Should Telework be Banned? An Investigation of the Relationship between Leisure Crafting Subjective Well-being Perceived Work Productivity and Need Satisfaction for Teleworkers

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Abstract

Employees work more from home due the COVID19-pandemic (Chang et al., 2021). Abdel Hadi et al. (2021) found that especially daily leisure crafting during the COVID-19 pandemic promotes subjective well-being for teleworkers. The aim of this study is to gain a better understanding of how leisure crafting can increase subjective well-being and perceived work productivity for teleworkers. It was hypothesized that for teleworkers there is a positive association between leisure crafting and subjective well-being, in particular life satisfaction (H1), as well as between leisure crafting and perceived work productivity (H2). The association of H1 can be explained by need satisfaction (H3). The association of H2 can also be explained by need satisfaction (H4). A cross-sectional survey study is used to test these hypotheses. The participants (N = 67) are employees who work at least 20 hours per week, of which at least 18% from home. The hypotheses are not supported by this research, but the scores of teleworkers on life satisfaction, perceived work productivity, leisure crafting and need satisfaction are high. An explorative analysis shows a positive significant association between life satisfaction and need satisfaction. This research adds to the conceptualization of leisure crafting from Petrou and Bakker (2016). The high values on the variables suggest that telework may be beneficial for teleworkers.

Keywords: Leisure Crafting, Subjective Well-being, Life Satisfaction, Perceived Work Productivity and Need Satisfaction

Should Telework be Banned? An Investigation of the Relationship between Leisure Crafting, Subjective Well-being, Perceived Work Productivity and Need Satisfaction for Teleworkers

During the COVID-19 pandemic, governments urged people to work at home as much as possible to remain safe due to the lack of effective treatments (Chang et al., 2021). Thus, many people changed from office-workers to teleworkers. After the start of the COVID-19 pandemic it is estimated that half of the U.S.A. working population started teleworking (Brynjolfsson et al., 2020). Though, the amount of teleworking or ‘telecommuting‘ already increased the past decades as a result of the possibility to completely work remotely due to technological advancements (Allen et al., 2015). Different countries passed laws supporting teleworking such as the Philippines for the private work sector (Republic Act 11165, 2018) and the U.S.A. for government employees (U.S. Equal Employment Opportunity Commission, 2005; U.S. Office of Personnel Management, 2021). The backing of teleworking by various governments opposes to the banning of telework in large companies such as Yahoo! (Keller, 2013; Lavey-Heaton, 2014) and Hewlett-Packard (Lavey-Heaton, 2014). Recently Tesla CEO, Elon Musk, announced the condition for teleworking to work at least 40 hours or more at the office (Cuthbertson & Kilander).

Similarly, in previous research contradictory evidence has been found for the effect of telecommuting (Boell et al., 2016). The effect of teleworking on productivity has been one of those conflicting findings (Boell et al., 2016). On one hand the reports state that telework contributes towards higher productivity for organizations and their employees (Gregg, 2011; Maruyama and Tietze, 2012; Overmyer, 2011). On the other hand it remains unclear whether telework contributes to productivity by reducing interruptions. As different forms of disturbances, ICT-related interruptions affect teleworkers more than their office working counterparts (Leonardi et al., 2010).

Furthermore, the reduced possibilities for interaction, may contribute to feelings of isolation and a lack of workplace involvement for teleworkers (Maruyama and Tietze, 2012; Sardeshmukh et al., 2012; Tremblay & Thomsin, 2012). Therefore, telework may also contribute towards decreased work satisfaction and a feeling of social isolation (Mann & Holdsworth, 2003; Pyöriä, 2011). Thus, it may result in a diminished sense of subjective well-being. In contrast, Vittersø et al. (2003) describe telework as the preferred structure. Well-being seems to be crucial in determining the degree of professional contributions; therefore it features on the agenda of various organizations (Vittersø et al., 2003).

Knowing this, it is important to investigate the influences on subjective well-being. Leisure activities are important promoters of well-being (Janurek et al., 2018; Sonnentag, 2001). Abdel Hadi et al. (2021) found that especially daily leisure crafting during the COVID-19 pandemic promotes subjective well-being for teleworkers. Leisure crafting is a relatively new concept, conceptualized by Petrou and Bakker (2016) as "the proactive pursuit and enactment of leisure activities targeted at goal setting, human connection, learning and personal development". Petrou and Bakker (2016) recognized the potential of leisure crafting to address and satisfy the three innate and basic human needs (Ryan & Deci, 2000), as they found a relationship between leisure crafting and two innate needs, autonomy and relatedness. The general research question that emerges from this introduction is how leisure crafting can increase subjective well-being and perceived work productivity for teleworkers. Therefore this study will focus on the relationship between leisure crafting, subjective well-being especially life satisfaction, perceived work productivity and need satisfaction.

Telework

One of the reasons stated by Boell et al. (2016) for the paradoxical outcomes of telework is that telework has not been defined properly. Therefore it is important to clearly define telework. Teleworking is considered to be a form of flexible work (Baruch, 2000).

Telecommuting is defined by Gajendran and Harrison (2007) as a form of work arrangement in which employees work remotely from the office, commonly at home, using technology to complete their tasks. In this thesis the focus is on teleworkers who either fully work from home or divide their work hours between home and the office. Smite et al. (2022) emphasize that a better understanding of the influence of these hybrid practices on well-being and productivity could lead to diverse future work policies. This could be beneficial for the preparedness for situations like the COVID-19 pandemic. According to Abdel Hadi et al. (2021), the COVID-19 pandemic urged a large number of employees to promptly accustom to teleworking.

A frequent outcome is the contribution of telework on increased flexibility and autonomy for workers (Maruyama and Tietze, 2012; Sardeshmukh et al., 2012; Tremblay & Thomsin, 2012). This can be explained by the fact that teleworkers usually decide for themselves under what conditions they work best since they experience more freedom to structure their work activities (Gajendran & Harrison, 2007; Morgan, 2004; Pyöriä, 2011). For managers adopting telework challenges control and assesses the commitment and productivity of their subordinates (Causer & Jones, 1996; Morgan, 2004; Pyöriä, 2011). Telework may hinder teamwork as colleagues are not physically in the same location, whereas the ability to build and share understanding and implicit knowledge is diminished (Brodt & Verburg, 2007; Pyöriä, 2011; Sarker et al., 2012).

Leisure Crafting

Teleworking may add to a work-life conflict as the boundary between work and private life becomes unclear (Sarker et al., 2012; Gold and Mustafa, 2013; Tremblay and Thomsin, 2012). Leisure experiences, particularly those including social interactions and physical activity, are important promoters of well-being (Janurek et al., 2018; Sonnentag, 2001). Abdel Hadi et al. (2021) found that especially daily leisure crafting during the COVID-

19 pandemic promotes subjective well-being for teleworkers This thesis uses the leisure crafting definition of Petrou and Bakker (2016), mentioned above. One of the elements derived from this definition of leisure crafting is not casual, but highlights the proactive, 'serious' and intentional aspects (Fritsch et al., 2005; Stebbins, 2001).

Life Satisfaction

As mentioned before, the effect of telework on subjective well-being is inconclusive (Boell et al., 2016). Generally subjective well-being has a multifaceted nature, with both affective and cognitive components (Diener et al., 1999). Kim et al. (2022) consider life satisfaction as a key indicator for subjective well-being. In this thesis life satisfaction is the measure of subjective well-being. Identified by Pavot and Diener (1993) life satisfaction is a distinct construct representing a cognitive and global evaluation of the quality of one's life as a whole. Erdogan et al. (2012) add that it combines several domains, including work, family and leisure. Next to being a cognitive component, life satisfaction is also correlated with the affective components of subjective well-being (Lucas et al., 1996). There are multiple ways in which leisure may play a role within a sustainable career, including the direct promotion of health (Han & Patterson, 2007) and life satisfaction (Kuykendall et al., 2015). From these findings the following hypothesis arises:

Hypothesis 1 (H1): for teleworkers leisure crafting has a positive association with subjective well-being, in particular, life satisfaction.

