Thesis

Inclusive leadership relationship to innovative work behavior: the mediating effect of knowledge sharing and the moderating effect of mindfulness.

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Abstract

The aim of this research was to investigate the relationship between inclusive leadership and innovative work behavior. Based on role modelling and the information/decision-making perspective, it was hypothesized that knowledge sharing mediates the effect between innovative work behavior and inclusive leadership. Furthermore, it was hypothesized that mindfulness moderates the relationship between knowledge sharing and innovative work behavior, by influencing how information is used and the transfer of knowledge. A questionnaire was filled in by 292 respondents, who worked 12 hours a week or more, and had a supervisor. In line with the hypothesis, the positive relationship between inclusive leadership and innovative work behavior was fully mediated by knowledge sharing. Inconsistent with the hypothesis mindfulness did not moderate the relationship between knowledge sharing and innovative work behavior, but in additional research a direct relationship between mindfulness and knowledge sharing was found. Lastly, limitations of the study and new perspectives for future research are given. This research contributes to the understanding of the relationship between leadership and innovation, which helps organisations survive in more complex and dynamic environments.

Keywords: Inclusive leadership, innovative work behavior, knowledge sharing, mindfulness
1. Introduction

Research done by Shalley, Zhou and Oldham, (2004) states that Environments of organisations become more complex and dynamic. To deal with more complex and dynamic environments firms need to become more innovative. Research done by Tierney, Farmer and Graen, (1999), Jung, Chow and Wu (2003), and Ma Prieto and Pilar Perez-Santana (2014) stated that in this era with all the ongoing changes and globalization, innovative work behavior is essential for organisations to make sure they survive and are able to grow. Considering this, finding factors which influence innovative work behavior and how, is needed.

Innovative work behavior consists of the creation of new ideas, the promotion of these new ideas and the application of these new ideas. Previous research found that leadership is an extremely important factor for influencing the creativity and innovation in an organisation (Mumford & Hunter, 2005; Shalley & Gilson, 2004; Woodman, Sawyer & Griffin, 1993). There is however very little research done about the specific leadership styles and behaviors, and how this leads to innovative work behavior (Oldham & Cummings, 1996; Tierney et al., 1999). Amabile, Schatzel, Moneta and Kramer (2004) have looked at specific leadership characteristics or behaviors that can create a work environment for creativity. This however is might not be enough to grasp the broad and essential connection between leadership and innovative work behavior. There are multiple mechanisms by which leadership can influence innovative work behavior, and thus different mediating and moderating constructs related to different leadership behaviors. This research contributes to this body of research by looking at a specific type of leadership namely, inclusive leadership. Inclusive leadership refers to leaders who exhibit openness accessibility and availability in their interactions with followers (Carmeli, Reiter-Palmon & Ziv, 2010). The purpose of this paper is to examine the effect that inclusive leadership can have on innovative work behavior. As Yidong and Xinxin (2013) stated it is very important to look at the mediating mechanisms between leadership and innovation. This paper examines the mediating effect of knowledge sharing on the relationship between inclusive leadership and innovative work behavior. Knowledge sharing is seen as the willingness of people in the organisations to share knowledge they have acquired with others. The relation between inclusive leadership and knowledge sharing is explained by role modelling, which explains that behavior can be influenced by leaders by giving the right example. The relation between knowledge sharing and innovative work behavior is explained by the information/decision-making
perspective, which explains that when individuals share information, new insights are shared and evaluated, which can lead to new creative and innovative ideas (Van Knippenberg, De Dreu & Homan, 2004). When new ideas are found this can result in innovative work behavior.

In addition to this mediated relationship between inclusive leadership and innovative work behavior, mindfulness is also investigated in this research. Mindfulness is expected to have an interactive effect on the relation between knowledge sharing and innovative work behavior, because it can influence the usage and transfer of knowledge (Langer, 1989; Swanson & Ramiller, 2004; Salomon & Globerson, 1987). Mindfulness in this study is seen as being aware of and have attention to the present reality (Thomas, 2006).

The theoretical contribution this research makes, is that it elaborates further how specific leadership style influence innovative work behavior. This is done by exploring if the relationship between this leadership style and innovative work behavior is mediated by knowledge sharing.

In accordance with the mentioned statement, this research examines the following research question:

*Does knowledge sharing mediate the relationship between inclusive leadership and innovative work behavior and does mindfulness moderates the relationship between knowledge sharing and innovative work behavior?*

2. Theoretical framework

This section will explain that inclusive leadership relates to innovative work behavior through the sharing of knowledge. First of all, the relationship of inclusive leadership on knowledge sharing is explained by role modelling, which explains that leaders can influence the behavior of their followers by giving the right example (Carmeli, Reiter-Palmon & Ziv, 2010). The relationship between knowledge sharing and innovative work behavior is explained by the information/decision-making perspective, which explains that when information is shared, new perspectives and evaluation of these perspective create creative and innovative ideas (Van Knippenberg, De Dreu & Homan, 2004). After that the influence of mindfulness on the relationship between knowledge sharing and innovative work behavior is explained. This relationship is expected because, mindfulness supports individuals in the usage of the right
information and the transfer of the knowledge (Langer, 1989; Swanson & Ramiller, 2004; Salomon & Globerson, 1987).

2.1 The relationship between inclusive leadership and innovative work behavior, mediated by knowledge sharing.

Previous research (Mumford & Hunter, 2005; Shalley & Gilson, 2004; Woodman, Sawyer & Griffin, 1993) found that leadership is an important factor for creativity and innovation in an organisation. Carmeli et al. (2010) stated that leaders can contribute to employee creativity and innovation in multiple ways. First, leaders can serve as a role model for their subordinates. By showing innovative work behavior, followers start showing more innovative work behavior themselves. Secondly, they can provide the resources needed for creative endeavour. For example leaders who give followers the time to think of creative work solutions. Thirdly, leaders can motivate their subordinates to become more involved in creative processes. Fourthly, leaders can provide relational support to followers, which supports creative behavior. Finally, leaders can create a work climate that promotes creativity, this means a climate in which the supervisor is not trying to control everything and promotes innovations. So the effect that leaders have on innovative work behavior has been supported in previous research. But as stated by Carmeli et al. (2010), despite the importance of this relationship, there are only a limited amount of studies which looked at the specific styles of leadership and the multiple mechanisms that explain this relationship between leadership and innovative work behavior.

