



**Stimulating team organizational citizenship behavior  
through inclusive leadership:**  
*The mediating role of autonomy, competence and relatedness  
need satisfaction*

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### **Abstract**

This research aimed to broaden the (inclusive) leadership field by studying the relationship between inclusive leadership and team organizational citizenship behavior (TOCB). Moreover, this study used a self-determination theory lens to highlight how individual psychological needs (autonomy, competence, relatedness) can influence team behavior. A survey was conducted in a large Dutch private company in the finance sector. A total of 264 valid responses were collected. Results were analyzed using a structural equation model (SEM). As expected, inclusive leadership positively influenced all three psychological needs (autonomy, competence, and relatedness), whereas both autonomy and relatedness need satisfaction positively influenced TOCB. These two needs also fully mediated the relationship between inclusive leadership and TOCB. No relationship between competence need satisfaction and TOCB was found. Competence need satisfaction also did not mediate the relationship between inclusive leadership and TOCB. These findings contribute to the literature in three ways. First, they expand the inclusive leadership literature by uncovering the relationship between inclusive leadership and psychological need satisfaction. Second, they expand the field of (T)OCB by highlighting that individual need satisfaction can influence behavior within and towards the team. Third, by revealing the mediating role of psychological need satisfaction, the findings expand the broader leadership literature through a focus on the underlying processes that explain how leaders influence organizational outcomes. Finally, on a practical level, the findings of this study emphasize the importance of inclusive leadership not only from a moral, but also a business perspective.

**Key words:** *inclusive leadership, team organizational citizenship behavior, self-determination theory, psychological need satisfaction, diversity*

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## Introduction

Over the past decades the workforce has become increasingly diverse (Martín Alcázar, Romero Fernández, & Sánchez Gardey, 2013). Often times this diversity is thought to increase organizational effectiveness, which is comprised of efficiency, adaptation and human capital (Yukl, 2008). This increase in effectiveness is because the organization has access to a larger pool of talent (Guillaume, Dawson, Woods, Sacramento, & West, 2013). A diverse talent pool brings unique qualities to the organization, such as increased creativity and better problem-solving (Cox & Blake, 1991; Roberge & van Dick, 2010). Moreover, diversity, for example in the form of cultural backgrounds, can also bring organizational citizenship behavior (hereafter: OCB), since this type of workplace behavior is generally expected in collectivistic cultures (Paine & Organ, 2000). OCB is a form of proactive and discretionary employee behavior that employees are not rewarded nor trained for (Mamman, Kamoche, & Bakuwa, 2012). Generating this behavior is crucial to organizations as it promotes the efficient and effective functioning of an organization (Morrison & Phelps, 1999; Organ, Podsakoff, & MacKenzie, 2006). Moreover, it can lower turnover intentions and unit-level costs (Podsakoff, Whiting, & Podsakoff, 2009).

However, when not handled effectively (Mamman et al., 2012), diversity can lead to counterproductive work behaviors and decreased group cohesiveness (Roberge & van Dick, 2010). Therefore, managing diversity is a key strategic priority for organizations (Nishii & Mayer, 2009). This is where leaders come into play, as they have a crucial role in the effectiveness of diversity efforts (Cox & Blake, 1991). Specifically, one leadership style argued to effectively handle diversity is inclusive leadership (Jin, Lee, & Lee, 2017; Nishii & Mayer, 2009). Inclusive leaders are open, accessible and available in the communication with their followers (Carmeli, Reiter-Palmon, & Ziv, 2010). Moreover, inclusive leaders invite and appreciate each employee's contributions (Nembhard & Edmondson, 2006). Thus, inclusive leaders facilitate the belongingness and uniqueness of each employee (Randel et al., 2018).

Inclusive leadership has been linked to the positive outcomes for diversity mentioned earlier, namely innovative work behavior (Javed, Khan, & Quratulain, 2018; Javed, Naqvi, Khan, Arjoon, & Tayyeb, 2019; Qi, Liu, Wei, & Hu, 2019) and OCB (Panicker, Agrawal, & Khandelwal, 2018; Tran & Choi, 2019; Younas, Wang, Javed, & Zaffar, 2020). More specifically, Tran and Choi (2019) highlight the role of organizational justice and learning culture in the relationship between inclusive leadership and OCB, while Younas et al. (2020) studied the perception of the leader through behavioral integrity and trust as underlying mechanisms. Yet, as pointed out by Younas et al. (2020), what remains unclear is the role of

individual-level motivations in understanding the relationship between inclusive leadership and OCB.

Self-Determination Theory (hereafter: SDT), which highlights individual psychological needs as a basis for self-motivation and personality integration, may be this missing link (Ryan & Deci, 2000). According to SDT, there are three universal psychological needs: autonomy, relatedness and competence. The satisfaction of these provides room for intrinsic motivation and internalization (Ryan & Deci, 2000; Vansteenkiste & Ryan, 2013). As highlighted previously, inclusive leaders have the ability to satisfy these needs through their focus on the uniqueness and belongingness of each employee (Randel et al., 2018). Need satisfaction in turn leads to pro-social behavior (such as OCB), specifically in the proximal social context, which includes an employee's team (Chiniara & Bentein, 2016).

Yet, OCB from a team perspective has been overlooked in research as Tran and Choi (2019) and Younas et al. (2020) focus on OCB in general. However, it is becoming increasingly important as more and more organizations move towards team-based structures (Richter, Dawson, & West, 2011). Moreover, Richter et al. (2011) argue that team-based working is likely to stay common within organizations as it enhances productivity. This perspective is underscored by Qi and Liu (2017) who argue that teams are crucial in generating positive organizational outcomes. Therefore, several authors have called for group-level focused OCB research (Organ & Ryan, 1995; Podsakoff, MacKenzie, Paine, & Bachrach, 2000). This implies a focus on the behavior of the group instead of individual members. Team OCB (hereafter: TOCB) is studied by asking group members about the behavior of the entire group (Chan, 1998). Nielsen, Hrivnak, and Shaw (2009), through a meta-analysis, found that TOCB was more strongly related to performance than individual OCB. This perspective is also underscored by Podsakoff, Podsakoff, MacKenzie, Maynes, and Spoelma (2014) who found TOCB to impact various types of unit, team and firm-level performance measures. Combined, these findings highlight the need to understand how to manage TOCB effectively.