Perceived Work Productivity

In order to a better understanding of the effects of telework, not only a cognitive component of well-being (Diener, 1984), should be studied. A work-related outcome should be studied as well. In this thesis perceived work productivity is used. As mentioned before, telework contributes to higher productivity (work-related outcome) for organizations and their employees (Gregg, 2011; Maruyama & Tietze, 2012; Overmyer, 2011). This result may be

due to the reduced commuting to the company office as they may use this extra time to be more productive (Kanellopoulos, 2011; Pyöriä, 2011; Tremblay & Thomsin, 2012). Also longer commute times are associated with lower life satisfaction (Stutzer and Frey, (2008)

An alternative explanation regarding the increased productivity of teleworkers is the reduced amount of interruptions from coworkers (Fonner & Roloff, 2010; Morgan, 2004; Tremblay & Thomsin, 2012). As mentioned before, it remains unclear whether telework improves productivity by reducing interruptions (Leonardi et al., 2010). Related to perceived work productivity is job performance, which is negatively associated with emotional exhaustion as a component of subjective well-being (Abdel Hadi et al., 2021). Considering that telework contributes to higher productivity for employees (Gregg, 2011; Maruyama & Tietze, 2012; Overmyer, 2011), the facilitating effect of leisure activities on recovery from job performance on employees (de Bloom et al., 2018) and the increased leisure time may positively affect productivity (Klaver & Lambrechts, 2021), it is suggested that:

Hypothesis 2 (H2)**:** for teleworkers leisure crafting has a positive association with perceived work productivity.

Need Satisfaction

Need satisfaction and Leisure Crafting

Connected to leisure crafting and well-being is the self-determination theory. This is a macro-theory that consists of several mini-theories (Sheldon et al, 2003). One concept deriving from the self-determination theory is the basic need satisfaction theory by Ryan and Deci (2000). In this theory people are determined to satisfy three innate needs: autonomy competence and relatedness (Ryan & Deci, 2000). The feelings of self-governance over action refers to autonomy (Ryan & Deci, 2000). The feeling of effectiveness while engaged in challenging tasks refers to competence (White, 1963). Relatedness is associated with the satisfaction of the inherent need to feel connected to others, fostering a sense of belonging

(Baumeister & Leary, 1995). Petrou and Bakker (2016) researched whether the needs (Ryan and Deci, 2000) are positively associated with leisure crafting. They found that for employees the need for autonomy and relatedness were positively related to leisure crafting, while competence was not (Petrou & Bakker, 2016). Leisure crafting may add to the fulfilment of the need for autonomy (Ugwu, 2017).

In literature two important hypotheses feature to describe the interference of work and leisure (Guest, 2002; Snir & Harpaz, 2002). The spillover hypothesis states that positive experiences within one domain, for example work, repeat themselves in the other domain, for example leisure (Petrou & Bakker, 2016). Geurts and Demerouti (2003) forward the compensation hypothesis which shows that individuals use domains with favorable conditions (e.g. leisure) to realize a state that cannot be achieved in other domains with unfavorable conditions (e.g. work). Studies suggest that the relation between need satisfaction in work and nonwork domains may be compensatory. For example, employees benefit particularly from need satisfaction in the nonwork domain when a need is not satisfied in work (Hewett et al., 2017). On the other hand both cross-sectional (Walker & Kono, 2018) and diary (van Hooff & Geurts, 2015) studies have found that need satisfaction during work and during leisure were positively related. This points to a possible spillover effect between life domains (de Bloom et al., 2020).

Need Satisfaction and Subjective Well-being

Links were established between need satisfaction and well-being (for reviews, see Deci & Ryan, 2008; Tay & Diener, 2011; Van den Broeck et al., 2016) as well as between job crafting, need satisfaction, and well-being (Slemp & Vella-Brodrick, 2014). The impact of leisure crafting on basic psychological need satisfaction has been highlighted before in research (Petrou et al., 2017) which, in turn, proved to associate with employee health and well-being (e.g., de Bloom et al., 2020; Deci & Ryan, 2008). Reis et al. (2000) state that

someone's well-being may be considered as a direct result from need satisfaction. Hu et al. (2021) found that for workers an active leisure intervention effectively increases the need for competence and autonomy. Competence also mediates the effect of the active leisure intervention on life satisfaction. Although the relationship between need satisfaction and life satisfaction for teleworkers in particular remains unclear, the research on life satisfaction proposes need satisfaction (financial, interpersonal and esteem needs) to be a function of life satisfaction (Diener et al. 2002).

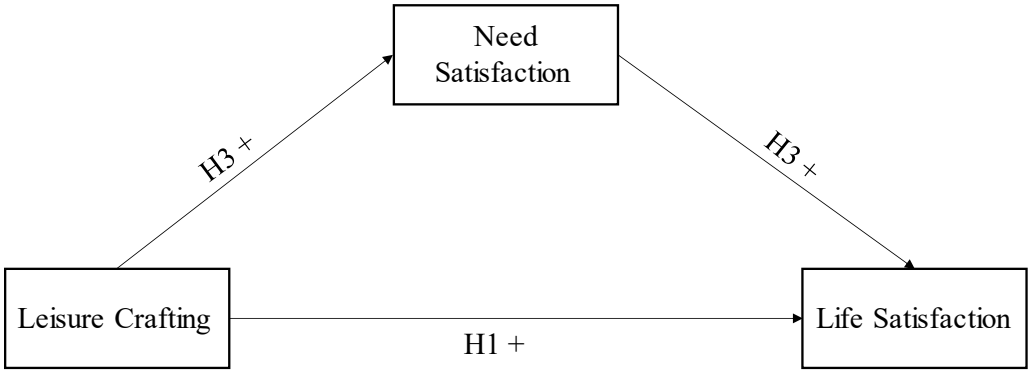
The Mediating Role of Need Satisfaction

Gagné and Deci (2005) state that a basic assumption is that the work situation influences employees' psychological functioning by satisfying the basic psychological needs. This insinuates a mediating role of the basic need satisfaction between the job characteristics-job outcomes relationship (Van den Broeck et al. 2010). Although the link between need satisfaction and leisure crafting has been established (Petrou & Bakker, 2016) as well as the link between need satisfaction and subjective well-being (Deci & Ryan, 2008; Tay & Diener, 2011; Van den Broeck et al., 2016), these constructs do not seem to have been linked to each other in a mediation relationship. Derived from these findings:

Hypothesis 3 (H3, can be seen in figure 1 as well as H1): for teleworkers, the positive association between leisure crafting and subjective well-being, in particular life satisfaction, is explained by the need of autonomy, competence and relatedness.

Figure 1

Hypotheses H1 and H3



Note: Graphic view of hypotheses H1 and H3.

