



Enhancing Career Satisfaction and Job Satisfaction

The importance of interactions between the 4C's of adaptability; Concern, Control, Curiosity
and Confidence.

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Abstract

Career adaptability is a set of personal resources that help individuals to cope with career changes, and consists out of four dimensions: concern, control, curiosity and confidence. The purpose of this study is to examine the interactions between the 4C's of career adaptability, as predictors of career satisfaction and job satisfaction. In a sample of 228 employees, working in different branches, this study examined a moderation model. Concern is not positively related to career satisfaction and job satisfaction. Furthermore, no interaction effects for control, curiosity and confidence were found on the association between concern and career satisfaction and job satisfaction. Post hoc analyses suggest that control is the most predictive dimension for career satisfaction and job satisfaction and the relation of concern on career satisfaction and job satisfaction is mediated by an indirect effect of control. Improving the feelings of control, and the feelings that employees can make their own choices, is essential in fostering career satisfaction and job satisfaction.

Keywords: career adaptability, career satisfaction, job satisfaction, career construction theory.

Introduction

Career satisfaction and job satisfaction are important constructs in predicting turn-over intentions and performance (Chan & Mai, 2015; Karatepe, 2012). Career adaptability is positively related to career satisfaction and job satisfaction (Rudolph, Lavigne, & Zacher, 2017; Savickas & Porfeli, 2012). This implies that individuals who are more adaptable to their careers experience a higher degree of satisfaction. ‘‘Workers with high levels of career adaptability prepare for future career tasks (concern), take responsibility for their career development (control), explore possible future selves and career opportunities (curiosity), and believe in their ability to succeed in solving career-related problems (confidence)’’ (Rudolph et al., 2017, p.17-18). The central aim of this study is to examine the impact of the interactions between the four aspects of career adaptability (4C’s), on career satisfaction and job satisfaction.

Career adaptability is a central concept in the Career Construction Theory, which encompasses the dimensions *concern*, *control*, *curiosity* and *confidence* (Savickas, 1997). Previous research focuses mainly on the overall effect of career adaptability on career satisfaction and job satisfaction (Rudolph et al., 2017), however a study on the relationships between the four dimensions with respect to career satisfaction and job satisfaction is missing. Previous research shows that the 4C’s are strongly interrelated (Hirschi, Hermann & Keller, 2015), but they are theoretically and empirically distinct (Savickas & Porfeli, 2012). The fact that the 4C’s are interrelated, but also theoretically and empirically distinct from each other makes it relevant to investigate the relationships between them. Are all 4C’s evenly relevant in optimizing career adaptability for an individual? Can some of the 4C’s reinforce each other, or can they be considered to work quite ‘independently’? These are relevant questions in guiding people’s career satisfaction and job satisfaction and in studying job and career design. If interactions are found between the 4C’s, this can mean that, for example, the ‘concern’ aspect contributes even more to the overall impact on satisfaction with a certain degree of ‘control’. If it is understood which dimensions and their interactions are the most critical for career satisfaction and job satisfaction, counseling and training can be focused on those dimensions.

Therefore, the research question that is central in this study is: *How do the interactions between the four dimensions of career adaptability (concern, control, curiosity, confidence) as predictors, relate to career satisfaction and job satisfaction?* This study is an extension to existing literature since little is understood empirically about interactions among

the 4C's of career adaptability, in relation to career satisfaction and job satisfaction. It contributes to the insight in the nomological network of the career adaptability construct.

The knowledge gained from this study will be of practical relevance, as it can be used in practical job and career advice. Once it is known which predictors significantly contribute to a higher level of satisfaction, and which interactions between dimensions enhance the effect on satisfaction, HR managers can improve and adjust their policy, in order to make sure all employees are highly satisfied.

