

A study examining the mediating role of group cohesion in the relationship between  
organisational citizenship behaviour (OCB) and its consequences: job satisfaction and  
perceived group performance

Mirjam Eilander (5740649)

Utrecht University

Supervised by: Dr. Bibiana Armenta Gutierrez

Second reviewer: Dr. Meltem Ceri-Booms

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### **Abstract**

Antecedents of Organisational Citizenship Behaviour (OCB) has been widely investigated. The purpose of this graduation thesis is to investigate job satisfaction and group performance as outcomes of OCB. This study aims understand these relations by investigating the explanative role of group cohesion on the relations between OCB and its outcomes. We based our theorizing on the Self Determination Theory. This study was conducted in the Netherlands and data was collected through an online survey. 177 participants were included in the analysis. Using a mediation analysis, relations between OCB and job satisfaction and OCB and group performance were examined. The mediating effect of group cohesion was examined. All the hypotheses were found positively significant, except the OCB-group performance relationship. The results emphasize the beneficial effect of OCB on the individual-level on job satisfaction and on group-level outcomes (i.e. cohesion and performance). Hence, this study shed a light on groups cohesion as an explanation of these relations. As such, policymakers, CEO's and supervisors should be aware of the team composition and dynamics with regards to establish cohesive teams, since these teams enhances performances and team member's personal job satisfaction. In addition, we suggest that managers, leaders and supervisors should not reward but rather recognize someone's effort and support their co-workers' initiatives instead. In this way they let OCB flourish to its full potential.

Over the past few years, burn-out, job satisfaction, happiness, and well-being have become a topic of interest for scholars (Alarcon et al., 2009). Following the saying ‘happy employees, happy customers’, CEO’s and managers want their employees to be happy and satisfied with their job. Since burn-out ratings have increased over the past few years, being happy and satisfied with one’s job has become an increasingly important topic on the individual level as well (RIVM, 2020). Several antecedents and consequences of job satisfaction have been studied over the past few years and has shown that job satisfaction is positively correlated with well-being, and negatively correlated with turnover intentions and absenteeism (Asif et al., 2017). Research showed that job satisfaction leads to more well-being, less turnover intentions and less absenteeism. Besides employee satisfaction, it is also important employees to behave in a way which increase group performance and enhance organisational outcomes (Nielsen et al., 2009). The behaviour of employees who are highly motivated and committed to their work, group, and organisation can be characterized as Organisational Citizenship Behaviour (OCB) (Podsakoff, et al., 2009). OCB refers to one benefitting and helping other individuals, as well as the organisation, beyond being formally rewarded for it (Podsakoff, Blume, Whiting & Podsakoff, 2009). This research will look at the influence of prosocial behaviour (OCB) on job satisfaction and if OCB can increase team performance since OCB is being focused on helping others.

Additionally, this study not only aims to research if OCB leads to better group performance and more job satisfaction, but also aims to understand what could explain these relations. Business, and team management expert Lencioni stated: “Not finance. Not strategy. Not technology. It is teamwork that remains the ultimate competitive advantage, both because it is so powerful and so rare” (Chapman et al., 2010, p. 39). What Lencioni could be mentioning here is group cohesion (Ng & Van Dyne, 2005). Group cohesion is like ‘social glue’ that makes the team members feel connected and sensitive towards each other, and willing to collaborate in order to be successful. Therefore, could cohesion strengthen a team, and therefore increase performance and individual satisfaction? This study contributes to the literature of OCB’s consequences, especially to the OCB-job satisfaction relation. It underscores the importance of team cohesion, by examining the explanative role of group cohesion. In addition, this could lead to practical insight for organisations, employers and employees as well, on how working together could enhance one ‘s positive individual, and team performance, pointing out the importance of prosocial, motivated employees and cohesive teams.

## **Current Research**

### **Organisational Citizenship Behaviour**

Organisational Citizenship Behaviour (OCB) has been a subject of research for a few decades. In 1983 Organ and his colleagues were the first to mention the term 'Organisational Citizenship Behaviour' (Podsakoff et al., 2000). Organ (1997) formulated Organizational Citizenship Behaviour (OCB) as "performance that supports the social and psychological environment in which task performance takes place" (Podsakoff et al., 2009, p. 122).

Podsakoff et al., 2009 has conceptualized OCB, and consists of several concepts that together capture OCB. These concepts are altruism, courtesy, conscientiousness, civic virtue, sportsmanship, peacekeeping, and cheerleading (Podsakoff et al., 2009).

A critical literature review of Podsakoff et al. (2000) presents several antecedents of OCB, such as job satisfaction, cohesive groups, and leadership. In contrast, the field of OCB consequences has been researched less, with more ambiguous results. Podsakoff et al. (2009) found that OCB contributes to organizational productivity, efficiency, and profitability and decreases costs (Podsakoff, et al., 2009). However, even though OCB seems very helpful and positive, research suggests that OCB could also result in negative outcomes. For example, it could lead to role overload, stress and work-family conflict, which decreases organizational effectiveness (Podsakoff et al., 2009; Bolino & Turnley, 2005). This can occur when OCB is highly encouraged and therefore perceived as involuntary (Banwo, & Du, 2018).

Over time, little research has been done on the factors that possibly determine OCB's outcomes. There is not much insight on why or how OCB results in positive consequences (Podsakoff et al., 2014). One concept that has been linked to OCB is (group) cohesion/cohesiveness. In previous studies, several relationships between OCB and cohesion were found. Cohesion has been found to play a mediating role and function as an antecedent of OCB (Chen et al. (2009). Reizer et al. (2019) found that cohesion has been used as a moderator on the relationship between caretaking and OCB. However, in their study Taiwan et al. (2010) found that OCB leads to more cohesiveness. This raises the question in what way cohesion and OCB relate, and whether group cohesion possess an explanatory role in the underlying mechanism of OCB's relationships and positive outcomes.

