The curvilinear relationship between organizational citizenship behavior and task performance: the moderating role of task interdependence.

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Date: 21-6-2020
Word count: 6548
Publicly accessible: yes

Abstract

In this study, the influence of task interdependence on the curvilinear relationship between (time spent on) Organizational Citizenship Behavior (OCB) and task performance is examined. The main expectation of the current study was the too-much-of-a-good-thing effect of time spent on OCB on task performance. More specifically, time spent on OCB has a positive effect on task performance until a breaking point and becomes negative afterwards. Furthermore, it was expected that for low task interdependence, the relationship between time spent on OCB and task performance would be curvilinear and linear for high task interdependence. A regression-analysis have been performed on survey data from 185 respondents to analyze these relationships. The curvilinear relationship between time spent on OCB and task performance was insignificant and looked close to linear. When task interdependence was added as a moderator, the model became significant but the predictors did not prove to predict task performance significantly. Against expectations, for low task interdependence, the relationship between time spent on OCB and task performance looked curvilinear, whereas this relationship looked linear for high task interdependence. However, these results should be interpreted with caution because the sample size was not large enough, and had a power of .42 on the tested model with time spent on OCB, task interdependence and task performance. Furthermore, people working from home due to the corona crisis may have influenced the data. Therefore, this study should be repeated with a good representation of the entire Dutch working population after the corona crisis.

Keywords: organizational citizenship behavior, time spent on OCB, task interdependence, task performance, TMGT-effect

Introduction

In order to maximize organizational performance, individual employees need to highly perform on their job so the organization can gain a competitive advantage (Sonnentag, & Frese, 2002). Not surprisingly, much research has been done on the topic of performance to get insight in how to stimulate the company's results. Many meta-analyses are available on the different types of performance: task performance (Stajkovic, & Luthans, 2003), team performance (De Dreu, & Weingart, 2003), and organizational performance (Combs, Li., Hall, & Ketchen, 2006).

The positive effects of Organizational Citizenship Behavior (OCB) on performance have been studied widely (Nasir et al., 2011; Sevi, 2010). Interestingly enough, not nearly as many studies have been conducted on the negative effects of OCB. However, some examples of negative outcomes of OCB that have been examined are the formal job tasks expanding over time, employees feeling OCB as compulsory and time spent on OCB having a negative effect on performance (Bolino et al. (2009). OCB is found to have many positive consequences but time spent on OCB cannot be used for formal job tasks. Too much time spent on OCB may therefore have a negative effect on task performance. Therefore, this study aims to determine the effect of diminishing returns from OCB on task performance.

In addition, this study focuses on the role of task interdependence in teams in relation to OCB and task performance. Organizational performance is dependent on the performance of individual employees and the additional performance of the team (Ralea, & Badea, 2011). This renders the combination of individuals and teams an interesting topic of research. Therefore, the current study analyzes the effect of task interdependence in teams on individual employees, and the diminishing returns of individual time investment. More specifically, the effect of task interdependence on the curvilinear relationship between OCB and task performance.

Organizational Citizenship Behavior and Task Performance

OCB's are behaviors that are not part of employees' formal job requirements but do have a positive effect on the organization (Podsakoff, Ahearne, & MacKenzie, 1997). Examples of how OCB is expressed include helping colleagues out when they fall behind in their work, providing constructive suggestions about how the team can improve their effectiveness (Podsakoff, Ahearne and MacKenzie, 1997), expressing loyalty toward the

organization or sharing personal property with colleagues to help their work (Lee, & Allen, 2002).

Not surprisingly, the expected positive effect of OCB on performance has led to much research on the topic over the past 40 years. Ten years ago, over 650 articles had already been published on this subject (Podsakoff, Whiting, Podsakoff and Blume, 2009). Podsakoff et al. (2009) performed a meta-analysis on the consequences of OCB: from 168 independent studies, they identified several outcomes of OCB on both an individual and organizational level. At the individual level, OCB led to higher ratings of employee performance, lower turnover (intention) and lower absenteeism. Furthermore, OCB was related to organizational effectiveness and lower costs, which has a positive effect on profitability. In another meta-analysis, the same effect of OCB on group performance was found from 38 independent studies (Nielsen, & Hrivnak, 2009). This article also showed that the relationship between OCB and group performance was stronger if the questionnaires were answered by the same source (self, peer, supervisor, group). Furthermore, no significant differences were found between the different sources. This means that subjective measures from self-assessment obtained the same results as from more objective measures.

The main focus of the current study is to assess the relationship between OCB and task performance, particularly the potential negative relationship between these variables. As stated above, individuals need to perform very well to maximize organizational performance (Sonnentag, & Frese, 2002). The performance of individuals on their main job tasks is referred to as task performance (Koopmans, Bernaards, Hildebrandt, De Vet, & Van der Beek, 2014). In prior research, OCB has been associated with task performance (Nasir et al., 2011). In a study among 450 employees in Iran, a large correlation effect was found between OCB and task performance. The same positive relationship is also expected in the current study, however, up to a breaking point. When too much time is spent on OCB, this relationship is expected to become negative.