Career Satisfaction and Job Satisfaction

This study is focused on subjective career success, in terms of career satisfaction (CS) and job satisfaction (JS). The abbreviations CS and JS will be used throughout the study. Career satisfaction and job satisfaction are both forms of adaptation results, as described in the career construction theory (Savickas, 1997), but are also distinct from each other. *Career satisfaction* is conceptualized as the evaluation of an individual's success in achieving different career-associated objective (e.g., achievement, income) and subjective accomplishments (Greenhaus, Parasuraman, & Wormley, 1990). *Job satisfaction* is defined as a work-related attitude that combines cognitive and emotional evaluations of one's job experiences (Brief & Weiss, 2002; Locke, 1976, from Zacher & Griffin, 2015). Job satisfaction is about evaluating the job, and career satisfaction is more about evaluating the progress in a career. The one is not a requirement for the other.

The Career Construction Theory and the Person-Environment Fit model both suggests that the aim of career adaptation is to balance the personal needs of workers with environmental demands and opportunities (Savickas, 2013, Savickas & Porfeli, 2012). If there is a balance, the employee feels healthy, enjoys the work and performs well (Savickas, 2013). Career adaptability resources (the 4C's) are a type of human capital that is acquired over time, changes due to education and work experiences, which drives the strategies that direct the adaptive behavior of the career goals of employees (Savickas & Porfeli, 2012). So, improvement of the 4C's enhances adaptation, and therefore increases CS and JS.

Research by Fiori, Bollman & Rossier (2015) shows that individuals with strong adaptability resources (4C's) perceive greater control over workplace uncertainty and feel comfortable to overcome barriers, reduce the impact of unstable negative emotions and experience lower overall work stress. Previous research has revealed that employees who are higher in adaptability, experience more satisfaction with their career ($r_c = .42$) and job ($r_c = .19$) (Rudolph et al., 2017; Savickas & Porfeli, 2012; Zacher, 2014). By this, it is seen that

career adaptability has not always the same effect on career satisfaction as on job satisfaction. For this reason, they are both integrated in the research model as separate dependent variables.

Career Adaptability

Career adaptability refers to the resources (4C's) that help employees deal with career changes and challenges, to manage their careers proactively (Savickas, 1997). The resources are the self-regulation strengths that a person may draw upon to tackle career changes and challenges. The resources are based on the competencies: planning, decision making, exploring and problem solving (Savickas, 2013). Where the 4C's are originally based on in detail is not widely described.

The adaptive individual is conceptualized as (a) becoming *concerned* about the vocational future, (b) increasing personal *control* over one's vocational future, (c) displaying *curiosity* by exploring possible selves and future scenarios, and (d) strengthening the *confidence* to pursue one's aspirations. These definitions are widely used in different research about career adaptability (e.g. Hirschi et al., 2015; Savickas, 2013; Savickas & Porfeli, 2012).

The career construction theory shows that there is a certain order in the dimensions. Savickas (2013) defines 'concern' about one's own vocational future to be the first and most important dimension of career adaptability. The fundamental role of concern in constructing careers is reflected by the primary position given to it by influential theories of vocational development, such as Ginzberg's time perspective, Super's planfulness, and Harren's awareness (Savickas, Silling, & Schwartz, 1984). "Thinking about one's work life across time is the essence of career because a subjective career is not a behaviour; it is an idea" (Savickas, 2013). Results from Hirschi et al. (2015) illustrated that concern showed on average the highest correlation to different adaptation measures. This indicates that not all of the four career resources are equally effective predictors of career outcomes, as verified by research of Zacher (2014). Concern was a significant predictor of career satisfaction (no specific research outcomes on the strength of the relation were reported) (Zacher, 2014). Career adaptability also positively predicted job satisfaction (Zacher & Griffin, 2015), but no details are given about the effect of the 4C's on job satisfaction. Due to the fact that concern is seen as the most important dimension and having a significant effect on career satisfaction, concern is taken as the main predictor with the largest share in career satisfaction and job satisfaction. The following hypothesis is formulated:

Hypothesis 1. *Concern is positively associated with career satisfaction and job satisfaction.*

Savickas (2013) defines ‘control’ over an individual’s own vocational future to be the second most important dimension in career adaptability. The fundamental function of control in constructing career is reflected by the amount of research on topics such as independence, internal locus of control, autonomy, self-determination and agency (Blustein & Flum, 1999, from Savickas, 2013). The third dimension is ‘curiosity’. It means the initiative to learn about the types of work that one might do and the job prospects for doing it (Savickas, 2013). The essential role of curiosity in constructing careers is reflected in the frequent attention provided to it by important theories of professional development under the concepts of explorations and information seeking behaviour. The fourth and final dimension is ‘confidence’. Self-confidence remarks the anticipation of success in facing challenges and dealing with the problems.