### **OCB and Job Satisfaction**

One plausible positive consequence of OCB is job satisfaction (Podsakoff et al., 2000). Locke (1976) defined job satisfaction as an emotional state resulting from the evaluation of one's job and job experience. Many findings indicate a relationship between job

satisfaction and OCB (Zeinabadi, 2010; Organ & Ryan, 1995). In their meta-analysis, Ryan and Organ (1995) found a stronger relation between job satisfaction and OCB than in-role behaviour and OCB. Despite job satisfaction being studied as a predictor of OCB, they used correlation methods to investigate the relationships between OCB and job satisfaction (Ryan and Organ (1995). This warrants no actual causality of job satisfaction predicting OCB (Field, 2013). Even though job satisfaction has been researched as an antecedent of OCB, we propose that job satisfaction can be a consequence of OCB.

We based or theorizing on the Self Determination Theory (SDT) (Deci et al., 2017; Gagné & Deci, 2005). This theory states that every human being has basic needs; the need for competence, the need for autonomy, and the need of relatedness. The need for autonomy, which can be defined as “one’s inherent desire to feel volitional and to experience a sense of choice and psychological freedom when carrying out an activity, over the job and workplace” (Van den Broeck et al., 2010), can be fulfilled by doing something extra for colleagues or for the organisation in general. For example, the decision to assist a team member without expecting anything in return. Furthermore, we propose that OCB can fulfil the need for competence, (i.e. an individual inherent desire to feel effective in interaction with the environment) (Van den Broeck et al., 2010). OCB means that employees contribute to, or benefit others, by their prosocial behaviour. This (prosocial) activities and behaviour, beyond the initial tasks, give employees-in relation to others- a feeling of being helpful and effective, which should increase the feelings of competence. These needs determine the degree of one’s intrinsic, sustainable motivation. When an individual’s needs are fulfilled, performance, learning and adjustment skills increase (Deci et al., 2017). In this light, the need for autonomy and competence supports the hypothetical idea of job satisfaction being a consequence of OCB. We propose that OCB result in more job satisfaction.

*Hypothesis 1: OCB has a positive effect on job satisfaction*

### **OCB and Group performance**

Another commonly researched consequence of OCB is effectiveness and performance (Nielsen et al., 2009; Podsakoff et al., 2009). Group performance is a component and indicator of group effectiveness. Salas et al., (2008) describe group/team performance as a product of a team working together by using their pool of resources in order to accomplish their mutual goals. OCB in a group has been shown to be positively related to group performance (Nielsen et al., 2009).

SDT can possibly explain why OCB increases team performance (Deci et al., 2017). In

concordance with the reasoning on job satisfaction, the need for competence and autonomy can drive one to do extra for the organization and therefore contribute to the team, by doing something positive. The need for relatedness included the need for frequent personal contact or interactions, which should mainly free from conflict and negative affect. In addition, it contains the need to perceive that there is an interpersonal bond established, marked by stability, affective concern and continuation into the foreseeable future. The need for relatedness could motivate why people display OCB in teams and benefit them (Baumeister & Leary, 1995; Deci et al., 2017). We propose that through OCB, colleagues foster each other and strengthen their bonds, which enhances group performance.

Kim and Wang (2018) state that this prosocial behaviour could function as a social, supportive job resource, facilitating the other team members in doing their job (Kim & Wang, 2018). OCB promotes effective communication, which results in knowledge sharing and fostering coordination amongst employees. Hence, the need for relatedness which fosters the teams bonds and resources, leads to better performance (Kim & Wang, 2018; Mahembe & Engelbrech, 2014).

Furthermore, performing OCB may trigger others to do exhibit OCB as well. Cropanzano and Mitchell (2005) mention the Social Exchange Theory (SET) and the phenomenon of reciprocity. The universal phenomenon of reciprocity encourages the receiver of a beneficial act of prosocial behaviour, in this case OCB, to meet this altruistic gesture. The receivers of the benefit have received the act without any costs or effort on their side, and therefore, a form of dependence has been made. In order to meet the altruistic gesture and fix the imbalance, a reciprocated act should be made (Cropanzano & Mitchell (2005) . Hence, when employees exhibit OCB in a team, the team members will react to this prosocial behaviour with the same acts of OCB. Therefore, the exhibition of OCB generates a cycle proposing that OCB generates more OCB (Cropanzano and Mitchell, 2005). In this light, through performing OCB, team members keep investing in one another, enhancing group performance in line with the rule of reciprocity. Additionally, we argue that OCB will fulfil the basic needs of SDT. We therefore expect that OCB leads to better group performance.

*Hypothesis 2: OCB has a positive effect on group performance*

### **OCB and Group Cohesion**

In this research, we want to look beyond and above the proposed relationships. We aim for a better understanding of what mechanism can explain these relationships. Liu et al. (2016) state that members of a perform their jobs not in isolation. The functioning of a group

is impacted by the social and psychological environment (Lui et al., 2016). Therefore, OCB is defined by its relationship to its environment, and does not occur in isolation (i.e. it might be a function, factor or a consequence of the team's environment) (Podsakoff et al., 2009). Group cohesion or cohesiveness is a group-characteristic and an environmental factor that influence group performance. Group cohesion includes all forces acting on the members to stay part of the group (Ng & Van Dyne, 2005; Gully et al., 2012). According to Kidwell et al. (1997) OCB increases group cohesion. Kidwell et al. (1997) state that OCB stems from helping behaviour (e.g. helping a colleague who has been absent, which helps the team to perform well). They also refer to the SET. As mentioned earlier, performing OCB could enhance a cycle of social investments into one another by reciprocating each other's efforts, (i.e. members of cohesive groups would reciprocate OCB, which will in turn leads to in even more OCB) (Kidwell et al., 1997). We therefore proposed that OCB nourishes mutual liking and the establishments of bonds, which not only enhances group performance, but also increases the liking of and attachment to the group (Kidwell et al., 1997). In sum, we propose that OCB contributes to group cohesion by strengthening the intermediate relationships among team member, by an ongoing exchange of acts of OCB motivated by the need to be related to one another.