Research regarding these negative outcomes of OCB is limited. This seems logical, since OCB is seen as a positive organizational behavior that help employees to thrive at work (Bolino, Klots, Turnley, & Harvey, 2009). One study that has reviewed the negative effects of OCB is an article by Bolino et al. (2009). They have identified both personal and professional costs of OCB. Employees may perceive OCB as compulsory instead of voluntary because it gets encouraged by the organization (Bolino, Turnley, Gilstrap, & Suazo, 2010). Using survey data, they have found that the perceived pressure to perform OCB is associated with conflicts

in work-life balance, stress and turnover intentions. Furthermore, employees who spend more time on OCB have a lower salary increase and it takes longer for them to get a promotion (Bergeron, Ostroff, Schroeder, & Block, 2014). More specifically, OCB toward the employee's organization was found to have a negative effect on salary increase and promotion whereas OCB toward the professional association had a positive effect.

The negative effect of OCB on salary increase and promotion might be a consequence of lower task performance, since high individual performance is normally rewarded with salary increase (Sonnentag, & Frese, 2001). A possible explanation can be drawn from the Resource Allocation Theory. The Resource Allocation Theory describes how the available resources are divided between different activities (Bower, 2018). In the current situation, the resource is time. Time can only be spent once, which means that time spent on OCB cannot be spent on the formal job tasks. This raises the question if there is a too-much-of-a-good-thing (TMGT) effect, when something that is beneficial by definition is taken too far and starts to cause harm (Pierce, & Aguinis, 2013). One study by Rapp, Bachrach and Rapp (2013) has looked into the TMGT-effect of OCB on performance. The sample used in this study consisted of sales representatives from a single firm and was measured by a survey. For this group, a curvilinear relationship between OCB measured in time and task performance was found (ß = -.157). However, the results cannot be generalized to the whole working population because the organizational culture might have influenced the results. Therefore, the current study will look at the Dutch working population to get a broader insight into this curvilinear relationship. It is expected that time spent on OCB has a positive effect on task performance up to a certain point, but that this relationship becomes negative afterwards.

Hypothesis 1: There is a curvilinear relationship between time spent on organizational citizenship behavior and task performance (see *Figure 1* for the model). The effect of time spent on OCB on task performance is positive until a breaking point and has a negative effect after that breaking point.

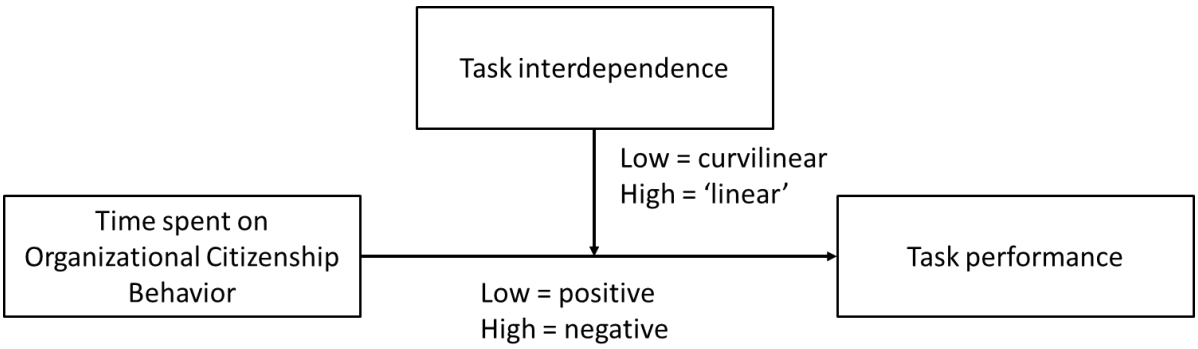

Figure 1. The tested model of hypothesis 1 and 2.

Task interdependence

Groups and teams are the foundation of many organizations (Reimer, Russell, & Roland, 2017). Teamwork in organizations has become very important to solve the problems an organization faces (Muscalu, & Muntean, 2012). A team is a group of more than three interdependent individuals that work towards the same goal (Salas, Burke, & Cannon-Bowers, 2000). The fact that people in a team work interdependently might be a reason for team members to help each other to work towards a common goal, even though it could be something that does not fit their job description. With this point of view in mind, it is very interesting to look at the interaction between OCB and task interdependence in a team. Task interdependence refers to the extent to which colleagues are dependent on one another to complete their own tasks in an effective way (Bachrach, Powell, Collins and Richey, 2006).

In relation to OCB, Bachrach et al. (2006) studied the effect of task interdependence on the relationship between OCB and group performance. The level of task interdependence was manipulated in this experiment and OCB was assessed by independent evaluators. In this study was found that, as expected, high levels of OCB had a positive effect on group performance when task interdependence was high. Unexpected was that, when task interdependence is low, moderate levels of OCB have a positive effect on group performance but that low and high levels of OCB have a negative effect on group performance. This result also indicates a different curve between high and low task interdependence for group performance. For high task interdependence this would mean a positive linear relationship but for low task interdependence a curvilinear relationship could be expected in that the relationship is positive up to a certain point and is negative afterwards.