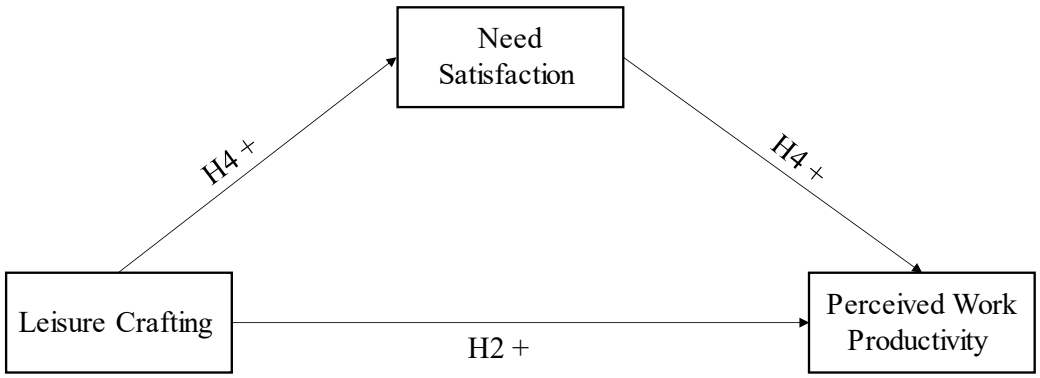
Need Satisfaction and Perceived Work Productivity

The relationship between perceived work productivity and need satisfaction does not seem to have been directly researched. Still it has been found that need satisfaction autonomy and competence not only boosts employees well-being but also their job performance (Baard et al., 2004; Desrumaux et al., 2015; de Gieter et al., 2018; Gagné & Deci, 2005; Leroy et al, 2015; Reis & Gable, 2000). This suggests a link with need satisfaction and perceived work productivity. The link between need satisfaction and leisure crafting (Petrou & Bakker, 2016) as well as the possible mediating role of need satisfaction has been explained already in the introduction of the third hypothesis. Consequently:

Hypothesis 4 (H4, can be seen in figure 2 as well as H2): for teleworkers, the positive association between leisure crafting and perceived work productivity is explained by the need for competence, autonomy and relatedness.

Figure 2

Hypotheses H2 and H4



Note: Graphic view of hypotheses H2 and H4

Methods

Participants

The participants of this research are working adults, who understand written English, work at least 20 hours per week, of which they work from for at least 18%. The ethical approval of this research was done by Ethics Commission of the Department of Psychology at the University of Groningen. This research is a voluntary response as well as a convenience sample. The researchers of this study asked people to complete the questionnaire. Furthermore, they distributed the questionnaire on various media platforms (LinkedIn, Facebook and WhatsApp) to collect responses from eligible people willing to respond. The received responses is a total of 108. The data of 67 participants are included in the study after filtering out participants based on the inclusion criteria, as well as the responses on the informed consent (see appendix A). Also, participants who did not fill out the questionnaire completely and those who answered *did not apply* to perceived work productivity as well as those who did not work from home at all, are excluded. Although nine participants did not answer the validation question accordingly, upon further investigation, it was decided that these participants were to remain, because their answers varied and there was no indication of a faulty response pattern. The questionnaire is filled out by participants of different

nationalities. Of the participants who filled out the questionnaire 67.2% currently live in Germany, 11.9% in the Netherlands and 4.5% in the U.S.A. The mean of the working hours per week was 40.15 hours (*SD* = 9.9) and the mean of working hours from home was 28.99 hours (*SD* = 12.4). The age of the participants was measured with intervals. The most frequent age intervals are, with each 31.3%, ranging from 25-34 years old and 45-54 years old. The youngest age group ranges from 18-24 years old with 11.9% and the oldest category (65-74 years old) consist of 1.5%. The participants consist of 50.7% females, 47.8% males and 1.5% identified as non-binary. The mode of completed education is, with 44.8%, the master's degree or an equivalent level; 31.3% completed a bachelor's or equivalent level of education. The participants were not compensated monetarily, They received the opportunity to reflect on their own leisure and work experiences for a better understanding of this and themselves.

Procedure

The data were collected in collaboration with other researchers. Therefore other variables were also measured in this questionnaire: work-family conflict, job satisfaction, psychological detachment and meaningful work. In order to finetune the questionnaire, it was pilot tested in the days before the data collection started. Participants were asked by the researchers to fill out the cross sectional questionnaire, mainly through social media platforms (LinkedIn, Facebook and WhatsApp). The message that participants received included the inclusion criteria, a link to the Qualtrics-questionnaire and appreciation if they forwarded this questionnaire to other eligible people. Data collection lasted for three and a half weeks.

Filling out the questionnaire took approximately 15 minutes. The online survey began with a statement of consent and proceeded to the leisure crafting scale. After leisure crafting the order of the assessed variables was as follows: life satisfaction, need satisfaction, perceived work productivity, psychological detachment, work-family conflict, meaningful work and demographics. In between the items of perceived work productivity a validation

question was included. After the demographics, it was possible for participants to fill out their email address when they appreciated to receive the findings of this study.

Materials and Instruments

Leisure Crafting

After the definition and examples of leisure crafting, nine items (α = .85) followed, indicating the level of leisure crafting the participants partake in. These items were derived from **Petrou and Bakker (2016).** A 5-point Likert-scale ranging from 1= N*ot at all* to 5= *Very much* was used to answer the items. An example item is: *"I try to build relationships through leisure crafting"*. To better understand leisure crafting, three questions regarding the type, frequency and situations in which leisure crafting was engaged in were added.

Perceived Work Productivity

The scale of Perceived Work Productivity consists of four items (α = .60). These items were derived from Chang et al. (2021), who was inspired by Belanger (1999**).** A 7-point Likert-scale ranging from 1= *Strongly disagree* to 7= *Strongly agree* was used to answer the items. An example item is: *"I can work more effectively when I telecommute than when I am at the office".* The option *does not apply* was added to these items, because some participants worked from home only.

Life Satisfaction

Leisure crafting consists of five items (α = .88). These items were derived from Diener et al. (1985). A 7-point Likert-scale ranging from 1= *Strongly disagree* to 7= *Strongly agree* was used to answer the items. An example item is: *"In most ways my life is close to ideal".*

Need Satisfaction

Need satisfaction consists of nine items (α = .81). Three items across three categories: autonomy, competence and relatedness. These three categories were measured with a 5-point Likert-scale ranging from 1= *Strongly disagree* to 5= *Strongly agree*. These items were

derived from Sheldon et al. (2001). Before each item the following sentence was given: "*reflecting on your life in general…"*. This sentence is slightly modified from the original sentence of Sheldon et al. (2001) original sentence. An example sentence is: *"I feel that my choices are based on my true interests and values"*.

Validation Question

To make sure the participants read the questions, a validation question was included within the items of perceived work productivity. The validation question consisted of one item stating: *"Please click on strongly disagree"*. This item was measured on a 7-point Likert-scale ranging from *1= strongly disagree* to *7= strongly agree*. The option *does not apply* was also added to the Likert-scale.

Strategy of Analysis

The first step of the strategy of analysis was to examine the items of every relevant scale: leisure crafting, life satisfaction, perceived work productivity, need satisfaction all and need satisfaction subscales apart. The percentage of hours worked from home in relation to the total hours worked was also calculated. Then the mean was computed for every relevant scale. After this, the scales of life satisfaction and perceived work productivity were standardized from a 7-point Likert-scale to a 5-point Likert-scale. After this the descriptive statistics (mean, standard deviation and correlations) were calculated of the relevant scales and the demographic information. In order to test the hypotheses, the assumptions for the linear regression had been checked, before the linear regression was conducted. After the linear regression, a mediation analysis based of Baron and Kenny (1986) was conducted through PROCESS after checking the same assumptions as the linear regression analysis. All of the steps were conducted in SPSS.

Results

Descriptive Results

In table 1, the descriptive statistics (mean and standard deviation) and the correlations between the independent variable, the dependent variables, the mediating variable and it's subscales can be found as well as possible covariates: age, gender, hours of work per week as well as the hours working from home. The correlation between the independent variable- leisure crafting and the dependent variable perceived work productivity was not significant, $r = .15$, $p = .24$. The same applies for the correlation between the independent variable- leisure crafting and the dependent variable life satisfaction, $r = .005$, $p = .97$. Notable is that leisure crafting correlates negatively significant with age $r = -.26$, $p < .037$. Life satisfaction correlates positively significant with need satisfaction overall $r = .66$, $p < .001$ and with the need satisfaction subscales individually. Another interesting positive significant correlations are between gender and hours worked per week $r = .29$, $p < .017$ and between gender and hours worked from home, $r = 26$, $p < .034$. Furthermore, hours worked per week and hours worked from home has a positive significant correlation, $r = .37$, $p < .001$. The means of leisure crafting ($M = 3.8$), the standardized life satisfaction ($M = 3.6$), the standardized perceived work productivity ($M = 3.9$) and need satisfaction overall ($M = 4.0$) are already relatively high, taking into account that it is measured on a 5-point Likert-scale.