The present study makes three important theoretical contributions. First, it expands the inclusive leadership literature through the focus on the relationship between inclusive leadership behavior and employee psychological need satisfaction. Although multiple studies have researched the relationship between other leadership styles and psychological need satisfaction (e.g. Chiniara & Bentein, 2016; Kovjanic, Schuh, Jonas, Van Quaquebeke, & van Dick, 2012; Leroy, Anseel, Gardner, & Sels, 2015), research from an inclusive leadership perspective is lacking. This research is needed as it is a leadership style well suited to deal with the increasing diversity in organizations (Kuknor & Bhattacharya, 2020). Second, this study

responds to calls from Dinh, Lord, Gardner, Meuser, Liden, and Hu (2014) to advance leadership theory through an understanding of “how leaders influence underlying processes that lead to organizational outcomes” (p. 55). This study answers this call by using an SDT lens as the underlying mechanism in the relationship between inclusive leadership and TOCB. Third, it advances OCB research through a focus on TOCB. Several leadership styles, including inclusive leadership (Tran & Choi, 2019) have been linked to OCB (e.g. Chiniara & Bentein, 2016; Zhang & Chen, 2013), but not TOCB. Yet, as highlighted earlier, TOCB has a strong link to performance (Nielsen et al., 2009) and positive firm-level outcomes (Podsakoff et al., 2014). Thus, understanding how TOCB can be generated is a crucial imperative.

Overall, this leads to the following research question:

*Does inclusive leadership promote team organizational citizenship behavior (TOCB) and can the underlying relationship be explained through individual psychological need satisfaction?*

## **Theoretical framework**

Many positive leadership styles (including, amongst others, transformational and authentic leadership) share underlying mechanisms, such as a focus on employee motivation, performance, and well-being (Decuyper & Schaufeli, 2020). Yet, inclusive leadership differentiates itself through its focus on acknowledging and valuing diversity (Mitchell, Boyle, Parker, Giles, Chiang, & Joyce, 2015). Moreover, inclusive leadership as a concept focuses on “doing things with people, rather than to people”, which emphasizes the role of relationships (Hollander, 2009, p. 3). It also places a strong emphasis on the interaction and communication between the leader and employees (Fang, Chen, Wang, & Chen, 2019). They accept employees for who they are, acknowledge their unique abilities and views, and stimulate them to engage in organizational activities (Qi et al., 2019). Inclusive leaders are open, accessible and available (Carmeli et al., 2010), both physically and psychologically (Hirak, Peng, Carmeli, & Schaubroeck, 2012).

Linking this to specific behaviors, according to Randel et al. (2018) there are three leadership behaviors facilitating belongingness: supporting group members, ensuring that justice and equity are part of each member’s experience, and providing opportunities for shared decision making on relevant issues. There are also two behaviors stimulating uniqueness: encouraging diverse contributions to the work group and helping group members fully offer their unique talents and perspectives to enhance the work of the group (Randel et al., 2018). These behaviors can also be summarized as respect for others, recognition of their input and responsiveness to them (Kuknor & Bhattacharya, 2020).

### **Inclusive Leadership and Self-Determination Theory**

Since inclusive leaders appreciate the uniqueness of employees, they pay close attention to employee’s needs, as satisfaction of these needs allow them to be their true self at work (Chiniara & Bentein, 2016). To better understand employee needs and how inclusive leaders enable their satisfaction, it is important to turn to SDT, a theory focusing on human motivation. Vansteenkiste and Ryan (2013) explain that humans have a natural potential for growth, integration, and well-being. In turn, these concepts are linked to intrinsic motivation and internalization (Gagné & Deci, 2005). Yet, to allow for this well-being and motivation, three basic psychological needs should be satisfied: autonomy, competence, and relatedness (Vansteenkiste, Ryan, & Soenens, 2020). These three needs are identified as basic needs because their fulfillment is essential for well-being, while their absence leads to passivity and defensiveness (Vansteenkiste et al., 2020).

Translating this to the work environment, SDT focuses on facilitators of high-quality, sustainable motivation on the one hand, and the creation of volitional engagement of employees on the other (Deci, Olafsen, & Ryan, 2017). According to SDT, satisfying psychological needs in the work environment leads to increased employee satisfaction, in turn stimulating organizational effectiveness (Deci et al., 2017). Thus, organizations should focus on creating workplace conditions that foster need satisfaction.

Leaders have an important role here, as they play a central role in providing employees with the conditions needed for need satisfaction (Chiniara & Bentein, 2016; Inceoglu, Thomas, Chu, Plans, & Gerbasi, 2018). This perspective is underscored by Baard, Deci, and Ryan (2004), who found that whether an employee perceives the manager as autonomy-supportive influences the employee's need satisfaction. Hon (2012) also highlights the important role of leaders, emphasizing that empowering leadership, consisting of trust, autonomy, and self-direction, is crucial for autonomous motivation. Further supporting these findings, Gillet, Gagné, Sauvagère, and Fouquereau (2013) found a positive relationship between supervisor autonomy support and employee autonomous motivation. Thus, leadership behavior has the ability to influence employee need satisfaction.

Zooming in on the first psychological need, autonomy, this implies feeling that your behavior is an expression of, and aligned with, who you are (Ryan & Deci, 2002). In the work environment, an autonomy-supportive manager is one that allows for choice, provides noncontrolling positive feedback, and acknowledges the other's perspective (Deci, Connell, & Ryan, 1989). As highlighted above, research has indicated that the opportunity for autonomy need satisfaction is influenced by a manager's autonomy-supportive behavior (Baard et al., 2004). Further supporting this claim, Slemp, Kern, Patrick, and Ryan (2018) found a positive relationship between leader autonomy support and autonomy need satisfaction. Displaying this autonomy-supportive behavior is precisely what inclusive leaders do, as they emphasize shared decision-making, allowing freedom and guidance in deciding how work is conducted (Randel et al., 2018). This leads to the following hypothesis:

**H<sub>1a</sub>:** Inclusive leadership is positively related to autonomy need satisfaction

Next is competence. This is, according to Ryan and Deci (2002), "feeling effective in one's ongoing interactions with the social environment and experiencing opportunities to exercise and express one's capacities" (p. 7). Although empirical evidence linking inclusive leadership with competence need satisfaction is lacking, this relationship has been investigated for other leadership styles, such as servant leadership (Chiniara & Bentein, 2016), authentic



leadership (Leroy et al., 2015), and transformational leadership (Kovjanic et al., 2012). Chiniara & Bentein (2016) argue for this link as servant leaders stimulate subordinates' growth and understand their capabilities. Extending this logic, inclusive leaders recognize that team members all have different strengths and stimulate these different perspectives, acknowledging their capabilities (Qi et al., 2019; Randel et al., 2018). One could argue that this satisfies the need for competence as based on this inclusiveness, team members can showcase their talents and can fully contribute. This leads to the following hypothesis:

**H<sub>1b</sub>:** Inclusive leadership is positively related to competence need satisfaction

Lastly, relatedness means “feeling connected to others, to care for and being cared for by those others, to having a sense of belongingness both with other individuals and with one’s community” (Ryan & Deci, 2002, p.7). It focuses on the social aspect of work and our relationships with for example our leaders and colleagues (Hetland, Hetland, Andreassen, Pallesen, & Notelaers, 2011). Ilies, Lanaj, Pluut, and Goh (2018) studied interpersonal need fulfillment, which also focuses on the interactions and relationships at work and found that both interpersonal justice and perceived organizational support satisfy this need. This organizational support comes from the leader and thus, a leader’s ability to provide this support is important to satisfy relatedness (Hetland et al., 2011). Inclusive leaders show this support through their focus on creating a comfortable environment and actively stimulating support for diverse opinions (Randel et al., 2018). They also generate interpersonal justice by ensuring justice and equity for each individual team member. In turn, these leaders enable employees to create meaningful relationships with others, leading to the following hypothesis:

**H<sub>1c</sub>:** Inclusive leadership is positively related to relatedness need satisfaction

### **Self-Determination Theory and Team Organizational Citizenship Behavior**

The three psychological needs are also antecedents of work performance (Deci et al., 2017). A specific aspect of work performance is contextual performance, which includes voluntarily carrying out activities that go beyond formal job requirements. Zooming in, OCB is part of this contextual performance. This type of performance is important as it shapes an organization’s social and psychological context (Borman & Motowidlo, 1997). Stimulating this behavior is a crucial business imperative, as positive outcomes of (T)OCB include, for example, lower turnover intentions, lower unit-level costs, and increased organizational effectiveness (Podsakoff et al., 2009).

Moving beyond the individual level, TOCB focuses on the team as a whole (Nohe & Michaelis, 2016). As defined by Ehrhart (2004), TOCB highlights the normative level of OCB performed within the unit. Thus, it is not the mere aggregation of the OCB of individual members. Rather, it reflects the standard mode of behavior within the unit (Ehrhart, 2004). In contrast to OCB, it is studied by asking team members about the behavior of the entire group instead of individual behavior (Chan, 1998).

TOCB can become the standard within a group because of social information processing, which suggests that individuals turn to their immediate social environment for cues about norms and expectations (Salancik & Pfeffer, 1978). Taking a closer look at these norms, when working in teams, we generate group norms. Essentially, they tell us what acceptable and unacceptable behavior is (Ehrhart & Naumann, 2004). More importantly, these evolve as we interact with others and are informally agreed upon by group members (Cialdini & Trost, as cited in, Ehrhart & Naumann, 2004). Extrapolating, displaying TOCB is a group norm.

Coming back to the foundation of SDT, intrinsic motivation, Wörtler, Van Yperen, and Barelds (2020) found a link between basic psychological need satisfaction and OCB. This finding underscores the perspective that need satisfaction allows for the intrinsic motivation needed for employees to showcase voluntary work performance, such as OCB (Wörtler et al., 2020). Roche and Haar (2013) also support this link between the three needs and OCB. Specifically, they found that autonomy and relatedness link to both OCB on the individual and the organizational level, whereas competence positively influences only organizational OCB (Roche & Haar, 2013). Also linking autonomy and OCB, Gagné (2003) found evidence supporting a positive relationship between autonomous motivation and prosocial behavior. Finally, Zhang and Chen (2013) argue that self-determination enhances employee goodwill, thus generating OCB. This view is also supported by Chiniara and Bentein (2016) who suggest that psychological need fulfillment leads to a growth, advancement and success mindset, as proposed by SDT theory. In turn, this mindset is likely to generate prosocial behaviors.

As highlighted, psychological need satisfaction is likely to generate individual OCB. Because individuals seek cues in their environment to ensure appropriate behavior (Salancik & Pfeffer, 1978), individual team members displaying OCB reinforce one another and generate groups norms. Therefore, when individual psychological needs are satisfied, TOCB becomes the group norm. This leads to the following hypotheses:

**H<sub>2a</sub>:** Autonomy need satisfaction is positively related to TOCB

**H<sub>2b</sub>:** Competence need satisfaction is positively related to TOCB

**H<sub>2c</sub>:** Relatedness need satisfaction is positively related to TOCB

Combining the above, one could argue that psychological need satisfaction mediates the relationship between inclusive leadership and TOCB. As argued, inclusive leaders play a crucial role in the satisfaction of the psychological needs of their team members. For example, because of their focus on belongingness and uniqueness (Randel et al., 2018), they display autonomy supportive behavior which leads to autonomy need satisfaction (Slemp et al., 2018).

In turn, as argued by SDT, psychological need satisfaction enhances a growth mindset and goodwill amongst team members (Chiniara & Bentein, 2016; Zhang & Chen, 2013). As argued by, amongst others, Wörtler et al. (2020), this satisfaction leads to OCB. Extrapolating, because these team members do not operate in a vacuum and use their environment to locate social cues (Salancik & Pfeffer, 1978), TOCB emerges as a group norm. This implies the following:

**H<sub>3a</sub>:** Autonomy need satisfaction mediates the relationship between inclusive leadership and TOCB

**H<sub>3b</sub>:** Competence need satisfaction mediates the relationship between inclusive leadership and TOCB

**H<sub>3c</sub>:** Relatedness need satisfaction mediates the relationship between inclusive leadership and TOCB

Visually, this leads to the following hypothesized conceptual model:

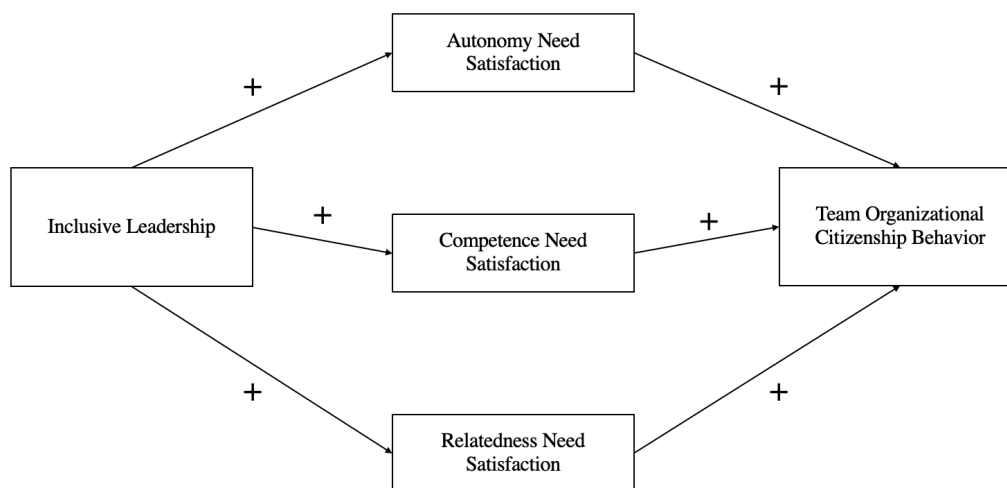


Figure 1. Conceptual model

## Method

### Research design and sample

To test the model and relationships proposed earlier, this study adopted a quantitative cross-sectional design. Data was collected in cooperation with a large Dutch private company in the finance sector. The company operates globally. An online survey (Google Forms) with self-reported items was used.