First we will elaborate the concepts of innovative work behavior and inclusive leadership. De Jong and Den Hartog (2007) define innovative work behavior as behavior that involves thinking about challenges concerning work methods, needs of people, or changing trends. Innovative work behavior is a phenomenon that is very complex and dynamic. According to Mumford and Gustafson (1988) it also encompasses creativity. They state that creativity helps with the formation of new ideas and innovations and it helps with bringing these ideas in practice. The study of Janssen (2000) is in line with this statement, they argue that innovative work behavior consist of both creativity and innovative aspects. The current study will be looking at a specific kind of leadership style to explain innovative work behavior namely, inclusive leadership. Inclusive leadership is a leadership style in which a leader behaves open,
accessible, and available in the interaction with followers. Leaders with inclusive behavior invite and value the opinions of others. These leaders want employees to feel that their voice and opinion are genially valued (Carmeli et al., 2010). The current study focusses on one of these contribution of leaders, namely where leaders serve as a role model, influence the innovative work behavior.

This research looks at the mediating effect of knowledge sharing to explain the relationship between inclusive leadership and innovative work behavior. Knowledge sharing is described as the willingness of people in organisations to share knowledge they have acquired with others. This can be done directly through communication but also indirectly. Knowledge exists mostly in individuals, these individuals can choose if they want to share their knowledge with others, this cannot be forced on individuals, it can however be encouraged (Gibbert and Krause 2002). Knowledge that is not shared throughout the organisation has limited impact on the organisation (Inkpen, 2000). When individuals share their knowledge, these individuals have to elaborate what they mean, and translate their message in a form that is clear and relevant to the recipient. (Radaelli et al., 2014). Previous research has shown that leaders who show inclusive behavior reduce the perception of differences in status, and creates respect among followers (Mitchel, Boyle, Parker, Giles, Chaing & Joyce, 2015). This creates an environment in which followers feel that different perspectives and ideas are genuinely heard and appreciated, which can lead to more willingness of individuals to share their knowledge and participate in open discussions about different perspectives. Leaders can achieve this by making clear that all ideas and opinions of followers are respected and valued (Mitchel et al., 2015). Making clear that all ideas and opinions are respected and valued is one of the characteristics of inclusive leadership.

Role modelling can explain the link between inclusive leadership and knowledge sharing. Rich (1997) defined role modelling as behavior of an individual perceived as an example to follow. Leaders have an important role in role modelling because of their hierarchical position and power in the organisation (Bandura, 1977). There is quite some research about the importance of role modelling by leaders. For example Bass (1985) talked about “the extent the leader provides examples and patterns for the follower” (p.77) and Conger and Kanungo (1987) about “engage in exemplary acts that followers perceive as involving great personal risk, cost, and energy”(p.641) and that is “worthy of imitation” (p.642). Rich (1997) stated that when role modelling is done right this can result in the emulating of the behavior of the leader. More recent
studies also stated that leaders serve as an important role model, for example Brown and Treviño (2014) found that ethical leadership emulates into ethical behavior of their followers and Carmeli et al. (2010) stated that leaders serve as a role model when showing creative behavior. So when a leader invites you to share information and knowledge, and a leader accepts and values all the opinions, their followers will emulate this behavior, and start to invite the sharing of knowledge, and accept and value different opinions. This will lead to an organisation in which knowledge sharing is promoted and stimulated.

The mediating construct of this study also looks at the relationship between knowledge sharing and innovative work behavior. Innovative work behavior can be divided in three tasks: idea generation, promoting these ideas, and applying these ideas (Radaelli et al., 2014). These innovations can be done for products, services, or work processes. There is already strong evidence in the literature supporting the association between knowledge sharing and innovativeness (e.g., Lin, 2007; Zhou & Li, 2012; Radaelli et al., 2014). Radaelli et al. (2014) state that individuals who are engaging in innovative work behavior, need to manage their knowledge all the time. For idea generation, individuals need to recombine internal knowledge and external ideas. For idea promotion, they need to translate their knowledge so that it is understandable and interesting. Finally, during the application, individuals need to coordinate with other individuals. This research also stated that knowledge sharing is useful for innovation, because new information, resources and understandings create innovation. This can be acquired in formal and informal interaction (Radaelli et al., 2014). This is in line with the information/decision making perspective (Van Knippenberg, De Dreu and Homan, 2004). This perspective can be used to explain the relationship between knowledge sharing and innovative work behavior. The information/decision-making perspective argues that knowledge sharing between individuals creates a broader range of knowledge, skills and abilities. When more conflicting viewpoints are evaluated people need to thoroughly process all the information. This helps people to avoid the easy thinking. The avoidance of easy thinking and the evaluation of different perspectives can create innovative and creative ideas and solutions (Van Knippenberg, et al., 2004). According to Radaelli et al. (2014) Employees who share a lot of knowledge will also receive more knowledge and with that more new ideas, which gives them more opportunities for innovative work behavior. This statement of Radaelli et al. (2014) is in line with the information/decision-making perspective. Knowledge sharing is also related to the promotion of
ideas. When individuals want to share knowledge they need to elaborate and translate their message in a way that people are able to understand. When sharing knowledge people actively reflect on their knowledge and the fit to the situation. This reflection on their own knowledge increases their ability to show more innovative work behavior (Radaelli et al., 2014). Based on previous research, role modelling and the information/decision-making perspective, this research formulates the following hypothesis:

**Hypothesis 1:** The more a leader is perceived as inclusive, the more innovative work behavior is shown, mediated by knowledge sharing.

