be more effective than employees working on their own. However, some teams, as alluded to above, have a little something extra than the added productivity of the average team. It is this ‘something extra’ which this study investigates. Team engagement is a concept where the team itself functions as an engaged unit. Engaged teams, to describe them succinctly, are greater than the sum of their parts. Team level engagement is a new area of study, particularly relating to teams in the public sector; therefore, this thesis would like to know: *What is team engagement in the public sector and how does it emerge?*

The research question was addressed in two parts. First, team engagement was conceptualized and operationalized in Chapter 2. This study conceptualized team engagement as being characterized by the spark, team spirit and energy which is seen in some teams, and that those teams are engaged towards three objects of engagement: team task, team goal and team membership. A measurement tool was created to test the three objects of team engagement and the tool was validated through an exploratory factor analysis, a confirmatory factor analysis and construct validity tests. The results verified a three-factor structure for team engagement consisting of team task, team goal and team membership engagement. In addition, team engagement was found to be independent from similar concepts such as individual work engagement, team cohesion, and team commitment. Contrary to predictions team engagement was not found to have a relationship with public service motivation measured at the team level.

The second part of the study focused on the emergence of team engagement in public sector teams. Informed by the theoretical background, a model of emergence was developed from past theory and qualitative interviews with a high performing team in the public sector. The results indicated that the context (including being in the public sector), as well as four clusters of characteristics, may influence the levels of team engagement. Team composition, including the team leader and the characteristics of the individual team members, was found to be related to team membership and team task engagement as they influence the working relationships built between the team members. The team’s level of interdependence was the second cluster. Task dependency was found to be related to team task and team membership engagement and goal dependency was related to team goal engagement. A safe and respectful team atmosphere was the third cluster of characteristics, which reflected the working relationship of the team and how the team atmosphere can support the emergence of team engagement. Finally, the internal relations, which included three team processes: collaboration, communication and cohesion, was the final cluster of characteristics. The internal relations influenced all three objects of engagement.

Team engagement was found to be characterized by a team’s engagement towards their tasks, goals and team membership which is influenced by the team’s context, composition, interdependence, team atmosphere and internal relations. While the generalizability of the findings are limited based on the

small sample size, the factors are consistent with previous team and engagement literature and provides a strong basis for future research into team engagement. Implications of this study on future research includes the unique contribution of team engagement research in the public sector, the confirmation that team engagement is a separate construct from individual work engagement, and the proposal that team engagement is represented by engagement towards three objects of engagement.

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Chapter 1 Introducing Team Engagement in the Public Sector

1.1 Introducing Team Engagement

"Talent wins games, but teamwork and intelligence wins championships."

- Michael Jordan

And he should know. Arguably one of the best basketball players of all time, it may seem that Michael Jordan won games and championships all on his own. Despite this perception, he acknowledges that the talent of one person can only take you so far. This is an occurrence which is not only unique to sports. Teams have become a standard and important part of the organizational landscape (Salanova, Llorens, Martínez & Schaufeli, 2003; Van Mierlo, Vermunt & Rutte, 2009). Various studies have found that work teams accomplish more and are more effective than employees working on their own (Wildman, Thayer, Rosen, Salas, Mathieu & Rayne, 2012; Marks, Mathieu & Zaccaro, 2001).

While teams can be defined in many different and complex ways, in its simplest form, a team can be defined as "two or more individuals interacting adaptively, interdependently, and dynamically toward a common and valued goal" (Wildman et al., 2012, p. 98). This definition of a team, interestingly, does not assume that teams will be successful. While work teams can provide many advantages for an organization, such as increasing productivity, efficiency, and innovation, just having work teams does not guarantee success (Rousseau, Aube & Savoie, 2006; Torrente, Salanova, Llorens & Schaufeli, 2012a; Groeneveld & Kuipers, 2014). So, what does guarantee success? Teams are complicated and can be very challenging to understand, not to mention the fact that there are many human and team characteristics which can influence team productivity and success (Campion, Medsker & Higgs, 1993; Kozlowski & Bell, 2003). These are challenges faced not only by employers trying to build successful and productive teams, but also ones faced by the academics trying to study them. Even with these challenges; however, it has been found to be worthwhile to delve into the world of studying teams because the benefits of understanding the processes and strategies that lead to successful teams is a relevant area of study that pays great dividends (Cohen & Bailey, 1997; Van Mierlo, Vermunt & Rutte, 2009; Kozlowski & Ilgen, 2006; Kuipers & Groeneveld, 2014). Successful teams have been found to have positive outcomes for employees such as higher satisfaction, improved productivity, and increased feelings of influence over their work (Strubler, & York, 2007, p. 2). The positive employee outcomes which result from working in teams not only impacts the individual's work experience, but also has positive outcomes for organizations through increased efficiency and productivity at the organizational level (Cohen & Bailey, 1997), retention of good staff, and improved customer service (Strubler, & York, 2007). While all these benefits are great, they are not guaranteed when teams are created as there is more to implementing successful teams than just setting up the proper structure (Kuipers, 2005). Because of the potential, but not guarantee, of success with work teams, teams and the many factors which can influence teams have been studied a great deal in the past 25 years (Kuipers, 2005). Team dynamics, tasks, goals, environment, self-management and leadership are but a few of the many complicated factors and team characteristics which work together or against each other to produce highly a productive or disastrously unsuccessful team (Kuipers & Groeneveld, 2014; Campion et al., 1993).

One factor that focuses on the positivity that can arise from working with others is a concept called team engagement. Team engagement, simply defined, is the spark, team spirit and energy which is found in some high performing teams. While still a relatively new concept, only being researched at the team level as recently as 2012 (Torrente, Salanova, Llorens, & Schaufeli, 2012a, b; Costa, Passos, & Bakker, 2012), it builds off the study of teams and the concept of work engagement to represent a work team with a shared sense of engagement towards their work. Engaged teams are something more than just successful teams and more than just engaged team members – they are a unique entity which ends up being greater than the sum of its parts (Larson & LaFasto, 1991). An engaged team is not only effective and efficient, but they are also successful within the dynamics of the team and the team environment. An engaged team environment can include benefits such as team member retention, adequate conflict management, and a better overall approach to their work (Costa et al., 2014b; Costa et al., 2012). Unengaged teams can still have good, hardworking team members, but without the 'entire package,' those team members alone are unlikely to change the status of the team. So what is the difference between an engaged team and a group of engaged individuals?

It is clear that engaged teams can provide many benefits to both team members and organizations. This is of particular interest in the public sector where, since the 1980's, there has been increased pressure to function within a more private sector, 'business-like' model while still existing within a very different work sector and environment (Pollitt & Bouckaert, 2011; Groeneveld & Kuipers, 2014). Therefore, public sector organizations have been faced with trying to find a solution to the challenges placed on them by politicians who "wanted civil services which were more flexible and responsive, more focused on getting results, more skillful and, if possible, less numerous (and therefore less expensive in total)" (Pollitt & Bouckaert, 2011, p. 89). One solution was to become more efficient through human resource management (Pichault, 2007). This reinforces the importance of understanding the mechanisms at play when using teams and trying to provide the context and support for high performing, engaged teams in the public sector. Important differences between the public and private sector such as the motivations to work in the public sector, the type of people drawn to working in the public sector, the resources available to public sector organizations and the pressures put on public sector organizations by stakeholders are all reasons that this paper is acknowledging the differences between the public and private sector and specifically studies engaged teams in the public sector. These are important differences that may influence the level of engagement within a team, as work engagement has been linked to the work environment and job and social supports (Bakker, 2011; Bakker, Demerouti, & Xanthopoulou, 2012).

Chapter 1 will provide an introduction to team engagement in the public sector by exploring its theoretical background in section 1.2, describing the value of conducting research on team engagement in the public sector in section 1.3 and finally presenting the research design including the research questions and methodology in section 1.4.

1.2 Background

Team engagement is a concept that incorporates the concept of work engagement at the individual level with team processes and characteristics to represent a team level concept. This concept can be considered unique from the concept of work engagement at the individual level or a collection of

engaged individuals. Additionally, team engagement is unique from similar team level concepts such as team cohesion and commitment. The following three sections introduce the background literature on teams, work engagement, and the public sector which was used to conceptualize team engagement in the public sector.

1.2.1 Teams

To expand on the definition provided in the introduction, Cohen and Bailey (1997) define work teams as:

A collection of individuals who are interdependent in their tasks, who share responsibility for outcomes, who see themselves and who are seen by others as an intact social entity embedded in one or more larger social systems (for example, business unit or the corporation), and who manage their relationships across organizational boundaries. (p. 241)

The academic literature on teams offers a fairly consistent consensus on the definition of what a team is; however, in practice teams come in all different shapes and sizes and can be very diverse, further complicating the feat of answering the seemingly basic question of 'what is a team?' (Wildman et al., 2012). That being said; there are certain key elements of teams which can help understand exactly what a team is. Some of those elements are task design, including task dependency and goal dependency (Cohen & Bailey, 1997; Wildman et al., 2012; Campion, Medsker & Higgs, 1993), team type, group composition (Cohen & Bailey, 1997) and internal relationships (Cohen & Bailey, 1997; Carless & De Paola, 2000). A team's task design plays a large role in determining what kind of team it is. Elements of task design can include task type and task dependency. The core characteristics of a team go beyond simply what the team does, (task type) but also how they do it (Wildman et al., 2012). Task dependency, related to the how of task type, is the degree of interdependence between team members to accomplish that task, and is related to goal dependency, which similarly is the degree of interdependence between team members when accomplishing a goal (Campion et al., 1993).

While the type of task that a team engages in influences the type of team it is, those two concepts are conceptually different as a team's tasks are not sufficient to determine what kind of team it is (Wildman et al., 2012). The 'type' of team addresses the diversity in the function of the team. Acknowledging these differences is very important as different types of teams have different characteristics and therefore require different approaches when working with and managing them. As highlighted by Cohen and Bailey (1997), "The type of team matters for the determinants of effectiveness. By distinguishing among types of teams, this review clearly indicates that the variables that are studied and the findings that are captured vary for different types of teams." (p. 281). Cohen and Bailey (1997) identify four types of teams: management, project, work and parallel teams. In addition to these types, a lot of research has been done into the classifications and taxonomies of team types, and there are a number of different ways that teams can be classified (Wildman et al., 2012; Larson & LaFasto, 1990; Devine, 2012). While team engagement can occur in any type of team when teams are mentioned in this thesis, it is referring to work teams which are characterized as usually having stable, full-time and well-defined membership (Cohen & Bailey, 1997, p. 242).

Group composition and internal relationships refer to the interdependent nature of teams. Group composition includes the size and diversity of a team and internal relations relates to the relationship

between team members and quality of their cooperation (Cohen & Bailey, 1997; Carless & Paola, 2000). Because there are many human characteristics which can influence team dynamics and team productivity, team interactions are complicated phenomena. Factors such as individual team members, team leaders and organizational structure, in combination with the other team factors, can work together to result in a high performing or engaged team, or an unsuccessful one.

1.2.2 Work Engagement

Positive psychology is a psychological perspective which emphasizes what people are doing right instead of what they are doing wrong (Bakker & Daniels, 2011). Individual work engagement falls within the realm of positive psychology because it is considered to be a positive work state in which employees are enthusiastic, productive, vibrant, and of course, engaged. A relatively new concept, work engagement was only formally introduced in 1990 by Kahn who described it as the "harnessing of organizational members' selves to their work roles: in engagement, people employ and express themselves physically, cognitively, emotionally and mentally during role performances" or in simpler terms, people work hard because they identify with it (p. 694 as cited in Schaufeli & Bakker, 2010, p. 12). While initially it received little academic attention, work engagement has been studied more extensively in the past ten years and since 1990 has developed into four main streams: (a) Kahn's Model of Personal Engagement; (b) Maslach and Leiter's Work life Model; (c) Bakker and Schaufeli's concept of Work Engagement based on the Job-Demands Resource Model; and (d) Harter et al.'s Employee Engagement Model (Simpson, 2009). The concept of work engagement conceptualized by Schaufeli, Bakker and colleagues is arguably one of the most well-known and utilized forms of engagement used in academics, as indicated by the use of the scale they developed to measure individual work engagement, the Utrecht Work Engagement Scale (UWES) whose user manual has been cited 345 times since 2003 (Searched June 26, 2014). This paper follows Bakker and Schaufeli's stream of work engagement and while it can be informally described as the extra 'spark' an employee feels towards their work; officially it is defined as:

Engagement is a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption. Rather than a momentary and specific state, engagement refers to a more persistent and pervasive affective-cognitive state that is not focused on any particular object, event, individual, or behavior. Vigor is characterized by high levels of energy and mental resilience while working, the willingness to invest effort in one's work, and persistence even in the face of difficulties. Dedication refers to being strongly involved in one's work and experiencing a sense of significance, enthusiasm, inspiration, pride, and challenge. Absorption is characterized by being fully concentrated and happily engrossed in one's work, whereby time passes quickly and one has difficulties with detaching oneself from work. (Schaufeli & Bakker, 2003, p. 4)

There are a number of benefits of work engagement. Engaged employees have been found to have higher job satisfaction and motivation, and being engaged at work has been identified as a buffer against stress and burn-out (Bakker, Emmerik & Euwema, 2006). Time and time again engaged employees are found to have significant benefits to the organization and their co-workers, as well as the positive effects on themselves (Bakker et al., 2012; Leiter & Bakker, 2010; Sonnetag, Dormann, Demerouti, 2010). While work engagement shares some overlap with similar concepts such as extra-role

behaviour, personal initiative, job involvement, organizational commitment, job satisfaction, positive affectivity, flow, and workaholism, none of these individual concepts completely encompass the unique traits of work engagement (Schaufeli & Bakker, 2010, p.13). For example, work engagement is unique from extra-role behaviour because engaged employees bring something different to their jobs, they do not just do more. Likewise, while engaged employees most likely experience flow (i.e., a state of optimal experience that is characterized by focused attention, effortless concentration and a loss of self-consciousness), flow is considered as a short-term experience while work engagement is a more pervasive state (Schaufeli & Bakker, 2010, p.15). Therefore, work engagement has been found to be a distinct and separate entity from these other concepts.

An engaged employee may be described as involved, committed, passionate, enthusiastic, and having focused energy and effort (Bakker & Leiter, 2010, p.11). In fact, energetic is a good descriptor for work engagement. Engaged employees are not only energetic people, but they also have the ability to apply that energy to their work, "they do not hold back" (Bakker & Leiter, 2010, p. 2). These descriptors may give the impression that work engagement is a personality trait; however, this is not the case. While there are certain personality traits which may often be seen in engaged employees, work engagement is described as a 'relatively stable state of mind' (Seppälä et al., 2009, p.3). Work engagement is considered to be more stable than work-related emotions but less stable than personality traits (for example the big five personality traits: openness, conscientiousness, extraversion, agreeableness, and neuroticism) (ibid). Although described as "relatively durable over time," it has also been argued and found that having the full, three-dimensional state of work engagement may be more of a transient state than initially thought (Sonnentag, Dormann & Demerouti, 2010, p. 26). One of the characteristics and positive benefits of work engagement is its buffer against burnout and stress and its positive crossover which can potentially influence other employees working with the engaged individual (Bakker et al., 2006). This 'positive crossover' aspect of work engagement shows how an engaged individual can influence those working around them and creates a feasible argument that an engaged team could transfer that individual work engagement to new members or continue to sustain engagement in current members.

1.2.3 Public Sector

We are studying team engagement in the public sector is because while there are similarities across sectors and with all teams, there are also important differences in the attributes and mechanisms which are unique to the public sector. While it has been the target of scholarly study for many years (see the sociological work of Max Weber and Robert Merton) studying teams in the public sector became particularly relevant since the introduction of New Public Management (NPM) and the public management reforms which came along with the post-NPM organizational concepts in the sector (Pichault, 2007; Hood, 1991; Pollitt & Bouckaert, 2011). Despite this added relevancy, teams in the public sector have been surprisingly understudied with most of the research focusing on the sector or organizational level (Kuipers & Groeneveld, 2014) or the individual level (Perry 1996).

Amidst budget cuts and public scrutiny, public service organizations needed to find a way of meeting the needs of their stakeholders (including government officials and taxpayers) while providing a higher level of customer service to the public (Kuipers & Groeneveld, 2014). The challenges of public sector

organizations include the difficulties associated with trying to implement and use private sector management principles while still functioning within the realm of the public sector sphere. Important public sector values such as legitimacy and adaptability can be neglected when trying to focus on the primarily output focused business model characterized by the "do more with less" attitude being placed on public organizations, not only from the government, but also from the public themselves (Melián-González & Bulchand-Gidumal, 2009).

Therefore, public sector organizations face not only different challenges than teams in the private sector, but at times, a completely different frame in which their work situation is built around. Although these differences are known, there has been very little research specifically done on teams in the public sector, with the exception of health care teams (Kuipers & Groeneveld, 2014). Studying engaged teams in the public sector will give us unique insight into not only public sector teams in general, but also hopefully how these teams become and remain engaged within a sector that has different values, expectations and resources than those available in the private sector.

1.3 Value (theoretical and practical)

A key question posed by this thesis is: why is it important to study team engagement in the public sector? Although work engagement has been studied at great length over the past ten years, (Bakker & Leiter, 2010; Salanova et al., 2003; Demerouti, Bakker, De Jonge, Janssen, & Schaufeli, 2001) team engagement is a concept that is still largely seen as a 'black box' in the organizational sciences literature (Costa, Passos, & Bakker, 2012). There is a gap in the literature about exactly what a conceptualization of work engagement looks like at the team level as a team construct. Work engagement has been looked at in a collaborative way by analyzing individual work engagement at a collective level – but that is not the same thing as team work engagement and, as a result, would provide a skewed or inaccurate portrait of an engaged team vs. a team consisting of engaged individuals (Torrente et al., 2012b).

It is important to study team level engagement because there are inherent qualities in teams that can support or sabotage team engagement. Therefore, it is not only important to study team engagement to be able to understand what the concept of work engagement looks like at the team level, but also to learn what the determinants, indicators, and consequences of team engagement are. Further, as team engagement is a team construct we believe that it needs to be studied using team theory and concepts which are overlooked if team work engagement is being conceptualized and studied as a group level of the individual level construct.

Taking a step away from other research into team engagement, this thesis surmises that there are three potential objects which a team can be engaged towards. Not only does the addition of these objects provide insight into the team level mechanism, but they also allow us to provide a distinction when studying team engagement in the public sector. In particular, we believe that by singling out the different potential objects of engagement that we will be able to identify the factors which may be driving the engagement of teams in the public sector. This is an important identification to make as the factors driving team engagement in the public sector may not be consistent with the drivers of engagement in other sectors. Therefore, this study has both theoretical and practical value. The theoretical value is the contribution to the team engagement literature. This will be achieved not only

because we are focusing on team engagement in terms of team characteristics, which incidentally has also recently been studied (see Costa et al., 2014a) and because it is being studied in the public sector; but also because we are proposing a unique conceptualization of team engagement that includes three objects of engagement.