To ensure appropriate data management and alignment with organizational policies, a privacy officer from the company was involved in the survey design. All items were checked and verified to ensure that the privacy of respondents was guaranteed, and no unethical questions were asked. The privacy officer, in conjunction with the compliance department, approved both the survey and proposed sample. Moreover, the Ethics Review Board of the School of Social and Behavioral Sciences, Tilburg University, gave research clearance.

Sampling was done with the help of a company employee who is an expert on sampling and survey procedures within the company. A proportional stratified sample was created, where the strata used were the different departments within the Dutch branch of the company. Random samples were then taken from each department. To ensure that the stratified sample was proportional, the relative size of each department was taken into account when determining the sample size of each department (Hibberts, Johnson, & Hudson, 2012). External employees were excluded from the sample. These are employees that are not employed by the company but are hired for a specific project. Company insiders deemed these employees significantly different from the wider organization population.

Based on these criteria, 1557 employees received an invitation to participate. To prevent socially desirable answers, anonymity was ensured and explicitly communicated to respondents, both in the survey and accompanying email (Podsakoff, MacKenzie, & Podsakoff, 2012). To increase motivation, respondents were notified as to how the provided information was used (Podsakoff et al., 2012). Moreover, they received an explanation as to why research on this topic is needed. Employees who wished to receive the final results of the research were asked to provide their email.

269 responses (response rate: 17.28%) were received, which is low in comparison to other research on inclusive leadership (e.g. Javed et al., 2019; Tran & Choi, 2019). There are two factors that could have potentially negatively impacted the response rate. First, due to COVID-19, the company is currently sending weekly surveys regarding employee well-being. This might have caused employees to be frustrated with yet another survey. Second, as

highlighted by Fan and Yan (2010), official sponsorship of a survey influences response rates. Elaborating, Kaplowitz, Lupi, Couper, and Thorp (2012) found that when the subject line of the survey invitation includes sponsorship from an authority figure response rates are significantly higher. Unfortunately, the company's privacy officer requested not to present the survey as an internal research and to not link it to an internal sponsor. This has potentially influenced the response rate.

Case wise deletion was used to handle missing data. This resulted in the exclusion of five respondents, bringing the final sample to 264. As can be seen in table 1, more men (54.9%) completed the survey than women (42.8%). Most respondents are between 35 and 50 years old (36.0%). The largest share of respondents has been working for the company for 15 years or more (35.2%). Yet, most respondents have only started reporting to their current manager for 2 to 12 months (40.5%) or 1 to 3 years (37.9%).

Table 1. Sample characteristics ( $N = 264$ ).

	Frequency	Valid percent
<b>Gender</b>		
Male	145	54.9%
Female	113	42.8%
Prefer not to say	6	2.3%
<b>Age</b>		
< 35	80	30.3%
35 – 50	95	36.0%
50+	89	33.7%
<b>Employee organizational tenure</b>		
Less than 2 months	5	1.9%
2 to 12 months	36	13.6%
1 to 3 years	44	16.7%
3 to 5 years	19	7.2%
5 to 10 years	34	12.9%
10 to 15 years	33	12.5%
15 years or more	93	35.2%
<b>Employee tenure with current manager</b>		
Less than 2 months	20	7.6%
2 to 12 months	107	40.5%
1 to 3 years	100	37.9%
3 to 5 years	25	9.5%
5 to 10 years	9	3.4%
10 to 15 years	1	0.4%
15 years or more	2	0.8%

## Instruments

To test the proposed hypotheses, several measurement instruments were used. All scales have been validated in previous research. As the survey was conducted in a Dutch organization, both an English and Dutch version of the scales was used. For the Dutch translation, the items were translated to Dutch by a native speaker. After this, a native English speaker back translated the items to English. Discrepancies between the original English scale and this translation were compared and discussed. This approach is consistent with the forth-back translation method of Brislin (Eriksson & Boman, 2018).

### *Inclusive Leadership*

Each team member was asked to assess their supervisor on a nine-item, five-point scale designed by Carmeli et al. (2010). This scale has frequently been used in private sector research on inclusive leadership (e.g. Choi, Tran, & Kang, 2017; Javed et al., 2019; Tran & Choi, 2019). A sample item is, “My manager is open to hearing new ideas” (1 = *strongly disagree* to 5 = *strongly agree*). This scale reported high reliability (Cronbach’s alpha = 0.93).

### *Team Organizational Citizenship Behavior*

TOCB was assessed using a five-item, five-point scale, adapted from Ehrhart (2004). To better reflect the setting of the present study, the item wording was changed from department employees to team members. A sample item is, “Team members willingly help others who have work-related problems” (1 = *strongly disagree* to 5 = *strongly agree*). This scale also demonstrated high reliability (Cronbach’s alpha = 0.87).

### *Psychological Need Satisfaction*

As respondents receive a large number of surveys, likely leading to survey fatigue, it was desirable to keep the survey as short as possible. Therefore, the 18-item psychological need satisfaction scale by Van den Broeck, Vansteenkiste, De Witte, Soenens, and Lens (2010) was shortened. In doing this, Chiniara and Bentein (2016) were followed. They represented each dimension with four items instead of the original six. To emphasize the focus on the level of satisfaction of a need instead of the importance of a need, all items were introduced with the following question: “In your current job, how satisfied are you with the following aspects of your work?” (Chiniara & Bentein, 2016). A sample item for autonomy is, “The level of autonomy I have in my job” (1 = *very dissatisfied* to 5 = *very satisfied*) for competence, “The

level of confidence about my ability to execute my job properly”, and for relatedness, “The feeling of being part of a group at work”. The Cronbach’s alpha values were 0.88 (autonomy), 0.89 (competence) and 0.85 (relatedness).

### *Control Variables*

The first variable controlled for in this study is gender (male, female, prefer not to say). The importance of controlling for gender is underscored by Riordan, Griffith, and Weatherly (2003) who highlight a relationship between age, gender, tenure and work-related outcomes, such as organizational commitment. On top of this, in their work on leader behavior and team performance, Schaubroeck, Lam, and Cha (2007) also control for age and tenure, arguing that these are all related to team performance.

Based on these arguments, this research also controlled for age (<35, 35 – 50, 50+). Lastly, the research controlled for tenure. Following Chiniara and Bentein (2016), both tenure with the manager and the organization were included (less than two months, two to twelve months, one to three years, three to five years, five to ten years, ten to fifteen years, fifteen years and more). All control variables were dummy coded.

