The Relationship of Work Self-Efficacy, Job Crafting and Job Satisfaction in Startups

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Master Project **(**SOW-PSMWOH70-2021-JAAR-V)

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Date: 04.07.22

Executive Review

This research provides an overview of measures to take to increase job satisfaction in startup employees and consequently enhance employee retention. The management of the German early-stage startup company for whom this research was conducted was interested in how to retain high-quality personnel in a fast and dynamic startup environment. Moreover, they were interested in keeping their current employees satisfied and happy, as well as, encouraging them to proactively innovate their job tasks. Based on previous studies, job crafting, an individual redesign process, is linked to higher job satisfaction. Job crafting can be further distinguished between four dimensions: increasing structural job resources, increase social job resources, decreasing hindering job demands and increasing challenging job demands. Prior research has mixed results about each dimensions relationship with job satisfaction, and results were also not yet obtained in a startup sample. Moreover, prior research indicates that individual resources such as general self-efficacy is also associated with job satisfaction. As it would be methodologically more significant to use work self-efficacy instead of general self-efficacy, this study uses work self-efficacy as a variable. The purpose of this study was therefore to investigate whether each dimension of job crafting and work self-efficacy has an effect on job satisfaction in startup employees. The research was done by conducting an online survey in which employees from this startup, as well as, other startup companies filled in three self-report questionnaires. The survey was completed by a total of 54 startup employees. The results indicate that decreasing hindering job demands is negatively related to job satisfaction, meaning that the more employees engage in decreasing hindering job demands the less satisfied they are with their job. Furthermore, work experience is also negatively associated with job satisfaction, meaning that the more work experiences an employee has, the less satisfied they are with their job. The other hypothesized association with job satisfaction could not be confirmed. The findings should be taken with caution though, as the sample size was relatively small and the independent variables only accounted for 21% of variance in the criterion job satisfaction.

These findings in conjunction with prior research indicate two things. For one, employees job satisfaction can be enhanced via job crafting behaviors. Job crafting might individually done redesign job process, but management can support this behavior by redesigning the work environment. For example, by giving employees more job autonomy, so that they can shape their work flow. Management can also try to reduce or eliminate hindering job demands, by for example automatizing boring repetitive, so that employees have more time working on interesting, creative tasks instead. Plus, management should invest in their more experienced

employees to keep them satisfied by providing them with professional trainings for growth opportunities and salary bonuses for good performance.

Abstract

With the great resignation of employees, employers need to find ways to retain high-quality personnel. Especially in startups in which limited resources and name recognition are a hinderance to recruitment, current employees must be retained. Job satisfaction is an important determinant of employee retention. Job crafting, distinguished between increasing structural job resources, increase social job resources, decreasing hindering job demands and increasing challenging job demands, positively affects job satisfaction. Work self-efficacy is a personal factor that could also be associated with job satisfaction. Therefore, this study investigated whether work self-efficacy and the four dimensions of job crafting and job satisfaction are associated. A multiple linear regression was conducted. The general model was significant with decreasing hindering demands being negatively associated with job satisfaction and the control variable work experience being negatively associated with job satisfaction. The other three job crafting dimensions, as well as work self-efficacy were non-significant. Future research should investigate what the underlying causes are for the negative association of decreasing hindering demands and how to circumvent that, as well as, looking into the differences between startup employees and the effect on job satisfaction and job crafting.

Keywords: job satisfaction, job crafting, work self-efficacy, startup, employee retention

Retaining high-quality personnel is crucial for new ventures/startup companies, as turnover and replacement come with immense financial costs, loss of productivity and engagement, and loss of knowledge and skills (Hinkin & Tracey, 2000). According to Human Capital Theory, people and their knowledge and skills shape an organization, especially when they hold firm-specific knowledge (Becker, 1962). Losing vital knowledge by staff turnover will likely interfere with growth and, worst case, have even more long-term negative effects for startup companies. Startups, defined as new businesses providing innovative products and working to scale up (Robehmed, 2013), have distinct characteristics and challenges compared to established firms, like lack of resources and reputation (Salamzadeh & Kawamorita, 2015) and yet they must compete with larger businesses within the same talent pool. Paired with job uncertainty - according to Forbes, an estimate of 90% of startups ultimately fail (Griffith, 2014)-, lower legitimacy and low organizational awareness, startups have a disadvantage when it comes to constantly attracting new personnel to replace key assets and thus must come up with cost-effective strategies to retain their current employees (Salamzadeh et al., 2015). In such a dynamic, fast-paced environment with limited resources, it becomes pivotal

to retain high-quality talents to realize a venture's goals and turn it into a well-functioning organization. Based on this, finding effective ways to retain talent, the current study holds great importance to the small-scale startup in which the research is set and startup companies in general.

Job satisfaction, defined as the amount of employee contentedness with their work on the whole or certain parts of it (Spector, 1997), is considered an important aspect of employee retention and determinant for turnover intentions (Spector, 1985). The higher employees are satisfied with their job, the less intention they have to quit. Plus, there is a significant relationship between total satisfaction and subsequent turnover (Spector, 1985). It is assumed that job satisfaction, being an emotional-affective response to different job aspects, is obtained by comparing the current job aspects with an ideal version of these aspects. The closer these aspects are to the ideal, the more satisfied one is with their job (Smith, 1969; Spector, 1985) and consequently higher job satisfaction lowers voluntary turnover (Memon et al., 2020). Thus, when it comes to finding effective strategies to retain talent within startup companies, job satisfaction is an important determinant.