2.2 Mindfulness, helping to create innovative work behavior.

Knowledge sharing leads to innovative work behavior following the previous stated argumentation. But not all knowledge will lead to more innovative work behavior, and not all knowledge is shared or used in the right way. This research states that mindfulness positively influences the relationship between knowledge sharing and innovative behavior, because mindfulness supports individuals in the usage of the right information and the transfer of the knowledge.

Mindfulness finds it origin in Buddhism, and stands for being aware and giving attention to the present moments, in a curious, not judgmental and accepting way. (Kabat-Zinn, 2003; Segal, Teasedale, Williams & Gemar, 2002). Mindfulness is being aware of and having attention to the present reality. Awareness is part of consciousness and is about the monitoring of the internal and external environment of an individual. Attention is about the increased responsiveness of limited stimuli. So an individual can be mindful of their internal state as well as to external stimuli (Thomas, 2006). The opposite of mindfulness is mindlessness, which is seen as semiautomatic, and does not require much attention or awareness compared to mindfulness (Thomas, 2006). Matook and Kautz (2008) stated five aspects to individual mindfulness. These aspects are openness to novelty, alertness to distinction, sensitivity to different contexts, awareness of multiple perspectives and orientation in the present. Openness for novelty is about the ability to think about and cope with a new kind of stimuli. Alertness to distinction is the ability to compare things, sensitivity to different contexts is about the awareness of the context of an individual. Awareness of multiple perspectives is about the different and
opposing views individuals can have and orientation in the present states that individuals when mindful are aware of their immediate situation and surroundings.

Previous research already examined the influence of mindfulness on information processing. Langer (1989) states that mindfulness refers to active and fluid information processing, sensitivity to the context, different perspectives, and distinguishing new ideas. So when knowledge is shared by someone, a mindful receiver can process information more fluidly, and filter new perspectives, which can help in the idea generation aspect of innovative work behavior. The receiver is also sensitive to the context and perspectives, which can create new insights in certain problems (Langer, 1989). This is also in line with one of the dimensions of Matook and Kautz (2008) which state that one is more aware of different perspectives and opposing viewpoints. These effects support the expectation that mindfully receiving information can create more innovative ideas then mindlessly receiving information. Swanson and Ramiller (2004) stated that mindfulness is linked to making good decisions about when to innovate. They state that innovations are often mindful responses to opportunities in changing conditions. Because not all knowledge is useful to innovate. Mindfulness helps to distinguish when knowledge is useful for innovation, in a particular context. So mindfulness moderates the relation between knowledge sharing and innovative work behavior, by filtering information that is useful when creating new ideas for innovative work behavior. So both studies state that mindfulness can influence the way information is used, and thus positively influencing the relationship between knowledge sharing and innovative work behavior. Next to this Salomon and Globerson (1987) also state that the gap between what an individual can do with and does with acquired knowledge can be narrowed down by mindfulness. This is because individuals who are mindful do not only use the non-effortful answer, they take a broader perspective on the subject and try to think of different issues. So when rehearsed and overlearned solutions do not work anymore, and new ways of working need to be found, mindfulness is a key concept. Mindfulness also leads to better usage of new ideas, principles and strategies because these need to be decontextualized from their original context. Mindfulness helps in this process because being sensitive to different contexts is, as stated by Matook and Kautz (2008) and Langer (1989), a characteristic of mindfulness.

The previous statements all underline that mindfulness influences how efficient information is processed and how this information is used in creating innovative ideas. Next to this, mindfulness also influences the transfer of knowledge. Gick (1985) found that individuals
who were mindfully abstracting problems and underlying principles, transferred significantly more knowledge than individuals who did not mindfully think of these things. Salomon and Globerson (1987) state that transfer of knowledge can be divided in ‘low road’ and ‘high road’. Low road transfer consists of great amounts of information, but these are transferred only to similar situations, which is not innovative. In these types of communication less mindfulness is needed. As Salomon and Globerson (1987) stated “transfer takes care of itself, based on the similarity of surface features” (p.632). High road transfer involves mindful abstraction, this is the deliberation and de-contextualization of information that is useful to be transferred. Because of this deliberation and de-contextualization knowledge can be more adequately shared, in a useful way for different contexts. Organisations have a very dynamic and complex environment (Shalley et al., 2004), which is why for knowledge to be shared it often needs to be transferred to new contexts. If these ideas need to be transferred via the high road, mindfulness helps them to decontextualize the ideas to new contexts (Salomon & Globerson, 1987). This supports the statement that mindfulness positively influences the effect of knowledge sharing on innovative work behavior.

So following the previous argumentation mindfulness has a positive effect on the relationship between knowledge sharing and innovative work behavior, by influencing how the knowledge is shared and how the received knowledge is used. That is why this research hypothesizes that:

*Hypothesis 2: The higher the mindfulness of the employee, the stronger the relationship between knowledge sharing and innovative work behavior.*

**Figure 1. Conceptual Model**
3. Method

3.1 study design and procedure

For this research the method of secondary data analysis is used. The population consisted of working people from the Netherlands. The sample frame was set by an earlier study done by students of the Faculty of Behavioural Sciences at Tilburg University. For participants to participate they needed to meet two criteria: (1) they had to work at least 12 hours a week and (2) they needed to have a supervisor. The number of respondents who met these criteria was 624. Because employees filled in this questionnaire, the gathered data is single-source and at an individual level.

The data was collected from the participants in 2015, in the months September and November. The students used stratified convenience sampling, so they were selected to take part in the research because they were easily accessible for the researchers and had to be collected in different age categories and equally divided among gender. Finally, the respondents were asked to spread the survey to others who would want to be a participant in this study. This type of data collection is called snowball sampling (Biernacki & Waldorf, 1981).