### **Analysis**

SEM is the appropriate technique to test the proposed model, as this statistical method enables both confirmatory factor analysis (CFA) and multiple regressions (Kline, 2010). The analysis was conducted with R, using the lavaan package combined with semTools (Rosseel, 2012). The two-step approach proposed by Anderson and Gerbing (1988) was followed. The first step focuses on building the measurement model, through the use of confirmatory factor analysis (CFA). This step also includes the assessment of fit of the measurement model and, if needed, further specification (Anderson & Gerbing, 1998). In the second step, the structural model is tested. This step tests the relationships between variables (Kline, 2010).

Zooming in on the CFA, this analysis tests the validity of all measures. Following Kline (2010), factor loading should be high ( $> .70$ ) for items measuring a common factor. This establishes convergent validity. Yet, their correlations should be  $< .90$  to ensure discriminant validity. For both the measurement and structural models, model fit was evaluated. This was done using approximate fit indexes, which “are intended as continuous measures of model-data correspondence” (Kline, 2010, p. 195). These fit indexes are the root mean square error of approximation (RMSEA), the standardized root mean square residual (SRMR), the comparative fit index (CFI) and the Tucker-Lewis index (TLI). For RMSEA and SRMR, the models are said

to fit the data well when RMSEA and SRMR were between .050 and .100. The CFI and TLI need to be close to .90 (Hu & Bentler, 1999; Kline, 2010).



## Results

### Measurement model

As a starting point for the preliminary analysis, CFA was performed to determine the best measurement model. The hypothesized measurement model (five-factor) was tested against two alternative models. The CFA results of all models can be found in Table 2. First, as a generally used approach to test for common-method bias (CMB) (Podsakoff et al., 2012), a one-factor model was tested where all items loaded on one common factor. Common method bias is not an issue in this sample, as fit for this model was significantly less than for the hypothesized five-factor model ( $\Delta\chi^2 = 317.51$ ;  $\Delta df = 10$ ;  $p < .001$ ). Next, autonomy, competence, and relatedness need satisfaction are sometimes grouped together in research on psychological need satisfaction (e.g. Leroy et al., 2015). Therefore, a three-factor model was examined in which all items pertaining to psychological need satisfaction loaded on a single factor. Fit for this model was significantly worse than the hypothesized five-factor model ( $\Delta\chi^2 = 11.675$ ;  $\Delta df = 4$ ;  $p < .05$ ). Moving to the hypothesized model, this five-factor model shows good fit to the data ( $\chi^2 [289] = 551.446$ ; CFI = 0.938; TLI = 0.930; RMSEA = 0.059; SRMR = 0.057), whereas average variance extracted (AVE) ranged from 0.59 to 0.67. As this was the best fitting measurement model, this model was used in subsequent analyses.

Table 2. Measurement models and fit indices.

	$\chi^2$	$df$	CFI	TLI	RMSEA	SRMR
1 factor (CMB)	2437.091	299	0.494	0.450	0.165	0.154
3 factors (IL, PNS, TOCB)	1256.603	296	0.773	0.750	0.111	0.093
5 factors (IL, PNS-A, PNS-C, PNS-R, TOCB)	551.446	289	0.938	0.930	0.059	0.057

Note: CMB: common method bias; IL: inclusive leadership; PNS: psychological need satisfaction; TOCB: team organizational citizenship behavior; PNS-A: autonomy psychological need satisfaction; PNS-C: competence psychological need satisfaction; PNS-R: relatedness psychological need satisfaction

### Descriptive statistics and correlations

The means, standard deviations and correlations can be found in Table 3. Both autonomy and competence need satisfaction correlated with gender. Both tenure with the organization and manager, as well as competence and relatedness need satisfaction correlate with age. Organization tenure correlated with tenure with the manager, competence and relatedness need satisfaction. Inclusive leadership did not correlate with the control variables but correlated with TOCB and all three measures of need satisfaction. TOCB also correlated with all three psychological needs. As expected, these psychological needs also correlated amongst each

other, as they resort under psychological need satisfaction. All correlations are  $< .90$ , establishing discriminant validity (Kline, 2010). Lastly, important to note is that some categories within the control variables had very few cases (see Table 1). To prevent overcrowding the model, some categories within the variable employee tenure with current manager were combined. These are the categories 5 to 10 years, 10 to 15 years and 15+ years.

Table 3. Means, standard deviations and correlations.

	Mean	SD	1	2	3	4	5	6	7	8	9
Gender	1.47	0.54									
Age	2.03	0.80	0.06								
Employee organizational tenure	4.94	1.95	0.10	0.62**							
Employee tenure with current manager	2.65	0.99	-0.05	0.28**	0.41**						
Inclusive leadership	4.12	0.65	0.04	-0.07	0.05	0.01	( $\alpha = 0.93$ )				
TOCB	3.99	0.67	-0.10	0.03	-0.03	-0.11	0.31**	( $\alpha = 0.87$ )			
Autonomy need satisfaction	4.16	0.65	-0.16**	0.09	0.05	-0.01	0.29**	0.39**	( $\alpha = 0.88$ )		
Competence need satisfaction	4.00	0.64	-0.13*	0.19**	0.15*	0.12	0.29**	0.40**	0.41**	( $\alpha = 0.89$ )	
Relatedness need satisfaction	3.65	0.76	0.01	0.18**	0.13*	0.10	0.42**	0.58**	0.31**	0.48**	( $\alpha = 0.85$ )

Notes: \* $p < .05$ , \*\* $p < .01$ ; Gender (1 = male, 2 = female, 3 = prefer not to say); Age (1 =  $< 35$ , 2 = 35 – 50, 3 = 50+);

Tenure organization (1 = Less than 2 months, 2 = 2 to 12 months, 3 = 1 to 3 years, 4 = 3 to 5 years, 5 = 5 to 10 years, 6 = 10 to 15 years, 7 = 15 years or more);

Tenure manager (1 = Less than 2 months, 2 = 2 to 12 months, 3 = 1 to 3 years, 4 = 3 to 5 years, 5 = 5 to 10 years, 6 = 10 to 15 years, 7 = 15 years or more)

## Structural model

To finish the preliminary analysis, the hypothesized structural model and an alternative model were compared. In the hypothesized model inclusive leadership indirectly influences TOCB through autonomy, competence, and relatedness need satisfaction. The full mediation model ( $\chi^2[584] = 918.369$ ; CFI = 0.923 TLI = 0.909; RMSEA = 0.047; SRMR = 0.045) fits the data well. The alternative model proposes partial mediation. This implies that inclusive leadership directly influences TOCB and indirectly through psychological need satisfaction. This model did not provide significant improvement ( $\Delta\chi^2 = 0.0091862$ ;  $\Delta df = 1$ ;  $p > .05$ ). Therefore, the hypothesized model was used for hypothesis testing.

Table 4. Structural models and fit indices.