In line with the Job-Demand Resource Model (JD-R) (Bakker & Demerouti, 2007), job aspects/characteristics that affect job satisfaction can be classified into two dimensions regardless of occupation: job demands and job resources. Job demands are any physical, psychological or social aspects of the job that result in strain, i.e. work pressure, emotional demands. Job resources are any physical, psychological or social aspects of the job that increase motivation, engagement and lower job demands, i.e. coaching, job autonomy (Bakker & Demerouti, 2007). Increasing job resources, have been proven effective in increasing job satisfaction (Sousa-Poza & Sousa-Poza, 2000). Similarly, a meta-analysis by Podsakoff et al. (2007) showed that an increase in challenging job demands, meaning job characteristics that have a personal cost to the employees as they require effort but that impact an employees motivation positively, are also positively associated with higher job satisfaction (Podaskoff, Lepine & Lepine, 2007). Hindering job demands, however, was related to higher employee exhaustion and strain, thus lower satisfaction (LePine, Podsakoff & LePine, 2005; Tadic, Bakker & Oerlemans, 2015). Therefore, job satisfaction is related to job demands and job resources.

One way to influence job demands and resources and ultimately job satisfaction is through job crafting. Job crafting is an individually focused job redesign process (Wrzesniewski & Dutton, 2001) in which employees actively engage in behaviors that shape and change their current job characteristics to better align with their personal goals, skills and

needs (Berg, Dutton, & Wrzesniewski, 2008). In line with the Job Demands-Resource Model (JD-R) (Bakker & Demerouti, 2007), job crafting can change job demands and increases job resources. Based on the JD-R model, Tims et al. (2012) defined four dimensions of job crafting employees may engage in to align their needs with their job. First, employees might increase structural job resources, for example, by having higher flexibility about when and where to work. Secondly, employees might increase social job resources, for example, by asking for specific feedback from their colleagues or superiors. Thirdly, employees might engage in increasing challenging job demands by taking on new responsibilities in addition to their regular tasks. Lastly, employees might decrease hindering job demands, for example, by reframing boring, repetitive tasks into a more acceptable viewpoint that helps with the emotional costs and demands that come with this task. This way, the task does not change, but its evaluation becomes more positive, which helps make the work more engaging to the employee (Tims & Bakker, 2010; Wrzesniewski & Dutton, 2001).

Prior research indicates that people who engage in job crafting behaviors score higher on job satisfaction (Tims, Bakker & Derks, 2013). However, there are mixed results regarding increasing challenging job demands and decreasing hindering demands. In their study, Tims et al. (2013) found a significant moderate relationship between crafting structural and social resources with job satisfaction. This is in line with the JD-R theory that by increasing job resources satisfaction increases as employees are more motivational engaged with their jobs by fulfilling basic needs or increasing the likelihood to successfully achieve their goals (Bakker & Demerouti, 2007). They also found a significant direct effect of crafting challenging job demands and job satisfaction, though they could not find a significant relationship between decreasing hindering demands and job satisfaction. Increasing challenging demands should potentially increase satisfaction as the increase impacts employee motivation positively due to creating personal learning and growth opportunities (LePine et al. 2005). Decreasing hindering demands should potentially increase job satisfaction, as hindering demands are related to negative outcomes such as exhaustion and cynicism (LePine et al. 2005), which is related to lower satisfaction. Other research supports the relationship between increasing job resources and job satisfaction (De Beer, Tims & Bakker, 2016; Villajos, García-Ael & Topa, 2019), but the evidence for the relationship between job demands (both challenging and hindering) remains mixed (De Beer, Tims & Bakker, 2016; Nielsen & Abildgaard, 2012; Llorente-Alonso & Topa, 2019). Thus, it is interesting to replicate the results in another sample to shed more light on this relationship. Especially in a startup environment where flexible work and ample opportunities for

challenging work tasks are quite common and even wanted, job crafting could be an important employee-driven behavior that enhances a startup environment. However, little research has been done about job crafting, specifically in startups.

Through prior research, we also know that there are other individual differences when predicting higher job satisfaction, one of which is general self-efficacy. Employees with high general self-efficacy tend to be more satisfied with their jobs when they feel competent to perform the required tasks and can set more challenging goals for themselves (Judge et al., 2007; Yakin & Erdil, 2012). General self-efficacy refers to someone's confidence in their ability to deal with different situations effectively. It is a widely known construct anchored in social learning theory (Bandura, 1986). In this context, it is important to highlight that the concept of self-efficacy embedded in social cognitive theory also implies that self-efficacy cannot just be defined as a global personality construct but is also domain-specific (Bandura, 1986). While it can be argued that the concept of self-efficacy can be transferred to many different scenarios, such as the workplace, there is a need for making a finer lined distinction in research, as one should take the conceptual symmetry between predictor and criterion into account (Chen, Gully & Eden, 2001). Therefore, when measuring self-efficacy in the organizational context, one should distinguish between general self-efficacy and work self-efficacy (also referred to as professional, occupational or career self-efficacy in literature) (Salanova, Grau, & Martínez, 2005). While general self-efficacy is an individual competence to deal with environmental demands that trigger certain responses (Bandura, 1986; Salanova et al., 2005), work self-efficacy specifically targets an employee's confidence in dealing with work-related situations, especially in new and prospective workers (Cherniss, 2017). There has been little research about work self-efficacy in current literature, especially when it comes to startups. Most studies have focused on the general trait of self-efficacy, even though it has been recommended to look at more domain-specific types (Chen et al., 2001; Roskova & Faragova, 2020). Nevertheless, the few research that focused on work self-efficacy also found a significant relationship between work self-efficacy and job satisfaction (Schyns & Von Collani, 2002; Yeves, Bargsted & Ramírez-Vielma, 2019). Besides that, work self-efficacy accounted for at least a 16% variance in job satisfaction apart from general self-efficacy, confirming that general self-efficacy and work self-efficacy are different constructs in predicting job satisfaction (Schyns & Von Collani, 2002). However, these studies were done in samples of mixed profession (Schyns & Von Collani, 2002; Yeves et al., 2019) and not in such a specific sample as startup employees.