The study of Bachrach et al. (2006) linked OCB to group performance. However, as stated before, the performance of individuals is also of critical importance. The current study will connect the task interdependence in a team to individual performance, which has not yet been studied and makes this a new point of view relevant to the academic literature. Task

performance is part of group performance, but group performance is more than the sum of the performance of its members, because it is also dependent on how well team members work together (Sonnentag, & Frese, 2001). When measuring group performance, also task interdependence is therefore partly measured and the current study will use task performance as the outcome variable. It is expected that task interdependence influences the relationship between time spent on OCB and task performance. For high task interdependence, it is expected that this relationship is positive, because helping out colleagues could also stimulate one's own performance due to the high interdependent nature of the tasks. On the other hand, for low task interdependence this relationship is also positive up to a breaking point and becomes negative after that breaking point. Diminishing returns are expected because helping out colleagues would not stimulate one's own performance due to the low interdependent nature of the tasks.

Hypothesis 2: The curvilinear relationship between organizational citizenship behavior and task performance is moderated by task interdependence (see *Figure 2* for a visual representation of the hypothesis). This hypothesis is specified into three hypotheses, 2a, 2b and 2c.

Hypothesis 2a: When task interdependence is high, the relationship between time spent on OCB and task performance is (close to) linear.

Hypothesis 2b: When task interdependence is low and time spent on OCB is low, time spent on OCB has a positive effect on task performance.

Hypothesis 2c: When task interdependence is low and time spent on OCB is high, time spent on OCB has a negative effect on task performance.

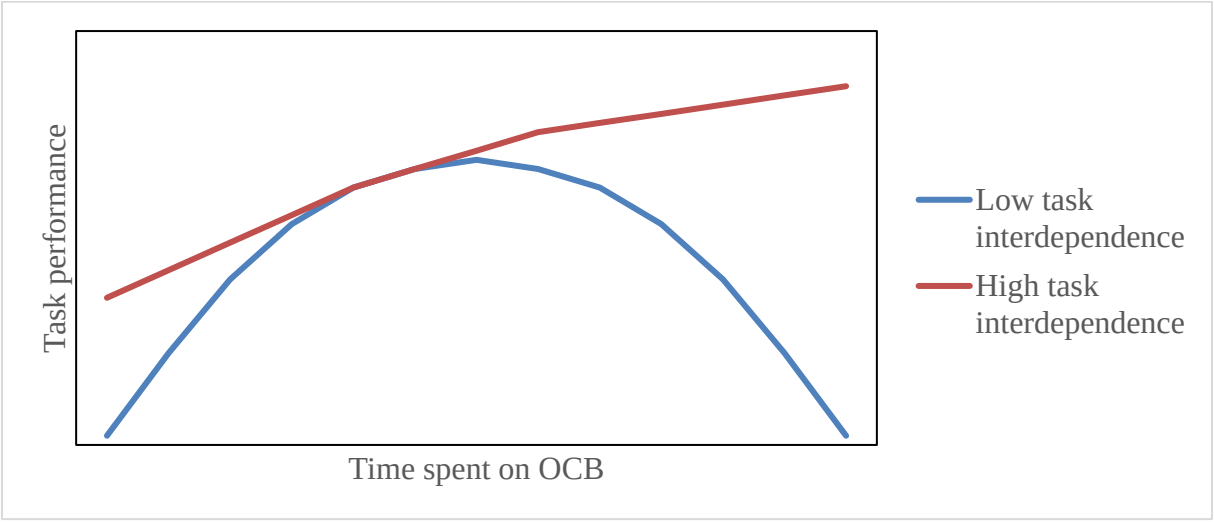

Figure 2. A visual representation of the expected results in Hypothesis 2.

Method

Procedure

A cross-sectional design was used in this study. Data was collected with a team of five researchers, who were all doing research on OCB. All the variables of the five researchers were measured in one survey, this led to 10 measured variables including demographics with a total of 110 questions. All questionnaires were available in English and in Dutch for the participants. The back-translation technique was used to obtain the Dutch translation. Participants were recruited via the social media platforms Facebook and Whatsapp, in which they were invited through a short invitation including a link to the questionnaire. First, the option was given between English and Dutch, then the questionnaire started with an explanation of the survey and informed consent. After the informed consent had been read and accepted, the requirements were checked. The requirements for participants were that they worked at least 24 hours per week in a team, were between 18 and 67 years of age and working in the Netherlands. If the participant met the requirements, the survey was administered. They were requested to fill in all the questions but were not forced to. There was no compensation for participation and the questionnaire took about 15 to 20 minutes to finish.