	$\chi^2$	<i>df</i>	CFI	TLI	RMSEA	SRMR
Hypothesized model (full mediation)	918.369	584	0.923	0.909	0.047	0.045
Alternative model (partial mediation)	918.360	582	0.923	0.909	0.047	0.045

## Hypothesis testing

The final structural model is displayed in Figure 2, whereas the regression coefficients can be found in Table 5. As can be seen, those who prefer not to disclose their gender rate their managers as less inclusive than males ( $b = -.606$ ,  $p < .05$ ). They also score lower on autonomy ( $b = -.679$ ,  $p < .01$ ) and competence need satisfaction ( $b = -.662$ ,  $p < .05$ ). Additionally, females also score lower than males on autonomy need satisfaction ( $b = -.169$ ,  $p < .05$ ). Employees who are older than 50 ( $b = -.282$ ,  $p < .05$ ) experienced lower levels of inclusive leadership than employees below 35. In contrast, they scored higher on autonomy ( $b = .262$ ,  $p < .05$ ), competence ( $b = .363$ ,  $p < .01$ ), and relatedness need satisfaction ( $b = .504$ ,  $p < .001$ ). Employees between 35 and 50 also scored higher on competence ( $b = .347$ ,  $p < .01$ ) and relatedness need satisfaction ( $b = .477$ ,  $p < .001$ ) than younger employees (<35). Tenure with the organization had no effects. On the other hand, a tenure of 1 to 3 years with the manager decreased TOCB ( $b = -.268$ ,  $p < .05$ ) as compared to a tenure of less than 2 months. This also holds for a tenure of 3 to 5 years ( $b = -.406$ ,  $p < .01$ ).

Providing support for H<sub>1a</sub>, employees who have a manager they found to be an inclusive leader also reported higher scores on their autonomy need satisfaction ( $b = .362$ ,  $p < .001$ ). Moreover, these employees also scored higher on competence ( $b = .366$ ,  $p < .001$ ) and relatedness ( $b = .632$ ,  $p < .001$ ) need satisfaction, confirming both H<sub>1b</sub> and H<sub>1c</sub>. When looking at TOCB, employees who were fulfilled in their autonomy ( $b = .189$ ,  $p < .01$ ) and relatedness ( $b = .431$ ,  $p < .001$ ) needs showed a higher willingness to help team members, as indicated by

TOCB. This confirms both H<sub>2a</sub> and H<sub>2c</sub>. In contrast, this effect was not found for competence need satisfaction ( $b = .055, p > .05$ ). Thus, no support was found for H<sub>2b</sub>.

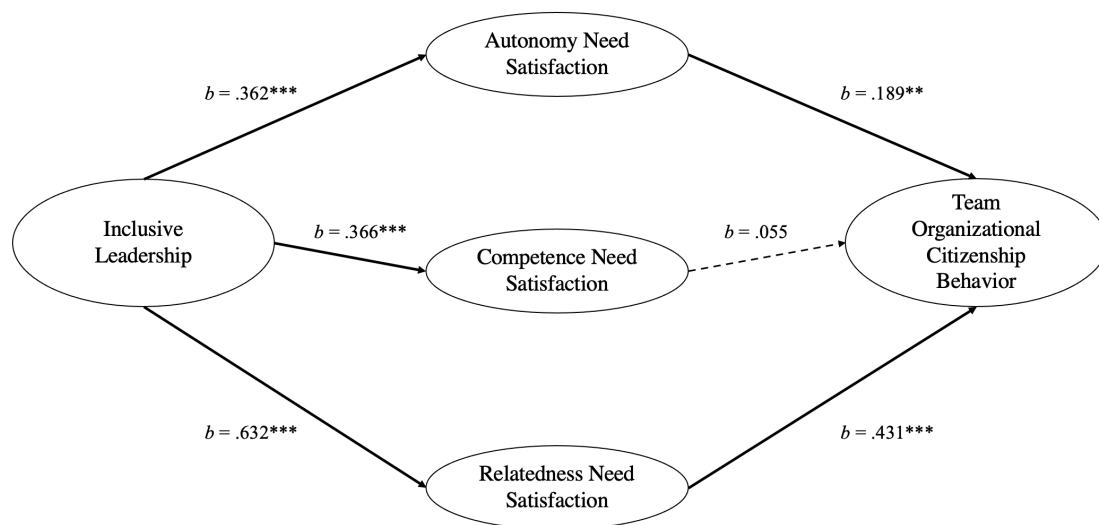


Figure 2. Path model. Note:  $N = 264$ .  $*p < .05$ ,  $**p < .01$ ,  $***p < .001$ .  $\chi^2[584] = 918.369$ , CFI = 0.923, TLI = 0.909, RMSEA = 0.047, SRMR = 0.045. Significant relationships are in bold, non-significant relationships in dashes. Control variables and their impact are not displayed.

Lastly, autonomy, competence, and relatedness need satisfaction were tested as mediators of the relationship between inclusive leadership and TOCB. Taking a step back, the alternative structural model proposed earlier did not find a significant relationship between inclusive leadership and TOCB ( $b = -.006, p > .05$ ). This strengthens the case for full mediation. To test for mediation the bootstrapping method suggested by Preacher and Hayes (2008) was used. This approach is commonly used in multi mediator SEM research (e.g. Bauwens, Audenaert, Huisman, & Decramer, 2019; Chiniara & Bentein, 2016). All indirect effects were estimated with a 95% confidence interval (CI) for 1000 samples. The indirect effect of autonomy need satisfaction was 0.068 (95% CI = 0.013 – 0.143;  $SE = 0.034$ ;  $p < .05$ ), providing support for H<sub>3a</sub>. For relatedness need satisfaction this was 0.272 (95% CI = 0.170 – 0.402;  $SE = 0.059$ ;  $p < 0.001$ ), thus H<sub>3c</sub> is also supported. Yet, the 0.020 (95% CI = -0.043 – 0.075;  $SE = 0.028$ ;  $p > .05$ ) indirect effect for competence need satisfaction was not significant. Therefore, H<sub>3b</sub> is not supported.

Table 5. Regression results for the hypothesized model.