Therefore, this study investigates whether work self-efficacy and the four job crafting dimensions (increasing social and structural resources, increasing challenging job demands and decreasing hindering job demands) are associated with job satisfaction in startup employees.

This study would contribute to existing research and the JD-R model, further confirming the relationship between job crafting and job satisfaction (Tims, Bakker & Derks, 2013). Especially the mixed results of the two dimensions regarding challenging and hindering job demands on job satisfaction will be further explored (De Beer et al., 2016; Nielsen & Abildgaard, 2012; Llorente-Alonso & Topa, 2019). Additionally, little research has been done on job crafting and its effects on startup employees to date, so this study also further contributes to the overall knowledge of job crafting's impact in different work environments. Secondly, this research uses the conceptually more fitting construct, work self-efficacy rather than general self-efficacy, to explore the relationship between work self-efficacy and job satisfaction in startup employees (Bandura, 1997; Judge et al., 2000; Kanten, 2014). Moreover, this study contributes to society and the small-scale startup this research is conducted to make recommendations on how to better retain high-quality personnel in a startup setting by increasing overall job satisfaction through two mechanisms – job crafting and work self-efficacy. Job crafting behaviours are desirable in any organization, as providing employees with the opportunities to efficiently job craft their work will not only contribute to their well-being but also affect their job performance, work engagement and organizational commitment, which overall benefits the organization (Demerouti, 2014) and consequently affect turnover intentions (Spector, 1985). Besides providing them with opportunities to job craft, it is important to keep individual differences in mind. One contributing factor might be work-self efficacy. Knowing to what extent work self-efficacy plays a role can be an indicator of implementing positive performance feedback loop systems to increase work self-efficacy in employees to encourage further (Fletcher, 1990).

It is hypothesized that startup employees who engage in one of the job crafting behaviors will positively relate to higher job satisfaction (Tims, Bakker & Derks, 2013; De Beer et al., 2016; Nielsen & Abildgaard, 2012; Llorente-Alonso & Topa, 2019). Thus, the following hypotheses are tested:

1. Employees high in structural resources will have higher job satisfaction.
2. Employees high in social resources will have higher job satisfaction.
3. Employees high in increasing challenging job demands will have higher in job satisfaction.

4. Employees high in decreasing hindering job demands will have higher in job satisfaction.

Secondly, it is hypothesized that employees with more work self-efficacy will positively relate to higher job satisfaction (Schyns & Von Collani, 2002). Thus, the following hypothesis is tested:

5. Employees high in work self-efficacy will be higher in job satisfaction.

To test these hypotheses, an online survey of startup employees was conducted in which participants filled out three questionnaires regarding job crafting, work self-efficacy and job satisfaction.

Methods

Participants

A sample of startup employees participated in this study. The researcher approached them via social network platforms like LinkedIn, WhatsApp and intercompany networks making use of HR personnel or supervisors to share the link to the study. The research adheres to Dutch code of conduct for scientific integrity and university policy regarding the storage and management of personal and research data and has been reviewed independently by the Ethics Committee Social Sciences (ECSS). Participation was voluntary and without reimbursement, however participants could receive a summary of the main results if they wanted to by reaching out to the researcher via mail. Participants received an anonymized link to the online survey, and after being adequately informed, everyone was asked to give consent to participate in the study. According to the a priori power-analysis (F-tests, multiple linear regression) conducted via G*Power, a sample size of 63 is needed to obtain a power of .95 with 5 predictors and a high effect size. In total, 54 responses were recorded. Four outliers were detected, but due to the small sample size they were kept. Using a post-hoc power-analysis in G*Power a power of .90 was determined for the given sample size. Thus, the final data consisting of 54 participants meets the required power of at least .80 (Faul, Erdfelder, Buchner, & Lang, 2009).

The sample was comprised of 59.3 % female (N = 32) and 40.7% male (N = 22). The majority 63 % (N = 34) indicated that they had no prior startup experience before their current position, while 37% (N = 20) indicated having prior startup experience. Within the sample 7.4 % (N = 4) of employees had no work experience, 44.4% (N = 24) had less than 2 years of work

experience, 27.8% (N = 15) had between 2-4 years of experience, 13% (N = 7) had between 4-6 years of work experience and 7.4% (N = 4) had more than 6 years work experience.