Moderators: control, curiosity and confidence

First, in many studies, the 4C’s in relation to the outcome variable are researched separately and in combination, but the interactions of the 4C’s have not yet been researched.

Second, analyses in research by Zacher (2014) revealed that the effects of concern, control and confidence were positive and significant when predicting career satisfaction, whereas curiosity had no significant effect. Thus, the other dimensions of career adaptability accounted for the shared variance between curiosity and career satisfaction (Zacher, 2014). In analogy with research on coping strategies, it has been found that certain adaptive and problem-focused coping strategies (selection, optimization, and compensation) can increase the effects of each other when designed in a multiplicative context (Zacher, Chan, Bakker, & Demerouti, 2015). They concluded that distinct strategies lead to beneficial effects such as accomplishments and well-being, since the use of these strategies in combination allows individuals to optimally distribute their limited resources. This implies that a non-significant main effect of one of the 4C’s on CS and JS can be enhanced when researched in an interaction effect.

Third, career adaptability can be seen as a multidimensional and aggregate construct, and each of its subdimensions contributes to the overall level of adaptability alone and in combination (Savickas, 2013). Therefore, it is expected that control, curiosity and confidence

moderate the effect of concern on CS and JS, because the average level of career adaptability increases when more resources are added to the model.

Based on this reasoning, and the reasoning that concern is the most important dimension, control, curiosity and confidence are researched as possible moderators on the effect of concern on CS and JS. The moderation effects are expected to be positive, because it includes concern, which is a strong predictor for CS. In this study, Savickas's (2013) order was followed in adding the moderators, but there is a lack of empirical evidence for a certain order. Figure 1 shows the conceptual research model. The following hypothesis will be examined:

Hypothesis 2. The effect of concern on career satisfaction and job satisfaction is more pronounced under high levels of control.

Hypothesis 3. The effect of concern on career satisfaction and job satisfaction is more pronounced under high levels of curiosity.

Hypothesis 4. The effect of concern on career satisfaction and job satisfaction is more pronounced under high levels of confidence.

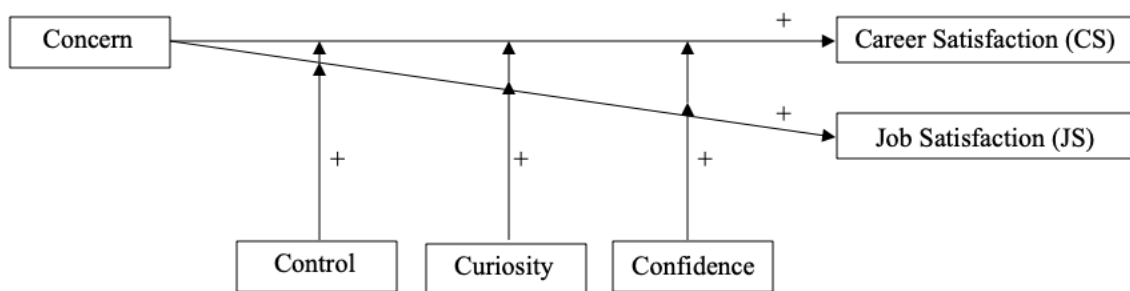


Figure 1. The expected relationships between concern, control, curiosity, confidence, career satisfaction and job satisfaction.