This distinction transitions us to the practical value of this study. There are obvious and relevant benefits of engaged teams. Particularly in the public sector where values and work motivators may be quite different than the private sector (e.g., salary vs. public values) (Boyne, Jenkins & Poole, 1999) being able to capitalize on good workers and good working environments is crucial. Based on the already validated and frequently used Utrecht Work Engagement Scale (UWES), this paper develops a measurement scale which measures team engagement towards the three objects of engagement. This measurement scale can be used by both scholars and practitioners. Because of the separation of the objects of engagement, the scale could be used by team leaders or managers to measure a team's overall level of engagement or to take a look at the different objects of engagement and identify what are the strongest drivers of engagement and in what areas the team is less engaged.

1.4 Research Design

The broad aim of this research is to study engaged teams in the public sector. Specifically the goals of this thesis are to conceptualize the concept of team engagement, to develop a measurement tool to measure this conceptualization, and to investigate and understand how and why team engagement emerges in teams in the public sector. To do this, one main research question which breaks down into four research questions, have been proposed:

What is team engagement in the public sector and how does it emerge?

RQ1: What is the 'object' of engagement of the team?

RQ2: Is team engagement unique from being a collection of engaged individuals?

RQ3: Is team engagement empirically unique from other similar concepts?

RQ4: How does team engagement in the public sector emerge?

The research questions will be addressed in two separate chapters using a mixed method design. The first part of Chapter 2 'Concept Development and Measurement' provides the background and theoretical framework for the concept of team engagement. It introduces three potential objects of engagement and provides the conceptualization and operationalization of team engagement. The second part of Chapter 2 is dedicated to the development, testing and validation of a team engagement measurement scale.

Chapter 3 investigates the factors, mechanisms and processes which are involved in the emergence of an engaged team through qualitative interviews with a high performing team in the public sector. Being able to identify how team engagement emerges provides potential real life and practical tools which practitioners can take into consideration when working with their teams in the public sector. Being aware of team engagement, its dimensions, objects of engagement and determinants are all tools that practitioners can use to try to foster and maintain team engagement in their organizations. The results and discussion from chapters two and three will be analyzed and reflected on in the final chapter to

provide overarching conclusions about team engagement as well as identifying limitations of the research and future steps in studying team engagement in the public sector.

Chapter 2 Concept Development and Measurement

2.1 Introduction: Research Question 1

As introduced in Chapter 1, teams are now and have been for a long time an indisputable fact in the organizational landscape. Likewise, the topic of engaged employees in the workplace has received increased attention and importance in the last 25 years. While the concept of individual work engagement has been looked at and conceptualized in four primary ways: personal engagement, burnout/engagement spectrum, work engagement and employee engagement (Simpson, 2009), studying engagement on the team level has only become a research focus in recent years (Torrente et al., 2012a, b; Costa et al., 2012; Costa et al., 2014a, b). This thesis plans to investigate further the relatively new concept of team engagement to be able to understand “what is team engagement in the public sector?” Chapter 2 will be focused on the first part of the main research question:

What is team engagement?

To answer this research question Chapter 2 concentrates on the conceptualization and measurement of team engagement. The main research question has been broken down into four questions, three of which will be addressed in this chapter:

1. *What are the ‘objects’ of engagement?*
2. *Is an engaged team unique from a team of engaged individuals?*
3. *What is the relationship between team engagement and similar concepts?*

Chapter 2 is dedicated to answering the three research questions which will allow us to answer the first part of the main research question “what is team engagement?” Question one, “*What are the objects of engagement?*” will explore and test the factor structure of the measurement tool developed in this chapter. Section 2.3 describes the development and testing of the measurement tool and section 2.4 tests its factor structure. Question two, “*Is an engaged team unique from a team of engaged individuals?*” is answered in section 2.5 when we look at the relationship between team engagement and individual work engagement. Finally, question three, “*What is the relationship between team engagement and similar concepts?*” examines the construct validity of the scale by looking at the theoretical and empirical relationships between the objects of engagement and the similar team concepts of cohesion and commitment. In addition, the relationship between the objects of engagement and the public sector will be tested by using the concept of public service motivation measured at the team level. The construct validity tests are also presented in section 2.5.

The conceptualization and measurement of team engagement is a crucial first step in being able to identify exactly *what is* team engagement in the public sector. Chapter 2 builds off the background and history of work engagement and teams provided in Chapter 1 and through the theoretical background and conceptualization of team engagement transition to the development of the proposed team engagement measurement tool. To be able to empirically study the concept of team engagement as it had been proposed in this thesis, we must have a way to measure it. Therefore, the purpose of Chapter 2 is to present a reliable and valid team engagement scale. The second part of Chapter 2 is dedicated to the development, testing, and analysis the team engagement scale. The chapter ends by answering the

question “what is team engagement in the public sector?” and by providing the next steps involved in allowing us to answer the question “how does team engagement emerge in the public sector?”

2.2 Theoretical Background

“For modern organizations, mental capital is of increasing importance. Therefore they do not need a merely ‘healthy’ workforce but a motivated workforce that is ‘engaged’” (Schaufeli, 2011).

Although a relatively unheard of concept in organizational sciences prior to Kahn’s introduction in 1990, the concept of ‘engagement’ has become quite trendy in recent years. When googled, the term ‘work engagement’ received 517,000,000 hits, this is due in large part to the popularity of the concept within the consultancy world. In contrast, when searched in PsychINFO ‘work engagement’ only received 701 text results (May 1, 2014). This helps illustrate how although the study of engagement within academics has increased significantly over the past ten years, it has also become a catch phrase to promote increased performance and employee satisfaction in the consulting sector.

Even with the significant increase in academic interest and research into teams and work engagement, the concept of collective engagement or team engagement has received very little attention. Collective engagement and the impact of an engaged worker on colleagues has been studied to a certain degree (Salanova, Llorens, Cifre, Martínez, & Schaufeli, 2003). However, it was not until 2012 that Bakker, Schaufeli and colleagues really took a discerning look at how engagement can be conceptualized, measured and studied at the team level instead of as a collective of individuals. Addressing the challenges of measuring a team level construct based on the experiences of individuals, Torrente et al. (2012b) applied a ‘referent shift’ to their individual work engagement questionnaire, the Utrecht Work Engagement Scale (UWES), to measure team work engagement. They shifted the survey items’ focus from the individual to the collective, asking the individuals to rate team properties rather than report on their personal experiences. We use a similar referent-shift strategy with the measurement tools in this chapter. Bringing the three dimensions of work engagement to the team level team engagement was identified as being “a shared, positive, fulfilling, affective-motivational emergent state of work related well-being” (Costa et al., 2012, p.6). Like individual engagement, team-level engagement was proposed to be a multidimensional construct characterized by collective vigor, dedication and absorption.

Team vigor describes a team’s energy. Defined as “shared high levels of energy and an expression of willingness to invest effort in work and persistence in the face of difficulties (e.g., conflict, bad performance)” (Costa et al., 2012, p. 6), examples of team vigor include team members encouraging colleagues or explicitly expressing their desire to continue working. **Team dedication** is a team’s shared, strong involvement in work. For these team members it is “an expression of a sense of significance, enthusiasm, inspiration, pride and challenge while doing so.” Examples of team dedication include team members talking to each other and to others (external to the team) about the importance of their work and the thrill they feel towards it (Costa et al., 2012, p. 7). **Team absorption** reflects a team’s shared focused attention on work. This is evident from team members who experience and express difficulties detaching themselves from work, for example, “talking about their work during breaks, commenting on time passing quickly and not engaging in non-work related interactions when working” (Costa et al., 2012, p. 7).

An important feature of team engagement is that it is not an individual construct aggregated to the team level. Although being functionally similar to work engagement, team engagement is a different concept structurally (Costa et al., 2012). Therefore, unlike concepts which are functionally equivalent across levels and can be appropriately operationalized as the sum or average of the individual construct to determine the team level construct, team engagement requires a separate operationalization and therefore conceptualization (Bell, 2007).

2.2.1 What is Team Engagement?

Building off the foundation built by Torrente, Costa and colleagues this paper provides a unique contribution to the engagement literature by delving deeper into the potential targets of engagement at the team level. We propose three objects of engagement at the team level which a team may be engaged towards: the job tasks, the team's work goals, and the team or team members themselves. Looking at team engagement through this lens allows us to address the specific elements which are a part of team engagement moving us a step closer to answering the question: *What is team engagement in the public sector?*

Engaged teams can provide many benefits to both team members and organizations. Benefits of team engagement include team and organizational outcomes such as: increased task and team performance, a decrease in turnover intention and sickness absence, a positive organizational climate, an increase in collective positive affect and efficacy beliefs, and an increase in individual work engagement (Torrente et al., 2012a; Costa et al., 2014a). Engaged teams are special and unique because they have that 'little something extra', extra energy, motivation and appreciation that a team shares towards their job and their work (Kuipers & Groeneveld, 2014). Unique from similar concepts such as team cohesion, or team or organizational commitment, team engagement encompasses those traits but offers something extra (Larson & LaFasto, 1989; Schaufeli & Bakker, 2010). It is the motivation, energy, drive and support which comes from being a part of an engaged team which distinguishes it from other similar concepts. Team engagement is most easily described in terms of sports teams. These are teams where the team unit itself is stronger than any individual player and the mentality shared by each member is to do your best and what is in the best interest of the team. It is a challenging concept to capture and conceptualize because of the many variables and factors which influence the definition of a team and the concept of collective engagement. However, we try to do so in the following sections.

In their 2012 chapter on developing a scale to measure team engagement Torrente and colleagues defined team work engagement as "a positive, fulfilling, work-related shared-state that is characterized by teamwork vigor, dedication, and absorption which emerges from the interaction and shared experiences of the members of a work team" (p. 338). Building off this definition, we originally conceptualized team engagement to include an additional feature which was believed to be present and unique to team engagement. Implied in the dedication dimension, the concept of **loyalty** was believed to be present in an engaged team. Loyalty was believed to be the binding agent necessary for team engagement to occur, a factor which could influence all members' engagement and which was unique to the team.

However, further discussion and research into team engagement identified another dynamic element which was not being addressed in the definitions provided above; this being the *object* of a team's

engagement. When critically examining the dimensions of team engagement patterns emerged which reflected a focus on the different objects of engagement within a team. For instance, loyalty could be operationalized as engagement towards one's team members or dedication could represent motivation towards a team's goals. Therefore, we felt that the current conceptualization and definitions of team engagement are missing a crucial element in understanding engaged teams, which is the *object* of engagement. Re-evaluating the concept of loyalty in the conceptualization of team engagement was the point of departure which expanded our thinking to include the potential targets of engagement in engaged teams. By asking the questions, "who or what is the team loyal and dedicated towards?" and, "who or what is causing the team's vigor and absorption?" three potential targets, or objects of engagement, were identified. The three objects of engagement are explained in more detail in the next section.

2.2.2 Objects of Engagement

Having outlined the background and dimensions of team engagement we will now describe and define the objects of engagement. The objects of engagement need to be appropriately defined as they act as guides, along with the three dimensions of engagement, in the scale development.

Contrary to the findings of Schaufeli and colleagues (2002) who state that work engagement is a "pervasive affective-cognitive state that is *not focused on any particular object, event, individual, or behavior*" (p. 465, emphasis added), this paper offers a unique contribution to the engagement literature by delving deeper into the specific focus of engagement within a team. The statement above claims that work engagement is not focused on any individual aspect of work and that instead it is representing the complete work experience. We believe this is a simplification and contend that there are many aspects of a team's job to which one might feel engaged towards. Unlike individual work engagement, an engaged group or team contains certain characteristics that are contingent on being a part of a collective. The three objects of engagement were developed by looking at the already existing dimensions of team engagement developed by Torrente et al. (2012a) and working with specific team characteristics to try to build an understanding of exactly what work engagement looks like at the team level. The team concepts which contributed to the conceptualization of team engagement included task and goal dependency (Campion et al., 1993), joint management (Kuipers, 2005), loyalty (Dooley & Fryxell, 1999), cohesion (Carless & De Paola, 2000), internal relations (Kuipers, Groeneveld, Ashikali, & Bronkhorst, 2014) and public service motivation (Kim et al., 2013). The relationship between the team characteristics and the objects of engagement are described in turn below.

Team Task Engagement

Our conceptualization of task engagement is consistent with previous studies conceptualization of the concept of team engagement as a whole. Task engagement refers to the team's work activities which are done on a regular (daily or weekly) basis. They are not only the activities that make up the 'work' or the job being performed, but also the process of those activities being completed. The composition of team task engagement refers not only to the tasks themselves but also the interdependence of those tasks within the team and the level of accountability on the team members to complete those tasks. It is the general sentiment which the team feels towards their work tasks. For example, do team members approach a work activity in a positive, enthusiastic or happy manner, or do they treat it like a chore? Is

there really a shared responsibility towards the team tasks or do they end up falling on specific team members, affecting the team's level of engagement towards that task? Team task engagement aims to look at the general attitude and approach of team members to the various tasks which make up their job. Here we will investigate how engaged the team is towards the work activities which they engage in every day.

Team characteristics such as task dependency and joint management contribute to the understanding of team task engagement as an object of team engagement. Task dependency is the degree to which team members depend on each other to accomplish their tasks (Campion et al., 1993), and joint management is "the extent to which the team manages internal processes and common accountability" (Kuipers, 2005). These team mechanisms inform the definition of team task engagement as an object of engagement.

When developing the scales to address the three objects of engagement it became clear that the items from the original team engagement scale (i.e., the team work engagement scale - TWES) only measured work tasks at the team level, not the work experience as a whole. Therefore the TWES, along with a second validated team engagement scale which was developed to measure engagement within high performing teams, were evaluated and tested to measure the team task engagement items (Torrente et al., 2012b; Kuipers & Groeneveld, 2014). Additional details on the development of the measurement scale are provided in section 2.3.1.

Team Goal Engagement

A team goal is the work goals of the team. Usually consistent with the goals of the organization, a team's goals may be unique to the specific role which they have with the organization. For example, in an organization dedicated to assisting immigrants the goals of one team might be specifically related to empowering immigrant youth. Team goal engagement is the team's attitude towards their team goals. This object of engagement is particularly relevant when looking at teams in different sectors. The goals of organizations in the public, private and not-for-profit sectors are often very different, which may be reflected in how motivated or engaged a team feels towards those goals. The team goal potentially reflects the overarching goal for the work that they are doing showing a sense of commitment or loyalty to 'the cause'.

Goal dependency and public service motivation contributed to the conceptualization of team goal engagement. Goal dependency is a team process which represents how much team members depend on each other to achieve their individual and team goals (Campion et al., 1993). Goal dependency is believed to be stronger if clear group goals exist and if individual goals are linked with overall group goals (Campion et al., 1993). Like team goal engagement, public service motivation (PSM) is also an attitude towards the team goals. Based on the service and community-oriented nature of work in the public sector, PSM reflects the assumption that individuals with an "orientation to delivering services to people with a purpose to do good for others and society" will be drawn to employment in the public sector (Kim et al., 2013, p. 80). Therefore, we are interested in looking into whether engagement toward the team's public goals may also be associated with team's motivation based on public sector values. To reflect PSM at the team level, it will be referred to as Public Service Team Motivation in this thesis.

Three new survey items were developed to measure team goal engagement. The new measurement tool was based on the already validated nine-item team engagement scale so for consistency's sake the same dimensions and items were attempted to be re-created for all three of the objects of engagement. However, when developing the items it became clear that goal engagement was only appropriately reflected in the 'dedication' dimension of team engagement. It was not practical that a team could be vigorous or absorbed towards their team goal; therefore, only three team goal engagement items were included.

Team Membership Engagement

Team membership engagement is a team's engagement and motivation towards the team, the team members and the overall experience of being a part of that team. Team membership is defined not only as the collective of people who are considered to be a part of the team, but also the team unit itself. Members of the team may change, but it is the team itself which remains. The interdependence of the team members may vary, however it should be clear who is and is not a member of the team. The object of engagement refers to the membership of the team as a whole and not being engaged towards specific team members. This is not a surprising aspect of team engagement as the positive influence of individual work engagement on colleagues has been well documented (Torrente et al., 2012a; Bakker, Van Emmerik, & Euwema, 2006). Like members of a sports team, coworkers and specifically team members may feel a strong sense of loyalty, support and responsibility to those they work with. The common expression "there is no 'I' in team" reflects the sentiments of team membership engagement in the sense that team members who feel engaged towards their team and team members may experience strong feelings of loyalty, trust and belonging.

Loyalty, team cohesion and a team's internal relations contribute to the conceptualization of team membership engagement. Up to now the literature does not have an exhaustive and explicit definition of loyalty as it fits into the conceptualization of team engagement. Considered to be a combination of commitment and trust, loyalty in team engagement is more than just a faithfulness earned from offering good pay and benefits, but instead represents the dedication and ownership which team members feel towards their team members and the team itself (Dooley & Fryxell, 1999; Adler & Adler, 1988). Unlike loyalty which is sparsely covered in the team literature, team cohesion has been studied extensively (Greer, 2012). Defined broadly as "the total set of forces keeping group members together," cohesion is viewed as a key component in effective work teams (Carless & Paola, 2000; Tekleab, Quigley & Tesluk, 2009, p. 174). It is a concept which is necessary and implied in team engagement, but which is not a dimension or an object itself, nor is it considered to be sufficient in producing an engaged team on its own. Finally, a team's internal relations refer to the quality of the relationships between team members (Kuipers & Groeneveld, 2014). Made up of key concepts team cooperation and communication, internal relations are believed to be connected with team membership engagement because it reflects the working relationship and team dynamics which the team members share.

Nine new items were developed to measure team membership engagement. Adapted from the TWES (Torrente et al., 2012b) the items were reworded to reflect the team itself as the object of engagement. More information about the scale development is provided in section 2.3.1.

2.3 Measurement

Conceptually, because team engagement only measures the team level of engagement it is a single level construct. Therefore, although based off the same core tenets, team engagement is conceptualized, operationalized and measured differently than individual work engagement. Some individual level constructs are structurally and conceptually similar across different levels. These constructs can often be measured at the individual level, and the individual data collected and aggregated to analyze the team level concept (Bell, 2007). However, when adapting a scale from the individual to the collective, “from the ‘I’ to the ‘we’,” the aggregated individual results will not be able to measure the group concept (Bell, 2007; Torrente et al., 2012b). As team engagement has been identified as a separate concept, it cannot be measured in the same way or with the same tools as individual work engagement. Therefore, to measure this team level construct by collecting data at the individual level a ‘composition model’ is required, which “describes how a construct that is operationalized at one level of analysis is related to another form of that construct at a different level” (Van Mierlo et al., 2009, p. 369).