*Hypothesis 3: OCB has a positive effect on group cohesion*

### **The mediation role of Group Cohesion**

Cohesion is related to job satisfaction (Urien et al., 2017). According to the Job-demands resources model (JD-R), cohesion could lead to more job satisfaction (Kim & Wang, 2018). Group cohesion can also foster social support (i.e. offering help to solve problems, providing advice, aid and care by listening sympathetically), and enhance social capital of the group (Jimmieson et al., 2010). Social capital refers to the body of human resources which is based on mutual trust and in which member of institutionalized or half-institutionalized organisations are attached to each other with strong ties (Özan et al., 2017). Trust and collaboration based on human relationships constitute the fundamental principle of social capital, which are indicators of highly cohesive groups (Mach et al., 2010; Özan et al., 2017).

Here, the effect of group cohesion relates to the need of competence and relatedness, where group cohesion strengthens bonds through social support (relatedness), and enables one to feel competent by contributing to resources (competence) (Deci et al., 2017; Through this, social resources of support, and increased social capital in high-cohesive groups, can lead to more job satisfaction (Özan et al., 2017; Kim & Wang, 2018). Hence, cohesive groups help

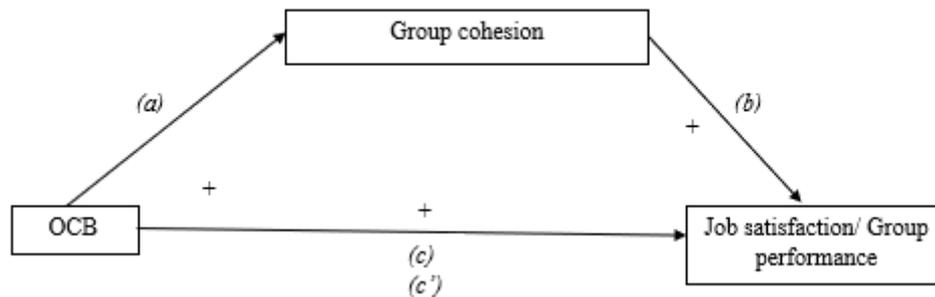
fulfil basic needs which increases job satisfaction.

Bolino et al. (2002) clarify that social capital increases with more cohesion, which improves performance. In accordance to the JD-R model, resources of social capital would not only contribute to job satisfaction, but resource also help the team doing a better job with cohesion as a generator of resources of social capital. It fosters the relationships amongst team members, who both make use of the resources and support each other (Kim & Wang, 2018).

In sum, as reasoned before, we propose that job satisfaction and group performance also relate to OCB. Additionally, employees who are willing to act beyond their initial tasks to help and benefit team members increase their feelings of autonomy, competence and relatedness (Deci et al., 2017). Cohesiveness enables and intensifies this process since team members are attached to one another and their effort to display OCB will be reciprocated, which will generate even more resources enhancing the group's social capital. This will make it easier for the group to realise their mutual goals. In addition, cohesive team members feel more connected and supported and receive benefits of others due to OCB which buffer against the process of depletion, and fulfil the basic need to relate, resulting in job satisfaction. Hence, we propose that OCB results in more group cohesion, which in turn increases job satisfaction and enhances group performance.

*Hypothesis 4: Group cohesion has a positive effect on job satisfaction (a) and on group performance (b).*

*Hypothesis 5: Group cohesion mediates the relationship between OCB and job satisfaction (a), and OCB and group performance (b)*

**Figure 1***Graphic model of the hypotheses*

*Note.* + indicates a proposed positive direction of the proposed relationships. (a) representing hypothesis 3; (b) hypotheses 4a and 4b; (c) hypotheses 1 and 2; and (c') hypotheses 5a and 5b.

## Method

### Participants

A sample of at least 150 participants was needed ( $N \geq 150$ ), based on a performed power-analysis completed before data collection. The power-analysis was executed by using a squared multiple correlation of 0.05 for a multiple linear regression and requesting power of 0.8 (Field, 2013). The inclusion criteria of participation was the minimum of working 24 hours a week; working in a team; and a minimum age of 18 years old.

In total, 376 participants responded to the survey. All the participants, who did not entirely fill in the questions of our focus, (e.g. OCB, group cohesion, job satisfaction and group performance) were excluded. We then checked the control-question 'How thoroughly did you fill in this questionnaire?' (0 = *unthoughtful* - 10 = *thoughtful*). One participant filled in a score of '5', eight participants filled in a score of a '6'. Because we viewed a 5/10 as insufficient and a 6/10 as barely sufficient, we excluded these participants of our analysis in order to warrant reliability and validity without the power being compromised.

Eventually, 177 participants were included for the analysis. Of the 177, 17 surveys were completed in English and 160 in Dutch. The average age of participants were 39.4 years old ( $SD = 14.6$ ). 47% of the participants ( $N = 83$ ) were male and 53% female ( $N = 94$ ). Dutch nationality comprised the majority of participants (94%). Participants' tenure was 8.5 years on average and the participants reported average team size was 11 persons. On average, participants worked 35.7 hours a week. Most of the participants reported working in Health

care and Welfare (21.5%); Education, Culture and Science (16.4%) and Trade and Services (15.3). For further demographic information see table 1 in appendix A .

### **Design and procedure**

Quantitative data was used to investigate the proposed relationships among the variables. The dependent variables (DV) are job satisfaction and group performance. The independent variable (IV) is OCB, and the mediator variable (MV) is group cohesion. Participants were recruited through a snow-ball method. Additionally, since five students started the distribution process, we attempted to gain independent respondents on the group-unit variables.

Data was collected through an online survey. The survey was conducted in the Netherlands and it was out and active for 30 days. The survey was distributed through social media, such as WhatsApp, Facebook and LinkedIn.

The survey contained three sections: In the first section, the informed consent was provided to the participants which highlighted the objective of the research, the language of the survey (Dutch or English) and inclusion criteria (see appendix B). Also, anonymity and confidentiality were guaranteed, and participants were informed that participation was completely voluntarily. In case someone would have a complaint, contact details were provided. One could start the online survey once the inclusion criteria were met. Upon completion of the survey participants were asked to distribute the survey further in order to obtain more participants

The second section contained the questions of the survey measuring the variables, OCB, job satisfaction, group performance and group cohesion (see appendix C). Besides those variables, other constructs were measured which are not part of this study.

Lastly, after measuring the variables of focus of the study, people were asked about their demographics (see table 1 in appendix A) The survey ended with a debriefing, in which the participants were thanked and appreciated again for their participation in this study. The purpose of the study and contact details were mentioned once again. In total, it took around 15 minutes to fill in the whole survey.