Measures

Job Crafting. The four predictors of *Job Crafting* are measured by using the mean score of each subscale of the 21-item "Job Crafting Scale" (JCS) (see Appendix A). For this research job crafting will be divided into the four dimensions, measured by one subscale of the JCS. Thus, the four individual predictors of job crafting are the following:

1. *Increasing Structural Job Resources* (iStJR)
2. *Increasing Social Job Resources* (iSoJR)
3. *Increasing Challenging Job Demands* (iCJD)
4. *Decreasing Hindering Job Demands* (dHJD)

The JCS has moderate to high internal reliability on all four dimensions. Increasing structural job resources (α = .82); decreasing hindering job demands (α = .79); increasing social job resources (α = .77); increasing challenging job demands (α = .75) (Tims, Bakker & Derks, 2012). This study's internal reliabilities were moderate to high on all four dimensions as well. Increasing structural job resources (α = .80); decreasing hindering job demands (α = .74); increasing social job resources (α = .76); increasing challenging job demands (α = .75). The internal reliability for the entire scale was good (α = .80). Participants were asked to answer statements regarding increasing structural job resources (e.g. *"*I try to develop my capabilities"), increasing social job resources demands (e.g. "I ask my supervisor to coach me"*)*, increasing challenging job demands (i.e. "I regularly tale on extra tasks even though I do not receive extra salary for them"*)*, decreasing hindering job demands (e.g. "I make sure that my work is mentally less intense"), on a 5-point frequency scale from 1 (*Never*) to 5 (*Almost Always*). A mean score for each dimension and a total score were calculated. With mean scores on each dimension ranging from 1 to 5, a score between 1-2.33 indicates low job crafting behavior, a score between 2.34-3.67 indicates medium job crafting behavior and a score between 3.67-5 indicates high job crafting behavior.

Work Self-Efficacy. The second predictor, Work Self-Efficacy, was measured using the mean of the total score of the 8-item version of the original 20-item "Occupational Self-Efficacy Scale" (OCCSEFF) (see Appendix B), which has high internal validity (α = .88) (Schyns & Von Collani, 2002). This study's internal reliability was high (α = .90). Participants

were asked to answer how true the statements are for them (e.g. "I feel prepared to meet most of the demands in my job") on a 6-point Scale from 1 (*completely true*) to 6 (*not at all true*). With mean scores ranging from 1 to 6, a mean score between 1-2 indicates high work self-efficacy, a score 3-4 indicates medium work self-efficacy and a score between 5-6 indicates low work self-efficacy.

Job Satisfaction. The criterion *Job Satisfaction* was measured using the mean of the total score of the 36-item "Job Satisfaction Survey" (JSS) (see Appendix C), which has high internal reliability (α = .93) (Spector, 1985). This study's internal reliability was high (α = .92). Participants were asked to answer about how much they agree with the statements (e.g., Those who do well on the job stand a fair chance of being promoted) on a 6-point Likert scale from 1 (*disagree very much*) to 6 (*agree very much*). With mean scores ranging from 1-6, a score between 1-3 indicates dissatisfaction with the job, and a score between 4-6 indicates satisfaction. A score between 3-4 indicates ambivalence.

Procedure

A link to the online survey was distributed via social media platforms like LinkedIn and company networks, by approaching them directly using supervisors or HR personnel to help distribute the link to the survey to their employees. Participants were informed about the survey's content and rights via an informed consent letter. After confirming their voluntary participation, they filled in some demographic data, including gender, level of work experience, and prior start-up experience. Afterwards, participants were asked to fill in the following questionnaires: First, they filled in the JCS (Tims, Bakker & Derks, 2012) about job crafting. Secondly, they filled in the OCCSEFF (Schyns & Von Collani, 2002) about work self-efficacy, and lastly they filled in the JSS (Spector, 1985) about job satisfaction. The statements of each questionnaire were presented in a random order for each participant to avoid any potential item order effects. In the end, all participants were informed about the purpose of the study and given contact information in case of questions or in case they want a brief summary of the results. The survey took around 6-7 minutes to fill out and was conducted between June 27th and July 3rd in 2022.

Data Analysis

The data was collected using the online survey program "Qualtrics" (Qualtrics UK, 2022). Afterwards, the raw data file was transferred to SPSS. A Multiple Regression Analysis was conducted to analyze the relationship between the predictors iStJR (range 1 – 5)., iSoJR

(range 1 – 5), iCJD (range 1 – 5), dHJD (range 1 – 5), Work Self-Efficacy (range 1 – 6) and the criterion job satisfaction (range 1-6). This analysis was done by using the statistical program IBM SPSS 27.

Before the analysis was conducted, the variables needed to be prepared. No data case had to be deleted due to missing data. The reverse items of the JSS needed to be recoded accordingly (Spector, 1985). A reliability analysis was conducted to test for internal reliability of each questionnaire used. Afterwards, mean scores for each job crafting dimension for each participant was calculated. Moreover, a mean score for work self-efficacy and the criterion job satisfaction was calculated as well for each participant. Next a check of assumptions for a multiple linear regression was carried out. All assumptions were met; however 4 outliers were discovered. They did have a significant effect on the model after testing by removing them. However, due to the already small sample size, the outliers were kept.

Results

Table 1.