A scale has already been developed to measure work engagement at the individual level. The Utrecht Work Engagement Scale (UWES) was developed by Schaufeli, Salanova, González-Roma and Bakker in 2002 and is considered to be the most consistently used tool to measure individual work engagement (Torrente et al., 2012b). The UWES is a survey tool which measures work engagement’s three dimensions: vigor, dedication and absorption, in a 17- or 9 item scale (Seppälä et al., 2009). In 2012, Torrente and colleagues looked at the UWES in an attempt to modify it to see if it could also be an appropriate measure for team engagement. The adapted scale acknowledges that team engagement is a structurally unique concept and therefore the TWES collects feedback from team members on how the *team* experiences vigor, dedication and absorption and not how the individual experiences them. The referent shift produced items such as “When my team is working, we forget everything else around us” asking the participants to consider the team and not necessarily their own work engagement. This is an important distinction not only because team engagement is not looking at the individual level of engagement, but also because a team member could perceive their work engagement and their team’s work engagement differently (Van Mierlo et al., 2009). Although so far only tested on university students, the TWES was found to be validated (Torrente et al., 2012b; Costa et al., 2014b).

Despite the fact that there are a number of scales that exist to measure individual work engagement (in addition to the UWES see also: May et al.’s Engagement of the Human Spirit at Work scale, 2004; and the engagement items in the Gallup Workplace Audit, Harter et al., 2002) and Torrente et al.’s 2012 team work engagement scale described above, none of those scales allow for the possibility of measuring engagement towards specific aspects of teamwork. Therefore, to empirically study work, goal and team membership engagement at the team level, we developed a new measurement tool building off validated scales such as the UWES and the TWES, and the engagement items from the High Performing Team’s Survey (Kuipers & Groeneveld, 2014).

Building off the 2013 research project on high performing teams (HPTs) in the public sector by Groeneveld and Kuipers the opportunity was provided to test the team engagement scale as part of the HPT questionnaire which was launched for a second time to collect data from professionals working in the public sector. The study of HPTs in the public sector was conducted with the goal of trying to

understand distinctive characteristics of HPTs, which would allow the researchers to develop targets for a policy aimed at improving team performance (Kuipers & Groeneveld, 2013). To do this, a number of concepts were measured, including of course, team engagement. The other survey items will be elaborated on below.

2.3.1 Scale Development

Item Generation

Four scales were developed to measure team engagement in the public sector. Representing the three objects of engagement two existing scales were tested to measure task engagement (i.e., the TWES and the HPT engagement scale) and two new scales were developed to measure team goal and team membership engagement. The items for the scales were developed through an intensive process including reviewing all currently available engagement scales, as well as scales of similar or overlapping concepts. In the end, the items for the team goal and team membership engagement scales were developed from the two currently existing team engagement scales. Both the HPT engagement scale and the TWES were adapted from the UWES using a referent shift from the individual towards the team (Kuipers & Groeneveld, 2013; Torrente et al., 2012b). This created a strong starting point from which to build the scales for the other two objects of engagement.

Team Engagement Scales

All of the potential scale items were carefully reviewed and, when appropriate, considered as possible items to measure team task, team goal and team membership engagement. As mentioned above, to increase the chance of creating a valid and reliable scale the decision was made to adapt items from complete, validated scales instead of compiling items from independent scales. As the HPT engagement scale and the TWES measure our conceptualization of team task engagement, no changes were made to these scales prior to testing. The items for team goal and team membership engagement were adapted from the two existing scales. Taking into consideration the three work engagement dimensions (i.e., vigor, dedication and absorption), each item was reworded to focus the statement on one of the objects of engagement (e.g., We as a team are proud of the work we do; We are proud of our team goals; The team members are enthusiastic about the team). As many as 20 test items were created for each of the new scales, and multiple wording options were formulated. See Table 1 for an overview of the final survey items organized by engagement object and dimension.

Table 1 Scale construction – Dimensions and objects of engagement

| Object/Dimension | Vigor | Dedication | Absorption |
|--------------------|--|---|---|
| Task | All team members are bursting with energy as they do the work. | My team is enthusiastic about the tasks they must accomplish. | If we are working as a team, we are immersed in our work. |
| | If we as a team are at work, we feel fit and strong. | We as a team are proud of the work we do. | Our work as a team brings us into raptures. |
| | When we get up in the morning, we feel like going to work with the team. | The work we do with our team inspires us. | When we are working intensively as a team, we feel happy. |
| Goal | - | We are proud of our team goals. | - |
| | - | My team is inspired by our team goals. | - |
| | - | My team is enthusiastic about our team goals. | - |
| Team Member | Being a member of this team energizes the team members. | The team members are enthusiastic about the team. | When with the team, we forget everything else around us. |
| | The team members look forward to being with the team. | The team members enjoy being a part of the team. | Because of the team, time flies when we are working. |
| | Being a member of the team makes team members feel strong and vigorous. | The team motivates team members to do a good job. | When being together as team, we feel happy. |

Item Testing

In total, because of the multiple options developed, thirty-nine items were tested in four interviews with five participants, all familiar with scale development and testing (three research masters students, one PhD student and one post-doc). Each item was reviewed and questioned. An interview script was developed prior to testing that included specific questions and probes to provide consistency throughout the survey testing process. Participants selected the version of the items they believed was the strongest and assisted in rewording items if necessary. The interview process was cumulative and newly generated items were tested along with the original items.

The interviews produced four viable objects of team engagement scales. The two already existing 9-item scales for team task engagement (the HPT scale and the TWES), one 3-item team goal engagement scale, and one 9-item team membership engagement scale. The scale for team goal engagement included only three items because when the items were being developed it became clear that ‘team goal’ could only be appropriately represented by the dedication dimension. The final decision about the scales was made in a discussion with the three researchers involved in the study. Because two task engagement scales were tested we needed to determine which was most appropriate for this study. In the end, the HPT task engagement scale was chosen for two reasons. Firstly, because the feedback from the interviews found that the HPT scale items were more focused on the team’s tasks. The second reason was that if necessary, the data could be compared to the 2013 research project (Kuipers et al., 2014). The items for the goal and team membership engagement scales were selected based on the feedback from the interviews about the most appropriate and understandable items.

It is also important to note that all of the items were generated and tested in English then translated to Dutch for the survey. The HPT scale already had validated Dutch items and the other scales had similar items in Dutch, which informed the translations of the English items to Dutch items. The final versions

were translated by a native Dutch speaker and reviewed and edited by two more native Dutch speakers before the scales were finalized.

2.3.2 Data Collection

Online Survey

The team engagement scales were included in the High Performing Teams survey which was distributed to the teams of students from the *Avondopleiding Bestuurskunde* at the Erasmus Universiteit Rotterdam (EUR). The students provided the names of teams in the public sector from whom they wanted to collect data and the email addresses for all the team members. An online survey was developed which generated individual links for all the participants allowing the ability to monitor participation.

The complete survey consisted of 123 items. In addition to the team engagement scales the HPT survey also measured task diversity, task dependency, goal dependency, self-management, team cohesion, task-oriented cooperation, targeted stakeholder cooperation, team commitment, team effectiveness, team efficiency, team legitimacy, transformational leadership, individual work engagement and public service team motivation. Some of the other concepts will be used later as part of the validation of the engagement scales.

Participants were sent individual email invitations to participate in the survey that included a unique link for each participant. The participants were given two weeks to complete the survey, and a reminder email was sent out in the second week to those who had not yet completed the survey. Some participants faced problems accessing the survey link, and these situations were dealt with on an individual basis.

Sampling and Response Rate

Thirty-eight students provided contact information for a total of 41 teams. One student provided information for four teams. The team size ranged from three to 45 team members with an average of 13.8 and a mode of 11 team members. There was a negative relationship between team size and response rate ($r = -.64, p < .001$). After reviewing the complete dataset five teams were eliminated. Four teams were removed because they were from private organizations, and one team was removed because only one team member responded to the survey. In addition, individual surveys that were less than 90% complete were also eliminated from the analysis. The surveys that were 90% complete were included because all of the team engagement items were answered by the 90% point, only the demographic information was not completed and that information was not necessary for the scale validation. Eight incomplete surveys were eliminated.

In total out of the 523 invitations sent out, 320 surveys were completed (61% response rate). While most non-respondents simply did not complete the survey, some indicated that they did not participate because they did not have time, did not feel that they could contribute (e.g., were new to the team, did not consider themselves a member of the team), or because they had trouble accessing the online survey. All participants who indicated they had had problems opening the survey were sent new links; however, there were inevitably some participants who did not pursue the survey further if their initial link did not work. With the incomplete surveys and incompatible teams removed there was a total of 36

teams and 307 respondents (62% response rate) included in the dataset. The number of respondents per team ranged from 2 to 27, with a mean of 8.53 ($SD = 4.90$); and the average response rates varied from 36% to 100% ($M = 69.23\%$). Participants' ages ranged from 20-24 to over 60, with an average of 35-39 years. 52% of the respondents were men (2 missing data), and 85% had a full-time contract. The average number of years respondents had been with their organizations was 12.1 and 5.21 years with their current team ($SD = 10.16$; 6.04).

2.4 Validation

To validate the team engagement measurement scale both an exploratory factor analysis (EFA) and a confirmatory factor analysis (CFA) were conducted. In addition, the construct validity of the scale was tested in section 2.5 by looking at the relationship between the three objects of engagement and individual work engagement, cohesion, commitment and public service team motivation. Although team engagement is a team level construct, the scale was analyzed at the individual level to ensure an adequate number of cases to conduct both an EFA and CFA on the dataset. The intraclass correlations (ICC) were measured to ensure that the scale is justified to be aggregated to the team level. In order to conduct both an EFA and a CFA with the same dataset, the dataset was split into two random samples. A sample of 100 participants was selected for the exploratory factor analysis, a slightly small but still acceptable number of respondents with the Kaiser–Meyer–Olkin and the Bartlett's test of sphericity within an acceptable range ($KMO = .92$; Bartlett's test of sphericity $\chi^2(210) = 2310.58, p < .001$) (Field, 2009). The remaining dataset of 207 participants was used for the CFA. While also a slightly small sample size it was still sufficient to create an adequate model (Byrne, 2010).

2.4.1 Exploratory Factor Analysis (EFA)

The exploratory factor analysis was conducted with a principal components analysis (PCA) using SPSS 21 software. An oblique rotation (i.e., Oblimin) was used because the factors, the objects of engagement, were expected to be related (Field, 2009); however both the rotated and unrotated factor loadings were considered as a part of the analysis. As stated above, the PCA was run on a random sample of 100 respondents. The sample yielded comparable demographics to the complete dataset with the same age range of 20-24 to 60 years and older; however, the most-common age group represented was a bit older at 50-59 years representing 16% of the dataset. Similarly, 54% of the respondents were male (with 2 missing data), 84% had a full-time contract and on average respondents had spent 11.47 years with the organization and 5.45 years with the team ($SD = 8.80$; 5.77).

The correlation matrix from the PCA was examined before looking at the scree plot and factor loadings. In the correlation matrix, we were looking for intercorrelations between the object of engagement items as well as correlations that were too high or too low (above .9 or below .4). None of the items had correlations below .4, however two of the three team goal engagement items had a high correlation score of .94. We were concerned when developing the scales that the goal engagement items may be too repetitive. We decided to keep the items in the scale for further testing and reserve making the decision to remove them until after the results of the EFA.

Before rotation all of the items loaded on one factor. The first time the PCA was run with the Oblimin rotation the items loaded onto two factors. Because we wanted to see if the items would load onto

three-factors a second PCA, forcing a three-factor solution, was run. While three-factors were found with the second PCA, it was interesting that there was still overlap between the last three items in the team task engagement scale and the nine team membership items. This is not entirely unexpected as the scales were developed to measure objects of engagement using the three dimensions of work engagement vigor (V), dedication (D) and absorption (A) as a guide. The three task engagement items which loaded on the same factor as the team membership items were all from the absorption dimension. We decided to keep the items with their respective scales and test the inconsistencies further in the CFA. Besides the overlap between the last three items from the task engagement scale, there was no further evidence of the three dimensions of engagement in the factor analysis. The results of the EFA are presented in Table 2. The component correlation matrix showed that all three-factors are correlated to each other, which you can see in Table 3. Although the scales are ultimately trying to measure three separate factors (i.e., the objects of engagement), they are still supposed to be subdimensions of the same concept, team engagement. Therefore, the fact that all the items loaded onto one factor in the unrotated component matrix and that the scales have acceptable intercorrelations is good support for this operationalization.

Table 2 Team Engagement Factor Loadings

| Item | Factor (F) Loadings | | |
|---|---------------------|-----|-----|
| | F1 | F2 | F3 |
| <i>Team Task Engagement – eigenvalue 1.4, 6.7% variance explained</i> | | | |
| All team members are bursting with energy as they do the work. (Alle teamleden bruisen van de energie als ze aan het werk zijn) (V) | | | .70 |
| If we as a team are at work, we feel fit and strong. (Als we als team aan het werk zijn, voelen we ons fit en sterk) (V) | | | .66 |
| When we get up in the morning, we feel like going to work with the team. (Als we 's morgens opstaan, hebben we zin om aan het werk te gaan met het team) (V) | | | .73 |
| My team is enthusiastic about the tasks they must accomplish. (Mijn team is enthousiast over de taken die ze moet volbrengen) (D) | | | .82 |
| We as a team are proud of the work we do. (We zijn als team trots op het werk dat we doen) (D) | | | .70 |
| The work we do with our team inspires us. (Het werk dat we verrichten met ons team inspireert ons) (D) | | | .69 |
| If we are working as a team, we are immersed in our work. (Als we als teamleden aan het werk zijn, gaan we helemaal op in ons werk) (A) | .52 | | |
| Our work as a team brings us into raptures. (Ons werk als team brengt ons in vervoering) (A) | .73 | | |
| When we are working intensively as a team, we feel happy. (Wanneer we heel intensief aan het werk zijn als team, voelen we ons gelukkig) (A) | .89 | | |
| <i>Team Goal Engagement – eigenvalue .9, 4.4% variance explained</i> | | | |
| We are proud of our team goals. (Wij zijn trots op de doelstellingen van ons team) (D) | | .63 | |
| My team is inspired by our team goals. (Mijn team wordt geïnspireerd door de doelen van ons team.) (D) | | .81 | |
| My team is enthusiastic about our team goals. (Mijn team is enthousiast over de teamdoelen) (D) | | .73 | |
| <i>Team Membership Engagement – eigenvalue 13.6, 64.6% variance explained</i> | | | |
| Being a member of this team energizes the team members. (Onderdeel uitmaken van dit team geeft ons als teamleden energie) (V) | .54 | | |
| The team members look forward to being with the team. (Teamleden kijken ernaar uit om als team samen te zijn.) (V) | .70 | | |
| Being a member of the team makes team members feel strong and vigorous. (Onderdeel uitmaken van dit team zorgt ervoor dat teamleden zich sterk en vitaal voelen) (V) | .87 | | |
| The team members are enthusiastic about the team. (Als teamleden zijn wij enthousiast over dit team.) (D) | .88 | | |
| The team members enjoy being a part of the team. (In ons team genieten we ervan om lid te zijn van dit team.) (D) | .88 | | |
| The team motivates team members to do a good job. (Als teamleden vinden we het uitdagend om lid te zijn van dit team.) (D) | .74 | | |
| When with the team, we forget everything else around us. (Wanneer we als team samen zijn vergeten we alles om ons heen.) (A) | .80 | | |
| Because of the team, time flies when we are working. (Als we als team samen zijn vliegt de tijd voorbij.) (A) | .85 | | |
| When being together as team, we feel happy. (Wanneer we samen zijn als team voelen we ons gelukkig.) (A) | .87 | | |

Table 3 Team Engagement Component Correlation Matrix

| Component | TE | GE | TME |
|----------------------------|-----|-----|-----|
| Task Engagement | 1 | | |
| Goal Engagement | .46 | 1 | |
| Team Membership Engagement | .66 | .53 | 1 |

2.4.2 Reliability Analysis: Cronbach's Alpha

Having determined the factor structure of the object of engagement scales, before the CFA was run the reliability of each scale was tested. The Cronbach's alphas for team task, team goal and team membership engagement were all quite high (.93, .94, and .96 respectively). The scales were evaluated to see if deleting an item would improve the alphas. In only one case, with the team goal scale, deleting the first item (i.e., We are proud of our team goals) would produce an alpha of .97. As the Cronbach's alpha was already quite high, we chose not to remove that scale item. While the reliability scores can be considered high, they are still within the acceptable range (i.e., .70 - .95) (Tavakol & Dennick, 2011). High alphas (above .90) may indicate a redundancy in the questions suggesting that the same question is being asked in a different way (Ibid.). Although this is a concern, when compared to the alphas of other scales in the HPT questionnaire the alphas are comparable. That being said it was kept in mind when conducting the CFA.

2.4.3 Confirmatory Factor Analysis

After exploring the factor structure of the objects of engagement, a confirmatory factor analysis (CFA) was performed using AMOS 22 to further validate the team engagement scale. The CFA was run with the remaining subsample of 207 respondents. The demographics revealed a similar sample to complete dataset with 50.7% of the respondents being male; the most-common age group was 35-39 (17.9% of the population), 85% of respondents had a full-time contract and on average respondents had been with the organization for 12.4 years and 5.1 years with the team ($SD = 10.75; 6.17$). In this sample, there was no missing data. The EFA allowed us to look at the clustering of the objects of engagement scale items; however, it did produce further questions about the scale's factor structure which we chose to investigate further with the CFA (Byrne, 2010). Based on the results of the EFA, AMOS was used to test three plausible measurement models:

- A three-factor model (M1)
- A three-factor model where the last three team task engagement items are a part of the team membership factor (M2)
- A one-factor model (M3)

The three-factor model assumes that, as we proposed in the conceptualization and started to see in the EFA, team engagement consists of three separate but still correlated factors. The three-factor model where the items from task engagement are tested as part of the team membership scale is to determine if the object of engagement factors are, in fact, separate factors. Finally, the one-factor model is testing whether all the team engagement items can load onto one common factor. Based on the EFA we

expected M1 to be the best fit for the data. In addition, if necessary, based on the modification indices, the measurement models were modified to find the best fit with the data. The steps of the CFA are outlined below.