Once the data was collected, we verified the data of our DV's, IV and MV, on missing values and reliability, with the reliability-control question, and 197 participants were therefore excluded. During the data collection the scores on our variables of focus '1' meant 'strongly agree' and '7' 'strongly disagree'. In this way a low score on OCB, for example, indicates an actual high degree of OCB. Because of this skewed representation, we scored the scores on

the items in reverse. This way, the data represents the right indication of scores of the measured variables.

We then combined the English and Dutch scores per variable in order to obtain the total mean score for this one variable.

We checked the data on outliers. Two extreme outliers were found, and those were deleted. The assumptions for normality and linearity were checked. Even though, the assumption of normality was slightly violated for OCB, job satisfaction and group performance, we did not transform the data, since we used a bootstrapping analysis which is characterised as 'robust' (Field, 2013)

## Materials

In this research we used several questionnaires combined into an online survey in order to collect data. Because this study took place in the Netherlands, every survey was translated into Dutch by using the Back-translation method.

**OCB.** For measuring OCB, we used the OCB-scale of Lee and Allen (2002). This questionnaire contained 16 items, with a 7-point Likert-scale (1= *Strongly agree* and 7= *Strongly disagree*) as answer key. An example of an item is: '[I] help others who have been absent'. The scale was reliable ( $\alpha = .71$ )

**Job Satisfaction.** For measuring Job satisfaction, we used the *Generic Job Satisfaction scale* by Macdonald and MacIntyre (1997). This questionnaire contained 10 items with a 7-point Likert scale answer key (1= *Strongly agree* and 7= *Strongly disagree*). An example of the questions is 'I feel good about my job'. The scale was reliable ( $\alpha = .73$ )

**Group Performance.** Group performance was measured by an indicator as a proxy for group/team performance. Group performance could be measured by a qualitative and/ or quantitative evaluation or assessment of a team's manager/leader; comparing figures and graphs of a team's performance over a small or longer period, for example. These methods were not feasible within the timeframe, amount participants needed; and method of recruiting participants, was taken into consideration. We therefore used the 8-item Group potency scale (Guzzo et al., 1993), in order to measure perceived group performance. The reason for choosing this scale for measuring group performance is because group potency is a predictor of group performance according to Guzzo et al. (1993). Because of the predictive value of group potency for group performance, the shared group belief of effectiveness and the self-report characteristic of the survey, the potency scale seems to be an adequate proxy for

measuring (perceived) group performance. The answer key consisted of a 7-points Likert scale with 1 representing 'Strongly agree' and 7 representing 'Strongly disagree'. An example of an item is: 'This team believes it can be very productive. Our combined questionnaire with both Dutch and English was reliable ( $\alpha = .85$ ).

**Group Cohesion.** For measuring group cohesion, we used items by Carless and De Paola (2000) from the original Group Environment Questionnaire (GEQ). These items were carefully selected and tested, and converted into a representing, valid *Work Group Cohesion* scale (Carless & De Paola, 2000). The items represent different subconstructs of group cohesion: Task Cohesion; Social Cohesion; and Individual attraction to the group. An example of an item is 'Our team is united in trying to reach its goals for performance'. The answer key consisted of a 7-points Likert scale with 1 representing 'Strongly agree' and 7 representing 'Strongly disagree'. We checked the negative-asked items in order to code these scores in reverse. Items 2,3,4,6,7 and 8 of group cohesion have been recoded. The scale was reliable ( $\alpha = .71$ )

## Results

In order to investigate whether OCB could lead to better group performance and more job satisfaction via group cohesion, a PROCESS Bootstrapping Approach for analysing the expected mediations by applying Preacher & Hayes model 4-analysis, was used (Field, 2013). The participants ( $N = 177$ ) had a mean score of 5.73 ( $SD = .48$ ) on OCB; a mean score of 5.69 ( $SD = .66$ ) on job satisfaction; a mean score of 5.73 ( $SD = .73$ ) on group performance; and a mean score of 4.31 ( $SD = .93$ ) on group cohesion.

Hypothesis 1 was confirmed. A positive relationship between OCB on job satisfaction was found, with a significant direct effect of,  $b = .28$ ,  $t = 2.75$ ,  $p < .05$ . Table 2 shows the model summary of the relationships between the predictors and job satisfaction, representing a small effect ( $R^2 = .12$ ).

**Table 2**

*Model summary of OCB and group cohesion predicting job satisfaction*

	<i>b</i>	<i>se</i>	<i>t</i>	<i>p</i>	<b>F (df)</b>	<i>Mse</i>	<b>R</b>	<i>R</i> <sup>2</sup>
<b>Model summary</b>					11.92 (2,174)	.39	.35	.12
<b>constant</b>	3.36	.57	5.89	.00**				
<b>OCB (c)</b>	.28	.10	2.75	.01*				
<b>Group cohesion (b)</b>	.16	.05	3.09	.00**				

*Note.* (b) and (c) corresponds with the relation (b) and (c) in figure 1 and 2, *b* = coefficient, *se* = standard estimate, *t* = value in a t-distribution, *p* = statistical significance of the analysis, *R*<sup>2</sup> represents how much variability in the outcome is due to the predictors.

\* *p* < .05, \*\* *p* < .01

Hypothesis 2 was not supported. The effect of OCB on group performance, was not significant, *b* = .21, *t* = 1.84, *p* = .07. Table 3 shows a summary of the model.

**Table 3**

*Model summary of OCB and group cohesion predicting group performance*

	<i>b</i>	<i>se</i>	<i>t</i>	<i>p</i>	<b>F (df)</b>	<i>Mse</i>	<b>R</b>	<i>R</i> <sup>2</sup>
<b>Model summary</b>				.00**	12.35 (2,174)	.47	.35	.12
<b>constant</b>	3.57	.62	5.72	.00**				
<b>OCB (c)</b>	.21	.11	1.84	.07				
<b>Group cohesion (b)</b>	.23	.06	3.90	.00**				

*Note.* (b) and (c) corresponds with the relation (b) and (c) in figure 1 and 3, *b* = coefficient, *se* = standard estimate, *t* = value in t-distribution, *p* = statistical significance of the analysis, *R*<sup>2</sup> represents how much variability in the outcome is due to the predictors.