Descriptive of Variables

	n	M	SD
JC (increasing structural resources)	54	4.21	.65
JC (increasing social resources)	54	3.72	.44
JC (decreasing hindering demands)	54	2.77	.61
JC (increasing challenging demands)	54	3.35	.68
Job Satisfaction	54	4.51	.65
Work Self-Efficacy	54	4.46	.75

The variables were tested for correlation with the three demographic variables gender, prior startup experience and work experience to test for confounding variables. Gender and prior startup experience were non-significant. However, there was a significant effect of work experience on the model, thus it was added as a control variable to the main analysis.

A multiple linear regression was conducted with job satisfaction as criterion and iStJR, iSoJR, iCJD, dHJD and Work Self-Efficacy as predictors and work experience as a control variable. The overall model was significant, $F(6, 47) = 3.40$, $p = .007$, with an R^2 of .21 and thus the regression model is a good fit for the data. It has a strong effect size, as 21% variance of the criterion job satisfaction can be explained by the predictors.

The job crafting dimensions decreasing hindering job demands was significant $\beta = -.28$, $t(53) = -2.00$, $p = .05$, and thus is negatively related to job satisfaction. Based on this hypothesis 4 is supported. With regards to the other three job crafting dimensions, neither increasing structural job resources, $\beta = .13$, $t(53) = .65$, $p = .517$, increasing social resources $\beta = .28$, $t(53) = 1.52$, $p = .135$, increasing challenging demands $\beta = .30$, $t(53) = 1.63$, $p = .111$, are related to job satisfaction. Therefore, the hypotheses 1 – 3 are not supported. Work self-efficacy was not related to job satisfaction either, $\beta = .14$, $t(53) = .84$, $p = .405$, thus hypothesis five is not supported. The control variable work experience has a significant negative effect on the criterion job satisfaction, $\beta = -.25$, $t(53) = -2.67$, $p = .01$.

Discussion

The purpose of this study was to investigate cost-effective ways to increase employee retention rates for the small-scale startup company in Germany in which this research was partly carried out – the rest of the participants coming from other startup companies. To do so, the following research investigated the relationship between the four job crafting dimensions (increasing social and structural resources, increasing challenging job demands and decreasing hindering job demands) and work self-efficacy are associated with job satisfaction in startup employees. The results of the analysis show that one of the job crafting dimensions (decreasing hindering demands) was significantly negatively related to job satisfaction, meaning that for every one unit change in decreasing hindering demands, job satisfaction was lower ($\beta = -.28$). The other dimensions and work self-efficacy were not related to job satisfaction. However, the control variable work experience was also negatively significantly related to job satisfaction, meaning that by every year of more work experience, job satisfaction got lower ($\beta = -.25$).

The results are somewhat surprising as they do not correspond with previous studies. The first and second hypothesis was that by increasing structural job resources and increasing social job resources, employees would score higher on job satisfaction. Previous research into increasing job resources has proven to be effective in increasing job satisfaction (Bakker & Demerouti, 2007; Sousa-Poza & Sousa-Poza, 2000; Tims et al., 2013). This is due to the

nature of job resources being any physical, psychological or social job aspects that increase motivational engagement by fulfilling needs or helping to achieve a personal goal (Bakker & Demerouti, 2007). For example, fostering good relations with your supervisor, which corresponds to the increasing social resources dimension, was found to be one of the most important predictors of job satisfaction (Sousa-Poza & Sousa-Poza, 2000). Same applies to structural resources like job autonomy/control which activate positive and motivating processes that lead to higher satisfaction (Bakker & Demerouti, 2014). There was also no significant association between increasing challenging demands and job satisfaction, even though challenging demands tend to increase employees motivation by for example taking on new responsibilities (Podaskoff et al., 2007). Thus, it should positively affect job satisfaction even if initially related to personal costs. However, this result fits in with the mixed results of prior research, whereas increasing challenging demands was also not significant (Villajos et al., 2019).

Moreover, this research could not find support for the association between work self-efficacy and job satisfaction. This is also surprising as some research that used the domain-specific construct of work self-efficacy also found a significant relationship between work self-efficacy and job satisfaction (Schyns & Von Collani, 2002; Yeves, Bargsted & Ramírez-Vielma, 2019). One reason might be that in this sample work self-efficacy was between medium and low (M = 4.46) which could be due to the fact that the majority of the sample had none to less than 2 years of work experience. Less experience employees tend to have less work self-efficacy, as work self-efficacy is about the individually perceived confidence in their own abilities in successfully dealing with work related situations which is something that is accumulated over time (Cherniss, 2017). Startups tend to generally employ younger, less experienced personnel, a lot of times recruited straight out of college. As higher work self-efficacy is especially relevant in new employees when it comes to determining how successful they will perform their job, startups might do well in investigating and foster their young employees work self-efficacy. This can be done, for example, by increasing their employees work self-efficacy through established feedback loops to highlight good performance and work accomplishments which then in turn lead to higher efficacy and thus better performance in the future (Fletcher, 1990).