Participants

In total 377 people clicked on the link to the survey. Over half of the respondents' answers were removed due to not starting or not finishing the survey. 138 people did not even start the first question, 51 people did not finish the questionnaires on task performance and/or task interdependence, 1 was removed because of questionable answers (only answered with 1 and 7), 2 for not filling in the time spent on OCB. A remaining sample of 185 participants was used for the analysis. Of these 185 participants, 17 filled in the survey in English and 168 in Dutch. The last question of the survey was about how thoughtful the respondents had filled in the survey on a scale from 1 to 10, in which 10 meant that the respondent had filled in the survey very thoughtful (M = 8.34, SD = 1.18). No respondents were removed because of this.

The sample consisted of 95 (51.4%) women, 88 (47.6%) men, 1 (0.5%) participant filled in 'Other' and 1 (0.5%) was missing. The age of the respondents varied from 20 to 67, with a mean of 39.52 (SD = 14.73), of which a peak can be seen between 20 and 30 (44.7%). The same peak occurred in the education level as can be seen in Table 1. The nationality of the participants were mostly Dutch (n = 174, 94.1%), 9 were non-Dutch (4.5%) and 2 did not answer this question (1.1%). Most of the respondents had completed a higher education.

Table 1.

Education level frequency and percentages of the sample.

	Frequency	Percentage
No education	1	.5%
VMBO	1	.5%
HAVO	4	2.2%
VWO	2	1.1%
MBO	11	5.9%
HBO	54	29.2%
WO Bachelor	15	8.1%
WO Master/PhD	82	44.4%
Other	15	8.1%
Total	185	100%

As for the demographics related to the job, tenure, contract hours, team size, branch and seniority were measured (see Table 2 and 3). There are a few characteristics that are worth mentioning. Firstly, a large part of the sample had only been working at their current job for only one full year. Secondly, the contract hours showed peaks at 24, 32 and 40 hours, since a full working day in the Netherlands is 8 hours so this corresponds to 3, 4 and 5 day working weeks. Thirdly, the team size is fairly evenly distributed, teams varied from 2 to 30 people. Lastly, some branches were overrepresented, these were Healthcare and welfare, Education, culture and science and Trade and services.

The target variables of time spent on OCB, task interdependence were checked for outliers. Outliers were found for time spent on OCB and task interdependence but no respondents were deleted for this because the sample size was considered more important. Furthermore, time spent on OCB, task interdependence and task performance were all found to have a skewed distribution. Therefore, the data was transformed by creating a new variable in which the square root of the original variable was taken. The data transformation of task performance and task interdependence did not improve the skewedness of the data, hence normal data was used.

Table 2.

Frequencies and percentages of seniority and branch.

	Frequency	Percentage
Seniority		
Employee	128	69.2%
Manager/Team leader	46	24.9%
Board of Directors	11	5.9%
Branch		
Healthcare and welfare	38	20.5%
Trade and services	27	14.6%
ICT	16	8.6%
Justice, security and public administration	9	4.9%
Agriculture, nature and fishing	2	1.1%
Media and communication	8	4.3%
Education, culture and science	31	16.8%
Technology, production and construction	16	8.6%
Tourism, recreation and hospitality	7	3.8%
Transport and logistics	3	1.6%
Other	27	14.6%

Measures

For this study, OCB, Task interdependence and Task performance were of interest (see Appendix A). Means and Standard Deviations are presented in Table 3. The survey ended with the demographic questions.

Organizational Citizenship Behavior. The Organizational Citizenship Behavior scale by Lee and Allen (2002) was used to measure OCB. This questionnaire consists of two scales, OCBI and OCBO. OCBI measures OCB's directed to individuals (e.g. 'I willingly give my time to help others who have work-related problems') and OCBO measures OCB's directed towards the organization (e.g. 'I attend functions that are not required but that help the organizational image'). Answers were given on a 7-point Likert Scale from 1 = Strongly

agree to 7 = Strongly disagree. No items had to be recoded. The mean score has been calculated per participant for the two scales combined because no distinction between OCBI and OCBO was needed. A high mean score meant that the participant does not perform much OCB. The psychometric properties of this questionnaire are approved (Davoudi, & Gadimi, 2016), Cronbach's alpha in the current study was .74, which is sufficient.

***Time spent on OCB*.** In addition to the questionnaire, a question was added about how much time the participant had spent on OCB: "How much time in hours (rough estimate) did you spend on this particular OCB in the past 4 weeks?". This question was asked directly after each OCB-item. The sum of the time spent on OCB of all items was calculated and corrected for the amount of contract hours (time spent on OCB / contract hours * 40).

Task performance. To measure task performance, a part of the Individual Work Performance Questionnaire was used (Koopmans, Bernaards, Hildebrandt, De Vet, & Van der Beek, 2014). This scale consisted of five questions measuring task performance (e.g. 'I was able to perform my work well with minimal time and effort.'). Answers were given on a 7-point Likert Scale from 1 = Strongly agree to 7 = Strongly disagree. No items had to be recoded. The mean score for each participant was calculated, a high score meant that task performance was high. The psychometric properties are rated acceptable by Koopmans et al. (2014), Cronbach's alpha for the current study was .76, which is sufficient.