Table 1

Descriptive Statistics and Pearson Correlations

Variable	M	*SD*	1	2	3	4	5	6	7	8	9	10	11
1. LC	3.77	.71	—										
2. LSstand.	3.59	.81	.005	—									
3.PWPstand.	3.90	.76	.15	.14	—								
4. NSall	4.04	.54	.16	.66**	.09	—							
5. NSA	3.83	.73	.18	.62**	-.004	.83**	—						
6. NSC	4.05	.62	-.04	.38**	.23	.67**	.40**	—					
7. NSR	4.24	.78	.20	.50*	.002	.78**	.48**	.23	—				
8. Gender	—	—	-.15	-.14	-.02	-.07	-.06	.02	-.10	—			

9. Age	—	—	-.26*	.17	.16	.04	.03	.03	.03	-.01	—		
10. Hours	40.15	9.91	-.10	.07	-.12	.10	.16	.009	.05	.29*	-.23	—	
11. HfH	28.99	12.36	-.02	.07	.06	.12	.09	.08	.10	.26*	.09	.37**	—

Note: *p < .05.
**p < .01.
The used variables are: leisure crafting (LC), standardized life satisfaction (LSstand.), standardized perceived workproductivity (PWPstand.), need satisfaction all variables (NSall), need satisfaction autonomy (NSA), need satisfaction competence (NSC), need satisfaction relatedness (NSR), gender, age, hours worked per week (Hours), Hours worked from home (HfH).
NSall, LSstand and PWPstand are measured using a 5-point Likert-scale, 1= *Strongly disagree* to 5= *Strongly agree*. LC is measured using a 5-point Likert-scale, 1= N*ot at all* to 5= *Very much*.

Assumptions Check Linear Regression

Before executing a linear regression analysis, the assumptions have to be checked. For H1, the independent variable leisure crafting and dependent variable life satisfaction, the assumptions of normality (through a P-P plot, see appendix B), homoscedasticity (through a scatterplot, see appendix B), multicollinearity (VIF=1.00) and independent observations (Durbin-Watson = 2.03) appear to be met. However the assumption of linearity (through the line of the scatterplot, see appendix B) appears to have been violated. As a result, no real conclusions can be drawn from a linear regression regarding leisure crafting and life satisfaction. No outliers, based on Cook's distance, were identified or excluded.

The assumptions also had to be checked for H2, the independent variable leisure crafting and the dependent variable perceived work productivity. The assumptions of normality, homoscedasticity (see appendix C for both plots), multicollinearity (VIF=1.00) and independent observations (Durbin-Watson = 2.16) appear to be met. The assumption of linearity (see appendix C, through the line of the scatterplot) has been violated. As a result no real conclusions can be drawn from a linear regression regarding leisure crafting and perceived work productivity. No outliers were identified.

Hypotheses Testing Through the Tobit Regression Analysis

The linear regression could not be executed, because of the linearity assumption violation and the suspected ceiling effect (see appendix D). Therefore the Tobit Regression Analysis has been executed (Cunillera, 2014). The result coming from the Tobit Regression Analysis for H1 is (z = 0.04, p = .97) are presented in table 2. This result indicates that the null hypothesis (no association) based on this analysis could not be rejected. The same applies to H2, the result (z = 1.20, p = .23) and can be found in table 3. The Baron and Kenny (1986) mediation analysis for H3 and H4 could not be executed as the same assumptions apply here as for the linear regression. Furthermore, the mediation analysis could not be executed as there was no signification relationships between H1 and H2.

Table 2

Tobit Regression Analysis

	Coefficient	Std. Error	Z-value	Significance
Intercept	3.57	.54	6.63	<.001
COMLC	.006	.14	.04	.97
Log(scale)	-.22	.09	-2.50	.01

Note: This table shows the results of the computed mean of the independent variable leisure crafting (COMLC) on the computed mean of dependent variable life satisfaction.

Table 3

Tobit Regression Analysis

	Coefficient	Std. Error	Z-value	Significance
Intercept	3.31	.50	6.60	<.001
COMLC	.16	.13	1.20	.23
Log(scale)	-.29	.09	-3.33	<.001

Note: This table shows the results of the computed mean of the independent variable leisure crafting (COMLC) on the computed mean of dependent variable perceived work productivity.

Explorative Analysis

The linear regression could not be executed. As a consequence the mediation analysis also could not be executed. An explorative analysis has been carried out with the 67 participants, investigating a possible relationship between need satisfaction and perceived work productivity and between need satisfaction and life satisfaction. The explorative analysis has been conducted, because otherwise the data on need satisfaction could not be further investigated. Table 1 showing a significant positive correlation between need satisfaction and life satisfaction could indicate an intriguing relationship between the variables.

For need satisfaction and life satisfaction the assumptions were checked and it appears that all the assumptions were met (see appendix E), even the linearity assumption. Therefore a linear regression was conducted. The result was as follows: R^2 = .44, $F(1,66) = 50.683$, $p <$ .001. This result indicates a relationship between need satisfaction and life satisfaction, that is not based on a coincidence.

For need satisfaction and perceived work productivity the assumptions were checked. All assumptions except linearity were met (see appendix F). Therefore a Tobit Regression Analysis was conducted, resulting in z = 1.14, p =. 26, which can be seen in table 4.

Table 4

Tobit Regression Analysis

	Coefficient	Std. Error	Z-value	Significance
Intercept	3.14	.71	4.42	<.001
COMNSALL	.20	.17	1.14	.256
Log(scale)	-.24	.09	-2.84	.004

Note: This table shows the results of the computed mean of the independent variable need satisfaction all (COMNSALL) on the computed mean of dependent variable perceived work productivity.

Discussion

Summary

The aim of this study was to understand the relationship between leisure crafting and life satisfaction as well as the relationship between leisure crafting and perceived work productivity and the possible mediating effect of need satisfaction on both of these relationships. The results conclude that all the hypotheses could not be supported. Therefore, there is no positive significant relationship found between leisure crafting and life satisfaction for teleworkers (H1). Also, no significant relationship was found between leisure crafting and perceived work productivity of teleworkers (H2). The planned mediation analyses could not be conducted, because the assumptions were not met and there was no relationship with H1 and H2. Therefore, H3 and H4 could not be investigated. The exploratory analysis did not find a significant association between need satisfaction and perceived work productivity. However, it did find a positive significant association between need satisfaction and life satisfaction. Lastly, teleworkers already had a high score on leisure crafting, life satisfaction, perceived work productivity and need satisfaction.

Possibly, the non-significant results are due to the small sample size. The publication crisis mentioned by Ferguson and Heene (2012) could also be a reason. This implies that many non-significant results in research were not published. Therefore, it is impossible to know whether studies had similar results as this one. Also a third variable may influence results such as socio-economic status, as a recognized control variable in terms of life satisfaction (Edwards & Klemmack, 1973). In addition, autonomy may already be satisfied by telework (Gregg, 2011; Maruyama and Tietze, 2012; Overmyer, 2011). Therefore, leisure crafting might not contribute to teleworkers as leisure crafting is also positively associated with autonomy (Petrou & Bakker, 2016). Leisure crafting may affect other aspects of subjective well-being more than life satisfaction. For example, Abdel Hadi et al. (2021) found a negative effect between leisure crafting and emotional exhaustion in the sense that more

leisure crafting was associated with less emotional exhaustion. In turn this may benefit subjective well-being.