This research found support for the fourth hypothesis, that decreasing hindering job demands is associated with job satisfaction. Interestingly, the relationship between hindering job demands and job satisfaction was negative, meaning that the more employees engage in decreasing hindering job demands the less satisfied they are with their job. As it has been

established before, previous research found mixed results when it comes to the relationship between decreasing hindering demands and job satisfaction. While Tims et al. did not find a significant effect for crafting hindering demands, de Beer et al. also found a significant negative association between crafting hindering demands and job satisfaction. They hypothesized that unsuccessful attempts of trying to decrease hindering demands in combination with a rigid environment in which it is hard to change such demands led to dissatisfaction (De Beer et al., 2016). This makes sense, as job demands in contrast to job resources are normally environmental factors that are less changeable by the individual. Especially, hindering demands oftentimes tend to be aspects or tasks that cannot be physically changed or avoided, but instead reframed into something more positive i.e., reframing a boring, repetitive task into something that is of importance for the entire company (Tims & Bakker, 2010; Wrzesniewski & Dutton, 2001). However, this reframing does not change the task directly and costs a lot of mental effort that could ultimately results in strain and lower satisfaction (LePine, 2005). A lack of control, but high demands within a job is according to Karasek's Job Demand-Control Model (JDC) also associated with impaired wellbeing, further indicating that the act of decreasing hindering demands only further emphasizes the lack of control one has over the situation which then leads to lower satisfaction (Karasek, 1979).

Coincidentally, this research has also found a negative significant effect of work experience on job satisfaction. This means that the more work experiences an employee has, the less satisfied they are with their job. This could be due to the fact that more experienced employees value growth opportunities more (besides financial benefits) when it comes to being satisfied and reasons for leaving an organization (Pushpakumari, 2008). Startup companies tend to have the disadvantage of oftentimes lacking (financial) resources to consistently raising salaries or investing in high-quality employee trainings (Salamzadeh & Kawamorita, 2015). Thus, this could be an explanation as to which more experienced startup employees are less satisfied. However, it should be noted that the sample, scored highly on job satisfaction on average ($M = 4.51$), suggesting that startup employees in general are highly satisfied with their job.

Limitations of this study was for one the relatively small sample size and the sampling method. Due to the personnel constraints of the small-scale startup, the researcher had to reach out to other startup companies/employees via LinkedIn or through HR personnel. The response rate was therefore quite low and based on the work experience level, the sample contains more less experienced employees. Future research should look into obtaining a larger and more diverse sample size in startups. Moreover, it should be noted that only 21% of

variance of the criterion job satisfaction can be explained by the predictors, thus it has relatively weak predictive power. Secondly, there is a methodological issue when it comes to startup companies. There is no fine line to find in literature when a company is no longer considered to be a startup. Thus, this sample contains both early-stage startup employees, who tend to have less resources, and startup employees of hypergrowth startups that already have more corporate-like structures and over hundred of employees. Future research should also make a clearer distinction between different startup stages, as that also affects for example the job resources and demands given to the employees.

Despite not finding significant results regarding the other three job crafting dimensions and work self-efficacy on job satisfaction, this study was successful in replicating results regarding the negative association of decreasing hindering demands and job satisfaction. Additionally, this study indicated that more experienced startup employees are less satisfied. As this studies predictors only accounted for 21% variance in the criterion job satisfaction, future research could further determine what other factors could be related to job satisfaction and also have an impact on job crafting behaviors. Interesting topics would include specific samples like startup employees in different stages of a startup (i.e. early-stage vs. hyper-growth) as both come with different environmental demands and resources. Similarly, it would be an interesting methodological study to find out exactly why decreasing hindering job demands is negatively associated with satisfaction and strategies to overcome this. It would also be interesting to conduct a long-term experimental study increasing job crafting in a startup setting and measuring the outcome to different work attitudes like job satisfaction, but also work engagement, for example.

Based on this studies finding, but also previous literature, it is recommendable to managers of any startup companies to invest time in creating an environment that stimulates job crafting behavior in their employees. Especially, when it comes to limiting or completely eradicating hindering demands for employees might have a positive effect on job satisfaction, as this study indicated that by individually decreasing hinder demands, job satisfaction also gets lower. As hindering demands tend to be out of control of the employee it might be something management can change. In order to so, managers should communicate openly with their employees to find out what job demands are hindering and what could help them increase their job resources. For example, by giving an employee more job autonomy, the employee can decide for themselves what changes to make in their job (Petrou, Demerouti, Peeters, Scahufeli, 2012).

Ultimately this study adds to current research by investigating the relationship between the four job crafting dimensions, work self-efficacy and job satisfaction using startup employees as a sample. The results indicate add to existing evidence that increasing hindering job demands negatively affects job satisfaction. Additionally, this study showed that more work experience was related to lower satisfaction, indicating that the needs of more experienced employees should be particularly cared, as they tend to be generally less satisfied with the status quo and yet they are normally the ones that bring a lot to the table. So when it comes to keeping startup employees satisfied one should invest more resources in the experienced employees to keep them satisfied and from looking for another job.

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Appendix A

Job Crafting Scale (JCS) (Tims, Bakker & Derks, 2012)

Instructions: How often do you engage in the following activities at your current job. Read each statement carefully.