Task interdependence. A part of a questionnaire created by Langfred (2005) was used to measure task interdependence. The scale consisted of 7 questions (e.g. 'The way individual members perform their jobs has a significant impact on others in the team.'). Answers were given on a 7-point Likert Scale, ranging from 1 = Strongly agree to 7 = Strongly disagree. No items had to be recoded. The mean score per participant was calculated, in which a high score meant that task interdependence was high. This questionnaire has a high discriminant validity and internal reliability (Langfred, 2005), Cronbach's alpha for the current study was .79, which is sufficient.

Results

Bivariate correlations between OCB, Task performance, Task interdependence and Demographics.

First, assumption of normality and outliers were checked. The test of normality was significant ($p < .01$) for OCBtime, task performance and task interdependence, outliers were found for OCBtime and task interdependence. This means both assumptions were not met and

therefore a Spearman's correlation-analysis has been performed. The results of the correlation-analysis are reported in Table 3. It would be expected that the target variables correlate, however, only OCB correlated with task interdependence. When looking at the demographics, tenure correlates with task performance, and seniority correlates with OCB and task interdependence. Therefore, tenure and seniority were used as control variables in the regression analysis.

Table 3.

Variable Means, Standard Deviations and Intercorrelations.

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10
1. Gender	n/a	n/a	-									
2. Age	39.52	14.73	.14	-								
3. Educational level	n/a	n/a	-.03	.09	-							
4. Tenure (in years)	8.33	9.78	.18*	.71**	.22**	-						
5. Contract hours	35.70	5.17	.32**	-.21**	-.01	-.16*	-					
6. Team size	10.61	7.78	-.16*	.08	.06	.16*	-.24**	-				
7. Seniority	n/a	n/a	-.14	-.10	.09	-.14	-.21**	-.05	-			
8. OCB	5.57	.51	-.05	.14	.05	.08	.08	.06	-.33**	-		
9. OCBtime	49.62	30.75	-.05	.04	.09	.07	-.04	.07	-.24**	.41**	-	
10. Task interdependence	5.31	.88	.08	.12	-.09	.10	-.03	.04	-.23**	.15*	.17*	-
11. Task performance	5.22	.99	.09	.09	-.01	-.17*	-.02	.04	-.12	-.07	.13	.07

Note. $N = 185$.

* $p < .05$. ** $p < .01$.

The direct curvilinear effect of time spent on OCB and the direct and moderated effect of Task interdependence on Task performance.

Prior to performing the quadratic regression analysis, a graph with time spent on OCB and Task performance was plotted (see *Figure 3*) to check for a reversed U-shape. *Figure 3* shows a normal distributed relationship, which is an indication of no curvilinear relationship. Then the assumptions of normality, homoscedasticity, and collinearity had been checked. None of the assumptions were violated. After the assumptions were checked, the results of the regression analysis had been examined (see Table 4). First, the direct effects of time spent on OCB and controls were analyzed (Step 1). The model was found not to be significant, $F(4, 177) = .29$, $R^2 = .01$, $p = .88$. For hypothesis 1, a curvilinear relationship between time spent on OCB ($OCBtime^2$) was expected. However, the regression analysis showed no significant curvilinear relationship between time spent on OCB and task performance, $\beta = .15$, $p = .67$, 95% CI [-.02, .03]. In *Figure* 3, the quadratic trendline has been added and looks close to linear, and hence rejects the first hypothesis.

In Step 2, the direct effect of task interdependence and the interaction between time spent on OCB (OCBtime and $OCBtime^2$) and task interdependence was added. Contrary to the first model, the model became significant, explaining 8% of the variance in task performance, when task interdependence and the interactions were added, $F(7, 174) = 3.14^{**}$, $R^2 = .08^{**}$. However, none of the predictor variables were significantly predicting task performance. There are some interesting things to say about the results though. First of all, the effect of time spent on OCB on task performance increased when task interdependence and the interactions were added to the regression (Step 1: $\beta = -.14$, $p = .69$; Step 2: $\beta = -.25$, $p = .46$). Furthermore, task interdependence ($\beta = .10$, $p = .17$) and the interaction between time spent on OCB and task interdependence ($\beta = -.62$, $p = .12$) were close to having a significant effect. These results indicate that higher task interdependence leads to higher task performance. The second hypothesis expected a relationship between time spent on OCB and task performance that is linear for low task interdependence and curvilinear for high task interdependence. When looking at the this relationship (see *Figure 5*), although not significant, time spent on OCB seems to have a linear relationship with task performance for low task interdependence, and a curvilinear relationship for high task interdependence. These results are opposite expectations, because the linear relationship was expected for high task interdependence and curvilinear for low task interdependence, hence rejecting the second hypothesis.