Method

Procedure

A data collection based on a survey was chosen, because that allows to question a large group of people and to test various variables and hypotheses in one go. The study is signed in with the University of Utrecht's Ethical Review Board and their protocol is followed. All data collection is guaranteed anonymous. Since the study examines career

satisfaction and job satisfaction, the survey was conducted among people who belong to the active labour force of the Netherlands and aims to generalize it to this research population. The survey was conducted during times of Corona. Therefore, job insecurity is included as variable in this study.

The program Qualtrics (Qualtrics XM, 2019) was used to design the online questionnaire for collecting the data (Appendix A). WhatsApp and email are used to communicate quickly and to reach a wide range of people. By the use of the Internet, participants were able to fill out the questionnaire anywhere, both on a laptop and on a mobile phone.

Participants

A power analysis was calculated by using G*Power 3.1 (Faul, Erdfelder, Buchner, & Lang, 2009). A power of 0.95 was used, with 7 as number of predictors (concern, control, curiosity, confidence, concern*control, concern*curiosity, concern*confidence), with a medium effect size of 0.15. Effect size of .15 is defined as a medium for multiple regression analyses by G-power (Cohen, 1988). The number of participants in the power analysis was 153.

A total of 228 participants filled in the questionnaire, of whom 102 (44.7%) were male and 126 were female (55.3 %). The total amount of filled in questionnaires was 240, but 12 participants (5%) didn't finish the survey. No extreme values were found, as the questionnaire had set a limit for this. Ages ranged from 21 to 70 years ($M= 46,2$, $SD = 12.67$). Most participants were highly (Hbo) educated (44.3%) or academically educated (34.6%). A significant proportion of the sample has over 21 years of work experience (61.8%). An overview of the descriptive statistics the sample can be found in Appendix B.

Measures

To ensure the validity of the study, existing scales with a high degree of reliability were used. The online questionnaire is compiled using the existing scales below and measured the following variables: career satisfaction, job satisfaction, job insecurity (COVID-19) and career adaptability (concern, control, curiosity, and confidence).

Career satisfaction was measured with five items from the Career Satisfaction Scale (Greenhaus, Parasuraman, & Wormley, 1990). Participants provided their responses on a 5-point Likert-type scale ranging from 'strongly disagree (1)' to 'strongly agree (5)'. An example item is 'I am satisfied with the progress I have made toward meeting my overall

career goals''. The Cronbach Alpha for the CSS scale has been reported as 0.88 by Greenhaus et al. (1990). In this current study, an internal consistency of .85 was measured. The average inter item correlation is .53.

Job satisfaction was measured with three items from Hesketh and Griffin (2010), as described in Zacher & Griffin (2015). The items are "Overall, I am very satisfied in my job", "I am very interested in my job", and "I get a great deal of accomplishment from my job" ($\alpha=.87$). Participants provided their responses on a 5-point Likert scale ranging from "strongly disagree" (1) to "strongly agree" (5). In this study, an internal consistency of .82 was measured. The average inter item correlation is .60.

Career Adaptability was measured with the Career Adapt-Abilities Scale (CAAS) – Netherlands Form. It consists of four scales, each with six items, which measure concern, control, curiosity, and confidence (Savickas & Porfeli, 2012) (van Vianen, Klehe, Koen, Dries, 2012). The items were graded on a 5-point scale, from (1) totally disagree to (5) totally agree. The total score for the CAAS-Netherlands has a reliability of .89, with subscale scores for concern (.84), control (.72), curiosity (.72) and confidence (.75) (van Vianen et al., 2012). The Cronbach's alpha in this study was .84, with subscale scores for concern (.81), control (.75), curiosity (.68), and confidence (.66). The average inter item correlation in this study for the CAAS-Netherlands is .18, with subscale scores for concern (.41), control (.34), curiosity (.26) and confidence (.25).