The survey this study was conducted among participants of the first data collection who indicated they were willing to participate in the initial research (N=187 participants). Because of the high diminishment of participants, new participants from outside the sample framework were asked to participate in the study, as part of a cross-sectional design. With the use of stratified convenience sampling, this sample consisted of a total of N=329 respondents. The same two criteria needed to be met. The number of respondents who met these criteria was N=292. The participant were contacted by phone, followed by an e-mail with additional information and guaranteed confidentiality. The same e-mail contained a link to Qualtrics, a program that collects all surveys and data digitally.

3.2 sample

In total 329 participants filled in the questionnaire of this research, 292 of these met the criteria and were analysed in this study. The missing values were excluded pairwise from the factor analysis. Since this sample consists of two different periods and partly different
respondents both are described below and displayed in Table 1. Table 1 also displays the study sample that is eventually used in this study.

For the initial research the average age of the respondents was 39 years (SD=13.73). Respondents also needed to be equally divided by gender. With 51.30% males and 48.70% females this sample was nearly equally divided. The education level of most participants was ‘MBO’ (29.10%) or ‘HBO’ (29.70%). Data from different respondents from work industries were collected. Most respondents worked in the healthcare sector.

For the additional respondents the average age of the respondents was 45 years (SD=13.08). With 40.60% males and 59.40% females this sample was not equally divided. The education level of most participants was ‘MBO’ (31.30%) or HBO (36.50%). Data from different respondents from work industries were collected. Most respondents worked in the healthcare sector, like in the initial study.

For this study sample the average age of the respondents was 39 years (SD=13.86). With 39.90% males and 60.10 females this sample was not equally divided. The education level of most participants was HBO (34.20%) or WO (26.00). Data was collected from respondents in different industries. Most respondents worked in the healthcare sector.

Table 1. Descriptives

<table>
<thead>
<tr>
<th>Descriptives</th>
<th>Initial participants</th>
<th>Additional participants</th>
<th>study sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Gender</td>
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<td></td>
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<tr>
<td>- Male (%)</td>
<td>51.30</td>
<td>40.60</td>
<td>39.90</td>
</tr>
<tr>
<td>- Female (%)</td>
<td>48.70</td>
<td>59.40</td>
<td>60.10</td>
</tr>
<tr>
<td>2. Age (SD)</td>
<td>39 (13.73)</td>
<td>45 (13.08)</td>
<td>39 (13.86)</td>
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<tr>
<td>3. Education Level (%)</td>
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<td>- ‘VMBO’</td>
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<td>4.20</td>
<td>4.50</td>
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<tr>
<td>- ‘HAVO’</td>
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<td>4.20</td>
<td>5.80</td>
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<tr>
<td>- ‘VWO’</td>
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<td>6.30</td>
<td>4.80</td>
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<td>- ‘MBO’</td>
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<td>31.30</td>
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<td>- ‘HBO’</td>
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<td>34.20</td>
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<tr>
<td>- ‘WO’</td>
<td>15.20</td>
<td>12.50</td>
<td>26.00</td>
</tr>
</tbody>
</table>
3.3 Measures

For this research only the data of the second measurement is used, this is done to prevent other influences, such as time, to intervene with the results.

*Inclusive leadership.* The variable inclusive leadership was measured by questions developed by van Engen en Meyers (unpublished). They developed these based on research of Van Dierendonck & Nuijten (2011) and Nishii (2013) which looked at servant leadership and inclusion for gender diverse groups respectively. An example of an item that was used in this scale is: ‘my supervisor encourages employees to use their talents’. These items could be answered by the respondents using a 5-point Likert scale, in which 1= strongly disagree and 5= strongly agree. Not all of the items that were used in the first measurement were used. The items

<table>
<thead>
<tr>
<th>Work Industry (%)</th>
<th>17.90</th>
<th>22.9</th>
<th>15.60</th>
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<td>0.60</td>
<td>-</td>
<td>2.10</td>
</tr>
<tr>
<td>Art and culture</td>
<td>0.50</td>
<td>-</td>
<td>1.00</td>
</tr>
<tr>
<td>Food industry</td>
<td>1.80</td>
<td>3.10</td>
<td>2.10</td>
</tr>
<tr>
<td>Catering</td>
<td>6.90</td>
<td>4.20</td>
<td>3.10</td>
</tr>
<tr>
<td>Other...</td>
<td>11.60</td>
<td>9.40</td>
<td>11.80</td>
</tr>
</tbody>
</table>
that were used were chosen because of the factor loading and items that fitted the new conceptual content. 7 of the originally 26 questions remained, none of which needed to be recoded. The factor analysis was performed on this variable. The KMO value was 0.854 and the Bartlett’s test was found to be significant, so the criteria were met. There was one component with an eigenvalue above one (eigenvalue= 3.882) which indicates that these items measure one factor. After the factor analysis the reliability was tested. This met the criteria as well with Cronbach’s alfa being above .7 (α= .863). No items needed to be deleted, because the reliability would not be higher if one item is deleted.

Knowledge sharing. The variable knowledge sharing was measured by questions developed from the scale of Van den Hooff and De Ridder (2004). An example of an item that was used in this research is: ‘I share my skills with colleagues’. These items could be answered by the respondents using a 5-point Likert scale, in which 1= almost never and 5=almost always. The scale of Van den Hooff and De Ridder (2004) originally consisted of 10 items. These 10 items are divided in 2 categories, one is about knowledge donating and the other about knowledge collecting. The 10 original items have been brought down to 5 questions, this was done because it was necessary to reduce the length of the scale. The selection of items was based on (a) sampling of items that cover the content of the construct (b) the items factor loadings in previous studies. The difference between the similar questions was that there were 5 questions about knowledge sharing inside respondents departments and 5 about knowledge sharing outside the respondents department. These similar questions have been brought down to 5 more general questions. The Factor analysis was performed on this variable. The KMO value was 0.643 and the Bartlett’s test was found to be significant, so the criteria were met. There were two components with an eigenvalue above one (eigenvalue= 2.308 and 1.221) which indicates that these items measure two components. This makes sense because of the two categories that were used to measure this variable. This research has combined these two factors, because we want to know the overall influence of knowledge sharing, which consist of both components. After the factor analysis the reliability was tested. This met the criteria as well with Cronbach’s alfa being above .7 (α= .704). No items needed to be deleted, because the reliability would not be higher if one item is deleted.