Theoretical Implications

Self-determination Theory

The results add to the existing literature that between leisure crafting and life satisfaction and between leisure crafting and perceived work productivity, need satisfaction does not mediate. The exploratory analysis however, points to a possible connection between need satisfaction and subjective well-being in terms of life satisfaction for teleworkers. This is in line with previous research (for a review, see Deci & Ryan, 2008; Tay & Diener, 2011; Van den Broeck et al., 2016).

Compensation / Spillover Hypothesis

Indirectly, the high level of leisure crafting (leisure domain), of life satisfaction in general (across domains) and the high perceived work productivity (work domain) for teleworkers suggest that the spillover hypothesis (Petrou & Bakker, 2016) is more likely than the compensation hypothesis (Geurts & Demerouti, 2003). The evidence for the compensation hypothesis (Hewett et al., 2017) as well as the spillover hypothesis (Van Hooff & Geurts, 2015; Walker & Kono, 2018), has been mentioned in the introduction. Considering the need satisfaction component, autonomy is already satisfied by work (Boell et al., 2016). Consequently, the need to participate in leisure crafting could be less for teleworkers. This might indicate that the compensation hypothesis is more prominent. Autonomy as a satisfied need in the work domain, could lead to wanting less autonomy in the leisure domain. Considering the contradictory findings, Petrou and Bakker (2016) suggest that future research should embrace both hypotheses as complementary to each other and focus on additional factors (e.g. individual differences) that could play a role in the prevalence of the hypotheses.

Practical Implications

As mentioned above in this current research, teleworkers already score relatively high on leisure crafting, life satisfaction, need satisfaction and perceived work productivity. Therefore, it could be useful for organizations to design employment/trainings or interventions in a manner that telework is incorporated. This suggestion contradicts the banning or restricting of telework by companies such as Tesla (Cuthbertson & Kilander) and Yahoo! (Keller, 2013; Lavey-Heaton, 2014). The result of the exploratory analysis, a positive association between life satisfaction and need satisfaction for teleworkers, suggests that organizations that allow telework could benefit from trainings or interventions designed to enhance these satisfactions.

Strengths, Limitations and Future Research

The method section showed that a strength of this current research is that the applied scales, were used before and had a relatively high reliability. Therefore, it appears that the intended constructs seemed to have been measured. This research contributes to the limited research on leisure crafting (Petrou & Bakker, 2016) and the relationship between leisure crafting, subjective well-being and telework (Abdel Hadi, 2021), in terms of not finding a significant result. Therefore, this research possibly addresses the publication crisis, (Ferguson & Heene, 2012).

Limitations

This research has various limitations. The sample size is small (N = 67). Therefore, the power is reduced. All the used scales are self-report scales, which may entail the risk of common method bias (MacKenzie & Podsakoff, 2012) and social desirable answering (Morling, 2018). This in turn may lead to less reliable results. As the majority of the participants of this current research resides in countries based in individualistic cultures (Germany, the Netherlands and the U.S.A) and a cross-sectional convenience study is used, the results are not easily generalizable (Morling, 2018).

For subjective well-being, only life satisfaction has been measured as a cognitive component. The construct of subjective well-being has cognitive and affective components (Diener et al., 1999). Although life satisfaction is recognized as a key indicator of subjective well-being (Kim et al.. 2022), it is debatable whether a scale with five questions (Diener et al., 1985), is sufficient to produce a whole picture.

The conceptualization of leisure crafting could be a limitation. Although this research used the definition and scale that Petrou and Bakker (2016) developed, for an outsider this definition could be too complex. Therefore, the researchers of the current research tried to present an understandable definition of leisure crafting, as it is not a well-known concept due to it's novelty. Three questions were added in the current research in order to a better understanding of the partaking in leisure crafting, but also to verify whether the participants understood the concept correctly. Although it is uncertain if the definition and addition of the researchers contributed to ambiguity, there were some deviating answers on the suppletory question 'under what circumstances do you usually engage in leisure crafting?', ranging from question marks, to the time or the situations.

It could be unclear what is meant with passive or active hobbies as it is not usual to categorize leisure activities in this manner. Additionally, the leisure crafting of Petrou and Bakker (2016) demands proactive participation that is intentional and 'serious' (Fritsch et al., 2005; Stebbins, 2001). Therefore, the effect of 'active leisure activity' is measured, the 'passive leisure activity', such as reading. could also play a role in the subjective well-being of teleworkers. It has been found that active leisure pursuits are associated in higher levels of well-being (Csikszentmihalyi & Hunter, 2003; Holder et al., 2009) and passive leisure activities associated negatively with well-being (Argyle, 2001; Csikszentmihalyi & Hunter, 2003). Where as there are also findings that showed a positive effect on well-being by both active and negative leisure (Sonnentag, 2001).

Suggestions for Future Research

First derived from the limitations, a better definition of leisure crafting and a larger sample size would be suggested for future research. It could also be interesting to look at the effect of passive leisure activities on the need satisfaction, subjective well-being and perceived work productivity of teleworkers. Future research could also focus on the differences or similarities between teleworkers, solely office workers and solely teleworkers. Other factors influencing leisure crafting such as proactive personality (Abel Hadi, 2021) could also be a focus for future research. To further investigate the relationship between leisure crafting and subjective well-being a longitudinal research and/or experiment could be introduced, where leisure crafting can be taught and possible changes in need satisfaction, perceived work productivity, life satisfaction or subjective well-being can be measured**.** Kosenkranius et al. (2020) already researched such intervention for off-job crafting to enhance need satisfaction, well-being and performance, consisting of an on-site off-job crafting training, an individual off-job crafting plan for four weeks, the use of a smartphone app and a training session for reflection.

Conclusion

Although this research has limitations and no results from the hypotheses have been found, this research can be seen as a step further into the leisure crafting and subjective well-being research. To the knowledge of this researcher, the possible relationship between leisure crafting and the other variables have not been directly linked to each other, as it has been linked in this research. More questions arise than there have been answered. Questions that can fuel future research entail: What kind of relationship is there between need satisfaction and life satisfaction for teleworkers? If teleworkers score relatively high on life satisfaction, need satisfaction, perceived work productivity and leisure crafting, why do big companies such as YAHOO! (Keller, 2013; Lavey-Heaton, 2014) and Tesla (Cuthbertson & Kilander) waive from telework?

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Appendix A

INFORMATION ABOUT THE RESEARCH

VERSION FOR PARTICIPANTS

"LEISURE CRAFTING, NEED SATISFACTION, WORK LIFE BALANCE, AND SUBJECTIVE WELL-BEING"

PSY-2122-S-0248

- **Why do I receive this information?**
  - This study focuses on people who are teleworkers or work from home. We are interested in understanding teleworkers' crafting behavior, need satisfaction and subjective well-being.
  - The research is conducted by Dr. Nanxi Yan and her master/bachelor thesis students. No external parties are involved.

- **Do I have to participate in this research?**

Participation in the research is voluntary. However, your consent is needed. Therefore, please read this information carefully. Ask all the questions you might have, for example because you do not understand something. Only afterwards you decide if you want to participate. If you decide not to participate, you do not need to explain why, and there will be no negative consequences for you. You have this right at all times, including after you have consented to participate in the research.

- **Why this research?**
  - The purpose of this study is to understand how engaging in crafting behavior (i.e., making small changes in work and/or life) can help teleworkers to decrease stress and increase well-being.

- **What do we ask of you during the research?**
  - Before you start the study, you will first be asked for consent to participate.
  - If you consent to participate, you will be asked to fill in some questionnaires about your work experiences and work environment, crafting behavior and experiences, psychological detachment and subjective well-being.
  - The survey takes about 10 minutes of your time.
  - No compensation will be provided.