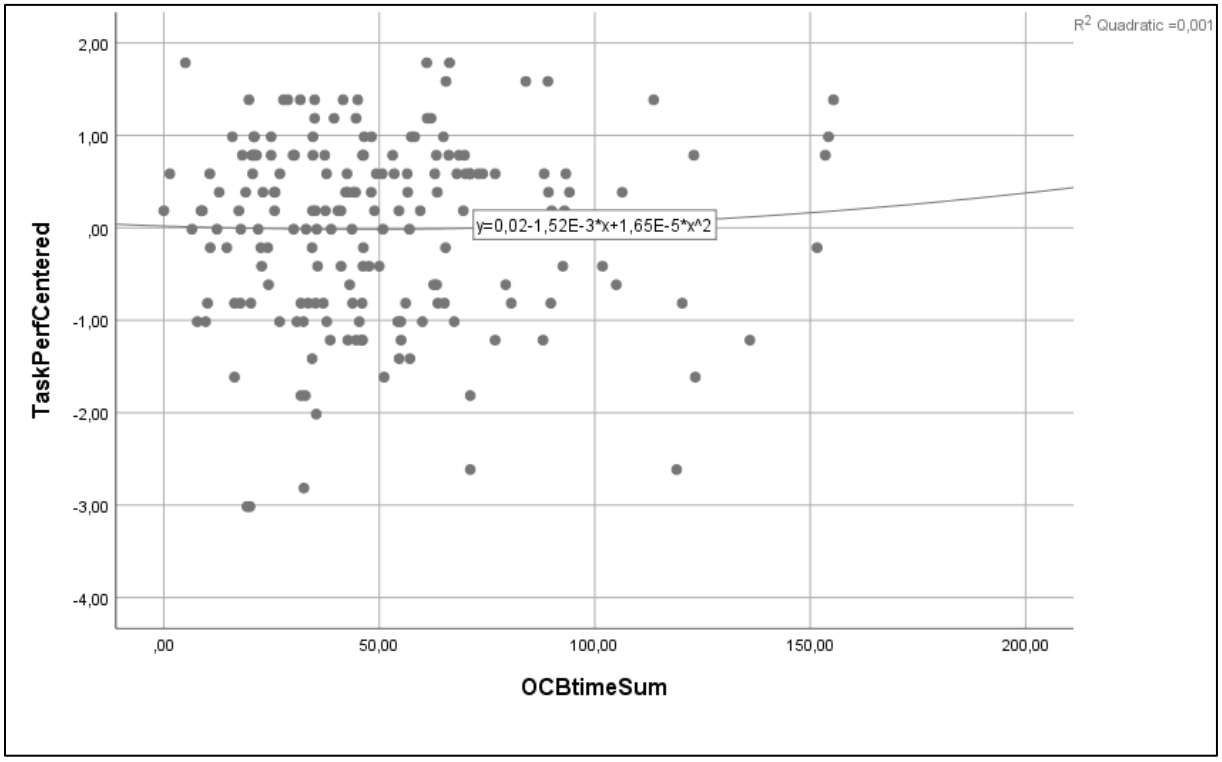

Figure 3. Scatter plot for the visual relationship between (OCBtimeSum) and Task performance (TaskPerfAvg).