Innovative work behavior. The variable innovative work behavior was measured by the questions developed by Dorenbosch, Van Engen, and Verhagen (2005). An example of an item
that was used is: ‘Do you have new ideas on how to optimize the knowledge and skills within your department?’ These items could be answered by the respondents using a 5-point scale, in which 1= to a little extent and 5= to a very large extent. Not all of the original items of Dorenbosch, Van Engen, and Verhagen (2005) were used in the data collection. This is because of the study for which the data was collected. The reason for this is that not all items were relevant for this study, and it was necessary to reduce the length of the scale. The two factors were chosen based on factor loading and the content of the construct. These two categories were creativity oriented work behavior and implementation oriented work behavior. With use of the factor loading and content of constructs the number of items was reduced from 21 to 11. The factor analysis was performed on this variable. The KMO value was 0.907 and the Bartlett’s test was found to be significant, so the criteria were met. There were two components found with an eigenvalue above one (eigenvalue= 5.249 and 1.085) which indicates that these items measure two components. This makes sense because of the two categories that were used to measure this variable, even though there is one factor who is stronger, there is a distinction between the questions focussing on creativity oriented work behaviour and implementation oriented work behaviour. This research again combined these factors because we want to measure overall innovative work behavior, which consist of both creativity and implementation. After the factor analysis the reliability was tested. This met the criteria as well with Cronbach’s alfa being above .7 (α= .887). No items needed to be deleted, because the reliability would not be higher if one item was deleted.

Mindfulness. The variable mindfulness was measured by the questions developed by Schroevers, Nykliček, and Topman (2008). They developed a mindfulness, attention and awareness scale. An example of an item that was used is: ‘I perform activities hastily, without really paying attention to it.’ These items could be answered by the respondents using a 6-point scale, in which 1= almost never and 6= almost always. Not all of the items that were used in the first measurement were used. The items that were used were chosen because of the factor loading and items that fitted the new conceptual content. 5 of the originally 15 questions remained. The factor analysis was performed on this variable. The KMO value was 0.768 and the Bartlett’s test was found to be significant, so the criteria were met. There was one component with an eigenvalue above one (eigenvalue= 2.560) which indicates that these items measure one factor. After the factor analysis the reliability was tested. This met the criteria as well with Cronbach’s
alfa being above .7 ($\alpha = .743$). The reliability could be higher if the item ‘I notice that I am very busy with the future or the past’ would be deleted. The reliability would increase to $\alpha = .793$, so this item was deleted.

**Control variables.** According to previous research of Lin (2008) gender can influence knowledge sharing in multiple ways. For example the reason why knowledge is shared differs. Men share more knowledge because of sportsmanship and courtesy while women share more knowledge because of altruism. Another influence is that women offer more help and share more knowledge than men (Lin, 2008). Following the study of Geiger, Boggero, Brake, Caldera, Combs, Peters and Baer (2016) who state that when individuals get older this increases their mindfulness, as older people naturally are more present-moment focused, age was included as a control variable.

4. Results

4.1 Descriptive results

In Table 2 the correlations, means and standard deviations of the variables that were used in this study are presented. Inclusive leadership and knowledge sharing were found to have a positive relationship with innovative work behavior ($r = .167, p < .001$; $r = .256, p < .001$). Mindfulness has a negative relationship with knowledge sharing ($r = -.186, p < .001$). Next to that knowledge sharing and inclusive leadership also had a positive relationship ($r = .321, p < .001$).

Concerning the control variables, age has a negative relation with mindfulness ($r = .21, p < .001$), and a negative relationship with gender. No significant relationship was found between gender and the other variables.

In Table 2 the means, standard deviations and correlations of the variables are presented. For gender the mean and standard deviation is not included because this is not a continuous variable. These variables are all included in the multiple regression for testing the hypothesis.

| Table 2. Mean (M), standard deviation (SD) and correlation (N = 291) |
|-----------------|-----|-----|-----|-----|-----|-----|-----|
| 1. Innovative Work Behavior | M   | SD  | 1   | 2   | 3   | 4   | 5   | 6   |
|  | 3.26 | 0.59 | -   |     |     |     |     |     |
4.2 The relationship between inclusive leadership and innovative work behavior, mediated by knowledge sharing.

The first hypothesis of this research is: ‘The more a leader is perceived as inclusive, the more innovative work behavior is shown, mediated by knowledge sharing’. To test this hypothesis first the multicollinearity was tested using the VIF values. The values ranged from 1.072 to 1.132, which indicates that there is no multicollinearity. Next to multicollinearity the homoscedasticity and outliers need to be detected as well. This is done by using a scatterplot. There were some outliers in the data, but removing the outliers does not influence the significance, so they are kept in the dataset.

To test the mediating hypothesis, the effect between inclusive leadership and innovative work behavior is evaluated. This effect was found significant in model 2 ($\beta = 0.169$, $p < .01$). Then this research looked for the effect of inclusive leadership on knowledge sharing to regress innovative work behavior. This effect was also found to be significant ($\beta = 0.288$, $p < .001$). Following this the mediating effect of knowledge sharing was tested in model 3. The effect of knowledge sharing on innovative work behavior was found significant ($\beta = 0.227$, $p < .001$). The Sobel test was used to determine if this mediating effect was significant. According to this test, the mediating effect was also significant ($Z=2.59$ $p < .01$). So there is a mediating effect of knowledge sharing between inclusive leadership and innovative work behavior. Therefore, hypothesis 1 is supported by the results of the analysis. Since there is no direct significant effect between inclusive leadership and innovative work behavior when knowledge is included ($\beta = \ldots$)}