\* *p* < .05, \*\* *p* < .01

Hypothesis 3 was supported:  $b = .55, t = 3.94, p < .01$ , which means that OCB positively relates to group cohesion. This model summary in table 4, shows a small effect size ( $R^2 = .08$ ).

**Table 4**

*Model summary of OCB predicting group cohesion*

	<i>b</i>	<i>se</i>	<i>t</i>	<i>p</i>	<b>F (df)</b>	<i>Mse</i>	<b>R</b>	<i>R</i> <sup>2</sup>
<b>Model summary</b>				.00**	15.5 (1,175)	.80	.29	.08
<b>constant</b>	1.14	.81	1.4	.16				
<b>OCB (a)</b>	.55	.14	3.94	.00**				

*Note.* (a) corresponds with the relation (a) in figures 1, 2 and 3, *b* = coefficient, *se* = standard estimate, *t* = value in a t-distribution, *p* = statistical significance of the analysis, and *R*<sup>2</sup> represents how much variability in the outcome is due to the predictors.

\*  $p < .05$ , \*\*  $p < .01$

Group cohesion had a positive effect on job satisfaction:  $b = .16, t(174) = 3.09, p < .05$  and group performance,  $b = .23, t(174) = 3.90, p < .05$ . (see path (b) in figures 2 and 3, respectively). These results supported hypothesis 4a and 4b. When group cohesion was added to the model, a significant total effect on both DV's was found. Table 5 shows the total effect on job satisfaction,  $b = .37, t = 3.69, p < .001$ . Table 6 shows the total effect on group performance,  $b = .33, t = 2.96, p < .05$ .

**Table 5**

*The total effect and indirect effect of OCB on job satisfaction, with group cohesion as mediator*

Predictor	Mediator	Job satisfaction						
		Total effect				Indirect effect		
		<i>b</i>	se	<i>t</i>	<i>p</i>	<i>b</i>	95% CI	
							Upper limit	Lower limit
<b>OCB</b>								
( <i>c'</i> )	Group cohesion	.37	.10	3.69	.000**	.09	.0249	.1784

*Note.* (*c'*) corresponds with the relation (*c'*) in figure 1 and 2, respectively, *b* = coefficient, se = standard estimate, *t* = value in t-distribution, *p* = statistical significance of the analysis.

\* *p* < .05, \*\* *p* < .01

**Table 6**

*The direct effect, total effect and indirect effect of OCB on group performance, with group cohesion as mediator*

Predictor	Mediator	Group performance						
		Total effect				Indirect effect		
		<i>b</i>	se	<i>t</i>	<i>p</i>	<i>b</i>	95% CI	
							Upper limit	Lower limit
<b>OCB</b>								
( <i>c'</i> )	Group cohesion	.33	.11	2.96	.004**	.13	.0487	.2232

*Note.* (*c'*) corresponds with the relation (*c'*) in figure 1 and 3, respectively, *b* = coefficient, se = standard estimate, *t* = value in t-distribution, *p* = statistical significance of the analysis.

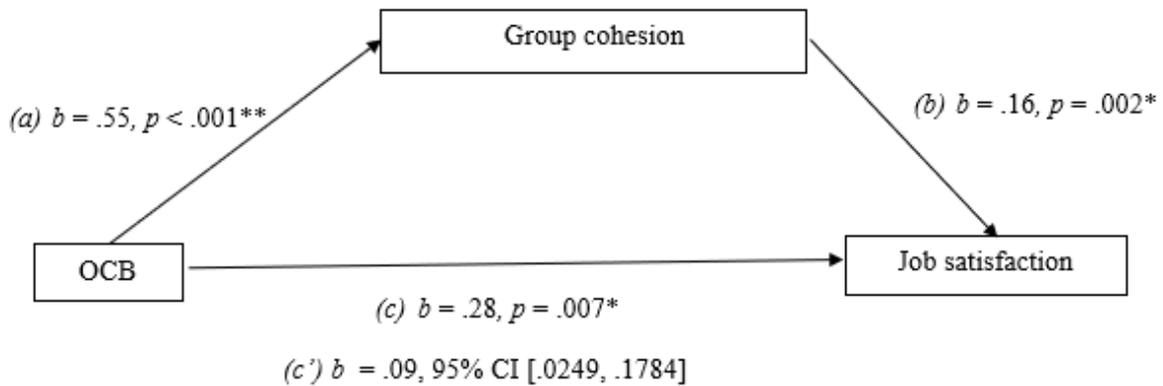
\* *p* < .05, \*\* *p* < .01

Regarding a potential mediation-effect, we looked at the upper- and lower limit of the 95%- confidence interval (CI) in the output, in order to see if an effect is significant. When the upper- and lower limits do not include zero, it is evident that there is a mediation effect. Table

5 shows an indirect effect of OCB on job satisfaction, via group cohesion,  $b = .09$ , 95% CI [.0249, .1784]. Hypothesis 5a was therefore supported (see figure 2).

**Figure 2**

*Graphic model of the results of the mediation analysis*

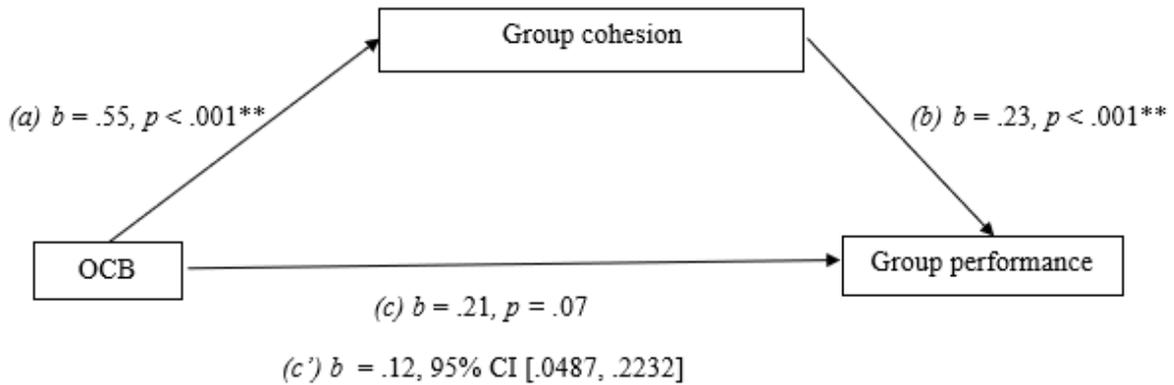


*Note.* (a) representing hypothesis 3; (b) hypotheses 4a; (c) hypotheses 1 and 2; and (c') hypotheses 5a.