Perceived job insecurity is included in the survey as extra variable. Rising unemployment is an increasing problem associated with COVID-19's pandemic spread. As in many crises, this compounds job insecurity feelings with proven negative effects on individuals (e.g., in terms of health and well-being), organisations and culture (Rigotti, de Cuyper, Sekiguchi, 2020). Job insecurity is negatively associated with job satisfaction, and therefore an important variable to take into account (de Witte, van der Elst, & de Cuyper, 2015). It is measured using four items, taken from De Witte (2000), validated by Van der Elst, De Witte, & de Cuyper, 2014). These items refer to two aspects of job insecurity: the affective aspect (e.g. "I feel insecure about the future of my job") and the cognitive aspect (e.g. "I am sure that I will be able to keep my job "). The items were graded on a 5-point scale, from (1) totally disagree to (5) totally agree. Cronbach's alpha = .93 (Van der Elst et al., 2014). The internal consistency of this study scored lower ($\alpha=.88$), with an average inter item correlation of .66.

Principal component analyses. To investigate the underlying structure of the 24-item questionnaire for career adaptability, a principal component analysis with oblique rotation (direct oblimin) is carried out. Oblique rotation method is used, because it is assumed that factors are correlated (Field, 2013). Prior to running the PCA, examination of the data indicated that not every variable was perfectly normal distributed. Despite the significant Shapiro-Wilk tests, each variable does appear to be reasonably normally distributed when examining the histogram plots. Given the robust nature of factor analysis, the deviations have not been considered problematic. Furthermore, the relationships between pair of variables were generally linear. The Kaiser-Meyer-Olkin measure verified the adequacy of the sample for the analysis, KMO = .799. Six factors had eigenvalues over Kaiser's criterion of 1 and in combination explained 56.79% of the variance. The scree plot showed inflexions that would justify retaining either 4 or 6 factors. Therefore, a PCA analyses is performed with fixed numbers for 4 factors as well. The four factors explained 47.09% of the variance. The factor loadings can be seen in Appendix C. From both analyses it is seen that the items for curiosity and confidence do not load on the factors as expected. According to Field (2013), items that are $<.30$ do not correlate very well with the scale overall and these have to be dropped. The results showed that two items (one of curiosity, and one of confidence), are $<.30$. However, deleting the item curiosity₅ and item confidence₃ did not improve the Cronbach's alpha for curiosity and confidence. For this reason, the original scales have been used in further analyses, loading on four factors. However, the itemset needs to be examined in further research, but this is beyond the scope of this study. It will be addressed in the discussion. An average score was calculated for concern, control, curiosity and confidence, based on 6 items per subscale.

Control variables. Career adaptability is a form of human capital, which is accumulated over time, and changes due to education and work experience (Savickas & Porfeli, 2012). As human capital has been proposed to be an important predictor of career adaptability (Zacher, 2014), education and work experience (tenure in years) are included as control variables. First, education might influence the effects career satisfaction and job satisfaction, because it is known that human capital positively contributes to career adaptability (Savickas & Porfeli, 2012). This implies, that when people are more educated, they experience more career adaptability, and this leads to higher levels of CS and JS. Since the study contains mainly highly educated people, it is controlled for education, so that the findings are not distorted. Second, work experience (in years) might also harm CS and JS, because this is also a form of human capital (Savickas & Porfeli, 2012). So, older worker

may possess greater career adaptability than young workers, because of more work experience. This implies that more work experience, results in higher levels of career adaptability, and therefore influences career satisfaction and job satisfaction.

Statistical analyses

To analyse the data, IBM SPSS Statistics (Version 26.0) was used. First all scales were tested for outliers, normality, multicollinearity, linearity, and homoscedasticity of residuals. Most assumptions were met. Only the normality assumption needs more attention. The p-values of the Shapiro- Wilk test show that the scales are not normally distributed. However, the Shapiro-Wilk test shows that all the scales are close to $W = 1$, which indicates that a normal distribution of the scales can be expected. Furthermore, with a sample size of 228, the Central Limit Theorem ensures that the distribution will be approximately normal. According to the Central Limit Theorem, for large samples ($N > 30$) the distribution is normal anyway, even though it is not normally distributed in the population (Field, 2013).