- **What are the consequences of participation?**
  - The benefit is that you get an opportunity to reflect on your own leisure and work experiences, which might help you to obtain more understanding of yourselves and your work and life experiences.
  - No costs, risks or harm is involved in the study.

- **How will we treat your data?**
  - The data will be used to write master thesis and academic publications.
  - The data will be collected and analyzed by Dr. Nanxi Yan and her bachelor thesis students. No sensitive data is collected. Your data will be stored on a secured cloud-

based system provided by the university of the researchers for 10 years (University of Groningen).
- Your responses (in combination with your name and email address) are considered personal data. Participants have the right to access, rectification, and erasure of their personal data. You can do so and also obtain a copy of personal data by sending an email to Dr. Nanxi Yan. No sensitive (personal data) will be processed as they will be removed and replaced by a personal identification number. The lists that can match participants' personal information and identifying number will be saved in Dr. Nanxi Yan's password protected computers and will be deleted once the data collection is done or study reports have been sent out to those who need it.
- To make science more transparent and reproducible, it has become common practice to make data publicly available. In line with this, we will upload the anonymized data sets to an open data repository (www.osf.io). Note that we will take all possible measures to ensure that your privacy is protected.

- **What else do you need to know?**

You may always ask questions about the research: now, during the research, and after the end of the research. You can do so by speaking with Dr. Nanxi Yan by emailing (n.yan@rug.nl).

Do you have questions/concerns about your rights as a research participant or about the conduct of the research? You may also contact the Ethics Committee of the Faculty of Behavioural and Social Sciences of the University of Groningen: ec-bss@rug.nl.

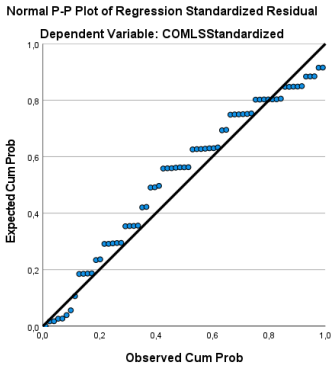
Do you have questions or concerns regarding the handling of your personal data? You may also contact the University of Groningen Data Protection Officer: privacy@rug.nl.

As a research participant, you have the right to a copy of this research information.

Appendix B

Figure B1

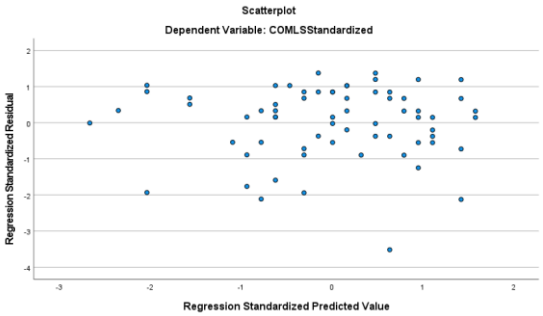
Assumption checking H1, P-P plot



Note: P-P plot of regression Standardized Residual. Dependent Variable: Computed Life Satisfaction Standardized.

Figure B2

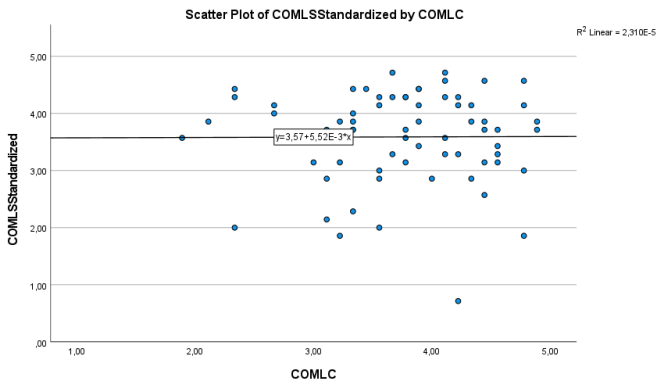
Assumption checking H1, Scatterplot Regression Residuals



Note: Scatterplot between y-axis Regression Standardized Residuals and x-axis Regression Standardized Predicted value. Dependent Variable: Computed Life Satisfaction Standardized.

Figure B3:

Assumption checking H1, Scatterplot IV and DV

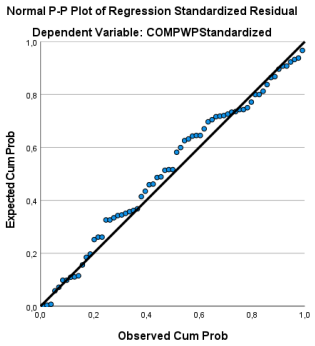


Note: Scatterplot y-axis: Computed life satisfaction standardized, x-axis: Computed leisure crafting.

Appendix C

Figure C1

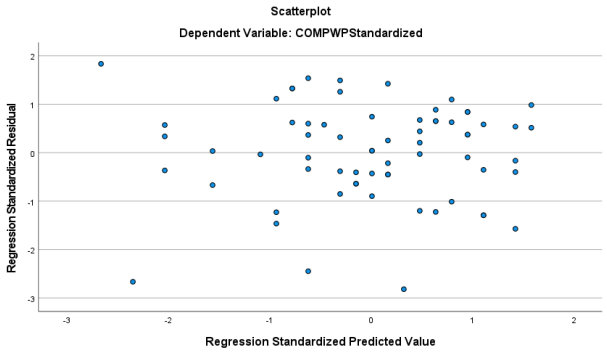
Assumption checking H2, P-P plot



Note: P-P plot of regression Standardized Residual. Dependent Variable: Computed perceived work productivity standardized.

Figure C2

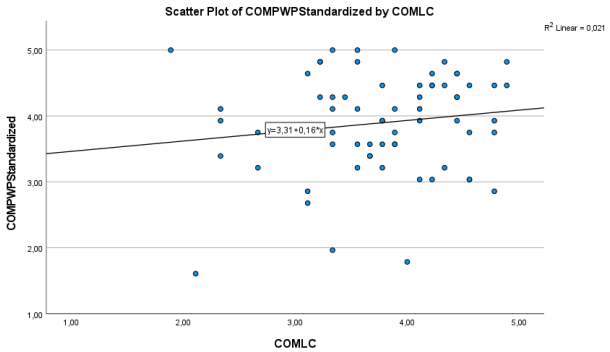
Assumption checking H2, Scatterplot Regression Residuals



Note: Scatterplot between y-axis Regression Standardized Residuals and x-axis Regression Standardized Predicted value. Dependent Variable: Computed perceived work productivity standardized.

Figure C3:

Assumption checking H2, Scatterplot IV and DV

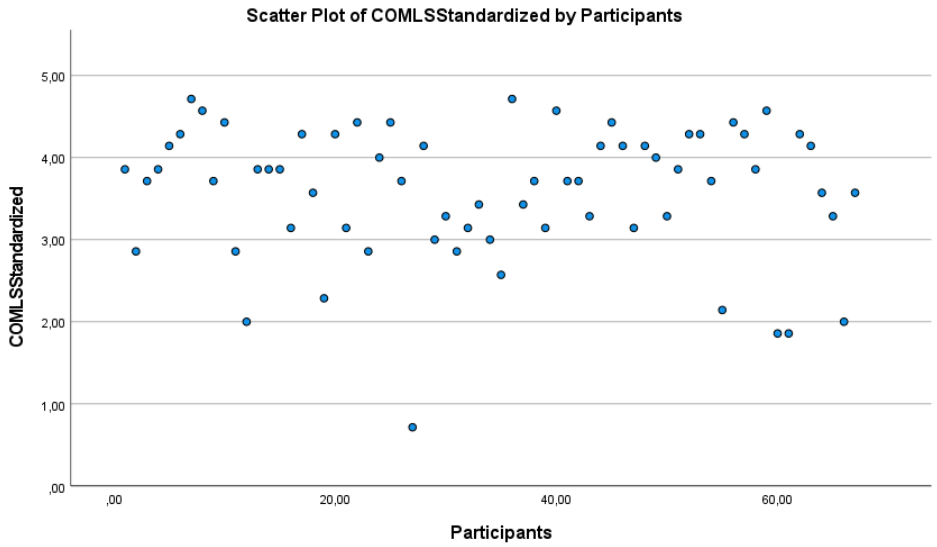


Graph C3: Scatterplot y-axis: Computed perceived work productivity standardized, x-axis: Computed leisure crafting.