"1" = never

"2" = rarely

"3" = sometimes

"4" = often

"5" = almost always

Dimension 1: Increasing structural job resources

1. I try to develop my capabilities
2. I try to develop myself professionally
3. I try to learn new things at work
4. I make sure that I use my capacities to the fullest
5. I decide on my own how to do things

Dimension 2: Decreasing hindering job demands

6. I make sure that my work is mentally less intense
7. I try to ensure that my work is emotionally less intense
8. I manage my work so that I try to minimize contact with people whose problems affect me emotionally
9. I organize my work so as to minimize contract with people whose expectations are unrealistic
10. I try to ensure that I do not have to make many difficult decisions at work
11. I organize my work in such a way to make sure that I do not have to concentrate for too long a period at once

Dimension 3: Increasing social job resources

12. I ask my supervisor to coach me
13. I ask whether my supervisor is satisfied with my work
14. I look to my supervisor for inspiration
15. I ask others for feedback on my job performance
16. I ask colleagues for advice

Dimension 4: Increasing challenging job demands

17. When an interesting project comes along, I offer myself proactively as project co-worker
18. If there are new developments, I am one of the first to learn about them and try them out
19. When there is not much to do at work, I see it as a chance to start new projects
20. I regularly take on extra tasks even though I do not receive extra salary for them
21. I try to make my work more challenging by examining the underlying relationships between aspects of my job

Appendix B

Occupational Self-Efficacy Scale (OCCSEFF) Short-Version (Schyns & Von Collani, 2002)

Instructions: Please rate each statement about how much they reflect you. Read each statement carefully.

"1" = completely true

"2" = usually true

"3" = sometimes true

"4" = sometimes but infrequently true

"5" = rarely true

"6" = not at all true

1. Thanks to my resourcefulness, I know how to handle unforeseen situations in my job
2. If I am in trouble at my work, I can usually think of something to do
3. I can remain calm when facing difficulties in my job because I can rely on my abilities
4. When I am confronted with a problem in my job, I can usually find several solutions
5. No matter what comes my way in my job, I'm usually able to handle it
6. My past experiences in my job have prepared me well for my occupational future
7. I meet the goals that I set for myself in my job
8. I feel prepared to meet most of the demands in my job

Appendix C

Job Satisfaction Scale (JSS) (Spector, 1985)

Instructions: Please rate each statement about how you agree with them. Read each statement carefully.

"1" = disagree very much

"2" = disagree moderately

"3" = disagree slightly

"4" = agree slightly

"5" = agree moderately

“6” = agree very much

Item Nr.	Subscale	Wording Direction	Item
1	1	+	I feel I am being paid a fair amount for the work I do
2	2	-	There is really too little chance for promotion on my job
3	3	+	My supervisor is quite competence in doing his/her job
4	4	-	I am not satisfied with the benefits I receive
5	5	+	When I do a good job, I receive the recognition for it that I should receive
6	6	-	Many of our rules and procedures make doing a good job difficult
7	7	+	I like the people I work with
8	8	-	I sometimes feel my job is meaningless
9	9	+	Communications seem good within this organization
10	1	-	Raises are too few and far between
11	2	+	Those who do well on the job stan a fair chance of being promoted
12	3	-	My supervisor is unfair to me
13	4	+	The benefits we receive are as good as most other organizations offer
14	5	-	I do not feel that the work I do is appreciated
15	6	+	My efforts to do a good job are seldom blocked by red tape
16	7	-	I find I have to work harder at my job than I should because of the incompetence of people I work with
17	8	+	I like doing the things I do at work

18	9	-	The goals of this organization are not clear to me
19	1	-	I feel unappreciated by the organization when I think about what they pay me
20	2	+	People get ahead as fast here as they do in other places
21	3	-	My supervisor shows too little interest in the feelings of subordinates
22	4	+	The benefit package we have is equitable
23	5	-	There are few rewards for those who work here
24	6	-	I have too much to do at work
25	7	+	I enjoy my co-workers
26	9	-	I often feel that I do not know what is going on with the organization
27	8	+	I feel a sense of pride in doing my job
28	1	+	I feel satisfied with my chances for salary increases
29	4	-	There are benefits we do not have which we should have
30	3	+	I like my supervisor
31	6	-	I have too much paperwork
32	5	-	I don't feel my efforts are rewarded the way the should be
33	2	+	I am satisfied with my chance for promotion
34	7	-	There is too much bickering and fighting at work
35	8	+	My job is enjoyable
36	9	-	Work assignments are often not fully explained

All items with wording directions marked "-" should be reverse scored.

Subscales:

1. Pay

2. Promotion
3. Supervision
4. Benefits
5. Contingent Rewards
6. Operating Procedures
7. Co-Workers
8. Nature of Work
9. Communication

Appendix D

Information Letter

The association between Job Crafting and Job Satisfaction in Startups

Thank you for wanting to participate in my master thesis study. Please read the information below before continuing with the questionnaires.

Study Context

This study is conducted within the Master's program of the Work, Organizational and Health (WOH) Psychology program of the Radboud University. In this course, students conduct a study on a work-

related psychological topic under the supervision of a teacher of the WOH program. Within this project, I conduct a study on Job Satisfaction, Work Self-Efficacy and Job Crafting in startup employees. Job Satisfaction refers to the amount of employee contentedness with their work. Work Self-Efficacy refers to an employee's confidence in dealing with work-related situations. Job Crafting is an individual job redesign process in which employees engage in behaviors that shape and change their current job characteristics to better align with their personal goals. The objective of this study is to gain insight into how to improve job satisfaction and indirectly employee retention rates.

The study has been reviewed independently by the Ethics Committee Social Sciences (ECSS) of the Radboud University and there is no formal objection to this study.