Hypothesis 5b was also supported. Table 6 shows a significant indirect relationship of OCB on Group performance, through group cohesion,  $b = .13$ , 95% CI [.0487, .2232] (see figure 3).

**Figure 3**

*Graphic model of the results of the mediation analysis*



*Note.* a) representing hypothesis 3; (b) hypotheses 4b; (c) hypotheses 1 and 2; and (c') hypotheses 5b.

### Discussion

Does OCB lead to more job satisfaction and to better group performance? Could group cohesion explain these relationships? This research attempted to formulate an answer to these questions. With regards to job satisfaction, our findings suggest that job satisfaction is not necessarily an antecedent of OCB, but could be a consequence. Based on our theorizing, we believe that when one exhibits OCB one's basic need for autonomy and competence are fulfilled which this will lead to more job satisfaction (Deci et al., 2017). As a result, one experiences intrinsic motivation, and is therefore satisfied with one's job. In addition, group cohesion explains this relation. Our theorizing suggests that group cohesion is a subsequently important group characteristic that enhances social support (Kim & Wang, 2018), social exchange (Kidwell et al., 1997; Cropanzano & Mitchell, 2005), and fulfils the basic need to relate (Ng & Van Dyne, 2005); which therefore, enhances job satisfaction and group performance.

Surprisingly, we have not found that OCB leads to more group performance. Our research suggests that, when it comes to unit-outcomes, OCB doesn't lead to better group performance. An explanation for these results could be that we measured group performance with 'group potency' as a proxy. Even though potency is found to be a good indicator and

predictor of group performance, this psychological construct is a belief in its nature (Guzzo et al., 1993). This means that one's self-reported conviction about the team's potential capacity of performance could differ from the actual group performance. Research on the Theory of Planned Behaviour and the Intention-Behaviour gap (Conner, 2020; Sheeran & Webb, 2016), shows that the intention, based on amongst other things on beliefs, is a substantial predictor to display behaviour. However, intentions do not always lead to that actual behaviour, even though one had the intention to do so. This gap indicates that people do not always do what they intended to do, and this gap can explain a discrepancy between someone's belief about potency and the actual (group) performance.

In addition, Lin and Peng (2010) made a distinction between two types of OCB. They suggests that OCBI (i.e. OCB focussed on the individual instead of the whole organisation) and OCBO (i.e. is behaviour for the good of the organisation, for example complying with the rules; ensure the organisation's stability; and efficiency and improves work functioning), leads to better group performance. However, only the relation between OCBI and group performance was mediated by group cohesion (Lin & Peng, 2010). Lin and Peng (2010) based their reasoning on the enhanced sense of belonging (relatedness) and attraction to the group. They argued that especially OCBI foster trust, loyalty and humanity in interpersonal relations. Hence, performing OCBI and therefore sharing and fostering a group, establish a socially shared cognition (Bandura, 1986), creating a common sense of certain behaviour. In this case, team members learn that it is normal to be loyal and support each other, which leads to more group cohesion and in turn, better group performance.

### **Implications**

This study explains how OCB affects performance in a team leads to individual job satisfaction. These results continue to build on the understanding of how job satisfaction and OCB are related to one another. In previous research job satisfaction was found to be an antecedent of, or mediator on a relationship predicting, OCB (Zeinabadi, 2010; Organ & Ryan, 1995, Fassina et al., 2008). This research suggests that job satisfaction can be affected by OCB and adds insight on their apparent non-uniform relationship. Moreover, the unravelled role of group cohesion shed a light on the underlying mechanism of how OCB could lead to more job satisfaction and better group performance. Hereby, these insights contribute to the literature of OCB and its relationship with its consequences

Lin and Peng's study (2010) found OCB being a predictor of group performance, nevertheless they found that only group cohesion mediates between OCBI and group

performance. That study took place amongst the financial sector in Taiwan, that can be characterised as more collectivistic culture than individualistic (Ali et al., 2005). Solís and Leiva (2019) studied if different kinds of culture affected the exhibition of OCB. They found that only horizontal-collectivistic characterized persons, (i.e. they focus on collaboration, are sociable and perceive themselves similar as others and value equality), related to OCB. This means that culture did have an effect on displaying OCB. In a horizontal-collectivistic oriented culture, in contrast to individualistic cultures, (i.e. inspired by singularity, achievement oriented and uniqueness), persons are more prone to display more OCB. Finkelstein (2012), however, stated that individualist and collectivists not necessarily differ on the amount of OCB, rather in their motivations and their experience. Aligned with Finkelstein's findings, the sample of our study represents more of a western, individualistic culture with participants representing different branches. Therefore, our findings of OCB and group cohesion, in relation to group performance can be putted in another, more universal, cultural perspective.

In addition, this study underscores the importance of the quality of teams with regards to the role of group cohesion and its effect on job satisfaction and group performance (Molnau, 2013). For policymakers, CEO's and supervisors, this study points out the importance of team composition and dynamics with regards to establish cohesive teams, since these teams enhances performances and team member's personal job satisfaction. Molnau (2013) describes several characteristics of highly cohesive teams: the team members are process-focussed; acting out of respect and assume good motives; commitment to strategies and team decisions and create accountability. Highly cohesive teams often have a high morale, because they benefit from increasing communication, a good team environment, loyalty and all members contributing in decision making. Highly functioning teams could be established by higher levels of collaborations and participation, based on trusting one another. A strong sense of identity should be warrant and team members should have confidence in their abilities and team's effectiveness. These teams possess high levels of emotional intelligence that made the team members attuned to one another. Therefore, it's important and desirable for policymakers and supervisors to create the right conditions in order to let a team and teamwork flourish.