Appendix D

Figure D1

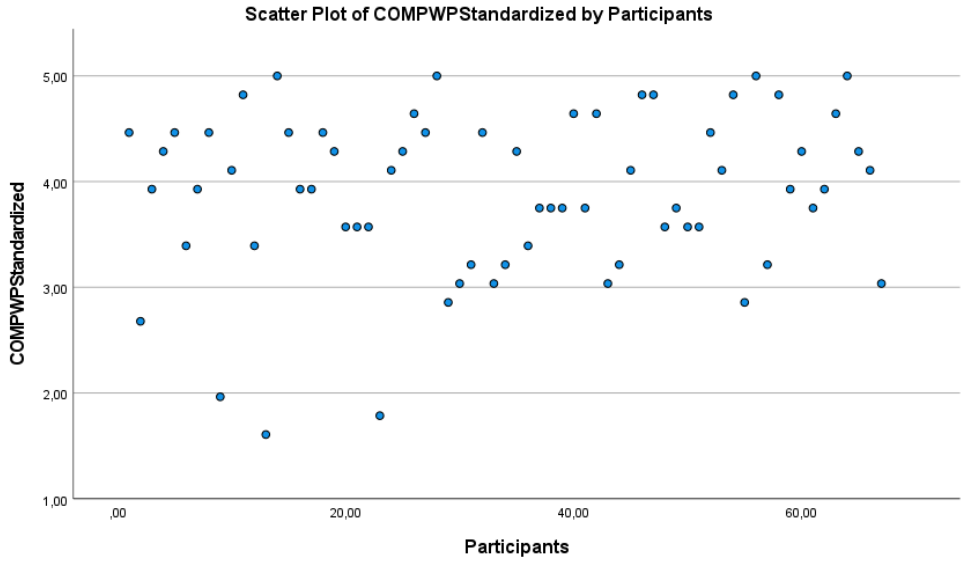
Suspected ceiling effect life satisfaction



Note: Graphic view of suspected ceiling effect of DV computed life satisfaction standardized.

Figure D2

Suspected ceiling effect perceived work productivity

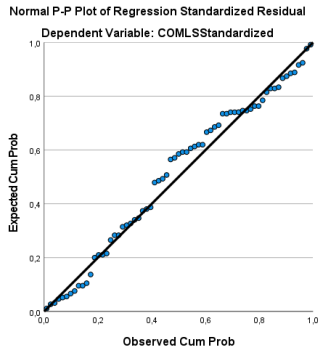


Note: Graphic view of suspected ceiling effect of DV computed perceived work productivity standardized.

Appendix E

Figure E1

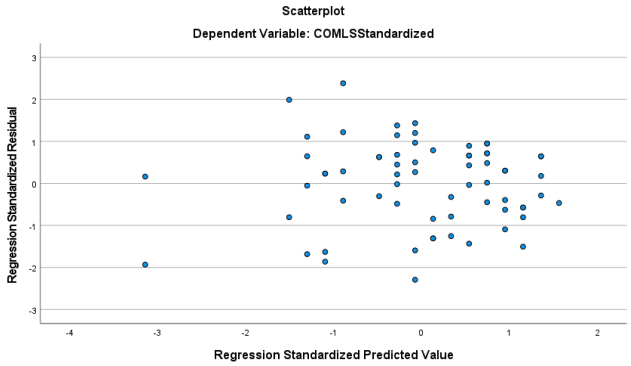
Assumption checking H3, P-P plot



Note: E1: P-P plot of regression Standardized Residual. Dependent Variable: Computed life satisfaction standardized.

Figure F2

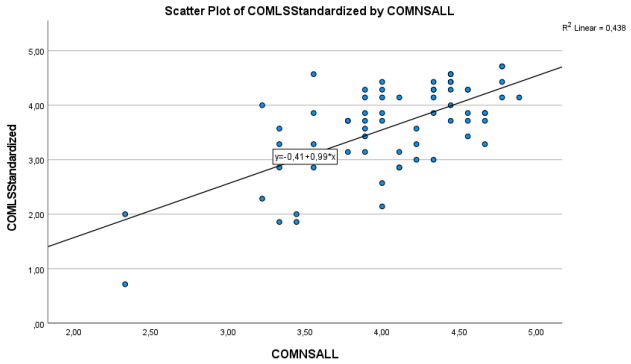
Assumption checking H3, Scatterplot Regression Residuals



Note: Scatterplot between y-axis Regression Standardized Residuals and x-axis Regression Standardized Predicted value. Dependent Variable: Computed life satisfaction standardized.

Figure E3:

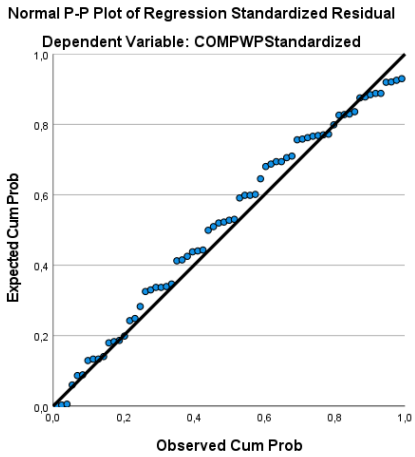
Assumption checking H3, Scatterplot IV and DV



Note: Scatterplot y-axis: Computed life satisfaction standardized, x-axis: Computed need satisfaction all subscales together.

Appendix F

Figure F1
Assumption checking H4, P-P plot



Note: P-P plot of regression Standardized Residual. Dependent Variable: Computed perceived work productivity standardized.

Figure F2
Assumption checking H4, Scatterplot Regression Residuals

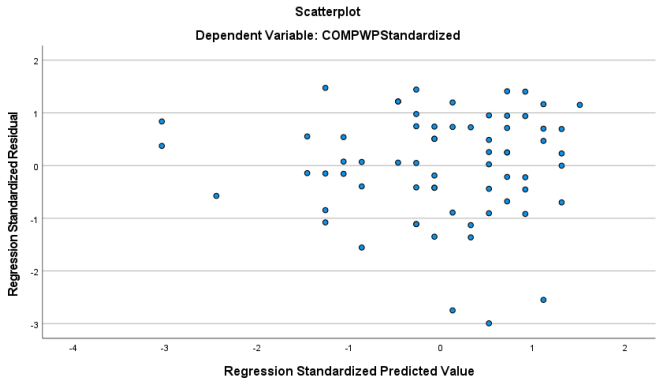
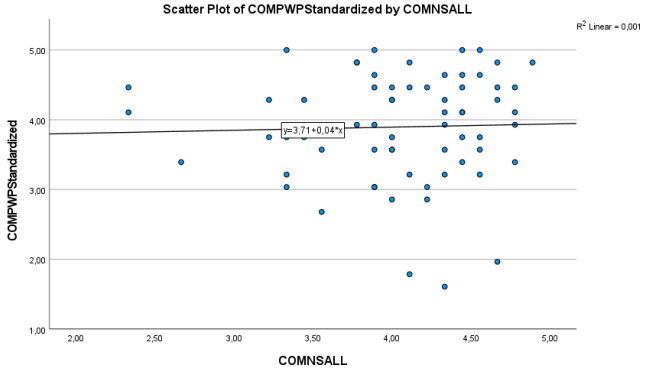


Figure F3:
Assumption checking H4, Scatterplot IV and DV



Note: Scatterplot y-axis: Computed perceived work productivity standardized, x-axis Computed need satisfaction all subscales together.