CFA Results

When put into the CFA, all of the object of engagement items were found to be significant and received factor loading scores above .70. The one exception was item V140_7, “When with the team, we forget everything else around us,” from the team membership engagement scale, which had a score of .60. Model fit was assessed with the CMIN/DF, CFI, RMSEA and SRMR scores¹. M1 was the first model tested and it included the object of engagement scales as a three-factor solution. M1 was not a fit with the data ($\chi^2(186) = 721.295$, $p < .001$, CMIN/DF = 3.87, CFI = .88, RMSEA = .12, SRMR = .0554). M2 was then tested to compare the two models. The three task engagement items which loaded on the same factor as team membership engagement were moved to the team membership engagement model. Although the model also had significance for all the items as well as factor loadings above .70, except item V140_7 which still loaded low, the model was a worse fit than M1 ($\chi^2(186) = 776.698$, $p < .001$, CMIN/DF = 4.18, CFI = .87, RMSEA = .124, SRMR = .0607) and therefore was rejected. M3, which tested all of the items as one all-encompassing factor of team engagement, excluded item 140_7 because of its previous low factor scores in the first two models. Like M2 this model was a worse fit than M1 ($\chi^2(170) = 1281.109$, $p < .001$, CMIN/DF = 7.48, CFI = .78, RMSEA = .177, SRMR = .0771), and was also rejected. The model fit scores were used to compare the goodness-of-fit.

As M1 was the model with the best fit, we looked its modification indices to see where it could be improved. Based on the modification indices the following modifications were performed: item 140_7 was deleted because of its low factor loading score and score above 2.58 in the ‘standardized residual covariation’ table; and, if justified, error correlations were added to items with the highest modification index scores (Byrne, 2010). After six modifications the model (M1_R) was a better fit but was still just outside of the appropriate range for the RMSEA (.086). See Figure 1 for a path diagram of M1 and Table 4 for the results of the CFA.

Table 4 Fit Indices for the CFA (N = 207)

| Models | χ^2 | df | CMIN/DF | CFI | RMSEA | SRMR |
|-----------------------|----------|-----|---------|-----|-------|------|
| M1 | 721.295 | 186 | 3.87 | .88 | .118 | .055 |
| M2 | 776.698 | 186 | 4.18 | .87 | .124 | .061 |
| M3 | 1281.109 | 170 | 7.48 | .78 | .177 | .077 |
| M1_R | 408.783 | 162 | 2.52 | .94 | .086 | .050 |
| M4 | 245.741 | 112 | 2.19 | .96 | .076 | .043 |

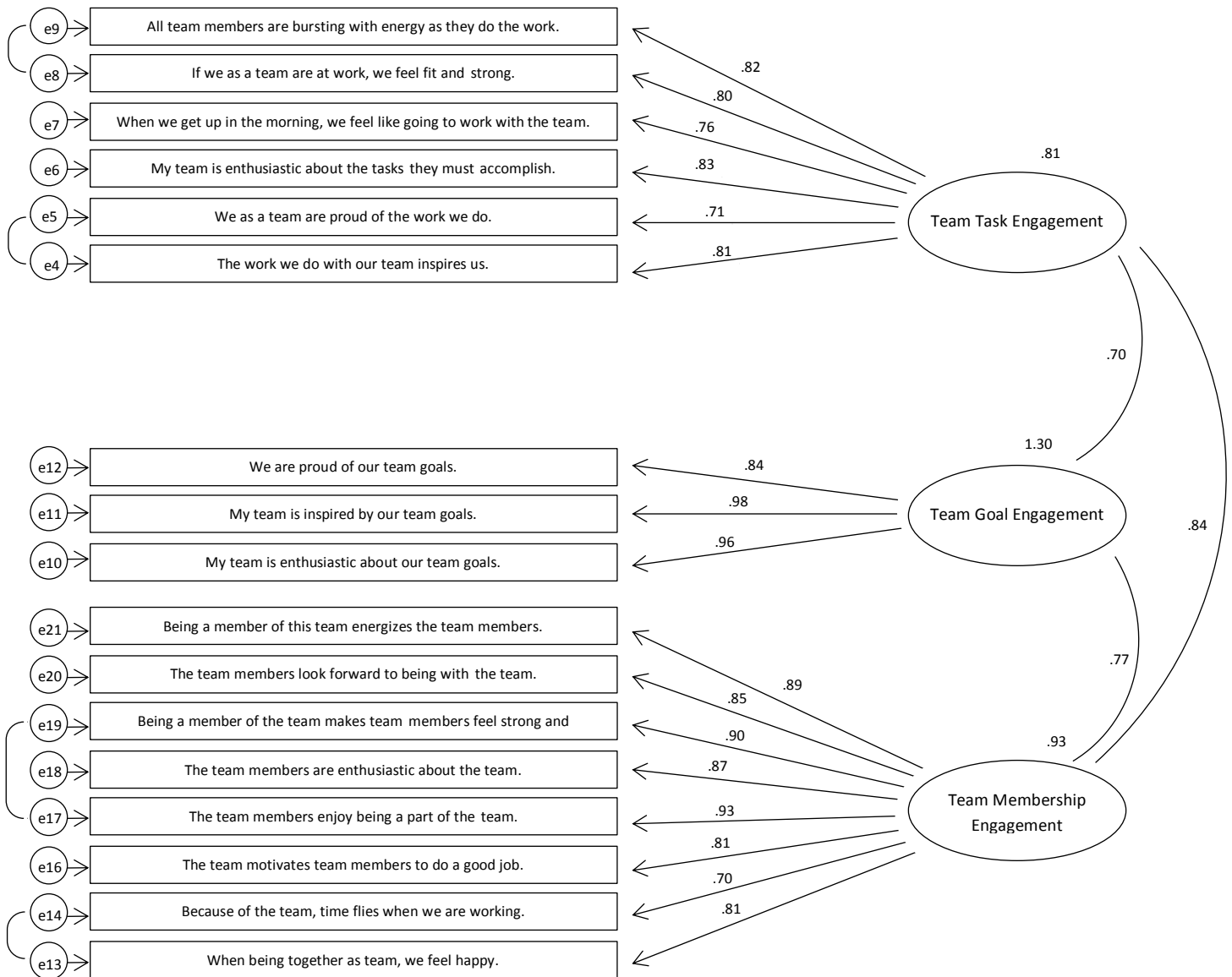
¹ The ideal scores for CMIN/DF are between three and one, and ideal CFI scores are above .95 although scores above .90 are also considered adequate (Hu & Bentler, 1999). RMSEA and SRMR scores are preferably below .05; however scores between .05 and .08 are also acceptable (Ibid.).

Figure 1 Measurement Model One (M1)



Because M1_R did not show adequate goodness-of-fit for the RSMEA one last measurement model (M4) was tested using an item-reduction procedure to test whether some of the questionable items from the EFA could be influencing the model. M4 removed the last three items of the team task engagement scale (i.e., the items that loaded on the team membership engagement factor) and tested the six-item scale as part of the 3-factor model. After making the same changes based on the modification indices as with M1_R, based on the comparison of the model fit scores, M4 was a better fit for the data than M1_R (CMIN/DF = 2.19, CFI = .963, RMSEA = .076, SRMR = .0430). See Figure 2 for a path diagram of M4, the measurement model for the final team engagement scale.

Figure 2 Measurement Model Four (M4)



While statistics is only one tool, along with theory and critical thinking, to be used when analyzing quantitative data, in this case the statistics suggest that the team task engagement scale, absorption items may not fit when measuring team engagement as a complete concept. The benefit of removing these three items (along with the one item from the team membership scale) is a stronger argument for the statistical factorial validity of the team engagement scale. The disadvantage of removing these items is the chance that the reliability of the scale may be in question when testing the scale with a new sample (DeVellis, 2012). Further, removing these items departs from the theoretical conceptualization of team engagement. That being said, as the three object of engagement items were adapted from the same scale and because the high Cronbach's alphas' indicate the potential of item redundancy within the scales, we feel justified in eliminating these items. Therefore, the structure that best fits the team engagement scale is the revised scale consisting of six task engagement items, three goal engagement items and eight membership items.

2.5 Construct Validity

The final step in validating the team engagement scale is to examine the construct validity of the scale by looking at its theoretical and empirical relationships with other variables (DeVellis, 2012). The construct validity looks at the “relationship of the measure to the underlying attributes it is attempting to assess (Hinkin, 1995, p. 968). To ensure that we are truly measuring team engagement we will look at the relationship between team engagement and four other constructs to see if it ‘behaves’ in a way that is consistent with the expected relationships based on theory and past research. We examined the relationship between the three objects of team engagement and individual work engagement, team cohesion, team commitment, and public service team motivation (PSTM). Individual work engagement, cohesion and commitment were measured using scales which had already been developed and validated (Schaufeli & Bakker, 2003; Kuipers & Groeneveld, 2014; Carless & De Paola, 2000; Bishop & Scott, 2000). However, as no team level scale for public service motivation currently exists one was developed for this study. The relationship between the concepts was measured at the individual level, using the full dataset of 307 respondents. A PCA and reliability test was run on each of the scales, and a correlation matrix was used to analyze the relations between the constructs. More information about each of the scales is provided in the concept’s respective sections. The correlation matrix can be found in Table 7.

2.5.1 Team Engagement and Individual Work Engagement

One of the most-pressing questions when investigating and conceptualizing work engagement at the team level is, “are engaged teams just a group of engaged individuals or is it truly a unique phenomenon?” Ignoring for now the role which individual engagement may have on team engagement or vice versa, the relationship between individual work engagement and team engagement was a very important question in this conceptualization and empirical testing of the concept. The researchers who developed the Utrecht Work Engagement Scale (UWES) also recently developed a team work engagement scale and started to study work engagement at the team level (Torrente et al., 2012a, b; Costa et al., 2012; Costa et al., 2014a, b). Contrary to the early studies where team engagement was expected to maintain isomorphic structure across the different levels (Torrente et al., 2012b); Costa and colleagues (2014b) determined that team engagement and individual work engagement were, in fact, structurally different constructs. We predict a similar result, including the prediction that while individual work engagement is a separate construct from team engagement, the two variables will still be positively correlated.

Individual work engagement was measured with the UWES. This scale is the most commonly used scale when measuring work engagement and has been tested and validated on a number of occasions as well as being used in a number of different contexts and translated into at least 12 different languages, including Dutch (Torrente et al., 2012b; Schaufeli & Bakker, 2003). A PCA with an orthogonal, Varimax rotation was run for the four variables used in the construct validity analysis. The orthogonal rotation was used because it is the recommended rotation if the variables are not expected to be related (Field, 2009). The individual work engagement items loaded onto one factor, which is not consistent with earlier findings where it was found to be a three-dimensional construct (Seppälä et al., 2009). The Cronbach’s alpha was .95 which would not be improved by deleting any of the scale items.

The relationship between the individual work engagement and team engagement scales were, as we predicted, related but not the same ($r = +.62$, $r = +.50$, $r = +.58$, and $p < .001$). In fact, the positive correlations between the concepts were in most cases lower than the commitment and cohesion correlations. This is particularly notable as all of the items from the team engagement scales were ultimately adapted from the UWES – the same scale which measured individual work engagement. This supports the question as to whether the individual team members were able to distinguish between their own and their team's level of engagement. It also supports the idea that team engagement is a unique concept which can be measured at the team level.

2.5.2 Team Engagement and Cohesion

As mentioned above, there are a number of concepts that are similar to work engagement, but are ultimately different. Similarly, team cohesion is a concept which is necessary and implied in the team engagement dimensions, but which is not a dimension itself. Defined broadly as “the total set of forces keeping group members together”; cohesion is the degree to which team members bond through targeted collaboration, mutual support and communication (Tekleab, Quigley & Tesluk, 2009, p. 174; Kuipers & Groeneveld, 2014). Listed as a key concept in team collaboration, it has been found to influence many aspects of team work including strong morale, high “team spirit” and higher motivation to pursue team goals (Evans & Dion, 2012; Carless & De Paola, 2000). Team cohesion, along with team conflict, is believed to be a factor which can influence team dynamics and ultimately a team's interactions over time (Tekleab et al., 2009). Team cohesion is expected to have a positive relationship with the objects of engagement, particularly team membership engagement.

Cohesion was measured in the HPT survey with a six-item scale adapted from Carless and De Paola (2000). The cohesion items loaded onto one factor, and the Cronbach's alpha was .83, which would not improve if any items were deleted. Team task, goal and membership engagement all had strong correlations with team cohesion ($r = +.55$, $r = +.52$, and $r = +.62$; $p < .001$). The strongest correlation was between cohesion and team membership engagement, which was expected since engagement towards one's colleagues suggests a certain degree of cohesion. All of the correlations between the team engagement dimensions and cohesion were strong; however, not strong enough to contest discriminant validity. Stronger correlations were seen between the three objects of engagement than with the cohesion variable.

2.5.3 Team Engagement and Commitment

Defined as “the relative strength of an individual's identification with, and involvement in, a particular organization (or team),” like cohesion, team commitment is a construct which is similar and implied in team engagement (Bishop & Scott, 2000, p. 439). It is particularly similar to the dedication dimension of team engagement and the sense of loyalty that is expected to be captured in team membership engagement. This is evident in this description of team commitment, “it can be characterized by (a) a strong belief in, and acceptance of, the organization's (or team's) goals and values; (b) a willingness to exert considerable effort on behalf of the organization (or team); and (c) a strong desire to maintain membership in the organization (or team)” (Bishop & Scott, 2000, p. 439). As such, we expect the strongest relationship to be with team membership engagement.

Team commitment was measured with eight items adapted from Bishop and Scott (2000). In the factor analysis, the commitment items all loaded onto one factor and the Cronbach's alpha was .90, which would not be improved if any items were deleted. Similar to cohesion, team commitment also had a strong correlation with the objects of team engagement ($r = +.63$, $r = +.55$, $r = +.71$, and $p < .001$). As we predicted, the highest correlation was with team membership engagement. This correlation is the highest correlation between any of the variables tested and was also higher than the correlations between team goal engagement and the other two objects of engagement ($r = +.69$, and $r = +.67$; $p < .001$). This may be explained by the fact that team commitment and loyalty are concepts which are implicitly being assessed when looking at a team members' engagement towards their team (Adler & Adler, 1988).

2.5.4 Team Engagement and Public Service Team Motivation

Defined as "an individual's orientation to delivering services to people with a purpose to do good for others and society" (Perry & Hondegehem, 2008, p. vii as cited in Kim et al., 2013), public service motivation has certain parallels with team engagement which we wanted to explore. Although this chapter has been dedicated to conceptualizing the general of concept of team engagement, the purpose of this research is to study team engagement in the public sector. Therefore, we wanted to include a concept that would measure the public values and the unique motivations which can drive teams in the public sector. One of these motivators was the team goal. PSM postulates that workers in the public sector may be motivated by their work because of a "public service ethos" or a "desire of doing good for others and society" (Boyne et al., 1999; O'Riordan, 2013, p. 27). While engaged teams in the public sector are driven by more than just public values, these values may be linked to the team's goal and therefore a target of the team's engagement. In addition, the effect of PSM may reach past just goal engagement. A review of PSM in the Irish Public Sector found that PSM and employee engagement shared similarities such as determinants and outcomes (O'Riordan, 2013). Therefore, we wanted to look at the relationship between public service motivation at the team level and the objects of engagement, particularly team goal engagement. Through this relationship, we would like to be able to distinguish between engagement towards the team's goal and a team's motivation to work for a public goal.

While public service motivation (PSM) has been studied at great length and across many cultures (Kim et al., 2013) there is currently, as far as we know, no PSM scale which measures public service motivation at the team level. Therefore, for this study we developed a scale to measure public service motivation at the team level. The Public Service Team Motivation (PSTM) items were adapted from a scale used by Steijn and Leisink (2009) to test PSM in the Dutch public sector. This particular version of the PSM was chosen because of its appropriateness to the Dutch context as cultural differences have been identified as a concern when the North American scale was used in a European context (Kim et al., 2013). The ten items from the scale were translated to the team level and, like the team engagement items; multiple wording options were tested to produce the best interpretation of the items. To test the factor structure, a PCA was run on the full dataset of 307 respondents. An orthogonal rotation (i.e., Varimax) was used because it is the recommended rotation when the factors are not expected to be related, which was the case with the PSTM and the other concepts in the construct validity test (Field, 2009).

A number of concerns arose when running the factor analysis for the PSTM. First of all, there were many low and non-significant correlations in the correlation matrix. Further, the PSTM items loaded onto two factors. One item, (“As a team, we find it important to contribute to the development or implementation of government.”) did not load on either factor and therefore was removed, and the PCA was run again. The second PCA resulted in two distinct factors which could be described as ‘Politics’ (e.g., In my team, politics is a dirty word) and ‘Public Values’ (e.g., In my team, serving the public good is seen as our duty). Although they loaded as clear subdimensions, these two factors had very low correlations scores in the PSTM component correlation matrix. The results of the PSTM EFA are presented in Table 5, and the interfactor correlations are presented in Table 6.

Table 5 Public Service Team Motivation Factor Loadings

| Item | Factor (F) Loadings | |
|---|---------------------|-----|
| | F1 | F2 |
| KMO: .759; Bartlett's Test of Sphericity: $\chi^2(36) = 593.757, p < .001$ | | |
| <i>Public Service Team Motivation: Politics – eigenvalue 1.7, 19.2% variance explained</i> | | |
| In my team, politics is a dirty word. | .78 | |
| The fact that compromises, in the development of policies hardly speaks not to our team | .46 | |
| Our team has little interest in what politicians do. | .82 | |
| <i>Public Service Team Motivation: Public Values – eigenvalue 2.9, 31.9% variance explained</i> | | |
| My team unselfishly contributes to society. | | .60 |
| In my team we find it important to take part in meaningful public service. | | .75 |
| In my team, it is preferred to see public officials do what is best for the public good, even if it is not in our best interests. | | .68 |
| In my team, serving the public good is seen as our duty. | | .83 |
| In my team, we have little sympathy for the less fortunate in society who take no steps to improve their circumstances. | | .68 |
| As a team, we consider it more important to make a substantial contribution to society than our team's successes. | | .55 |

The complete PSTM scale, with one item removed, was used to look at the relationship between public service motivation at the team level and team engagement. The Cronbach's alpha for the full PSTM scale was .65. The alphas for the two dimensions, politics and public value, were .54 and .77.

Table 6 Public Service Team Motivation Intercorrelations

| Component | Politics | Public Values |
|----------------------|----------|---------------|
| PSTM - Politics | 1 | |
| PSTM - Public Values | -.06 | 1 |

Relationship with Team Engagement

As we were working with teams in the public sector, we expected to find a connection between public service motivation and team engagement, particularly with team goal engagement. However, contrary to our expectations, we did not find a positive relationship with PSTM and any of the objects of engagement ($r = +.23, r = +.21, \text{ and } r = +.24; p < .001$). Because this is the first time the scale has been tested at the team level, and it is a concept whose measurement still generates controversy

(Vandenabeele, 2008), we will be cautious when drawing definitive conclusions about these results. Work engagement and public service motivation share a central tenet which is the motivation an employee feels towards the work that they do, the difference is in the stimulus for those motivations. Therefore, we were quite surprised at the particularly low correlation between PSTM and team goal engagement, the lowest of the correlations between the team engagement dimensions. Although the results are inconclusive, this is certainly an area that should be explored further, both the measurement of PSM at the team level as well as its relationship with engagement in the public sector.