	Inclusive Leadership		Autonomy need satisfaction		Competence need satisfaction		Relatedness need satisfaction		TOCB	
	<i>b</i>	SE	<i>b</i>	SE	<i>b</i>	SE	<i>b</i>	SE	<i>b</i>	SE
Gender										
Male (ref.)	-	-	-	-	-	-	-	-	-	-
Female	0.130	0.072	-0.169*	0.078	-0.145	0.074	-0.022	0.088	-0.104	0.059
Prefer not to say	-0.606*	0.239	-0.679**	0.258	-0.662*	0.257	-0.277	0.293	0.009	0.196
Age										
<35 (ref.)	-	-	-	-	-	-	-	-	-	-
35 – 50	-0.194	0.110	0.212	0.118	0.347**	0.118	0.477***	0.136	0.028	0.089
50+	-0.282*	0.115	0.262*	0.124	0.363**	0.124	0.504***	0.143	-0.018	0.092
Employee organizational tenure										
Less than 2 months (ref.)	-	-	-	-	-	-	-	-	-	-
2 to 12 months	0.157	0.303	-0.259	0.323	-0.088	0.322	0.137	0.369	0.035	0.242
1 to 3 years	0.304	0.290	-0.230	0.310	-0.142	0.310	-0.176	0.355	0.025	0.231
3 to 5 years	0.319	0.313	-0.020	0.334	-0.041	0.334	-0.139	0.382	-0.026	0.249
5 to 10 years	0.253	0.300	-0.119	0.320	-0.198	0.320	-0.243	0.366	-0.091	0.239
10 to 15 years	0.317	0.307	-0.076	0.328	-0.198	0.327	-0.113	0.375	0.014	0.245
15 years or more	0.454	0.297	-0.268	0.318	-0.129	0.317	-0.206	0.364	-0.054	0.237
Employee tenure with current manager										
Less than 2 months (ref.)	-	-	-	-	-	-	-	-	-	-
2 to 12 months	0.057	0.157	-0.054	0.168	-0.105	0.168	-0.085	0.192	-0.157	0.126
1 to 3 years	0.086	0.160	-0.109	0.171	-0.015	0.171	0.019	0.196	-0.268*	0.129
3 to 5 years	-0.093	0.192	-0.164	0.205	-0.006	0.205	-0.042	0.235	-0.406**	0.156
5 to 15+ years	0.171	0.222	-0.193	0.237	0.066	0.237	0.088	0.271	-0.339	0.179
Inclusive leadership			0.362***	0.075	0.366***	0.075	0.644***	0.092		
Autonomy need satisfaction									0.188**	0.059
Competence need satisfaction									0.055	0.065
Relatedness need satisfaction									0.431***	0.064

Note:  $N = 264$ . \* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .  $\chi^2 = 918.369$ ,  $df = 584$ , CFI = 0.923, TLI = 0.909, RMSEA = 0.047, SRMR = 0.045.

## Discussion

The aim of this research was to explore the relationship between inclusive leadership and TOCB. Additionally, it focused on the mechanisms underlying this relationship by viewing this relationship from a SDT perspective. As hypothesized, support was found for a positive relationship between inclusive leadership and all three psychological needs. Additionally, the satisfaction of two psychological needs (autonomy and relatedness) positively influenced TOCB. Unexpectedly, competence need satisfaction did not predict TOCB. Finally, the relationship between inclusive leadership and TOCB was fully mediated by both autonomy and relatedness need satisfaction. In contrast to the hypothesized model, competence need satisfaction did not mediate this relationship.

### Theoretical contributions

This research adds to the existing literature in various ways. First, it expands the inclusive leadership literature by uncovering the relationship between inclusive leadership and psychological need satisfaction. The findings confirm earlier findings on the relationship between leadership and psychological need satisfaction and expand this perspective to also include inclusive leadership. For example, Chiniara & Bentein (2016) found a relationship between servant leadership and psychological need satisfaction, whereas Kovjanic et al. (2012) studied transformational leadership and need satisfaction. In a similar fashion, Zhang and Chen (2013) focused on developmental leadership and the three psychological needs combined.

Zooming in on autonomy need satisfaction, the findings are in line with previous research as both Baard et al. (2004) and Slemp et al. (2018) found that autonomy supportive behavior from managers leads to autonomy need satisfaction. To recap, autonomy supportive managers are those who acknowledge other perspectives and allow for choice (Deci et al., 1989). Inclusive leaders emphasize shared decision-making and allow freedom in how work is conducted (Randel et al., 2018). This is the autonomy supportive behavior needed to satisfy employees need for autonomy. For competence, leaders should focus on growth and understanding employee capabilities (Chiniara & Bentein, 2016). This is done by inclusive leaders as they acknowledge unique capabilities and strengths, allowing team members to highlight their talents and thus satisfy their need for competence (Randel et al., 2018). Finally, relatedness implies feeling connected with others and cared for by others (Ryan & Deci, 2002). This need is satisfied by inclusive leaders as they create a sense of belongingness (Randel et al., 2018) by creating a positive, open, and trusting environment (Carmeli et al., 2010).

Second, this research provides new insights into TOCB. Previous research has highlighted the relationship between inclusive leadership and OCB (Tran & Choi, 2019). This study builds upon that by expanding OCB to team. Knowing how to stimulate TOCB is important as it has a strong link to employee performance (Nielsen et al., 2009). This research studied individual psychological need satisfaction as an antecedent of TOCB. It argued that having individual needs satisfied leads to positive behaviors towards the group. Precisely this link is important, as Nohe and Michaelis (2016) highlight that previous research has often overlooked the premise that TOCB might originate within individuals. They found that an individual's trust in the leader increases TOCB (Nohe & Michaelis, 2016). Thus, processes lying within the individual can affect behavior towards others.

In line with this, this research found a positive relationship between two types of psychological needs (autonomy and relatedness) and TOCB. However, no relationship between competence need satisfaction and TOCB was found. This is in line with Chiniara and Bentein (2016) who found that both autonomy and relatedness were related to individual and organizational OCB, but that this relationship was absent for competence need satisfaction. One explanation for the absence of this relationship might be the different nature of competence need satisfaction. For example, both Chiniara and Bentein (2016) and Greguras and Diefendorff (2009) did find a link between competence need satisfaction and employee task performance and job performance respectively. Interestingly, Van den Broeck, Ferris, Chang, and Rosen (2016), through meta-analysis, found that the outcomes of competence need satisfaction were opposite from autonomy and relatedness. For example, the satisfaction of the need for competence led to lower affective commitment, greater turnover intentions and higher levels of absenteeism (Van den Broeck et al., 2016). They argue that those who are competent feel less connected to their workplace as they could easily find employment elsewhere (Van den Broeck et al., 2016). Extrapolating, this might explain the lack of a relationship between competence need satisfaction and TOCB, as these competent employees do not feel the need to go beyond the call of duty for their team members.

Third, besides deepening knowledge on inclusive leadership, this research also expands the broader leadership literature by exploring the mechanism linking inclusive leadership to (T)OCB. By doing this, this research responds to the call by Dinh et al. (2014) who emphasized the need to advance understanding of the underlying processes that explain how leaders influence organizational outcomes. This research uncovered such an underlying process by using an SDT lens to link inclusive leadership and TOCB. Both autonomy and relatedness need satisfaction fully mediated the relationship between inclusive leadership and TOCB. This is in

line with SDT, which argues that satisfaction of individual psychological needs leads to increased employee satisfaction and motivation (Deci et al., 2017).