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Inclusive Leadership$^2$</td>
<td>3.47</td>
<td>0.69</td>
<td>.18**</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>3. Knowledge Sharing$^4$</td>
<td>4.03</td>
<td>0.40</td>
<td>.24**</td>
<td>.28**</td>
<td>-</td>
</tr>
<tr>
<td>4. Mindfulness$^4$</td>
<td>2.56</td>
<td>0.73</td>
<td>.08</td>
<td>.07</td>
<td>.17**</td>
</tr>
<tr>
<td>5. Age$^5$</td>
<td>39.08</td>
<td>13.70</td>
<td>-.00</td>
<td>.08</td>
<td>-.08</td>
</tr>
<tr>
<td>6. Gender</td>
<td>-</td>
<td>-</td>
<td>-.04</td>
<td>.01</td>
<td>.05</td>
</tr>
</tbody>
</table>

$^*$Correlation is significant at the 0.01 level (2-tailed).
1 Measured on a 5-point scale
2 Measured on a 5-point likert-scale
3 Measured on a 5-point likert-scale
4 Measured on a 6-point scale
5 Measured as a continuous variable in years
0.094, \( p > .01 \), the effect between inclusive leadership and innovative work behavior is fully mediated by knowledge sharing.

### Table 3. Regression analyses \((N = 614)\)

<table>
<thead>
<tr>
<th>Model</th>
<th>Innovative work behavior</th>
<th>Knowledge sharing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( \beta )</td>
<td>( \beta )</td>
</tr>
<tr>
<td>Age</td>
<td>-.014</td>
<td>-.027</td>
</tr>
<tr>
<td>Gender</td>
<td>-.048</td>
<td>-.053</td>
</tr>
<tr>
<td>Inclusive leadership</td>
<td>.169*</td>
<td>.094</td>
</tr>
<tr>
<td>Knowledge sharing</td>
<td>.227**</td>
<td></td>
</tr>
<tr>
<td>( R^2 )</td>
<td>.002</td>
<td>.031</td>
</tr>
<tr>
<td>( \Delta R^2 )</td>
<td>.028*</td>
<td>.045**</td>
</tr>
</tbody>
</table>

**\( p < .001 \)

*\( p < .01 \)

### 4.3 The relationship between knowledge sharing and innovative work behavior, moderated by mindfulness.

The second hypothesis of this research is: ‘The higher the mindfulness of the employee, the stronger the relationship between knowledge sharing and innovative work behavior’.

To test this hypothesis first the multicollinearity was tested using the VIF values. This was done because the variables were centralized. The values ranged from 1.036 to 1.124, which indicates that there is no multicollinearity. Next to multicollinearity the homoscedasticity and outliers need to be detected as well. This was done by using a scatterplot. There were some outliers in the data, but with a sample of 291 this is not uncommon, and thus it is not necessary to take action. Removing the outliers does not influence the levels of significance, so they were kept in the data.

To test the moderator the interaction term was created. This variable was included in the third model. There was no significant effect between mindfulness and innovative work behavior \( (\beta = 0.066, \ p > .01) \), so when individuals are more mindful this has no effect on how much innovative work behavior they show. The moderating effect of mindfulness between the
relationship of knowledge sharing and innovative work behavior was also tested. The direct
effect of knowledge sharing on innovative work behavior was found to be significant \( \beta = 0.240, \ p < .001 \). So when there is more knowledge sharing there is more innovative work behavior. Mindfulness was expected to influence this effect in a positive way, but there was no significant result found for this assumption \( \beta = 0.118, \ p > .01 \). So mindfulness did not influence the relationship between knowledge sharing and innovative work behavior.

Table 4. Regression analyses \( (N = 614) \)

<table>
<thead>
<tr>
<th>Model</th>
<th>Innovative work behavior</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( \beta )</td>
<td>( \beta )</td>
<td>( \beta )</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>-.014</td>
<td>-.004</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>-.048</td>
<td>-.047</td>
<td>-.043</td>
<td></td>
</tr>
<tr>
<td>Knowledge sharing</td>
<td>.244**</td>
<td>.240**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mindfulness</td>
<td>.066</td>
<td>.048</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction</td>
<td></td>
<td></td>
<td>KS</td>
<td>.118</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>.002</td>
<td>.072</td>
<td>.086</td>
<td></td>
</tr>
<tr>
<td>( \Delta R^2 )</td>
<td>.070**</td>
<td>.014</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( *p < .01 \)

\( **p < .001 \)

4.4 Additional research

Because of the correlation between knowledge sharing and innovative work behavior, this study decided to test for the direct effect of mindfulness on knowledge sharing. To test this hypothesis first the multicollinearity was tested using the VIF values. The values ranged from 1.011 to 1.119, which indicates that there is no multicollinearity. Next to multicollinearity the homoscedasticity and outliers need to be detected as well. This was done by using a scatterplot. There were no outliers found in this analysis. To test this expectation a regression was used. The results show that mindfulness has a direct effect on knowledge sharing \( \beta = 0.183, \ p < .001 \).

Table 5. Regression analyses \( (N = 614) \)
### Knowledge sharing

<table>
<thead>
<tr>
<th>Model</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>β</td>
<td>β</td>
<td>β</td>
</tr>
<tr>
<td>Age</td>
<td>-.071</td>
<td>-.096</td>
<td>-.134</td>
</tr>
<tr>
<td>Gender</td>
<td>.035</td>
<td>.025</td>
<td>.025</td>
</tr>
<tr>
<td>Inclusive leadership</td>
<td>.288**</td>
<td>.277**</td>
<td></td>
</tr>
<tr>
<td>Mindfulness</td>
<td>.183**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$R^2$</td>
<td>.008</td>
<td>.090</td>
<td>.122</td>
</tr>
<tr>
<td>$\Delta R^2$</td>
<td>.082**</td>
<td>.032**</td>
<td></td>
</tr>
</tbody>
</table>

**p<.001

5.1 Discussion

The goal of this research was to examine the relationship between inclusive leadership and innovative work behavior. This relationship was expected to be mediated by knowledge sharing. The relationship between knowledge sharing and innovative work behavior in turn was expected to be moderated by mindfulness. Resulting from the analysis it can be concluded that the more employees perceive their leader as inclusive the more knowledge gets shared which in turn results in more innovative work behavior. The moderating effect of mindfulness was not supported by the results.