After that, a correlation matrix is used to determine whether any significant effects between the variables exist. To estimate the proportion of variance in CS and JS that can be accounted by the independent variables, a hierarchical (or sequential) multiple regression analysis is performed. The hierarchical method is selected, because first the main effects are tested, and after that the interaction terms are added. Separate hierarchical regression analyses have been performed for the dependent variables career satisfaction and job satisfaction, with both five models. In model 1 the control variables were entered (education, work experience). In model 2, the main effects for concern, control, curiosity and confidence were added. Hypothesis 1 is tested in model 2, as it shows if concern is a significant predictor for CS and JS. The interaction terms for control, curiosity and confidence were included in model 3, 4, and 5. Model 2 contains the control variables and the 4C's. Model 3 contains the control variables, the 4C's and the interaction term concern*control. Model 4 contains the control variables, the 4C's and the interaction term concern*curiosity Model 5 contains the control variables, the 4C's and the interaction term concern*confidence. Hypotheses 2, 3 and 4 can be supported if the interaction effects are significant. In the analyses, centered scores for the 4C's were used (subtracting the mean value from each score) to reduce the problem of multicollinearity. Standardized coefficients are presented in Tables 3.

The emphasis in this study is on testing the hypotheses which focus on the interactions among the 4C's. The hypotheses are formulated this way, as in prior studies, much work has been conducted on the main effects of the 4C's. However, the main effects

are also being tested in this study. If mainly main effects are found, and they are strong, then the interactions can be seen in a different light. So, the regression is started with the main effects, but in fact, the hypotheses are formulated primarily on the interactions among the 4C's.

Common method bias. This study collected data on the independent and dependent variables from the same respondents at one point of time. Therefore, a Harman's Single-Factor Test (Podsakoff, MacKenzie, Lee & Podsakoff, 2003) is applied to test for potential common method variance as false internal consistency might be present in the data. The maximum variance which is explained by a single component is 20.47. So, it may be concluded that the data does not suffer from the common method bias as the threshold for the variance explained by a single factor is less than 50% (Eichhorn, 2014). This implies that we can assume that there is enough independence between the measurements.

Results

Descriptive statistics

Correlation analysis. An overview of means, standard deviations, and intercorrelations is presented in Table 2. As for the control variables, education positively correlated with career satisfaction ($r = .18, p < .01$) and work experience positively correlated with job satisfaction ($r = .17, p = .05$). As for the research model, all correlations were found to be positive and significant, as expected. It implies that the level of CS and JS will increase when the level of concern, control, curiosity and confidence increases, or vice versa. Especially control highly correlated with the outcomes CS ($r = .46, p < .01$) and JS ($r = .43, p < .01$). What is striking is that, compared with the other three dimensions, concern has the lowest level of correlation with CS ($r = .25, p < .05$) and JS ($r = .15, p < .05$). This could mean that there is room for the other C's to contribute to the explained variance in CS and JS. What is also striking, is that CS and JS are highly positively correlated ($r = .56, p < .01$). This implies that when the level of job satisfaction increases, the level of career satisfaction increases as well, or vice versa. This is reasonable since job satisfaction can be part of individuals' career satisfaction. However, CS and JS are still separately included as dependent variables in this study, because they are at conceptual level defined as distinct constructs and 25% overlap is reasonable but also meaningful regarding the definitions. Job insecurity is negatively related with CS and JS. This indicates that when job insecurity increases, CS and JS decreases, or vice versa. Control is significant and negatively related to job insecurity. This implies that when control increases, job insecurity decreases, or vice versa.

Table 2.

Range, means, standard deviations, and correlation coefficients of study variables (N=228).

	Range	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8
1. Education ^a	1-7	5.96	1.16								
2. Work experience ^b	1-52	23.17	12.99	-.09							
3. Concern	1-5	3.65	.61	.14*	-.02						
4. Control	1-5	4.03	.51	.12	.15*	.26**					
5. Curiosity	1-5	3.85	.50	.15*	.13*	.39**	.32**				
6. Confidence	1-5	4.10	.42	.09	.07	.27**	.49**	.38**			
7. Career Satisfaction	1-5	3.81	.62	.18**	.11	.25*	.46**	.27**	.34**		
8. Job Satisfaction	1-5	4.03	.67	-.01	.17*	.15*	.43**	.28**	.24**	.56**	
9. Job Insecurity	1-5	1.94	.89	-.03	.02	-.05	-.18**	.10	-.09	-.21**	-.18**

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

^ain categories: lagere school, mavo/lbo/vmbo, havo, vwo, mbo, hbo, wo.