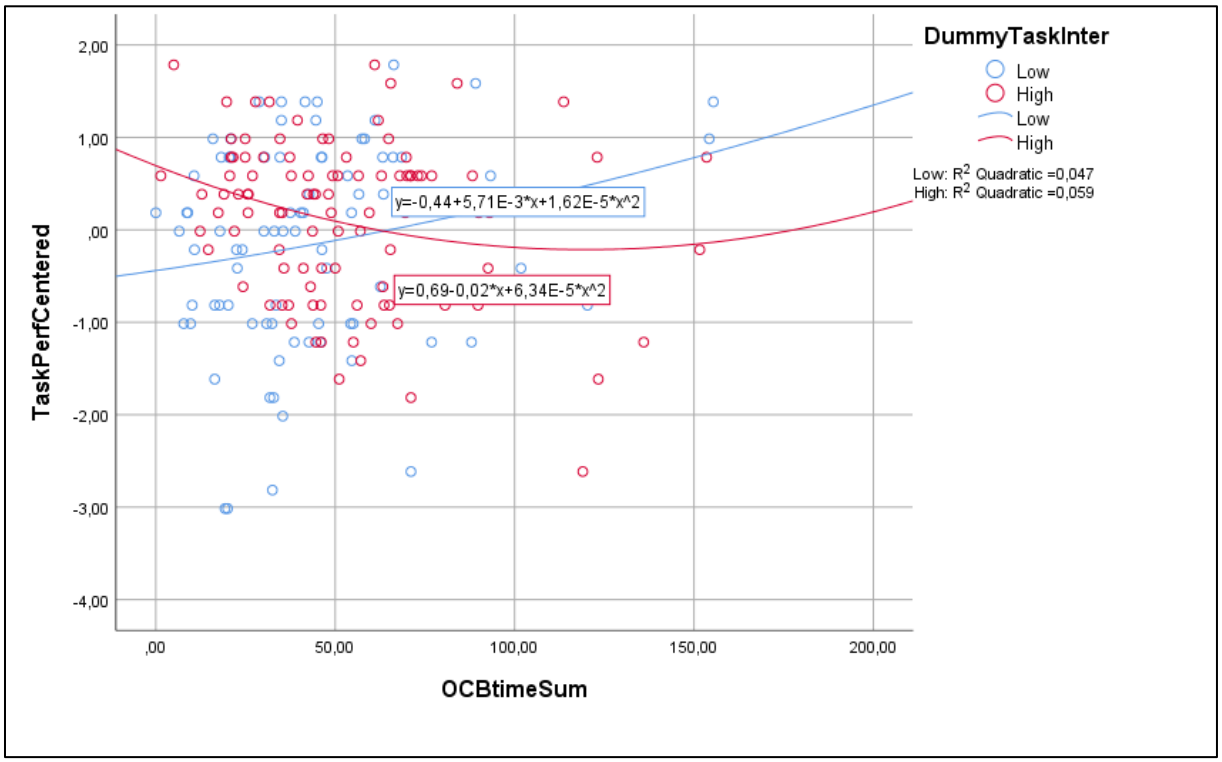

Figure 4. Scatter plot for the visual curvilinear relationship between (OCBtimeSum) and Task performance (TaskPerfAvg) for high and low task interdependence.

Table 4.

Results of the curvilinear regression analysis for task performance in relation to time spent on OCB, task interdependence and controls.

	Task performance							
	Step 1				Step 2			
Variable	*B*	*β*	95% CI	*t*	*B*	*β*	95% CI	*t*
Constant	.00		[-.14, .15]	.04	.04		[-.10, .18]	.52
OCBtime	-.07	-.14	[-.38, .25]	-.41	-.12	-.25	[-.42, .19]	-.74
OCBtime²	.01	.15	[-.02, .03]	.43	.01	.24	[-.01, .03]	.73
Tenure	.00	-.03	[-.02, .01]	-.36	-.01	-.06	[-.02, .01]	-.86
Seniority	-.11	-.07	[-.37, .14]	-.07	-.07	-.04	[-.31, .18]	-.53
Task interdependence					.12	.10	[-.05, .28]	1.37
OCBtime x TI					-.29	-.62	[-.65, .07]	-1.58
$OCBtime^2$ x TI					.01	.33	[-.01, .04]	.84

Note. For Step 1, $F(4, 177) = .29$, $R^2 = .01$; for Step 2, $F(7, 174) = 3.14^{**}$, $\Delta F = 6.89$, $R^2 = .08^{**}$, $\Delta R^2 = .11^{**}$.

OCBtime = Time spent on Organizational Citizenship Behavior; TI = Task Interdependence.

$^{*}p < .05$, $^{**}p < .01$.

Discussion

The current research has used survey data to study the curvilinear effect of time spent on OCB on task performance, and the influence of task interdependence on this relationship. A regression-analysis has been used to examine these effects, controlling for tenure and seniority.

Firstly, the relationship between time spent on OCB and task performance was examined. It was expected that this relationship would be curvilinear, with a positive relationship until a breaking point, after which it would become negative. This expectation was derived from the too-much-of-a-good-thing effect. Although OCBs are positive by definition, when too much time would be spent on OCB, this time could not be used for formal job tasks and thereby lead to lower task performance. In the current sample, most participants showed low to moderate time spent on OCB, with a few spending high amounts of time spent on OCB. Not surprisingly, results showed that the relationship is linear, because the diminishing returns were especially expected for high levels of time spent on OCB. For the current study, this meant that the too-much-of-a-good-thing effect was not applicable. These results are contrary to prior research by Rapp, Bachrach and Rapp (2013), where the diminishing returns of time spent on OCB were found. A possible explanation for these results is the difference in methods used to evaluate job performance. While Rapp et al. (2013) used an objective measure of job performance, the current study has used self-assessment for measuring task performance. This indicates that employees perceive their OCB as productive, while in fact, time spent on OCB does have a diminishing effect on their performance. A variable that could explain the gap between perceived performance and actual performance is self-efficacy. It appears that employees with higher self-efficacy evaluate their own job performance more positively and also predicts the levels of OCB they perform (Park, Sohn, & Ha, 2016). Therefore, objective measures might be better to measure performance when studied in relation to OCB, since self-assessed performance could be biased by the self-efficacy.

Secondly, the role of task interdependence in the relationship between time spent on OCB and task performance was examined. For high task interdependence, it was expected that this relationship would be linear. Due to the high interdependent nature of the tasks, helping out others will positively influence one's own performance. (referentie). In comparison, it was expected that the relationship between time spent on OCB and task performance would be curvilinear for low task interdependence. In this second case, helping

out others will not stimulate one's own performance due to the low interdependent nature of the tasks (Sonnentag, & Frese, 2001).

Contrary to the expectations and prior research, results of the analysis showed a linear relationship for low task interdependence and a possible curvilinear relationship for high task interdependence. Bachrach et al. (2006) had found the linear relationship for high task interdependence and curvilinear for low task interdependence in a card-sequencing experiment. Even though the methods differ, the gap between the results is larger than would be expected only from a difference in methods. Furthermore, the results from the current study were inconclusive, so it is also possible that the relationship between time spent on OCB and task performance is linear, regardless of the level of task interdependence. Yet, it is still a surprising result that needs further exploration.