In addition, we reasoned that the degree of intrinsic motivation- the basic needs- are the incentives to perform OCB in the first place. In line with Banwo and Du (2018) OCB will diminish or even leads to stress when OCB is perceived as involuntary. Policymakers should be aware of this mechanism and create a climate where the intrinsic motivation could flourish

and contributes to OCB, cohesion, group performance and job satisfaction, (i.e. job satisfaction could be responsible for up to 50% of one's work-related well-being) (Kovacs et al, 2018). In accordance with Gagné, and Deci (2005), workers should not be expected to, or rewarded for, performing OCB-in line with OCB's definition- since extrinsic incentives overpower the intrinsic motivation, which even leads to less OCB. Even though, uninteresting but important activities that require discipline benefit from extrinsic motivation to some extent (Gagné and Deci, 2005), managers, leaders and supervisors shouldn't reward but rather recognize someone's effort, and support their co-workers' initiatives instead. In this way they let OCB flourish to its full potential (Bruner, 2020; Gagné and Deci, 2005).

### **Limitations and further research**

In this study an attempt has been made in examining consequences of OCB and the role of group cohesion in these relationships. There are some limitations of this study that must be considered and suggestions for further research will be given.

First of all, this study took place during the dispersion of the coronavirus (COVID-19), which caused a pandemic. In this period, participants have filled in the questionnaire while working at home and were coping with the effects of the pandemic on their lives, which could affected this study in several ways: people had to recall their work behaviour; their dynamics; and their team member's behaviour, while working at home. These changing times could have affected the validity of this study because the data depends on self-report and thus based on perceived behaviours in combination with one's ability to recalling certain behaviours and dynamic, accurately. These memories made it plausible that these results are less representative of the real, normal work situation. Besides, it is unsure with what context in mind the participants personally filled in the survey (e.g., were they working at the workplace or were they partially working from home and did they base their answers on the situation during Covid-19 times or pre-Covid-19 times?).

Secondly, since the survey was conducted online and was based on self-report, the environment of filling in the survey couldn't be controlled. Evidently, the participants could fill in social desired answers. In addition, several participants mentioned the duration of the questionnaire was 'quite long', which could have led to less concretion, which in turn could lead to less reliability. In order to control these biases to a certain extent, we asked an honesty-, reliability-question as a control question. We have excluded participants which didn't comply with the criteria of a minimum score of 7 out of 10, in order to warrant reliability. Besides, since group potency was used as a proxy and indicator of group

performance, further research should take these subjective, self-report measures into account and should use other quantitative, objective measures in order to elaborate on, and increase the validity of, these findings.

Thirdly, our study is conducted in the Netherlands. Due to the snow-ball method we recruited mostly Dutch participants, which represent a western society with participants working in different branches. However, this method does not lend itself to control whom specifically is recruited. Hereby, a perfect representation of the population of the country or western society couldn't be warrant. Since age, tenure, branch and education were not proportionally distributed, the representability and therefore the generalizability of this study is restricted.

Fourthly, this research focusses on one's *perceived* behaviour, *perceived* situation and *experienced* group cohesion. The nature of these measurements is based on one's attitude and affect with regards to the subjects, which may result mainly in an assessment of the social, inter-personal, affective, attitudinal dimension of this subject. Hence, further research needs to establish whether other dimensions, (e.g. cognitive dimension), and subconstructs, (e.g. OCBI, OCBO, social cohesion, task cohesion), differ from and add to this study. For example, Lin and Peng found group cohesion mediating OCBI and group performance but collective efficacy fully mediated the relationship between OCBO and group performance. It is interesting, to what extent group cohesion is of importance in addition to, or beyond other closely related group characteristics. It would give a more detailed insight into the underlying mechanisms, further explaining the consequences of OCB

Fifthly and subsequently, the used version for the statistical analyses did not afford any of the commonly used effect sizes. Because of our limited statistical knowledge, we couldn't provide the sizes of the effects found. This made it harder to point out the extent of the role group cohesion plays in explaining the relationship between OCB and job satisfaction, and OCB and group performance, which leads space for further research opportunities. Further research could examine to what extent group cohesion could play with regards to OCB and its consequences.

Lastly, in this research we theorized that personal norms and intrinsic motivation are the reason for one to express OCB. This reasoning is supported by Gagné and Deci (2005). However, it could be that OCB may not be in function of fulfilling needs, but it might be a consequence of the fulfilled needs. Once personal needs are fulfilled, one is able to do an extra job and care about other beyond their initial tasks and needs. Further research must point

out whether our theorizing about the (urge to) fulfilment of basic human needs indeed incites OCB and therefore leads to its consequences.

### **Conclusion**

In short, this research found that OCB could lead to more job satisfaction and group performance. It shed light on the underlying explanatory mechanism of group cohesion in these relationships. Based on the SDT, this research contributes to literature by adding value to OCB as an antecedent of job satisfaction and group performance, rather than a consequence. Also, a wider cultural, more general perspective have been given through the findings of group cohesion mediating the relationship of OCB and group performance. This research underscores the importance of appreciating one's intrinsic motivation, by recognizing it when performing OCB. It also highlights the importance of the team-unit and its cohesiveness, since highly cohesive teams are well-performing teams, and leaves one satisfied with the job. Manager, supervisor and recruiters should take one's intrinsic motivation into account. Leaders and team members should create and stimulate the right conditions for a highly cohesive team. Since these the findings were small and effect size were not given, further research should elaborate on this direction and could investigate which and how other group characteristics could contribute to explaining OCB's consequences, beside and beyond group cohesion.