Appendix H

For this research the relevant items of the questionnaire:

Start of Block:

The following statements assess leisure crafting. Leisure crafting can be defined as actively engaging in leisure activities targeted at goal setting, human connection, learning and personal development.
Example: actively playing soccer with the intention to connect to others.
On the other side, just watching TV or listening to music is not considered leisure crafting.

I try to build relationships through leisure crafting.

- ○ Not at all (1)
- ○ Not really (2)
- ○ Undecided (3)
- ○ Somewhat (4)
- ○ Very much (5)

I try to find challenging activities outside of work.

- ○ Not at all (1)
- ○ Not really (2)
- ○ Undecided (3)
- ○ Somewhat (4)
- ○ Very much (5)

I try to increase my skills through leisure activities.

- ○ Not at all (1)
- ○ Not really (2)
- ○ Undecided (3)
- ○ Somewhat (4)
- ○ Very much (5)

I try to increase my learning experiences through leisure activities.

- ○ Not at all (1)
- ○ Not really (2)
- ○ Undecided (3)
- ○ Somewhat (4)
- ○ Very much (5)

I try to set myself new goals to achieve through leisure activities.

- ○ Not at all (1)
- ○ Not really (2)
- ○ Undecided (3)
- ○ Somewhat (4)
- ○ Very much (5)

Through my leisure activities, I look for inspiration from others.

- ○ Not at all (1)
- ○ Not really (2)
- ○ Undecided (3)
- ○ Somewhat (4)
- ○ Very much (5)

Through my leisure activities, I try to obtain novel experiences.

- ○ Not at all (1)
- ○ Not really (2)
- ○ Undecided (3)
- ○ Somewhat (4)
- ○ Very much (5)

My leisure time is a chance for me to grow and develop.

- ○ Not at all (1)
- ○ Not really (2)
- ○ Undecided (3)
- ○ Somewhat (4)
- ○ Very much (5)

I look for new experiences through leisure activities to keep myself mentally stimulated.

- ○ Not at all (1)
- ○ Not really (2)
- ○ Undecided (3)
- ○ Somewhat (4)
- ○ Very much (5)

Would you like to specify or add what leisure activities you engage in?

_____

How often do you engage in leisure crafting each week?

_____

Under what circumstances do you usually engage is leisure crafting?

_____

End of Block:

Start of Block: Life satisfaction (Diener et al., 1985)

The following statements assess life satisfaction. Life satisfaction refers to how satisfied you are with your life in general.

In most ways my life is close to ideal.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Slightly disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Slightly agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

The conditions of my life are excellent.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Slightly disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Slightly agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

I am satisfied with my life.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Slightly disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Slightly agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

So far I have gotten the important things I want in life.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Slightly disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Slightly agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

If I could live my life over, I would change almost nothing.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Slightly disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Slightly agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

End of Block: Life satisfaction (Diener et al., 1985)

Start of Block: Need satisfaction Q20 autonomy Q21 Competence Q22 Relatedness

The following statements assess need satisfaction. Need satisfaction measures the three basic psychological needs: autonomy, competence and relatedness.

Reflecting on your life in general...

I feel that my choices are based on my true interests and values.

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

I feel free to do things my own way.

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

I feel that my choices express my "true self".

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

Page Break

Reflecting on your life in general...

I feel that i was successfully completing difficult tasks and projects.

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

I feel that I'm taking on and mastering hard challenges.

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

I feel very capable in what I do.

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

Page Break

Reflecting on your life in general...

I feel a sense of contact with people who care for me, and whom I care for.

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

I feel close and connected with other people who are important to me.

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

I feel a strong sense of intimacy with the people I spent time with.

- ○ Strongly disagree (1)
- ○ Somewhat disagree (2)
- ○ Neither agree nor disagree (3)
- ○ Somewhat agree (4)
- ○ Strongly agree (5)

End of Block: Need satisfaction Q20 autonomy Q21 Competence Q22 Relatedness

Start of Block: Perceived Work Productivity

The following statements assess the work productivity that you perceive. Telecommuting refers to the practice of working from home, using tools such as the internet, email and the telephone.

I can work more effectively when I telecommute than when I am at the office.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)
- ○ Does not apply (8)

I can complete more daily tasks when I telecommute than I can when I am at the office.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)
- ○ Does not apply (8)

My telecommuting work environment allows me to complete work in a timely manner.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)
- ○ Does not apply (8)

My company provides sufficient remote office resources.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)
- ○ Does not apply (8)

End of Block: Perceived Work Productivity

Start of Block: Demographics

What is your age?

- ○ Under 18 (1)
- ○ 18 - 24 (2)
- ○ 25 - 34 (3)
- ○ 35 - 44 (4)
- ○ 45 - 54 (5)
- ○ 55 - 64 (6)
- ○ 65 - 74 (7)
- ○ 75 - 84 (8)
- ○ 85 or older (9)

What is your gender?

- ○ female (1)
- ○ male (2)
- ○ non-binary (3)
- ○ prefer not to say (4)

In which country do you currently live?

- ○ Netherlands (198)
- ○ Germany (199)
- ○ ------ (200)

Do you live by yourself or with someone else?

- ○ I live by myself (1)
- ○ I live with my spouse or partner (2)
- ○ I live with my spouse/partner and a child/children (3)
- ○ I live with a child/children (4)
- ○ Other, please specify: (6) _____

What is your highest completed level of education?

- ○ Primary education (1)
- ○ High school or equivalent level (2)
- ○ Bachelor's or equivalent level (3)
- ○ Master's or equivalent level (4)
- ○ Doctoral or equivalent level (5)

What kind of work contract do you have?

- ○ I have a permanent work contract (1)
- ○ I have a temporary work contract (2)
- ○ I´m self-employed (3)
- ○ Other, please specify: (4) _____

What is your current job title?

_____

Do you have a leadership position?

- ○ Yes (1)
- ○ No (2)

Display This Question:

If Do you have a leadership position? = Yes

*

How many people are you employing?

_____

How would you classify your current job? Please only focus on the actual tasks and activities you are performing in your job, and do not take your educational level into account.

- ○ Manual/blue collar worker (e.g. bus driver, technician, cleaner) (1)
- ○ Lower level white collar worker (e.g. call center agent, assistant, nurse) (2)
- ○ Upper level white collar worker (e.g. school teacher, doctor, human resource manager) (3)
- ○ High Management (e.g. CEO, section/departmental manager, headmaster) (4)

In which field are you working?

- ○ (Public) Administration (1)
- ○ Agriculture (2)
- ○ Arts, entertainment & recreation (3)
- ○ Communications & Media (16)
- ○ Construction (4)
- ○ Education (5)
- ○ Engineering (6)
- ○ Finance (7)
- ○ Health care & social services (8)
- ○ Information Technology (10)
- ○ Logistics (9)
- ○ Management of companies & enterprises (11)
- ○ Manufacturing (12)
- ○ Professional, scientific and technical services (13)
- ○ Real estate (14)
- ○ Research (19)
- ○ Retail (18)
- ○ Trade (15)
- ○ Other, please specify: (17) _____

How many years have you been working for your current **employer**?

_____

How many years have you been working in your current **position**?

_____

How many hours per week do you work on average (contractual working hours plus overtime)?

_____

How many hours per week do you work from home?

_____

End of Block: Demographics

Start of Block: Debrief

If you would like to receive the findings of this study please leave your email adress in the field below.

_____

End of Block: Debrief