Regarding the practical implications, no conclusive advice can be given based on this study as a result of this contradiction with prior research. Any advice on this subject will have practical implications for organizations. Further research on this topic is required to determine the optimal course of action. For example, if the curvilinear relationship between time spent on OCB and Task performance is dependent on the amount of Task interdependence in a team, policy regarding OCB can be shaped around the level of interdependency.

Limitations

The current research had a number of limitations. To start, the current sample is too small with a low power of .34, this means a 34% chance that the results on the tested model are correct. The low power complicates the interpretation of the results of the current study, over 500 participants were needed for a sufficient power. Additionally, the sample does not give a good representation of the Dutch population, since the researchers have asked their network to spread the survey and presumably do not have a homogeneous social network. Furthermore, the survey could only be filled in digitally, people with a lack of digital skills could possibly not participate in the current research. Especially elderly, people with lower education and people with a lower income have a lower skill level on average and use the Internet less frequently (Van Deursen, 2018). In the current sample, only 22 participants were 60 or older, however, this did not stand out to the rest of the sample. Education level on the other hand, between 19 and 31 participants were lower educated, which means they are underrepresented in this sample. This could have had an impact on the current study because higher education is positively associated with OCB (Foote, & Tang, 2008).

Furthermore, the corona crisis started during the data collection. During part of the data collection, the Dutch employees had to work from home as much as possible (Rijksoverheid, 2020). The results might have been biased by the working from home, since the questions were focused on behavior that the participants had shown at work in the past four weeks. Several items might not have been applicable anymore, like 'Adjust your work schedule to accommodate other employees' requests for time off.', holidays are cancelled and employees do not want to take time off (Vollebregt, 2020). In addition, the corona crisis is expected to have a negative influence on the economy (Khan, & Naushad, 2020), but no statistics for the Netherlands on this topic have been found yet. A possible consequence of the economic decline is that less work is available, employees have more time available and need less help, and the item 'I assist others with their duties.' does not apply.

Future research

In the future, the advice would be to repeat the current research with extra attention for the limitations explained above: in a time without the corona crisis, with a larger sample of around 550 participants that is representative of the entire Dutch working population. Furthermore, the too-much-of-a-good-thing effect of OCB needs further exploration to get a more nuanced and complete view on the topic, especially in relation to task interdependence.

Moreover, self-efficacy would be an interesting variable to examine in relation to time spent on OCB and task performance. As stated above, self-efficacy is a predictor of both OCB and job performance. Especially in self-assessed task performance, self-efficacy could have an important role. Since self-assessment is more convenient to measure, understanding how self-assessment might be different from the actual performance would facilitate future research.

Lastly, due to the corona crisis, people have to work from home. This influences the way people work and are involved with colleagues. Therefore, it would be interesting to examine the effect that the corona crisis has on the interdependency in teams and how the kind of OCBs performed are different from the normal situation where most people work in the office.

Conclusion

The current study has examined the curvilinear relationship between time spent on OCB and task performance, and the effect of task interdependence on this relationship. The goal was to determine whether OCB has diminishing returns on task performance. The results have not revealed these diminishing returns but do indicate that task interdependence has an

important role in this relationship. Despite the limitations of the study, the results show potential for future research. Therefore, the advice is to repeat the current study with a larger, representative sample on the diminishing returns, especially in relation to task interdependence.

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Appendix A: questionnaires

Organizational citizenship behavior (1 strongly disagree – 7 strongly agree)

(Lee, & Allen, 2002)

OCBI items

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

OCBO items

1. I attend functions that are not required but that help the organizational image.
2. I keep up with developments in the organization.
3. I defend the organization when other employees criticize it.
4. I show pride when representing the organization in public.
5. I offer ideas to improve the functioning of the organization.
6. I express loyalty toward the organization.
7. I take action to protect the organization from potential problems.
8. I demonstrate concern about the image of the organization.

Task interdependence (1 strongly disagree – 7 strongly agree)

(Langfred, 2005)

1. The team works best when we coordinate our work closely.
2. Team members have to work together to get group tasks done.
3. The way individual members perform their jobs has a significant impact on others in the team.
4. My work cannot be done unless other people do their work.
5. Most of my work activities are affected by the activities of other people on the team.

6. Team members frequently have to coordinate their efforts with each other.
7. We cannot complete a project unless everyone contributes.

Task performance (1 strongly disagree – 7 strongly agree)

Individual Work Performance Questionnaire (Koopmans, Bernaards, Hildebrandt, De Vet and Van der Beek, 2014)

1. I managed to plan my work so that it was done on time.
2. My planning was optimal.
3. I kept in mind the results that I had to achieve in my work.
4. I was able to separate main issues from side issues at work.
5. I was able to perform my work well with minimal time and effort.