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## Appendices

### Appendix A: The demographic characteristics of the sample

**Table 1**

*Demographics of the participants included in the analysis (N = 177)*

Variable	N (%)	M	SD	MDN	Min	Max
<b>Gender</b>						
Male	83 (46.9)					
Female	94 (53.1)					
Total	177					
<b>Age</b>	177	39.4	14.6	35	20	67
<b>Nationality</b>						
Dutch	166 (93.8)					
Other, i.e. Czech Republic/Denmark/Ecuador/Finland/Guatemala/Malaysia/Slovakia/South Africa	9 (9 x .6 = 5.2)					
Total	175					
Missing	2 (1.1)					
<b>Tenure</b>						
Total	175	8.5	9.8	4	1	41
Missing	2					
<b>Team size</b>						
Total	176	10.8	8	7	2	30
Missing	1					
<b>Working hours a week</b>	177	35.7	5.3	40	24	40
<b>Branch</b>						
Total	176					
Health care and welfare	38 (21.5)					
Education, culture and science	29 (16.4)					
Trade and services	27 (15.3)					
Technology, production and construction	16 (9)					
ICT	12 (6.8)					
Justice, security and public administration	8 (4.5)					
Media and communication	8 (4.5)					
Tourism, recreation and hospitality	7 (4)					
Transport and logistics	3 (1.7)					
Agriculture, nature and fishing	2 (1.1)					
Other, i.e. Government and Finance/accountancy	26 (14.7)					
Missing	1 (.6)					
<b>Seniority</b>	177					
CEO/managing board	11 (6.2)					
Manager/supervisor/team leader	44 (24.9)					
Employee	122 (68.9)					

*Note.* N = number of participants, and % the percentage of participants. M = mean, SD = standard deviation, MDN = median, Min = minimum score and Max = maximum score.

## **Appendix B: Informed consent**

Dear participant,

By means of this letter, we would like to invite you to participate in the research project from a group of researchers from Utrecht University. The purpose of this study is to examine how particular individual behaviors and experiences at work can impact various organizational outcomes.

**Procedures:** We will be asking you a number of questions that relate to tasks you perform at your workplace and how you experience your workplace environment. The study consists of a brief questionnaire and will take approximately **15 minutes** to complete.

**Confidentiality:** All of your responses will be anonymous (we will not ask for, or record, your name or other information that could lead back to you). The data will remain anonymised before being stored. Only the researchers involved in this study and those responsible for research oversight will have access to the information you provide. The data will not be used for follow-up studies.

**Eligibility:** To participate in the study, you have to be **18 years old or older** and must work at least **24 hours** a week in The Netherlands. It is important that you work in a **team** with at least one colleague on a common project, assignment or goal.

**Risks and Benefits:** There are no anticipated risks associated with your participation in this study.

**Voluntary Participation:** Participation in this study is completely voluntary. Please feel free to stop at any time for any reason. The data collected up to that point may be used.

### **Contact information**

If you have a formal complaint about the study, you can contact the complaints officer at: klachtenfunctionaris-fetcsocwet@uu.nl

For questions about the research you can contact the independent researcher: Bibiana Maria Armenta Gutierrez (b.m.armentagutierrez@uu.nl)

For any other questions you can contact the research team (see our e-mail addresses below).

With kind regards,

Researchers

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**Research title:** Researching influences of particular work-related behaviours and experiences on work-related outcomes.

Participation in this study is completely voluntary. You are free to decline to participate and end participation at any time without an explanation or consequence.

**I hereby declare** that (please select the requirements that apply to you):

- ✓ **I am 18 years old or older**
- ✓ **I work at least 24 hours per week in a team**
- ✓ **I have been fully informed about the study's purposes and the manner in which my data will be handled. I have read and agree to the informed consent**

## **Appendix C: questionnaires**

### **Organisational citizenship behaviour (OCB)**

OCBI items:

1. Help others who have been absent.
2. Willingly give your time to help others who have work-related problems.
3. Adjust your work schedule to accommodate other employees' requests for time off.
4. Go out of the way to make newer employees feel welcome in the work group.
5. Show genuine concern and courtesy toward coworkers, even under the most trying business or personal situations.
6. Give up time to help others who have work or non-work problems.
7. Assist others with their duties.
8. Share personal property with others to help their work.

OCBO items:

1. Attend functions that are not required but that help the organizational image.
2. Keep up with developments in the organization.
3. Defend the organization when other employees criticize it.
4. Show pride when representing the organization in public.
5. Offer ideas to improve the functioning of the organization.
6. Express loyalty toward the organization.
7. Take action to protect the organization from potential problems.
8. Demonstrate concern about the image of the organization.

Response scale: 1 = strongly agree, 2 = agree, 3 = slightly agree, 4 = neither, 5 = slightly disagree, 6 = disagree, 7 = strongly disagree.

### **Job satisfaction**

1. I receive recognition for a job well done
2. I feel close to the people at work
3. I feel good about working at this company
4. I feel secure about my job
5. I believe the management is concerned about me
6. On the whole, I believe work is good for my psychological health
7. My wages are good
8. All my talents and skills are used at work

9. I get along with my supervisors

10. I feel good about my job.

Response scale: 1 = strongly agree, 2 = agree, 3 = slightly agree, 4 = neither, 5 = slightly disagree, 6 = disagree, 7 = strongly disagree.

**Group performance, measured with *Group potency***

1. This team has confidence in itself.
2. This team believes it can become unusually good at producing high-quality work.
3. This team expects to be known as a high-performing team.
4. This team feels it can solve any problem it encounters.
5. This team believes it can be very productive.
6. This team can get a lot done when it works hard.
7. No task is too tough for this team.
8. This team expects to have a lot of influence around here.

Response scale: 1 = strongly agree, 2 = agree, 3 = slightly agree, 4 = neither, 5 = slightly disagree, 6 = disagree, 7 = strongly disagree.

**Group cohesion**

1. Our team is united in trying to reach its goals for performance
2. I'm unhappy with my team's level of commitment to the task (R)
3. Our team members have conflicting aspirations for the team's performance (R)
4. This team does not give me enough opportunities to improve my personal performance (R)
5. Our team would like to spend time together outside of work hours
6. Members of our team do not stick together outside of work time (R)
7. Our team members rarely party together (R)
8. Members of our team would rather go out on their own than get together as a team (R)
9. For me this team is one of the most important social groups to which I belong
10. Some of my best friends are in this team

Response scale:

Response scale: 1 = strongly agree, 2 = agree, 3 = slightly agree, 4 = neither, 5 = slightly disagree, 6 = disagree, 7 = strongly disagree.