A positive relation was found from inclusive leadership to knowledge sharing. This means that when individuals experience a more inclusive leader they tend to share more knowledge. Role modelling explains the relationship between inclusive leadership and knowledge sharing, by stating that leaders can influence the behavior of their followers by giving the right example (Carmeli et al., 2010). When leaders show more behavior that promotes knowledge sharing, followers will also tend to promote more knowledge sharing. This assumption was supported by the findings of this study. There also was a positive relation between knowledge sharing and innovative work behavior. This indicates that when more knowledge is received and sent by employees, more innovative work behavior is shown. The relation between knowledge sharing and innovative work behavior can be explained with the information/decision-making perspective. This perspective explains that, when individuals share information, new insights are shared and evaluated. This can in turn lead to new creative and
innovative ideas (Van Knippenberg et al., 2004). This assumption was also supported by the results of this study. From the results of this study we can conclude that when more inclusive leadership is perceived by employees more innovative work behavior is shown because of knowledge sharing. So, the results provide support for the first hypothesis, which states that there is a positive relationship between inclusive leadership and innovative work behavior, mediated by knowledge sharing.

However, the results did not support the second hypothesis, which stated that the relationship between knowledge sharing and innovative work behavior is moderated by mindfulness. So this means that we cannot conclude that when knowledge is shared by an individual who is more mindful this will lead to more innovative work behavior than when this is done by a less mindful individual. A theoretical explanation that can explain why this interaction effect was not found can be that mindfulness had a direct effect on knowledge sharing instead of an interactive effect. Because mindfulness had a high correlation with knowledge sharing and the moderating effect was not found, this research examined if knowledge sharing had a direct effect on knowledge sharing. This assumption can be explained with the empirical evidence that mindfulness can influence the usage and transfer of knowledge (Langer, 1989; Swanson & Ramiller, 2004; Salomon & Globerson, 1987). This assumption was supported by the additional analyses that was done. So a reason that the moderating effect could not be found can be that the effect of mindfulness is not a interaction effect but a direct effect, as the results show.

Another explanation might be that only two out of the three aspects of innovative work behavior were included. Promotion of new ideas was not included in the questionnaire that was used. Mindfulness can for example influence the promotion of new ideas, by influencing the way they promote their ideas in. Mindfulness influences this because mindfulness increases the ability to distinct perspectives. So for example, when someone has a different perspective than you, the promotion of your idea works better if you can adjust it to the perspective of the receiver. Another reason why the moderating hypothesis was not confirmed can be the measurement of mindfulness. There are many scales that measure mindfulness, for example the 39-item kentucky inventory of mindfulness skills (KIMS) which looks at different domains of mindfulness, and there are a lot more (Schroevers et al., 2008). The mindful attention awareness scale which is used focusses on everyday mindfulness experiences (Schroevers et al., 2008). This might differ from mindfulness experiences at work.
5.2 Limitations and Future research

The first limitations of this research are the measures used to collect the data. This was a limitation because not all items were included in the follow-up research. This was diminished because the follow-up research needed to be shorter than the additional research. This can diminish the validity of these scales. For future research about this topic this research advises the usage of all the items from the developed scales.

The second limitation is the fact that the research is cross-sectional. Because of this one-time measurement of the data, causality concerning the results cannot be interpreted. Innovative work behavior could also lead to more knowledge sharing since one component of innovative work behavior is the promotion of ideas for which knowledge sharing can be needed. So future research should use a longitudinal design, so that causality can be examined.

The third limitation is that not all aspects of innovative work behavior were used. This has influenced the reliability of these variables. For future research it is advised to use more items to measure this scale, to make sure that all factors are included.

A fourth limitation is already mentioned in the discussion. The mindfulness scale which was used is about everyday mindfulness experiences. This might differ from mindfulness experiences in a working environment. Future research should use a mindfulness scale which focusses on workplace mindfulness.

A fifth limitation is that only employees were included in the sample. The concept of inclusive leadership concerns supervisors and employees. Including supervisors helps studies to find differences between supervisors and employees concerning inclusive leadership, mindfulness, knowledge sharing and innovative work behavior. This can be used to give better practical recommendations.

Next to these limitations which should be considered in future research, factors in this study were combined to measure the relationships between overall constructs. Future research could study the relationship of the factors without combining them.

Another consideration for future research is age. Age was found to be significantly positively related to mindfulness, which is in line with the research of Geiger et al. (2016). Age should therefore also be included in future research about mindfulness.
5.3 Practical implications

The practical importance of this research is that it helps organisations to increase innovative work behavior, which is important to deal with more complex and dynamic environments. This research found that inclusive leadership leads to innovative work behavior through knowledge sharing. Organisations are advised to follow the findings of this study. Organisations can for example look at how inclusive their leaders are and train them in showing more inclusive leadership. This will create more knowledge sharing in the organisation, which consequently increases innovative work behavior. The focus while training leaders in knowledge sharing should be one communication (Interview 1, personal communication, May 22, 2018). An organisation can also look for other ways to increase knowledge sharing and with that innovative work behavior. For example, as the additional research of this study supports, train mindfulness.

5.4 Conclusion

In conclusion, innovative work behavior is an important factor for the survival of organisations, and so increasing this behavior is important. This study therefore looked at the relationship between inclusive leadership and innovative work behavior. This research found a positive relationship between inclusive leadership and innovative work behavior, through knowledge sharing. This means that the positive relationship between inclusive leadership and innovative work behavior exists because of knowledge sharing. This study also looked if there was an interaction effect of knowledge sharing and mindfulness on innovative work behavior. There was no support for this interaction effect. But there was a positive relationship between mindfulness on knowledge sharing. Based on these findings, this study adds to the body of knowledge about the relationship between leadership and innovation. It provides guidelines for organisations to increase innovative work behavior which helps organisations cope with the more dynamic and complex environments they exist in.
6. Reference list


7. Appendix

Interview 1.