Table 7 Correlation Matrix

| | TE: Task | TE: Goal | TE: Membership | Individual WE | Cohesion | Commitment | PSTM |
|--------------------------------|----------|----------|----------------|---------------|----------|------------|------|
| Team Task Engagement | 1 | | | | | | |
| Team Goal Engagement | .69 | 1 | | | | | |
| Team Membership Engagement | .79 | .67 | 1 | | | | |
| Individual Work Engagement | .62 | .50 | .58 | 1 | | | |
| Cohesion | .55 | .52 | .62 | .40 | 1 | | |
| Commitment | .63 | .55 | .71 | .57 | .63 | 1 | |
| Public Service Team Motivation | .23 | .21 | .24 | .20 | .19 | .21 | 1 |

All correlations significant at $p = .001$

2.6 Aggregation

Because we analyzed the data at the individual level to ensure there are enough cases to reliably test the measurement scale, we still need to aggregate the data to the team level as we are ultimately measuring a team level construct. The means were used to aggregate the individual scores to the team level. To ensure that we are justified in representing the team level scores by aggregating the individual level data we conducted a one-way ANOVA and calculated the intraclass correlation coefficients (ICC) to look at the between-group differentiation (Van Mierlo et al., 2009). Two forms of intraclass correlations (ICC) are appropriate when studying teams: ICC(1) and ICC(2). ICC(1) is the proportion of variance accounted for by team membership in the target variable. ICC(2) is the reliability of the team mean scores (Kuipers & Groeneveld, 2014; Van Mierlo et al., 2009). We are looking for statistically significant ICC(1) scores and high ICC(2) scores ($> .65$) to be able to justify aggregating the individual data to the team level (Van Mierlo et al., 2009). Table 8 presents the ICC(1) and ICC(2) scores as well as the results of the F -test. The table shows that all three of the ICC(1) scores are statistically significant and that the ICC(2) scores are all above $.65$, indicating acceptable levels of reliability within the team means. Therefore, aggregation to the team level is justified. Table 9 contains the aggregated object of engagement descriptive statistics.

Table 8 Intraclass Correlation Coefficients

| | ICC(1) | ICC(2) | F ^a |
|----------------------------|--------|--------|----------------|
| Team Task Engagement | .063 | .696 | 3.41* |
| Team Goal Engagement | .069 | .730 | 3.69* |
| Team Membership Engagement | .068 | .725 | 3.63* |

^a df (within) = 271; df (between) = 35; * $p < .001$

Table 9 Aggregated Object of Engagement Descriptive Statistics

| | n | Minimum | Maximum | Mean | SD |
|----------------------------|----|---------|---------|------|-----|
| Team Task Engagement | 36 | 3.86 | 5.89 | 4.84 | .52 |
| Team Goal Engagement | 36 | 3.16 | 5.73 | 4.60 | .66 |
| Team Membership Engagement | 36 | 3.54 | 5.96 | 4.56 | .60 |

2.7 Discussion

The purpose of this chapter was to answer the question, “What is team engagement?” To do this, we provided a theoretical framework for team engagement and developed and validated a measurement scale. Based on a review of the current literature on work engagement, teams and team work engagement we proposed that unlike previous conceptualizations, team engagement is an independent concept from individual work engagement and therefore requires a different conceptualization and operationalization. As such, we argue that team engagement is a concept which is represented by a team’s engagement towards three objects: the team’s tasks, the team goals and the team itself (i.e., team membership).

To answer the research questions we developed and validated a team engagement measurement scale which was adapted from two currently existing team engagement scales: the HPT scale (Kuipers & Groeneveld, 2014) and the TWES (Torrente et al., 2012b). While the results answered research question one, that there are three objects of team engagement; it also presented some interesting questions and considerations. The EFA and CFA confirmed that the team engagement measurement scale was valid; however, the original scales did not achieve an acceptable level of factorial validity. Therefore, the CFA was run again with a revised model which removed the three items from the team task engagement scale which loaded onto the team membership factor in the EFA and one item from the team membership scale which received low factor loadings. The original scale (21 items) was reduced to 17 items: six team task engagement items, three team goal engagement items, and eight team membership engagement items. The revised scale was a statistically better fit with the data in the CFA and also addressed some of the issues that arose in the EFA.

An interesting finding was that while there was evidence of the three objects of engagement, the three dimensions of engagement (i.e., vigor, absorption, and dedication) found by Torrente et al. (2012b) were not present in the data. Costa et al. (2014b) found similar results in their study empirically testing

the TWES. They found that contrary to their hypothesis the one-factor structure was a better fit with the data than the three-factor structure (Ibid.). In this study, we noted that the four items removed from the scales (the three task engagement items and the membership engagement item with low factor loadings) were all from the absorption dimension. However, we did not see any other evidence of the three dimensions within the objects of engagement scales. That being said, the fact that all four of the items removed from the scale were representing the absorption dimension is a relevant finding. The items removed: *If we are working as a team, we are immersed in our work; Our work as a team brings us into raptures; When we are working intensively as a team, we feel happy; and, When with the team, we forget everything else around us;* may be reflecting a team construct which cannot be measured from the individual level, or simply that certain individual constructs cannot be translated to the team level. Future research testing the revised scale and investigating 'team absorption' is necessary to be able to better understand exactly if and how the individual level constructs are present at the team level.

Research questions two and three were answered by testing the construct validity and comparing the revised object of engagement scales with similar concepts using the individual level data. The correlations showed that while they had strong correlations ($r = +.62$, $r = +.50$, $r = +.58$, and $p < .001$), individual work engagement and the objects of team engagement variables were distinct. As expected the strong correlation suggests a positive relationship between individual work engagement and team engagement, though the direction of that relationship is not known. Research question three looked at the relationship between the objects of team engagement and team cohesion, team commitment and public service team motivation. The results showed that the scale behaved as expected with team cohesion and team commitment; however, it had only a weak correlation with PSTM. The positive relationship with the first two constructs shows not only that the objects of engagement behave as expected with those two items, but also because there was a lower correlation between those concepts and the team engagement objects it supports the discriminant validity of the objects. The fact that the correlation between team commitment and team membership engagement was higher than the relationship between team goal engagement and team membership and team task engagement must be noted. This poses some questions about the role or influence of team commitment in team membership engagement. In addition, the variables behaved consistently with concepts that were believed to be connected based on the literature. Those particular relationships will be further explored in Chapter 3. Although we were surprised about the weak relationship between PSTM and team engagement, we do not believe that it reflects on the construct validity of team engagement. Rather it asks more questions about the conceptualization of PSM at the team level and the possible relationship that may exist between motivation towards public values and motivation towards a team's work goals.

2.7.1 Next Steps

In Chapter 3, we will investigate how team engagement emerges in teams in the public sector. A review of the literature of determinants, models of emergence and other factors which are believed to influence work engagement will be reviewed in the theoretical background which will inform the data collection phase. The emergence of team engagement will then be empirically tested using qualitative interviews with a high performing team to collect some personal, first-hand input into how a team in the public sector develops team engagement.

Chapter 3 Determinants of Team Engagement

3.1 Introduction: Research Question 2

In Chapter 2, we conceptualized team engagement as having three objects of engagement and empirically tested that conceptualization by developing and validating a team engagement measurement scale. Chapter 3 moves beyond the acknowledgement and validation of the existence of team engagement and starts to look at how it presents in the workplace. There are many factors within a positive, effective, high performing team which may influence, occur simultaneously or even as a result of team engagement. As it is a team construct and can be interwoven within other team factors, team engagement is not an outcome which occurs in isolation which makes it more challenging to identify exactly how and why some teams in the public sector become engaged, while others do not. This leads us to the focus of Chapter 3 and the second part of the main research question:

What is team engagement in the public sector and how does it emerge?

While Chapter 3 will also contribute to the understanding of what team engagement is in the public sector; its individual contributions are related to the fourth research question:

How does team engagement in the public sector emerge?

This question targets the 'causes' of team engagement, as well as the configuration of factors, processes and mechanisms which allow it to emerge in the public sector. The research question is explored by first reviewing the theoretical background and previous research on teams, work engagement, team engagement and the public sector to identify possible factors that contribute to team engagement in the public sector. Second, to understand the three objects of engagement and how team engagement emerges, qualitative interviews were conducted with a high performing team in the public sector. The interviews provide evidence of if and how the three objects of engagement are present in an engaged, high performing team. In addition, it contributes to the understanding of the dynamics responsible for and factors influencing its emergence in the public sector and under what conditions it is most likely to develop. Empirically, our data is being used in an exploratory sense and is based on semi-structured interviews with one public sector team.

This chapter takes a qualitative approach to team engagement for two reasons. Firstly, although a lot of research into work engagement has been done in the past 15 years there has been very little qualitative research into work engagement (Schaufeli, 2012), and only one known case of qualitative research conducted at the team level (see Kuipers & Groeneveld, 2014). Therefore, we wanted to deepen our understanding of the components and interactions of an engaged team to be able to provide concrete, real life examples of the emergence of team engagement in a high performing team. Secondly, this analysis is one of the first instances, to our knowledge, that the emergence of team engagement in the public sector has been studied; therefore, we felt the novelty and complexity of the concept needed to be investigated qualitatively through in-depth interviews and discussions with a team in the public sector. For this reason, we explored team engagement in only one high-performing team to understand how it emerged and then, when appropriate, identified which of those results may be generalized to

other public sector teams. This focused qualitative approach allowed us to identify and analyze the interactions between the factors present in a high performing team which may have contributed to the team engagement in this team.

3.2 Theoretical Background

To be considered a team phenomenon, team engagement is a property which needs to be a shared, inherent trait of the team and the result of its mutual responsibility and commitment (Silva et al., 2013). As such, team or collective level constructs are only believed to exist when the sentiments and perceptions exhibited at the individual level are characteristic of the group as a whole (Costa et al., 2012). There are a number of theories that look at how group emotions may be experienced or transferred between team members. For example, one of the explanations for the collective emotions and attitudes within teams is the fact that team members often share the same resources, team leader, co-workers and possibly even the same workspace. Along with the interactions and interdependence which is often inherent in teams, these resources can result in joint constructions of meaning, communication about events and emotional experiences (Costa et al., 2012). Group norms and expectations around acceptable behaviour are also believed to facilitate or inhibit the emergence of team engagement by fostering either a positive, engaged work atmosphere or an independent or disengaged team environment (Costa et al., 2012).

Early theories explaining the emergence of engagement in the workplace and determinants of work and team engagement focused on theories such as the job resources-demands model (JR-D) and the influence of social resources on work engagement (i.e., supportive team climate, team work and coordination) (Torrente et al., 2012; Costa et al., 2014a, p. 415). Alternatively a 'climate for engagement' (which is measured through six areas of work life: workload, control, reward, community, fairness and values) (Bakker, Albrecht, & Leiter, 2011; Costa et al., 2012, p. 11) or theories explaining collective phenomena such as unified commitment, collaborative climate (Larson & LaFasto, 1991), emotional contagion, or group affective tone (Costa et al., 2014a) were also proposed. However, while those theories may explain the spread of work engagement throughout a workplace at the individual level, they fail to take into consideration key components of the team literature which may explain work engagement at the team level from a team perspective instead of trying to represent an isomorphic model of individual work engagement at the team level (Costa et al., 2014a). Further, it does not lend any explanation as to whether the phenomena would, in fact, be an engaged team or simply a group of engaged individuals (Costa et al., 2014).

For this reason, team literature is needed to understand and explain the mechanisms and conditions necessary for the emergence of team engagement in the public sector. Taking into consideration team processes, Costa and colleagues (2012) were some of the first researchers to study work engagement at the team level. Defining it as an emergent state, they introduced the notion that team engagement, like individual work engagement is a work-related experience which varies over time as a function specific to a configuration of inputs, team processes, interpersonal processes and outcomes (Costa et al., 2012, p. 7). They believed work engagement within a team is shaped by the team context as well as team members' interactions during various team experiences including team dynamics and processes (Costa et al., 2012, p. 8; Costa et al., 2014a, b). Their initial model identified four major groups of variables

which contributed to the emergence of team work engagement. These variables included the degree of interaction of the team; the degree of groupness; external cues; and, emotional events (Costa et al., 2012, p. 38). Emphasizing the importance of team and group literature, in 2014, they developed a theoretical model, based on the input-mediator-output-input framework of Ilgen and colleagues (2005) on the emergence of team work engagement taking into account team inputs, outputs and processes and team engagements' dependence "on the individual actions and cycles of interaction responsible for creating a shared pattern of behaviour" (Costa et al., 2014a, p. 416). They identified individual characteristics, team characteristics, task characteristics and the team's work structure (including work assignments, team norms and communication structure) as inputs, and motivational and affective processes as well as conflict management as interpersonal processes which might influence team engagement (Costa et al., 2014a). In addition, they described four emergent states: collective efficacy, team potency, cohesion and group affect which could co-occur or influence the team processes or team engagement itself.

Team engagement was simultaneously being studied by Kuipers & Groeneveld (2014) as a part of high performing teams (HPT) research in the public sector. Also using an input-process-output based model, team engagement was identified as an attitudinal outcome of high performing teams (Kuipers et al., 2014). Inputs such as team context, team composition, task and goal dependency; and team processes (the conduct and behaviour of the team members which influence outcomes) such as self-management, internal and external relations were believed to contribute to the team's attitudinal and performance outcomes, including team engagement (Kuipers et al., 2014).

Specific to the public sector, public service team motivation (PSTM) was a concept which was introduced in Chapter 2. The public sector provides not only the context within which the team exists, but factors related to public service motivation and public values may also contribute to the emergence of team engagement in public sector teams. Values such as accountability to the public and "an individual's orientation to delivering services to people with a purpose to do good for others and society" when shared and experienced by the team may have a role in influencing the team's engagement towards their team goals and activities related to their public sector roles (Kim et al., 2013, p., 80).

Based on the literature review, certain general team characteristics have been identified which are believed to contribute to the understanding of the emergence of engagement at the team level. Characteristics such as the team's context, interdependence, composition, internal relations and team processes are expected to influence the emergence of team engagement in the public sector. These characteristics have been connected with a team's effectiveness, productivity and emergent states (Campion et al., 1993; Marks et al., 2001; Wildman et al., 2012). The role that these characteristics play will be investigated through the qualitative interviews and taken into consideration with the existing theory reviewed in this chapter.

3.3 Method

This chapter used a qualitative research design to provide an enriched portrait and vibrant understanding of how and why team engagement emerges in the public sector. In this case the quantitative research from Chapter 2 and qualitative data collection in Chapter 3 occurred with

completely separate cohorts, so the team interviewed did not also contribute to the quantitative understanding of team engagement. Team engagement is a dynamic and complicated concept based on group phenomena and not the individual level. We believe that the qualitative input on factors such as the team composition, team's interdependence, and internal team processes from members of a HPT, reflecting on how their high performance came about will greatly contribute to the study and understanding of the three objects of engagement and ultimately the overarching concept of team engagement. Focusing on the team engagement of one team in the public sector allowed an in-depth analysis into the team characteristics believed to contribute to the emergence of the three objects of engagement in teams in the public sector.

Two interviewers conducted six, semi-structured interviews which lasted between one and 1.5 hours, with five team members (including the team leader) and one external stakeholder. Interviewing the team members, the supervisor and an external stakeholder assisted in validating the data and provided a check and balance for the accuracy of the perceptions of the participants. A topic list (available in Appendix A) was used as an interview guide; however, the interviews were conversationally based and allowed for the free flow of information. Probing or redirection was used if necessary for clarification or further exploration. The topic list was adapted from a list created by Kuipers and Groeneveld in their qualitative interviews with HPT (Kuipers & Groeneveld, 2014). The original topic list was in Dutch but was translated to English for the interviews. Because the interviews were not conducted in the interviewees' native language the Dutch interviewer assisted with clarification and translation if necessary.

Participant Selection

In their 2014 research, Kuipers and Groeneveld identified team engagement as an attitudinal outcome of high performing teams (HPT). Because it is easier to identify a HPT than an engaged team when recruiting a team to participate in the interviews, a HPT was selected with the expectation that they would also be an engaged team. The team was selected based on a number of criteria. First, as alluded in the description, the team needed to be identified as being high performing. In this case the team was referred to the researchers by the stakeholder and team leader as being a HPT. Secondly, the team was required to work within the public sector and finally the team members needed to be willing and able to participate in interviews in English instead of Dutch.

Only one team was selected for the interviews for two reasons. Because this is the first time studying the three objects of engagement, we opted to focus our attention and discussions around one team. Although samples of one have their limitations, they also offer the opportunity for an in-depth analysis and understanding of the phenomenon being studied (Silva et al., 2014). We chose to focus on understanding the emergence of team engagement in this one team and offer generalizations of the findings as appropriate. Practicality and time limitations were the second reason for only selecting one team. This team was a particularly good candidate for the interviews because of the situation and context of its formation. Although the individuals all worked together as part of a larger unit, we interviewed members of a team which was compiled to work a specific event. Therefore, we had the opportunity to look at the team's formation as well as how it came to be engaged and ultimately high performing.

The team that participated in the interviews was the *Veiligheidsregio Rotterdam-Rijnmond Risk en Crisis Management team* who oversaw the safety of the city of Rotterdam during the Nuclear Security Summit, which took place in The Hague in March 2014. The members interviewed were selected by the team leader. The semi-structured interviews focused on the high performance of the team, and specific probes were used to identify instances and examples of team engagement when and if appropriate.

Data Analysis

The interviews were recorded, transcribed verbatim, reviewed to ensure accuracy and then edited to protect individual team member confidentiality. The transcriptions were coded and analyzed manually. As the focus of the research was on the emergence of team engagement the interviews were coded to identify main themes and factors leading to team engagement as well as the overall story of if and how team engagement emerged in this team. To ensure the data was focused solely on team engagement, only themes related to team engagement were coded and other themes relating only to the team's high performance were not included. Taking a thematic approach, the interviews were coded using predefined categories based on the conceptualization of team engagement and the theoretical framework. Additional codes were identified while carefully reviewing the transcripts and coding the fragments during the open coding process. The codes were analyzed further during the axial code phase to deepen the understanding and interpretation of the data, and establish themes based on emerging patterns, as well as differences, and contrasting information. Fragments were coded more than once if they could be assigned to more than one code. This allowed us to see how the different themes related to, or overlapped with one another. See Appendix B for a complete coding tree.