These results are especially relevant in our increasingly diverse societies, as they highlight how inclusive leadership can reap the benefits of diversity. As emphasized by previous research (Jin, Lee, & Lee, 2017; Nishii & Mayer, 2009), inclusive leadership is crucial for managing diversity. This study takes this a step further by revealing how inclusive leadership leads to positive organizational outcomes, such as TOCB.

Yet, as competence did not mediate the relationship between inclusive leadership and TOCB, this implies that for competence to be able to generate TOCB a different leadership style might be required. One option for leaders would be, instead of focusing on inclusivity, to focus on creating a strengths-based psychological climate. According to van Woerkom and Meyers (2015), to create such a climate, it is important to appreciate employees' strengths and affirm their successes and potential. Leaders can do this, for example, through informal feedback (van Woerkom & Meyers, 2015). On top of this, van Woerkom and Meyers (2015) found a positive relationship between a strengths-based psychological climate and OCB. It would thus be interesting to see if this strengths-based approach could provide a mediating pathway between competence need satisfaction and TOCB.

### **Limitations and future research**

When interpreting and generalizing the results of this research, it is important to be aware of its limitations. First, ideally one would test both inclusive leadership and TOCB at the team-level. Originally a multilevel design was intended for this research. However, due to privacy regulations, the company only allowed reporting on teams where more than eight members of the team completed the survey. As this requirement was impossible to fulfill, the clustered nature of the data was not taken into account.

A multilevel perspective would have been theoretically stronger as it enables us to see the interaction between the team and the leader and within the team (Batistič, Černe, & Vogel, 2017). Batistič et al. (2017) emphasize that the leadership field often lacks a multilevel approach. Yet, research has also shown that leadership can be a dual-level phenomenon with both an individual and group focus (Wang & Howell, 2010). Expanding the multi-level perspective even further, Dionne et al. (2014) emphasize the need to also incorporate networks as a level. This perspective is also underscored by Zhu, Song, Zhu, and Johnson (2019) who highlight that social networks within organizations can lead to mutual influence. For example, followers do not only interact with their direct supervisor, but also with higher level managers



and potentially also with subordinates. Their social network influences these relationships (Zhu et al., 2019). Therefore, future research should explore the multi-level relationships of inclusive leadership, both with teams and the broader organizational context.

Second, although this research found clear results for the argument that inclusive leaders are important in stimulating need satisfaction at work, one needs to remain critical of the distinctive impact of inclusive leadership in comparison to other leadership styles. As highlighted by Decuyper and Schaufeli (2020) a wide variety of leadership styles can be grouped together, both theoretically and conceptually, as forms of positive leadership. Although they do not explicitly mention inclusive leadership, they do discuss leadership behaviors such as stimulating psychological ownership and recognition for contributions (Decuyper & Schaufeli, 2020). These behaviors fit well with those of inclusive leaders. Although inclusive leadership differentiates itself through its emphasis on the individual's perception of belongingness and uniqueness (Randel et al., 2018), it remains difficult to say if the results found are fully attributable to an inclusive leadership style, or whether some general effect of influence by the leader is present. Therefore, future research should work on untangling the effects of different leadership styles on psychological need satisfaction.

Lastly, the external validity of the results might be limited, as the studied company is a private company in the finance sector. Therefore, it could be that these results have limited applicability in other sectors. This limitation is also seen in public sector research on inclusive leadership (Ashikali, Groeneveld, & Kuipers, 2020). Ashikali et al. (2020) suggest that the public sector might have boundary conditions, such as its bureaucratic structures, and that contextual factors might differ for managers in the public sector. An example is the often times conflicting demands limiting the room for leaders to develop inclusiveness. Future research could thus focus on overcoming these external validity problems by researching the differences and similarities between different sectors with regards to inclusive leadership. For example, one might focus on the availability of inclusiveness training for managers or if inclusiveness is a strategic priority within a sector.

### **Practical implications**

From a practical perspective, this research emphasizes the value of inclusive leaders. As organizations are becoming more diverse, it is also important to manage this diversity (Mamman et al., 2012). In turn, this allows companies to capture the benefits from diversity, such as OCB (Paine & Organ, 2000). This research revealed that inclusive leaders have the power to stimulate TOCB in their employees. This underscores that inclusiveness is not only

important from a moral perspective, but also from a business perspective. (T)OCB can lead to lower turnover intentions, lower unit-level costs, and increased organizational effectiveness (Podsakoff et al., 2009). Thus, finding a way to stimulate this is a good business imperative.

To reap the benefits of these findings, one should focus on empowering inclusive leaders. This implies stimulating leaders to facilitate belongingness, for example through shared decision-making. On top of this, they should also value uniqueness by encouraging diverse contributions. This might require a change in mindset, as some organizations train managers to focus on pursuing collective goals (Carter, DeChurch, Braun, & Contractor, 2015).

This research also highlighted that the relationship between inclusive leadership and TOCB is fully mediated by autonomy and relatedness need satisfaction. Furthermore, these two psychological needs also have a direct influence on TOCB. Hence, focusing on satisfying these needs can also be beneficial. Van den Broeck, Vansteenkiste, De Witte, and Lens (2008) found that job resources increase feelings of psychological freedom (autonomy) and interpersonal connectedness (relatedness). Some examples of job resources are career opportunities and supervisor support (Van den Broeck et al., 2008). Linking it all together, inclusive leaders can provide these job resources precisely through their focus on being open, available and accessible (Choi, Tran, & Park, 2015).

## Conclusion

To summarize, this research investigated the relationship between inclusive leadership and TOCB and whether this relationship can be explained through psychological need satisfaction. To recap, these psychological needs are autonomy, competence, and relatedness. The results indicated that both autonomy and relatedness need satisfaction fully mediate the relationship between inclusive leadership and TOCB. Additionally, inclusive leadership positively influenced all three needs. In turn, both autonomy and relatedness need satisfaction had a positive effect on TOCB.

These results add new insights to the existing literature on inclusive leadership, TOCB and SDT. For example, it revealed that factors pertaining the individual, such as psychological need satisfaction, have the potential to influence behavior towards the team. Moreover, the results revealed that inclusive leadership positively influences all three psychological needs. Simultaneously, an inclusive leadership style might not be the best approach to use when trying to stimulate TOCB through competence need satisfaction. Importantly though, autonomy and relatedness need satisfaction did mediate the relationship between inclusive leadership and TOCB.

Although improvements are possible by focusing on external validity and a multilevel perspective, this research delivers practical insights. It highlights the importance of psychological needs and thus emphasizes the importance of satisfying these in the workplace. Additionally, this research underscores that inclusiveness is good for business. Therefore, it brings a new era, moving from primarily a moral focus on inclusiveness to a business one. Hopefully this puts inclusiveness and inclusive leadership on the agenda in more organizations.

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