Study Material

1. Demographic Information (Gender, Work Experience, Prior Start-Up Experience)
2. Job Crafting Scale (JCS) (21 items)
3. Occupational Self-Efficacy Scale (8 items)
4. Job Satisfaction Scale (36 items)

Estimated Length

5-10 Minutes (Though you have as long as you want to fill in the survey)

Participation Dimensions

- Participation is voluntary and you can quit anytime without facing any consequences
- no data will be gathered or stored that directly can be traced back to you (i.e. no IP-Adress, Name, E-Mail Address). The consequence is that I cannot inform you about your individual results.
- all data will be securely stored on an encrypted flashdrive and deleted once my study is completed (late August). Read down below to get more information about Anonymity and Personal Data.
- this study does not make use of any deception and is non-invasive

Contact details of the researcher: lisanne.sachsenhausen@ru.nl

Participation Requirements

- you are a healthy and capable adult (18+)
- you currently work in a startup company (full-time, part-time, internship etc.)
- you voluntarily agree to participate and understand that you can quit anytime during the study without consequences

Anonymity & Personal Data

The student-researcher adheres to the Dutch code of conduct for scientific integrity and university policy regarding the storage and management of personal and research data when conducting this research. The information you provide for the current research purposes is treated with the utmost care and is accessible to authorized staff only (here referring to the student-researcher Lisanne Sachsenhausen and the university supervisor of the Master's project Ilianne Boumans).

If you have any questions or concerns with regards to your data, please contact the Privacy Officer Faculty of Social Sciences (P.Janssen@socsci.ru.nl). More information about your rights in the processing of your personal data can be found at https://www.ru.nl/privacy/english/protection-personal-data/data-subjects-rights/ and on the website of the Dutch Data Protection Authority (https://autoriteitpersoonsgegevens.nl/en)

- Data will be collected via the RU licensed version of Qualtrics and stored on an encrypted USB stick.
- No personal data that can be traced back to you will be gathered. Any remaining data that could potentially reveal your identity will be anonymized or removed.
- Upon finishing the master project, the anonymized data will be sent to Ilianne Boumans via SURFfilesender (with a password) so that she can store the unencrypted anonymized data in a RU workgroup folder.
- All data will be deleted from any devices after the grading of the Master Thesis (end of August).

The research data obtained will not be viewed from a medical and/or clinical perspective. Therefore, your participation in the study cannot be considered a medical/clinical test. Since the current study is completely anonymous, any scores that are worrying and/or that may be of personal clinical significance cannot be related back to you. If you are concerned about your health as a result of the questions, we advise you to contact your general practitioner.

Did this study unintentionally prompt unpleasant feelings, thoughts, or insecurities for you? Or do you have any comments or complaints after the study? Then you can contact the course coordinator Brigitte Claessens (brigitte.claessens@ru.nl). She will then invite you as soon as possible for a personal conversation.

Your participation in this study is entirely voluntary. If you decide not to participate, there will be no consequences. If, during the course of the research, you wish to withdraw your consent and terminate your participation, you have every right to do so at all times. Again, there will be no adverse consequences for you.

If you indicate that you want to participate in this study, I will ask you to agree to the following informed consent form.

By agreeing to the terms, you indicate that you are sufficiently informed about the study.

Kind regards,

Lisanne Sachsenhausen

Students Master's Thesis

WOH Psychology Master Program

Radboud Universiteit

Appendix E

Consent Form

For participation in a study for my master thesis in the Work, Organization & Health Psychology Program

The association between Job Crafting and Job Satisfaction in Startups

This part should be filled out by the participant prior to the start of the study.

I hereby confirm that:

- I was satisfactorily informed about the study and I have read and understood the written information on the study.
- I was informed that the current study is conducted by a Psychology student as part of her Master's project
- I have had the opportunity to ask questions regarding the study and my questions have been answered satisfactorily
- I was informed that I can contact the researcher under lisanne.sachsenhausen@ru.nl and the course coordinator under brigitte.claessens@ru.nl
- I was allowed sufficient time to consider whether to give my consent.
- I participate of my own free will.
- My personal data (gender, work experience, prior startup experience) will be stored for the duration of the Master's project, analyzed and it will be deleted after the termination of the Master's project
- I am aware that only the research Lisanne Sachsenhausen and the university supervisor of the Master's project Ilianne Boumans have access to the data
- I am aware the data and all e-mail addresses will be deleted after the grading of the Master's thesis, prospectively at the end of August

I understand that:

- I have the right to withdraw my consent at any time without having to give a reason and withdrawing my participation has no further consequences.
- My information will be processed anonymously.
- The outcomes of the study cannot be considered as a diagnostic test.
- I will not be informed about my individual results
- I hereby consent to participate in the study referred to above.

*This form is for research involving competent human subjects aged 18 and over. This type of research requires consent from all participants.

Appendix F

Debriefing

This is the end of the survey.

This study investigated the relationship between job crafting behaviors, work self-efficacy and job satisfaction with work self-efficacy. The outcome of this study will help to give informed advice to management on strategies to increase job satisfaction in employees taking job crafting and work self-efficacy into account.

As the data is anonymized, I am unfortunately unable to relay your scores to you.

All data will be stored no longer than necessary for the completion of this project - which I expect to be at the end of August. After that point, all data will be deleted.

I again want to thank you for participating in my study.

Kind regards,

Lisanne Sachsenhausen

Master's Thesis

Psychology Program

Radboud Universiteit