^bin years.

Hierarchical multiple regression analyses

To test the influences of concern, control, curiosity, confidence and their interactions on career satisfaction and job satisfaction, two hierarchical (or sequential) regression analyses are performed. Work experience and education were included in the regression analyses as control variables. All the models in the regression analyses contain block 1 (control variables). To test the interaction effects, the main effects for concern, control, curiosity and confidence (block 2) are first added in the regression, in model 2. In model 3, block 3 with the interaction effect for control is added (concern*control). In model 4, block 3 is removed, and block 4 is added (concern*curiosity). In model 5, block 4 is removed and block 5 (concern*confidence) is added.

Main effects. As stated in the method section, prior to going into the hypotheses, it is seen if the main effects are present in this study. Standardized (β) regression coefficients for each predictor in the regression model are reported in Table 3. Hypothesis 1 suggested that concern is positively associated with CS and JS. No significant effect of concern on CS was found ($\beta = .10$, $p = .13$) and no significant effect of concern on JS was found ($\beta = .01$, $p = .90$). Therefore, hypothesis 1 is not supported. The results of Table 3 show that there is one significant main effect, which is 'control'. Control is significantly related to career satisfaction ($\beta = .34$, $p < .01$) and job satisfaction ($\beta = .38$, $p < .01$). Furthermore, 'curiosity' is significantly related to job satisfaction ($\beta = .15$, $p < .05$). Model 2, with the control variables and the main effects for concern, control, curiosity and confidence accounted for 26% of

career satisfaction, $R^2=.26$, adjusted $R^2=.24$, $F(6,221) = 12.78$, $p<.01$. Model 2, with the control variables and the main effects for concern, control, curiosity and confidence accounted for 22% of job satisfaction, $R^2=.22$, adjusted $R^2=.20$, $F(6,221) = 10.29$, $p<.01$.

Interaction effects. In model 3 the interaction term ‘concern*control’ is entered and hypothesis 2 is tested. Hypothesis 2 suggested that the effect of concern on CS and JS is more pronounced under high levels of control. In other words, a moderation effect of control on the positive relation between concern and CS and JS. No significant interaction effect of concern x control on CS and JS were found. The results indicate that the effect of concern on satisfaction is not more pronounced under high levels of control. By including the interaction term in model 3, no significant increases in R^2 were found. Therefore, hypothesis 2 is not supported.

Hypothesis 3 suggested that the effect of concern on CS and JS is more pronounced under high levels of curiosity. In other words, a moderation effect of curiosity on the positive relation between concern and CS and JS. No significant interaction effect of concern x curiosity was found for CS and JS. The results indicate that the effect of concern on satisfaction is not more pronounced under high levels of curiosity. By including the interaction term in model 4, no significant increases in R^2 were found. Therefore, hypothesis 3 is not supported.

Hypothesis 4 suggested that the effect of concern on CS and JS is more pronounced under high levels of confidence. In other words, a moderation effect of confidence on the positive relation between concern and CS and JS. No significant interaction effect of concern x confidence was found for CS and JS. The results indicate that the effect of concern on satisfaction is not more pronounced under high levels of confidence. By including the interaction term in model 5, no significant increases in R^2 were found. Therefore, hypothesis 4 is not supported.

Table 3.

Standardized coefficients of the Hierarchical Multiple Regression analyses regarding effects of concern and moderating effects of control, curiosity and confidence on career satisfaction and job satisfaction (N=228).