The team level construct was analyzed based on data collected at the individual level. Although the interviews focused on the team and the experiences of the team, the responses came from the individual experiences of the team members interviewed. While data was also collected on the individual level for comparison, there were two ways in which the data was determined to reflect a shared property or attitude of the team. The first was if it was described at the team level, (e.g., we worked well; we have to deliver) it was coded as evidence towards the team level construct. Secondly, if an attitude, emotion or factor was expressed at the individual level but shared by all the team members, then it was also considered as a possible shared property of the team. The fragments and codes were reviewed in and out of context and determinations about it reflecting a team or individual level construct were made during the axial coding and interpretation phases of the analysis.

3.4 Results

The analysis took place in three stages. First, the context in which the team was operating was analyzed. Secondly, the level of team engagement within the team, and finally, how the team engagement came about (the model of emergence). The context, including codes related to the public sector, was used to provide the setting in which this team existed and created the basis for interpreting and understanding the data. A number of themes were present when analyzing the level of team engagement and how it emerges. Team engagement had three themes: objects of engagement, dimensions of engagement, and individual work engagement; and the model of emergence had four themes: team composition, interdependence, team atmosphere and internal relations.

The results will be presented in such a way that it shows evidence of team engagement within this high performing team, as well as outlining factors and influences which appear to be contributors to that team's level of engagement. Further, the relationships between these items will be discussed to show the interrelations between the different factors and processes allowing for team engagement to emerge in the public sector.

3.4.1 Team Background and Context

Contextual variables can influence many team factors including interactions, processes and ultimately team outcomes (Costa et al., 2014a). Consequently, the context and particularly the unique circumstances within which this team was functioning needs to be taken into consideration when analyzing the data from this team. This is not your average work team. Although they work together on a regular basis, the VRR – Regional Operations Team (ROT)², who is responsible for the safety of the greater Rotterdam area, is compiled of representatives from many different governmental agencies including the fire department, medical services, the Port Authority, the environmental agency and municipal services. Each of these services has a number of representatives who rotate being on call to respond if there is an emergency or a crisis. When an emergency arises, the representatives on call are summoned to the 'control room' where they work together to respond efficiently and effectively to the situation. Because of the unpredictable nature of emergencies most of the time the representatives from the different agencies do not know in advance which team members will be present when the team is summoned. In addition to emergencies and crises, the VRR also works in a consultancy role together with the police for planned events such as large football matches or celebrations (e.g., Kings Day).

In preparation for the Nuclear Security Summit (NSS,) the VRR compiled two teams (a day and a night team) to prepare for and work during the three days of the summit. The teams worked together for six months leading up to the NSS doing preparation and scenario planning for the three days where they worked 12-hour shifts in the control room, ready to respond should any situation have arisen. This was a unique situation for these colleagues as they usually do not have the opportunity to work with the same group of people for an extended period of time. Also, although they were designated as a team, when they were not preparing for the NSS the team members continued to do their usual work for their respective agencies. This classifies this team as more of a 'parallel team' which "pull[s] together people from different work units or jobs to perform functions that the regular organization is not equipped to perform well" than a 'work team' (Cohen & Bailey, 1997, p. 242). Even though this is different than the work team environment in which team engagement was conceptualized, this team provided a unique opportunity to reflect on the processes of selecting, developing and working on a team that was ultimately classified as high performing and engaged. That being said the different structure of the team will likely influence the way in which team engagement emerges and presents in this team. Only the day team participated in the interviews.

Although no large crisis occurred during the NSS, the team was none-the-less identified as being high performing by their stakeholder, the commander of the police response team, as well as by the VRR themselves. When questioned about the high performance of their team the work that they did was

² ROT will be used to refer to the team, VRR will be used to refer to the organization which the ROT is a part of.

broken down into two main parts: the preparation for the NSS, which consisted primarily of scenario planning and role play exercises; and the actual event itself, which consisted of three-12 hour shifts in the control room watching and waiting in case an emergency should arise.

Public Sector

Related to context, this study is looking specifically at team engagement in the public sector to try to identify traits of team engagement unique to public sector teams. What we found was that some of the fragments coded under goal engagement were also goals consistent with public sector values. For example, knowing that “everyone is looking at you” and that “you’re very closely watched...trying not to make them nervous is one of our toughest tasks” are concerns specific to working for a public sector organization. The ROT reported to and was responsible to the city of Rotterdam and specifically the mayor of Rotterdam. During the NSS, one part of their job was to respond to situations, while another part was instilling trust in those counting on them, “we had to sit on our hands, but also make sure that the guys above us sit on their hands. Trust us, you’ll be the first to know if something happens.”

Further, because of the nature of the VRR’s work and the fact that they exist to be able to coordinate a multi-agency response, they are directly connected to many other public sector agencies and organizations. One of the few situations that the team had to deal with during the NSS was a shortage of ambulances for the city of Rotterdam. Two ambulances with paramedics whose background’s had been screened were assigned to the hotels where the delegations were staying. One evening the city of Rotterdam had a shortage of ambulances, and the decision had to be made whether or not to send one of the ambulances assigned to the hotels. While this situation was dealt with little fanfare, one of the questions which arose out of it, unrelated to the NSS, was that although it was known ahead of time that there was a consistent shortage of ambulances at that time, a) why was the ROT not notified? b) why this still happening? Therefore, although the NSS was a short term event, the team was still functioning within their public sector roles. In contrast to the findings from Chapter 2, the goals and values associated with the public sector appeared to be one of the leading factors influencing the goal engagement of this team. The team members felt a strong sense of pride and responsibility towards their city, and this came from their public sector roles.

3.4.2 Team Engagement

This was an interesting team to talk about team engagement with because each team member comes from a different agency and brings a different background and set of skills to the team. Evidence of team engagement was present in all of the interviews with the team members, particularly when looking at the three objects of engagement. During the axial coding phase, some interesting sub-themes were found within the three objects of engagement that we did not expect to find and would not have found when quantitatively studying team engagement. To get a full picture of ‘engagement’, we also coded for individual work engagement and the three dimensions of team engagement (vigor, dedication and absorption). When coding for the dimensions, we looked for examples of vigor, dedication and absorption in general and not specifically relating to one of the three objects of engagement.

Team Task Engagement

Three clusters of codes fell under the theme of team task engagement: the team and its tasks; “greater than the sum of its parts”; and, “the hardest thing to do was nothing.” The first subcategory reflected sentiments about the team, their tasks and how they related to those tasks on a day-to-day basis. Although each team member had their own individual tasks to complete, the team showed evidence of task engagement through statements like, “What I liked in this team that we were an active team, wanted to act”³ and, “He noticed that everybody was still enthusiastic and that everyone was so excited about the game and the situation.” These statements reflect the sense of purpose and energy with which the team approached their tasks and their duties and how the team was engaged towards the tasks although many of their tasks were done independently.

A good example of task engagement came from one of the scenario planning activities which was done together with the police response team and which ended up being one of the ROT’s defining moments in the preparation phase. To prepare for the different kinds of potential emergencies and crises which could occur during the NSS, the ROT was given scenarios that they had to evaluate and prepare a response to. One scenario emerged which the police believed did not require a multi-agency response, so the ROT was told they could leave and only the team leader, who was a part of the police response team as well, stayed. When the scenario was presented, the team leader immediately recognized that the ROT was also needed to prepare for this situation. Although the team members had returned to their usual work or even gone home, they were all back within half an hour and proceeded to work together quickly and efficiently to prepare a plan for the scenario in question. All the team members were present (physically and mentally) and were motivated to do their individual tasks which together created a presentation for the police to show them why this scenario would require a multi-agency response. Described as responding to this situation with a “sense of urgency,” within a short time the team had worked together to create a presentation that was a “product of the team” and something that they could all “stand behind.” Most importantly it showed the police team the added value the ROT and why they need to be involved in those kinds of responses.

The individual members of this team all had specific roles and duties. Different situations or emergencies require different input and activities from the team members. The scenarios that this team prepared for did not always require the input of all the team members. However, all team members noted that even if it was not ‘your’ department, everyone contributed to the team effort of responding to the situation. These instances were coded as “*greater than the sum of its parts.*” Team members mentioned the benefits of having all their colleagues engaged in the tasks, “some of the guys in the team although they were less involved they could ask the critical questions,” and “because he was a full member of the team and because we are open, and we ask for feedback, he really took the opportunity to give me feedback and there was a good discussion taking place and I also really appreciated him doing that.” The team members who were less involved in the scenario also described how they stayed engaged if the activities did not require their direct involvement, “there was little to do for us and what I

³ Quotes have been edited for grammar and confidentiality. All names were removed and gender references changed to male.

did then was mainly to be curious, to be interested in my team members,” and “even though it might not be a part of your job, still you can have a big role in the team.”

The final subtheme was *“the hardest thing to do was nothing.”* The team had two phases of activities: the preparation phase and the NSS phase. During the preparation phase they were always kept busy; however, it was a different situation during the NSS days. The team spent months preparing for these three days and then they were all sitting in a room together waiting for something to happen so that they could respond. Although they saw this as ‘doing nothing’ it was evidence of task engagement because it shows the passion, energy and engagement with which they approached their work and sense of responsibility during that time. In addition, while they had prepared for a number of different emergencies and were “ready to jump into action,” not responding to unrelated events and still being able to stay focused and engaged is further evidence of this team’s task engagement, “Sitting on our hands, as I would call it, was the most difficult task.” This was not a group of people who put their feet out and had a “coffee and a donut” when there was nothing to do. They wanted to act, and when there was nothing for them to do they did other, appropriate for the situation, work. Again, while this is done at the individual level, it is still evidence of team engagement because it was a shared sentiment of the team.

Team Goal Engagement

Because of the unique situation which this team was working together for, there were two main trends when identifying team goal engagement. All of the team members were motivated to be a part of the team because it was a “once in a lifetime experience.” This was evidence of both individual engagement towards the goal and the team’s goal engagement. Although all of the team members indicated the excitement and importance of the event contributed to their motivations for being a part of the team, those were more the motivations of wanting to be a part of the team than motivators for the work that they do as a whole. The team knew that this was a special event, and they wanted to do the best they could to ensure that the event and their city were safe and proud. They understood that the safety of not only of the delegations and VIPs arriving for the NSS was in their hands but also the people in their city, and they did not want to let those people down, “you want to have a safe city and you want to stand there for your city and I think the common feeling is to be proud, and you work together to go there and to do it.” In addition, they felt a sense of responsibility to their stakeholders, not only the police commander who was also involved in the interviews, but also to the ‘Gemeente’ and the Mayor of Rotterdam. So the added benefit of the once in a lifetime experience increased the motivation of the team to do their jobs well.

Team Membership Engagement

“Identification with the team implies thinking about oneself as a group member and it drives from the relationships the individual establishes as a member of the group and from the value and emotional significance that membership has to the individual (Tajfel & Turner, 1986 as cited in Costa et al., 2014b, p. 36).”

Although this team was only together for a short period, most of the individuals knew each other prior to being assigned to the NSS team. In addition, the team leader took special cause to select team

members who were not only good at their jobs, but who would be compatible as colleagues based on personality to minimize impacts from factors such as personality conflicts. Therefore, the team membership engagement findings may have certain qualities that may not reflect the situation of the average work team. However, there is still strong, relatable evidence for team membership engagement within this elite, albeit short-term, high-performing team. As we coded the data, four subthemes of team membership engagement emerged: team membership; team building and sharing experiences; being invested in the team members; and, “would you work with this team again?”

Identification within a team is a result of individual team members seeing themselves as members of the group and is strengthened if and when value and significance can be placed on that membership (Costa et al., 2014b). The fact that this was an elite group of professionals who were selected to work on an once-in-a-lifetime event provided an ideal opportunity for the team members to develop a strong sense of groupness or identification to the team. The team building and shared experiences were enough to have a good chance of developing team engagement, but the members of ROT also contributed to its team membership engagement. If the team was made up of competitive individuals who wanted to do their own work and go home than the team would have had a very different dynamic. Following the NSS the team leader shared with his supervisor “if you ask me to have an ‘A’ team, that is not difficult for me.” So it was a good group of people whose value, expertise and experience were recognized within the team and as a group as a whole. In addition, while this was a short term team event the team members noted the added value of having had those shared experiences with that team, emphasizing the relationship, bonding and loyalty which developed during their time together, “if you have had the same experience to have been a part of the team during NSS, it’s really good.”

Further, as mentioned above in task engagement, the team members saw the value in their team as a whole and were not stuck in their roles and departments, “like in the basketball team...also the players who are not playing but on the side just practicing are really essential on the team.” This shows the relationships and motivations of the team members specifically surrounding their team membership and *investment* into that team membership. There were certain factors that allowed this team to be together long enough to develop team membership engagement and a “sense of camaraderie” or a “badge of honor” from having been a part of this team. Further, the engagement towards the team appears to have outlasted the physical length of the team. Described as similar to being at a football match, the influence of these *shared experiences* was noted by a number of the team members. A shared feeling of “we were there together” was obvious when reminiscing about the NSS. It was deeper than, ‘I was there’; as the emphasis was always on ‘we’.

The team members appeared to understand and appreciate the strengths which this team offered them, “What we have learned as a team that, we are, there is one large chain as a team, and we also sit in a circle, and I think we need every shackle in the chain to be strong.” Many team members claimed that it was the team unit itself and not specific individual contributions which lead to the team’s high performance, “such a thing you cannot see from yourself if you are, if you cannot reflect yourself one of your team members can help you with that.” Finally, every single one of the team members and the stakeholder were asked one important question, “Would you work with this team again?” and in each and every case the answer was a resounding “yes!”

Dimensions of Engagement

Although the three dimensions of engagement were not seen in the quantitative analysis of team engagement, we still looked for evidence of team vigor, absorption and dedication in the qualitative data. Both evidence and lack of evidence of the dimensions provided insight into understanding team level engagement. Certain trends were found while coding for team vigor, absorption and dedication. Some evidence of the dimensions, particularly team vigor, was found in the data; however, more examples of the dimensions were seen at the individual level than the team level, “The other thing is I really liked it and enjoyed it although it took a lot of energy if you are there three times, 12-hours in a row and on Wednesday I had another extra appointment, so I had no days off.” There were also examples of a lack of the absorption dimension at the team level, “We can talk about our normal daily business together, so it’s not just talking about NSS as the only subject, we could talk about several things.” Therefore, although there was evidence of team vigor, “We were excited, it was in the last days, so you’re working on the third day or second day...You’re a team you do it together, you see the fun in that.,” it appears that the dimensions were represented more at the individual work engagement level than the team level. This is consistent with the findings from Chapter 2. This could be because of the challenges of capturing the shared experience of the dimensions at the team level, or because the dimensions are experienced too individualistically to be able to represent a team level phenomena.

Individual Work Engagement

Based on the construct validity test of Chapter 2, individual work engagement was found to have a positive relationship with the three objects of team engagement; however, we do not know in what direction that relationship exists. Does a group of engaged individual lead to team engagement? Or does being a part of an engaged team produce work engagement in individuals? All of the participants appeared to be engaged employees. This was evident not only from the interview content but also in the way the individuals conducted themselves during in the interviews. The interviewers found themselves engaged and energized from interviewing this high energy, positive and elite group of people. It was clear that they loved their jobs and were happy with what they were doing. This passion was also clear when they talked about their individual contributions to the team. As mentioned above, although they were kept busy during the preparations for the NSS, during the actual 12-hour shifts there were no emergencies for them to response to. However, this was not a group of people who responded to down time by “twiddling their thumbs.” Team members prepared work to do during that time and even brought work that could benefit from the aid of fellow team members to try to use the time the best they could. Further, even after their 12-hour shifts one team member spoke of how they then worked even later to make sure that everything that needed to be put in place was done before heading to the hotel to get some rest before the next 12-hour day, “I had some homework as well to do, to arrange some things, make a few phone calls to my duty officer on the street.”

However, not all the members of the potential pool of workers at the VRR could bring the same attitude to an engaged team, although all are undoubtedly good at their jobs. In contrast to being able to put together an ‘A’ team, the team leader also said that it would be easy for him to put together “a nightmare team.” Team members were able to give examples of working with the randomly selected ROT teams, either in training or in a crisis, which would not have been described as engaged, “I also

have experience in other teams where if one of the shackles gets weak it has to do with this, maybe with this intention that they are there. If they are not prepared, or not willing, or not interested, or they start getting annoyed and looking at their watch, I have other things to do.” Finally, one individual spoke of their frustration and lack of motivation when working with some of the same team members in an exercise a few months later. That exercise was completely different and far from the safe, respectful, engaged atmosphere which existed during the NSS, even with some of the same members. So just having those engaged team members together does not guarantee an engaged team; more importantly, the lack of team engagement in that particular circumstance, also influenced individual work engagement. As to the question of which came first, the individual engagement or the team engagement, in this team it appears that while the individuals were engaged workers, their work engagement was not sufficient to produce an engaged team. Other factors in combination with the group of engaged individuals contributed to the emergence of engagement in this team.

3.4.3 Model of Emergence

Based on the conceptualization of team engagement and the review of determinants and models of emergence in the theoretical background, certain factors that were expected to have an effect on the development of team engagement. Throughout the coding process, we moved back and forth between the data and the theory to investigate the factors, mechanisms and processes contributing to the emergence of engagement within this team. In doing so, certain trends became apparent that reflected different clusters of factors which are believed to have influenced the ROT’s level of engagement.

In this case the context had an undeniable influence on the engagement of this team. In addition, factors that are also applicable to other work teams were identified as contributing to the emergence of team engagement. These factors were clustered into four groups: team composition, interdependence, team atmosphere and internal relations. Team composition includes the leadership within the team and the characteristics of the individual team members. Interdependence reflects the team’s level of dependence on each other to complete their work activities and achieve the team goals. A safe, respectful and equal work atmosphere and the team’s internal relations (including collaboration, communication and cohesion) were the last two clusters identified. All of these clusters of variables can be considered to have either a direct or indirect influence on the emergence of team engagement. Although causation has not been determined, the factors are being presented in what we believe was the logical order of emergence in this team.

Team Composition

There were two codes clustered under the theme of team composition: leadership and individual team member characteristics. These inputs, along with the context in which the team was functioning, are believed to create a basis in which team engagement may emerge. This team had everything in their favour when it came to the selection of the team members. The fact that it was not only an exciting, but also a professionally challenging event assisted in the recruitment of the team members as it was a desirable team to be part of. Although it was noted that, because of the time commitment not everyone from the larger pool of potential VRR team members were inclined to be a part of the NSS teams.