Er is een interview afgenomen met iemand die in de praktijk ervaring heeft met de onderwerpen van ons onderzoek. Tijdens dit gesprek stonden de volgende thema’s centraal: ‘inclusief leiderschap, kennis deling, mindfulness, en innovatief werk gedrag. De respondent is een HR professional die op dit moment ook bezig met een leiderschapsproject waardoor zo in praktijk veel te maken heeft met de gevolgen van bepaalde leiderschapsstijlen. Ik heb de verwachtingen en de uitkomsten van mijn onderzoek gepresenteerd, aan de hand van de onderbouwing die ook in het theoretisch kader van mijn paper gebruikt heb.

Het eerste wat aan bod kwam in ons gesprek was inclusief leiderschap, de respondent vond het interessant dat hierna gekeken werd en niet alleen naar diversiteit, want hier wordt in de praktijk ook een verschuiving in gezien. Voorheen was het ‘diversity-inclusion en nu steeds vaker inclusion-diversity’. Diversity is het met verschillende mensen om de tafel zitten, maar hoe krijg je dan iets uit al die verschillende mensen, dan gaat het heel erg over dat inclusief leiderschap. Dus het is ook in de praktijk nu een zeer belangrijk onderwerp. Een belangrijk onderdeel in praktijk hiervan is het actief luisteren. In mijn onderzoek om de relatie tussen inclusief leiderschap en kennis deling te onderbouwen wordt de leider gezien als rol model. De respondent van dit onderzoek noemde als aanvulling hierop dat een leider ook kan proberen te faciliteren dat verschillende mensen binnen het team een rol model voor elkaar worden. Als training voor het inclusief leidinggeven wordt het trainen van goede gesprekstechnieken genoemd, want meer diversiteit is altijd moeilijker te manage. Een andere training zou kunnen zijn het inzichtelijk maken van de denkfouten die mensen maken, en hoe beïnvloed dit gedachten en besluitvorming.

Deze denkfouten kunnen ook eerder als moderator gezien worden volgens de respondent als mindfulness. Mindfulness word in de praktijk ook geen mindfulness genoemd omdat deze term te zweverig is. Wat bij mindfulness wel te verwachten was, volgens de respondent, was een invloed op inclusief leiderschap. Wanneer je van een afstandje even kunt kijken naar de situatie, wat volgens de respondent als een onderdeel van mindfulness wordt gezien, kan je een ander zijn perspectief en mening ook beter begrijpen. Op basis van deze argumentatie zou ook het verwacht interactie-effect van mindfulness op innovatief werkgedrag verklaard kunnen worden. Wanneer
iemand namelijk vanaf een afstandje kan reflecteren zou dit kunnen helpen in het tot nieuwe inzichten komen. Daarmee zou het dan wel ondersteunend zijn in de relatie van kennis deling naar innovatief werk gedrag. In conclusie was dit interview een zeer fijne reflectie op de praktische implicaties en toekomstig onderzoek.

Interview 2.

Het tweede interview was eveneens met een HR professional. Deze HR professional heeft als expertise vooral te maken met diversiteit en inclusie. Hierdoor was deze respondent zeer geschikt om te bevragen naar de praktische kant van onze theoretische ondervinding. De respondent is werkzaam bij een opleiding en ontwikkelfond, in een branche waarin P&O/HR nog zeker niet altijd als van toegevoegde waarde wordt gezien. Door de rol van opleiding en ontwikkelfond worden veel antwoorden gegeven over de branche in het algemeen, en niet over de organisatie waar de respondent werkzaam is.

Ten eerste werd het belang van innovatief werk gedrag erkend. De respondent is werkzaam in een snel veranderende branche waarin innovatief werk gedrag kan zorgen voor het voortbestaan of het ontwikkelen van organisaties.

Tijdens dit tweede interview kwam voornamelijk het belang van inclusief leadership naar boven. De respondent heeft meerdere keren benaderd dat er vele voordelen zitten aan deze leiderschapsstijl en dat inclusiviteit en diversiteit heel nauw samenhangen. Het rekening houden en luisteren naar verschillende perspectieven die mensen hebben kan ook zeker inclusief leadership veroorzaken stelt de respondent.

De theoretisch onderbouwing van de relatie tussen inclusief leadership en kennis deling was volgens haar niet voldoende. De respondent stelde dat het zijn van een rol model wel voor sommige mensen kan werken maar dat dit in praktijk niet voor iedereen werkt. Het is dus een van vele aspecten die deze relatie verklaard volgens de respondent. Een aspect van inclusief leadership dat heel vaak naar voren komt is communicatie. Ook wanneer inclusief leadership verbeterd moet worden is het binnen de werkzame branche, zijn trainingen op communicatie vaak de tool die gebruikt worden. Binnen de branche zie je dat veel leidinggevende nu ook de shift proberen te maken naar een meer inclusieve leiderschapsstijl, omdat dit nodig is in het behouden en aantrekken van personeel, waar branche breed in tekort aan is. Deze trainingen
worden aangeboden door het opleiding en ontwikkelfond en worden veel bijgewoond door organisaties.

Ook werd er gesproken over mindfulness met de respondent. Dit is in een term die je in de werkzame branche niet hoeft te gebruiken volgens de respondent. Dit is veel te zweverig en zal door organisaties ook niet snel zo genoemd worden. Wanneer het hierover gaat binnen de branche wordt het vaak energiemanagement genoemd volgens de respondent.

In conclusie is dit interview net zoals de vorige vooral handig voor de praktische implicaties en innovatief werkgedrag. Hierbij is het ook heel interessant om te horen hoe het per branche kan verschillen.