The presence of a good leader, in this case, was very strong evidence for the emergence of team engagement. There are a number of reasons that this appears to have a strong influence on the team's engagement. The first reason is that the team leader personally hand-picked the team ensuring not only that he chose people who were good at their job, but also people whose personalities would work well together, "I looked for the right balance...who do I want in my team? And are they complementary?" In addition, he was very clear to his team about his expectations and the type of leader that he was, "he chaired it well. He was clear, he was very short and brief, and so for all the team members it was clear what he expected us to do." When describing his leadership style, a team member stated, "There were no doubts in the team. There was no mistrust in the team." He was described as a calm leader and although self-described as "strict when I need to be," balked at the idea of having a sense of hierarchy built into the day-to-day processes of the team. Finally, he instilled confidence in his team members by relying on them and their skills to ensure that he also did a good job. He talked about how he selected a team member to "check his back." This team member was there to hold him accountable, to give feedback to him and to help him out if he was getting stressed or tense. This leadership likely contributed to the level of engagement in the team, as well as influencing the team atmosphere and spearheading the positive internal relations. By being an example for his team by acting calm, transparent, and dedicated the team leader established a baseline of acceptable behavior that was shared by the team members, "He was very relaxed those days. And if the leader is relaxed then everyone goes with it."

The team was very functionally diverse with each team member contributing unique skills to the team; however, they were similar in other attributes like professionalism, experience and gender. Characteristics of the individual members included being enthusiastic and being "willing to be open, willing to listen, and also willing to share their private things like their hobbies or their things." The team leader used what he calls the three (Dutch) K's, *knowledge (kennis)*, *character (karakter)*, and *network (kennisen)* when choosing his team. These are traits which are important because it ensured that the team members have the knowledge and the skills to do the job, but also a network that supports them and the character to be able to respond to tough situations. The characteristics of the individual team members influence the level of team engagement because although it is a team level construct, the team is still ultimately composed of individuals. For those individuals to be a part of an engaged team they need to have certain characteristics that are conducive of being able to create that shared state. Examples were given by the participants of other VRR colleagues who do not share these kinds of characteristics and therefore negatively influence the team dynamics and environment, "you can see in how people sit or how they look, non-verbally if they are enthusiastic, or if they are forced to be there. I think he was more or less feeling forced to be there." The team member characteristics are related to team membership and team task engagement as they influence the relationships built between the team members and their confidence in their colleagues to do the work required of them.

Interdependence

Two codes fit under the theme of 'interdependence': task dependency and goal dependency. Task and goal dependency were a part of the conceptualization of task and goal engagement in Chapter 2. Although designated as 'inputs' in the IPO model of Kuipers et al., (2014) in this case they are simply categorized as the interdependent nature of the team because it represents the team's working

conditions. Interdependence between the team members involves more interaction in team processes which in turn makes it more likely for team members to develop shared states such as team engagement (Costa et al., 2014a). For a team consisting of people from completely different disciplines with completely different tasks, this team showed a lot of evidence of task dependency. Referring again to the “greater than the sum of its parts” quote, the point of this team was to bring these professionals together to be able to utilize the expertise and interconnectivity of their roles when responding to an emergency. During the scenario planning activities each member contributed to the scenario as it related to their agency. Although they worked on their specific tasks separately the contributions from all the team members, along with the brainstorming and activities done as a team, were necessary to produce a solution to the situation.

There was an added necessity for task dependency for the NSS in the way that the different agencies had to work together. It was crucial that all of the members of the ROT understood each other and exactly what the different potential situations called for. For example, there were cordons in the hotels where the delegations were staying. All of the team members needed to know about the cordons and understand what the rules were around them, “We had in a part of our preparation phase, all the time to discuss ‘what does it mean?’ Do I understand what you are saying? And because of we had the same people in the team we could all discuss the scenarios, we would be very sure that we were saying the same things and understanding the same things.” For instance, if there was a fire - could the fire department go in the cordoned off area? The team was dependent on each other to be on the same page so they could provide the correct information to their respective agencies.

In addition, team members who were not as involved in a scenario or situation were still committed to the activities and provided important input. These types of situations showed an overlap between the collaboration and task dependency codes. The collaboration that took place in the team increased the level of task dependency through the willingness of the team members to remain engaged even if the situations did not directly involve them. This increased the team’s task dependency as that input began to be perceived as an integral part of their process, “and it’s always good to have someone in the team that isn’t involved in the processes...I think in every team, the more the situation is tense, the more you need someone like that to keep you from, televisions, or whatever.”

Task dependency was related to task as well as membership engagement. Working together, appreciating each other’s contributions and respecting the authority of the decision maker developed a sense of trust and comradery between the team members. In addition, the act of working together and depending on each other to complete their tasks influenced the level of task engagement through their shared interactions and successes.

There were fewer examples of goal dependency than of task dependency in this team. That being said, as mentioned above, the fact that this was an elite team compiled for a high profile, international event made the connection between the team and their goals very salient. This was reflected in the way in which the team members worked together and depended on each other to achieve their team goals. While their main goal was to keep the delegations and the citizens of Rotterdam safe, there were other smaller team goals which they also worked on throughout the preparation and the NSS itself. For example, as there were no emergencies during the actual NSS, staying calm and keeping their

stakeholders calm was identified as one of the main goals of the team. The team was so prepared to respond to a situation that the environment was described as tense, and the team members were energized and buzzing to respond to anything. Therefore, a common phrase from the interviewees was that “sitting on their hands” was a large part of their job during those three days, and they worked together to try and help each other avoid responding when it was not necessary. They were trained to ask themselves “what if?” in regards to situations which arose (e.g., what if this fire was set on purpose to pull resources away from a future terrorist attack?). But to also recognize when the crisis was not NSS related and then to step away so that they could respond if an NSS related event should occur. This is an area where it appeared that the team members really worked together to stay calm and collected while still being alert and attentive in a challenging environment. Having the shared large goals and smaller day to day goals contributed to the team goal engagement by focusing the team on their goals and making their attainment a team activity.

Team Atmosphere

Described as safe and respectful, the team atmosphere was believed to be a venue for collaborative team work for the ROT. It reflects the established team norms and expectations of behaviour within the team. One anecdote that illustrated the positive, inclusive team atmosphere involves an intern who participated in some of the scenario planning sessions. In the midst of a group of professionals who were preparing for a highly publicized, international event a young 20-year-old female intern “not in uniform, in this strong space” was able to contribute to the activities and make recommendations for the scenario planning. Both the fact that she felt comfortable enough to make suggestions and that the group was receptive to her ideas provides insight into the type of team atmosphere that existed within this team. While it should be investigated further, this kind of team atmosphere may provide a suitable platform in which individual work engagement can be extrapolated to the team level. In a previous study, a safe and respectful team atmosphere was identified as a key characteristic in producing a ‘climate for engagement’ where individual work engagement can be shared and heightened (Costa et al., 2012). In addition, categorized as a team social resource, a supportive team climate has been identified as a factor which can “elicit the functioning of interactive processes between individuals at work” (Torrente et al., 2012a, p. 111). Although cause and effect is hard to determine based on these interviews, it appears that the safe, respectful atmosphere was at least partially created by the members of the team, what they brought to the team, and how those dynamics interacted. Another contributing factor was the mutual respect which came from the fact that most of the team members knew and respected each other prior to working together on this team, “because everyone knows each other and respects each other for what he has, or her, what he or she has to bring in the team” and, “I think it was a good atmosphere in this team and they respected each other from their own work, and they worked very well together.”

Within this team one of the factors that contributed to the atmosphere was the team’s hierarchical structure, or lack thereof. In a team where ‘stars and stripes’ could have a large influence, there was very little imposed hierarchy. During an emergency, the hierarchical roles would take effect; however, the remainder of the time the team members were considered equals. This precedent was set from the team leader, “Nobody said I am the big boss. You treat each other as equal,” and “Hey, I’m the guy in charge but that doesn’t make me more important.” The lack of hierarchy in this team had a direct effect

on the team atmosphere. Many of the team members spoke of how they appreciated being perceived and treated as equals, “What’s your salary, how many stars and stripes do you have? It was no issue here.” The lack of imposed hierarchy in this team may not be a factor that influences team engagement in all teams, but it does reflect on the working relationship of the team and how that can create an atmosphere where team engagement can occur.

Internal Relations

Internal relations have to do with “the quality of cooperation between team members” (Kuipers et al., 2014, p. 9). Three codes were identified which are classified as the “three C’s” of internal relations: collaboration, communication and cohesion. While these fragments were coded separately, they were grouped together during the axial coding phase under the heading of internal relations because of the previous literature on teams by Kuipers and Groeneveld, where the “three C’s” would be classified as team processes, and also because they logically fit together as they described the working relationships of the team and team members. Team processes, as mentioned above, are the conduct and behaviour of the team members which influence outcomes.

Collaboration

Collaboration was one code that had a lot of overlap with task dependency. As described above, at times it was hard to distinguish when the team members were truly dependent on each other and when they were simply working together to make the overall tasks and activities better. That being said there were many examples that clearly reflected the collaboration within the team. This makes logical sense as collaboration between the representatives from the different agencies was the ultimate goal of the VRR. In this team, collaboration appeared to influence both task and membership engagement. Because this team worked together for six months instead of the usual ‘one-time event’ the team members were able to get to know each other, which created more opportunities for collaboration, “He noticed that if they are together that they know each other and can collaborate with each other. So could work together.” It influenced task engagement by connecting the team members in their work activities, “We helped each other thinking in each other’s processes and so on.” And it influenced team membership by building the trust and respect within the team, “But everyone could talk about it and think with him about how it will be organized. Everyone in the team can leave the idea that he’s the only specialist. So everyone in this team is open for suggestions from the other members of the team. And that’s very nice.”

Communication

Communication was a very important theme in these interviews because it reflected the working environment, the team interactions and provided an opportunity for collaboration. Opening up topics for discussion and providing and being open to feedback was one of the features of this team which contributed to its high performance and team engagement, “Accepting that someone else is asking you critical questions about the things you are doing. And not getting angry...I’m not asking this because I think you’re not doing the job right, no, I’m trying to help you make the right judgment.” How team members chose to communicate with each other was very important, particularly if and when a mistake was made. There was a particular attitude about how a mistake would be responded to, “Well we didn’t

argue; we didn't fight. We take it into account. It's a part of life; everyone makes mistakes. And if a mistake is made let us all together try to solve the problem, clean up the mess." This open and receptive communication style reflects the working relationships and work atmosphere of the team. Egos were put aside for the best of the situation and the team, "I've been doing this now for a couple of years and this was one of the first times that we really were critical or we're giving feedback to one another, and you speak up that you really have your expectations from another in your team." This shows how the communication within the team related all three of the objects of engagement: the task, because of the expectations around the work being done; the goal, because of the expectations of the quality of the work of the team; and the membership because the team members needed to have the kind of relationship that allowed this kind of critical and honest dialogue.

Cohesion

Team cohesion refers to the closeness of the team and the quality of the relationship between team members. It is the degree of unity of a team based on their collaboration, cooperation, support of one another and communication (Kuipers & Groeneveld, 2014). It is considered to be a factor contributing to the emergence of team membership engagement because it reflects the interactions between the team members and how those attitudes and behaviours can influence the level of engagement of a team towards their members. Team membership engagement is believed to be fueled by the relationship that the team feels towards the members of the team and the meaning associated with team membership. Therefore, teams with high cohesion are also expected to have high team membership engagement. Likewise, a team with low cohesion will likely have low team membership engagement as there is not a special draw to one's team members motivating them to work harder for that team.

Collaboration and communication were already described above, so the fragments that were coded as 'team cohesion' focused on the closeness, bonding and relationships within the team. Developing relationships, getting to know the team members better, feeling like a team, and being able to make jokes together were all examples of the team's cohesion. The evidence of cohesion within this team is also interesting because the team members were only part-time members of this team and belonged to different groups with whom they could also identify. The situation and the work environment provided a good setting for team cohesion to develop. The shared commitment towards the team's tasks and goals created a bonding environment and the additional time the team spent together fostered relationship building which was not possible during the usual VRR events and responses, "We can talk about private situation together. We can talk about our normal daily business together, so it's not just talking about NSS as the only subject, we could talk about several things." This closeness benefitted the team, "Yes, I do think that if you know each other better, if you have each other, that your performance will be easier." Further, the team cohesion has lasted beyond the NSS event. Even though they are no longer working together as a part of that team, when the team members are brought together in other capacities that sense of cohesion is still there, "The ROT is not working together but, there are a few people who always work when there is a disaster or something, so they know each other. But this is also helpful because they made teams with the same people in the teams. That also helped to be a team. And they knew how they work."

3.4.4 Emergence of Team Engagement

Above we have described a number of factors that have been identified as potential mechanisms and processes which may lead to team engagement. But it is the overall picture which we must look at to be able to determine how team engagement emerges in teams in the public sector. It must be noted that the context for this team was special and unique and undoubtedly influenced how team engagement emerged in this team; however, besides the context there are many generalizable factors here which inform how team engagement developed in this team. While Costa and colleagues (2014a) argued that contextual and individual variables had less of an influence on the emergence of team engagement than team interpersonal processes, we still want to acknowledge their presence, but not dwell on their potential limitations. Based on these findings, we put forward six propositions about the emergence of team engagement in the public sector.

Although this seems like an ideal organization and situation for team engagement to emerge, it is important to note that not all the teams working at VRR would be labelled as engaged, high performing teams. The composition of the team, the level of interdependence, the team atmosphere and the internal relations are all factors that contributed in different ways to the engagement of this team. The team leader said that while he had no problem identifying the members of what he called his 'A' team, he could also easily put together a 'nightmare team'. Therefore, it appears that an important contributing factor for engagement was the skilled, proud, engaged individuals who made up the team. Because of the unique situation, the selection of all of the team members was able to be controlled; a kind of team selection that is often not possible when compiling work teams. That being said it does emphasize the importance of taking into consideration the characteristics, work ethic and attitudes of potential recruits when selecting members for a team.

Proposition 1: Individual team members' work engagement influences the emergence of team engagement.

Proposition 2: Characteristics of the individual team members influence the emergence of team engagement.

Having engaged team members is not enough to create an engaged team; that is where the other factors like the team characteristics, the team atmosphere and the internal relations also contribute to the emergence of team engagement. Task and goal dependency within a team create interactions which help build relationships and develop a shared emotional state (Costa et al., 2014a). However, for task and goal dependency to be able to build positive interactions, the team members must be able to depend on each other. Otherwise it could negatively affect the team's level of team engagement.

Proposition 3: Team engagement emerges in teams with high levels of task and goal dependency.

The safe, respectful, hierarchy-free team atmosphere contributed to team engagement by providing a setting where the team members felt comfortable and supported in their work activities. The atmosphere was created by the shared inputs and experiences of the team and allowed for positive internal relations to develop within the team. The internal relations are the only team processes

identified. Team processes include all the behaviors and interdependent acts which affect the team outcomes (Kuipers et al., 2014; Costa et al., 2012). The three C's of internal relations contributed to the emergence of team engagement and likely also the team's performance outcomes as those were the activities that the internal relations were focused around.

Proposition 4: Team engagement is more likely to emerge in a safe and respectful team atmosphere which is conducive of a 'climate for engagement'.

Proposition 5: Team engagement emerges in teams with strong internal relations (collaboration, communication and cohesion).

Finally, while the influence of the public sector was most obvious in this team in terms of the team goals and goal engagement, teams in the public sector can also be influenced by other factors such as the context. The context can affect both the factors leading to team engagement and team engagement itself. Therefore in the model below, along with being a team in the public sector, the context is considered an overarching influence on the emergence of team engagement.

Proposition 6: Team goal engagement in the public sector emerges as a result of high identification and motivation towards public service related goals.

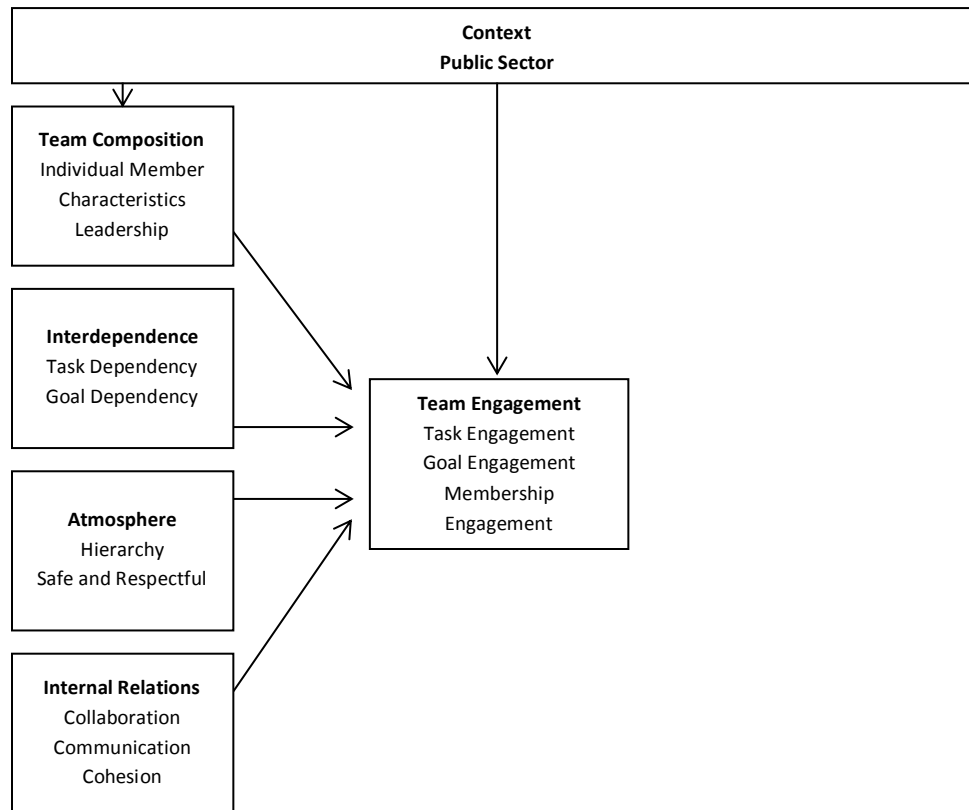
Proposition 7: The context affects both the characteristics that influence team engagement, as well as team engagement itself.

Based on the findings we believe the factors and mechanisms listed above all contributed to the level of engagement within this team. Adapted from the input – process –output model, the model proposed is a first step in looking at how team engagement emerges in the public sector. Because causal relationships are not clear the complete model of emergence of team engagement still requires further study, however the model in Figure 3 shows the contributions of the factors above and their relationship to team engagement.

Further understanding of how these mechanisms interact together to contribute to the emergence of team engagement is required as certain factors likely have a mediating effect on each other and team engagement. For example, in this case it appears that the team composition provided the setting for a safe team atmosphere to develop, which in turn created the positive internal relationships. However, the relationship between those factors will need to be studied in a wider variety of work teams and quantitatively to be able to determine the path of emergence for teams in the public sector. For now, based on the feedback from the team members of the high performing ROT, these factors were present and likely contributed to the team engagement and high performance of this team.

The three dimensions of engagement are absent in the model of emergence. While most dimensions were identified only at the individual level, team vigor was also found at the team level. As such, team vigor is a factor which is present in team engagement, yet is not considered to be its own dimension or object. The examples of team vigor in the ROT reflected the team's energy and excitement towards their work activities and team membership. Likely the dimension of team vigor is present in the three objects of engagement, and further research into how vigor contributes to the three objects of engagement needs to be studied in the future.

Figure 3 Model of Emergence



3.5 Discussion

This paper proposed a basic model of how team engagement emerges in the public sector. The qualitative data showed a concrete example of how team engagement can emerge in a public sector team and what factors were associated with that engagement. This was an example of ‘the perfect storm’ to create an engaged team: the team was handpicked for their expertise to work on an exciting and unique project, the expectations were clear and deemed fair, the work required the team to work together cohesively to be successful, the team felt ownership of their work and responsibility to the team and their stakeholders, and through leadership and mutual respect a respectful and safe team atmosphere was created. This model illustrates the importance of considering both the individual level and team level constructs when trying to develop an engaged team. And while these are factors that led to the team being engaged, they are also factors that led to the team being classified as a high performing team. Having this successful high performing, engaged team also likely develops a cyclic relationship between team engagement and the factors which allow it to emerge.

A notable absence in the model of emergence is team commitment. Team commitment was found to have a strong relationship in Chapter 2; however was not found to be a contributing factor in the emergence of team engagement in the ROT. The fact that the ROT is a parallel team who work together temporarily might explain why team commitment was not seen in this team. Team members were dedicated to the team, but that was mostly seen through the internal relations and the evidence of

team membership engagement. Although it was not seen in this team, team commitment should still be considered in future research investigating the emergence of team engagement in the public sector.

Chapter 4 Discussion, Conclusion, and Final Remarks

4.1 Answering the Research Question

This thesis was dedicated to understanding the concept of team engagement. To do that we set out to answer the following research question:

What is team engagement in the public sector and how does it emerge?

To answer the main research question four research questions were proposed:

RQ1: What is the 'object' of engagement of the team?

RQ2: Is team engagement unique from being a collection of engaged individuals?

RQ3: Is team engagement empirically unique from other similar concepts?

RQ4: How does team engagement in the public sector emerge?

Chapter 2 was dedicated research questions 1, 2 and 3 and Chapter 3 focused on research question 4. All four together answer the main research question. So, what is team engagement in the public sector? Team engagement is a three-dimensional construct where the three dimensions consist of three independent objects of engagement: team task, team goal and team membership. It is a team level construct different than a group of engaged individuals and independent from similar team constructs such as team commitment and cohesion. The qualitative research from Chapter 3 identified four clusters of factors which influence team engagement: team composition, interdependence, the team atmosphere, and internal relations. A basic model of the emergence of team engagement proposed a direct relationship between the clusters of factors and the objects of engagement. The context, including being a team in the public sector, is believed to influence both the factors and the objects. The more complex relationships between the factors leading to team engagement is not yet clear and requires further study, but the basic contributing factors leading to the emergence of team engagement have been identified.

Team engagement specific to the public sector was explored by looking at the relationship between the three objects of engagement and public service team motivation (PSTM) and from the interviews with a team within a government organization. Specifically, we looked at the relationship between public sector values and team engagement. While only a weak relationship was found between PSTM and the objects of engagement in Chapter 2, a stronger relationship between the public values and team engagement was seen in the interview data. This leads us to believe that public sector values do contribute to a team's engagement, particularly if the team feels a strong sense of accountability and responsibility to their stakeholders and their public sector roles.

Based on those findings we propose the following definition for team engagement:

Team engagement is a shared, positive, emergent state that is characterized by the team's engagement towards the team's work tasks, team goals and team membership.

An engaged team is "greater than the sum of its parts" in the sense that through its engagement towards the team's tasks, goals and membership, the team itself is the 'whole package' and the catalyst

of the team's success. In other words, team engagement is the spark, energy, and passion of a team working together to achieve something amazing (Kuipers & Groeneveld, 2014). While the contributions of the individual team members can influence the level of engagement, the success of the team comes from the unit and not the team members themselves. This definition was adapted from the earlier work into team engagement (Costa et al., 2012). Important differences between this definition and former definitions are the exclusion of the three dimensions of engagement and the inclusion of the three objects of engagement. Consistent with the findings of Costa et al. (2014b) vigor, dedication and absorption were not found in the quantitative measurement of team engagement and mostly seen at the individual level in the qualitative data. Therefore, the three objects of engagement are a part of the definition of team engagement, but the three dimensions are not.

4.2 Discussion

"They were the much better team. That's what team basketball is and that's how team basketball should be played. You know, it's selfless. Guys move, cut, pass; you've got a shot, you take it. But it's all for the team and it's never about the individual...That's how team basketball should be played."

– LeBron James

LeBron James, heralded as one of the best basketball players in the world right now, was quoted after his team was defeated by the San Antonio Spurs in the 2014 NBA finals. Within an industry that idolizes the superstar, the Spurs play basketball as a team should play a team sport, "To the San Antonio Spurs, you showed the world how beautiful this game is" (Adam Silver, June 15, 2014). This thesis has been about team engagement in public sector teams, but this example of an engaged basketball team is salient, timely and moving, and illustrates the strength of the unit rather than the individual players, stars in their own right, who fill the roster. Albeit a little less dramatic, the ROT was a public sector example of the Spurs. Each member was a star in their own right, but when they came together it was the team that was the superstar. In the final discussion we will cover three final points: team engagement as an emergent state, the model of emergence and the lost dimensions of team work engagement.

Defined as an emergent state, "constructs that characterize properties of the team that are typically dynamic in nature and vary as a function of team context, inputs, processes, and outcomes," team engagement is, therefore, dependent on the factors and mechanism which influence it (Marks et al., 2001, p. 357). Four clusters of factors were identified which contribute to the emergence of engagement within a team. Some of these factors are more stable than others. For example, while the team activities may stay the same, the individual member characteristics could fluctuate if team members come and go. While team engagement is believed to vary as a result of team characteristics, the addition of the three objects of engagement may offer a slightly more stable state of team engagement. Because there are three objects which the team can be engaged towards, and those objects together make up team engagement, if engagement is low towards one of those objects there is still the chance that the team may be engaged towards one of the other two objects of engagement. For example, during the 12-hour NSS shifts the ROT was often fatigued and losing focus. While their team task engagement was fading their engagement towards their goals and the pride that they felt from being a member of that team pushed them to stay focused and on task for the entire time. In other words, while the engagement

towards one of the objects waned, it was still strong towards the other two objects. The stability of team engagement should be investigated in the future to see: a) how the level of the three objects of team engagement fluctuates throughout an average work day, work week and work month; b) how engagement towards the three objects of engagement influences the level of team engagement as a whole; and finally, c) how engagement towards the three objects of engagement influences the engagement of the other objects. All these questions still point to the influence of the context, inputs, mechanisms, and processes on the emergence on team engagement, but we are curious as to how stable an 'engaged team' is once the factors are there to create it in the first place.

The factors used to explore the emergence of team engagement in Chapter 3 looked at the context, inputs, processes and team and individual mechanisms to understand the emergence of team engagement in the public sector. Previous studies have used an input-process-output model (IPO) and an input–mediator–output–input framework (IMOI) to explain the emergence of team engagement (Kuipers & Groeneveld, 2014; Costa et al., 2014a). The factors identified included parts of the models mentioned and were all found to have some kind of direct effect on the emergence of team engagement in the public sector. Therefore, the IPO and IMOI were used as a starting point for understanding the emergence of team engagement; however, while there is a more complex relationship between the different factors and their effect on team engagement, only a very basic model of the emergence of team engagement was proposed. The model presented in this paper should be considered as a point of departure for future research into team engagement and the three objects of engagement.

Team engagement was identified as an attitudinal outcome of high performing teams using the IPO, and was seen as both an emergent state and a team process in the IMOI (Kuipers & Groeneveld, 2014; Costa et al., 2014a). The fact that team engagement can be seen as a result as well as an influencing factor in teams proposes an interesting place for team engagement in team models and frameworks in future research. The ability of team engagement to have a circular effect or to create a feedback loop is very feasible. One member of the ROT noted "I was already proud on the NSS effort that we did, but now you put a stamp on it that it might be a high performing team, well I'm even more proud, more enthusiastic for the next time, it's a kind of cycle." Another team member spoke of the benefits of being aware of the potential goal of being an engaged team and implementing those team-related goals in addition to the task or action related team goals. Therefore, when building the model of emergence for team engagement in the future, team engagement may be looked at as a process or outcome, or both.

As noted in both Chapters 2 and 3, while the essence of the three dimensions of work engagement was a part of the conceptualization team engagement and the measurement tool, the dimensions were not identified in either the quantitative or qualitative data analysis. Costa et al. (2014b) also found that contrary to previous research (Torrente et al., 2012b) when testing the TWES they found a 1-factor instead of the 3-factor solution they were expecting. This study found that while the dimensions were not seen in the validation of the object of engagement scales, the four items which were removed from the scale were items that were adapted from the absorption dimension. We noted in Chapter 2 that this could be because absorption either cannot be measured at the team level if collected from the individual level or that absorption simply does not exist at the team level. The qualitative data supported the former. Evidence of absorption was present at the individual level; however was not

reported at the team level. This makes sense as you can imagine one or two colleagues being absorbed in their work together, but a team usually does not do all their work together. Thus, it is more likely that individual team members can be absorbed in their work but not team as a whole. While the dimensions are still a part of the description of team engagement, it appears that at the team level they are not separate, measurable dimensions.

4.3 Limitations and Future Research

4.3.1 Limitations

The sample size for the quantitative and qualitative analysis was the first limitation of this study. Although data from 307 individuals is a good sample size, once the data was aggregated to the team level, the smaller sample size of 36 teams was too small for some statistical tests. Therefore, the factor analysis and construct validity tests were done at the individual level instead of at the team level. While we do not believe this affected the validity of the results, as we are measuring a team construct we would have preferred to have conducted the tests at the team level. In addition, for practical reasons based on the time restraints and the feasibility of accurately interpreting and understanding the emergence of team engagement in a public sector team, only one team was interviewed for the qualitative analysis. Although it was a very informative team to interview, this does influence the generalizability of the findings. Because only one team was interviewed, and the circumstances of the team were so unique, the results may not apply to all teams in the public sector. That being said, the context was taken into account when analyzing the results and the data was interpreted within the frame of previous research and the theoretical background to make the findings as applicable as possible for teams in the public sector. No two teams are exactly alike, therefore these findings, like any results, need to be taken and applied to situations and teams as is appropriate and relevant to that team's specific situation.

4.3.2 Future Research

Team engagement is an exciting field which is just at the beginning of its research journey. There are many directions for future research into team engagement and a few points for future research have already been mentioned. Further testing and validation of the measurement scale is required as the final scale was structurally quite different than the original scale (Hinkin, 1995). In addition, based on the findings from Chapter 3 it would be interesting to look more in-depth into how the three objects of engagement emerge and if they also contribute to the emergence of each other. Along the same lines, further research is recommended into whether the objects of engagement always occur simultaneously under the overarching concept of team engagement or if they can occur individually. Additional qualitative research would also be beneficial to compare both engaged and disengaged teams to narrow down the unique factors which contribute specifically to team engagement.

As this study only looked at the factors which influence team engagement qualitatively; quantitative research into the determinants of the three objects of team engagement would also be valuable. The determinants of team engagement have been studied quantitatively (see Costa et al., 2014a and Kuipers et al., 2014); however, research looking at the relationship between the factors and the three objects of engagement would be a natural next step in trying to understand why team engagement develops in

some public sector teams and not others. As mentioned above, the role of team engagement in either the IPO or IMOI model needs to be investigated further; with a particular focus on the objects of engagement and their potential role as an outcome and process. Finally, in this study we focused on the positive side of working in the public sector including the public values and the motivations of workers and teams in the public sector. However, we did not look at the challenges which may negatively influence team engagement in the public sector including lower pay, challenging stakeholders, and bureaucracy. Those aspects of public sector teams will also need to be studied in the future.

4.4 Practical Application

This study provided a unique perspective when studying team engagement. It took an innovative approach by using team literature and focusing on studying teams in the public sector. In addition, this research provided a new perspective on team engagement by introducing three objects of engagement. By introducing three objects of engagement the core concept of team engagement has been brought into question allowing researchers to move forward in studying team engagement recognizing the complexity of measuring and studying engagement at the team level. It also contributes to the study of teams by offering a variation or addition to the process models which can be used to study teams. Finally, this study applied a referent-shift when quantitatively studying the concept of team engagement, and then supplemented those findings with qualitative data. The interviews with a HPT provided concrete examples of how the three objects of engagement are apparent in the daily work practices of the team. This mixed-methods perspective goes a step further than simply collecting team data from the individual level.

The practical implications of this study apply to both academics and practitioners. A dynamic concept, the three objects of engagement provide greater precision when studying team engagement in teams in the public sector. In addition, we showed that team engagement is a conceptually and structurally distinct concept from individual work engagement. This has practical applications for moving forward with the study of individual and team engagement, as well as for teams in the public sector. Academics can use the measurement scale for future testing and research into team engagement from the perspective of three objects of engagement. Practitioners can use the scale to identify engagement in their team and determine where the team's strengths are in terms of engagement. Knowing that engaged teams are more than a group of engaged individuals provides a different frame with which team leaders can approach working with teams. This is an important finding because it encourages team leaders to consider team as well as individual influences when managing teams.

The greatest practical application is bringing more awareness to the concept of engaged teams. While it can and does occur spontaneously, being able to capture what it is that creates team engagement team puts the power in the hands of managers and workers to make themselves more productive but more importantly, happier at work. If this research does nothing else than give people the tools for reflecting on their own teams and work environments, then that is a step in the right direction.

4.5 References

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Appendix A

Team Engagement Questionnaire

Nederlandse Versie

Nooit 0 1 2 3 4 5 6 Altijd

Teamtaak bevlogenheid

De volgende uitspraken hebben betrekking op hoe uw team zijn werk beleeft en hoe het team zich daarbij voelt. Hoe vaak is elk van deze stellingen van toepassing?

1. Alle teamleden bruisen van de energie als ze aan het werk zijn.
2. Als we als team aan het werk zijn, voelen we ons fit en sterk.
3. Als we 's morgens opstaan, hebben we zin om aan het werk te gaan met het team.
4. Mijn team is enthousiast over de taken die ze moet volbrengen.
5. We zijn als team trots op het werk dat we doen.
6. Het werk dat we verrichten met ons team inspireert ons.

Teamdoel bevlogenheid

De volgende uitspraken hebben betrekking op hoe uw team zijn doelstellingen beleeft en hoe het team zich daarbij voelt. Hoe vaak is elk van deze stellingen van toepassing?

7. Wij zijn trots op de doelstellingen van ons team.
8. Mijn team wordt geïnspireerd door de doelen van ons team.
9. Mijn team is enthousiast over de teamdoelen.

Teamcollega's bevlogenheid

De volgende uitspraken hebben betrekking op hoe de teamleden het team beleven en zich onderdeel van dit team voelen. Hoe vaak is elk van deze stellingen van toepassing?

10. Onderdeel uitmaken van dit team geeft ons als teamleden energie
11. Teamleden kijken ernaar uit om als team samen te zijn .
12. Onderdeel uitmaken van dit team zorgt ervoor dat teamleden zich sterk en vitaal voelen.
13. Als teamleden zijn wij enthousiast over dit team.
14. In ons team genieten we ervan om lid te zijn van dit team.
15. Als teamleden vinden we het uitdagend om lid te zijn van dit team.
16. Als we als team samen zijn vliegt de tijd voorbij.
17. Wanneer we samen zijn als team voelen we ons gelukkig.

English Version

Never 0 1 2 3 4 5 6 Always

Team Task Engagement

The following 6 statements are about how your team feels at work. Please read each statement carefully and decide if you think the statement describes your work team.

1. All team members are bursting with energy as they do the work.
2. If we as a team are at work, we feel fit and strong.
3. When we get up in the morning, we feel like going to work with the team.
4. My team is enthusiastic about the tasks they must accomplish.
5. We as a team are proud of the work we do.
6. The work we do with our team inspires us.

Team Goal Engagement

The following 4 statements are about how your team feels at work. Please read each statement carefully and decide if you think the statement describes your work team.

7. We are proud of our team goals.
8. My team is inspired by our team goals.
9. My team is enthusiastic about our team goals.

Team Membership Engagement

The following 8 statements are about how your team feels at work. Please read each statement carefully and decide if you think the statement describes your work team.

10. Being a member of this team energizes the team members.
11. The team members look forward to being with the team.
12. Being a member of the team makes team members feel strong and vigorous.
13. The team members are enthusiastic about the team.
14. The team members enjoy being a part of the team.
15. The team motivates team members to do a good job.
16. Because of the team, time flies when we are working.
17. When being together as team, we feel happy.

Appendix B

Topic List

1. Can you briefly tell us about your role and your role with this team / function in it?
2. Why is your (this) team a high performing team and what is so special about their team?
3. Can you describe specific events or situations that illustrate why this team is performing well?
4. Can you tell us something about your role and contribution in it?
5. Team engagement Questions/Probes
 - Have you worked on other teams within the same organization?
 - Did you experience a similar team dynamic?
 - Why or why not?
 - What is different?
 - Look at positive and negative factors – see if they can identify both what is there and what is missing (e.g., bad colleagues or unengaged colleagues)
 - What is the motivation of the team/team members
 - Focus
 - Motivators

Appendix C

Code Tree

This is the final code tree which was created during the axial coding phase where patterns and similar codes were clustered together to inform the analysis.

Context

Context

- Having a set team for this event
- Public Sector

Team Engagement

Objects of Engagement

- Task Engagement
 - “Greater than the sum of its parts”
 - “the hardest thing to do was nothing”
- Goal Engagement
 - To the event
- Membership Engagement
 - Team Building/Sharing Experiences
 - Being invested in the team and the team members
 - “Would you work with this team again?”

Dimensions of Team Engagement

- Team Vigor
 - Individual Vigor
- Team Dedication
 - Individual Dedication
- Team Absorption
 - Individual Absorption
 - Lack of Absorption

Individual Work Engagement

- Individual Work Engagement

Factors Contributing to Team Engagement

Team Composition

- Leadership
- Individual Team Member Characteristics

Interdependence

- Task Dependency
- Goal Dependency

Team Atmosphere

- Respect in the work place
- Safe work environment
- Lack of hierarchy

Internal Relations

- Collaboration
- Communication
 - Feedback
- Cohesion
 - Getting to know each other

Other

- Negative team elements/factors
- Evidence against team engagement
- High Performing
- Expectations