Predictor	Career Satisfaction					Job Satisfaction				
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 1	Model 2	Model 3	Model 4	Model 5
Block 1										
Education	.19**	.11	.11	.11	.11	.01	-.07	-.07	-.07	-.07
Work Experience	.13*	.06	.06	.06	.07	.17**	.09	.09	.09	.09
Block 2										
Concern		.10	.10	.10	.10		.01	.01	.01	.01
Control		.34**	.35**	.34**	.34**		.38**	.37**	.37**	.38**
Curiosity		.06	.05	.06	.04		.15*	.16*	.16*	.15*
Confidence		.10	.10	.10	.11		-.00	-.00	.01	-.00
Block 3										
Concern*control			.03					-.02		
Block 4										
Concern*curiosity				.03					.02	
Block 5										
Concern*confidence					.09					.00
ΔR^2	.05**	.21**	.00	.00	.01	.03*	.19**	.00	.00	.00
R^2	.05**	.26**	.26	.26	.27	.03*	.22**	.22	.22	.22
F	5.68**	12.78**	10.96**	10.96**	11.35**	3.33*	10.29**	8.79**	8.79**	8.78**

a. Variables in Model 1: education, work experience

b. Variables in Model 2: education, work experience, concern, control, curiosity, confidence

c. Variables in Model 3: education, work experience, concern, control, curiosity, confidence, concern*control

d. Variables in Model 4: education, work experience, concern, control, curiosity, confidence, concern*curiosity

e. Variables in Model 5: education, work experience, concern, control, curiosity, confidence, concern*confidence

f. Standardized coefficients (*Beta*) are shown.

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

Post hoc analyses

The results indicate that none of the hypotheses were supported. The model as formulated is therefore not confirmed. Additional analyses have been performed to further examine the relationships between the 4C's and their impact on the outcome variables career satisfaction and job satisfaction. The multiple regression analyses (Table 3) show that for CS, only a main effect for 'control' is found. For JS, a main effect for 'control' and for 'curiosity' is found. No effects for 'concern' and 'confidence' were found.

Stepwise regression. The correlation matrix shows that 'control' is highest correlated with CS and JS, in comparison to the other dimensions. The multiple regression analyses also show that control is the only significant predictor of CS and JS. For this reason, it could be that 'control' is the most predictive variable in predicting CS and JS. To test this, a regression analysis is performed to test the main effects of the 4C's, and the order of entering the variables is determined by SPSS, using the stepwise method. In the stepwise method variables are entered into the model based on the most explained variance. Once a new variable is entered into the model, all variables in the model are assessed to see whether they should be removed (Field, 2013). The results of the regression analysis for career satisfaction are shown in Table 4. The model shows that control is entered in step 1, which indicates that control is the most predictive dimension for career satisfaction. In step 2 concern is added. The results show that curiosity and confidence are excluded variables, which indicates that they do not add a significant variance to the prediction of career satisfaction upon the prediction by concern and control.

Table 4.

Results of the Stepwise Multiple Regression analyses on career satisfaction (N=228).

Step/predictor	Career Satisfaction	
	Step 1	Step 2
Step 1		
Control	.55**	.51**
Step 2		
Concern		.14*
ΔR^2	.21**	.02*
R^2	.21**	.23*
F	60.23**	33.47**

Note. Unstandardized coefficients (B) are shown.

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

The results of the regression analysis for job satisfaction are shown in Table 5. Control is entered in step 1, which indicates that control is the most predictive dimension for job satisfaction. In step 2 curiosity is added. The results show that concern and confidence are excluded variables, which indicates that they do not add a significant variance to the prediction of job satisfaction upon the prediction by control and curiosity. The best equation formula for career satisfaction (Y) = .51 control + .14 concern. The best equation formula for job satisfaction (Y) = .50 control + .21 curiosity. It suggests that control is important for both, but to predict the CS and JS, different C-constructs must be used to achieve optimal results.

Table 5.

Results of the Stepwise Multiple Regression analyses on job satisfaction (N=228).

Step/predictor	Job Satisfaction	
	Step 1	Step 2
Step 1		
Control	.56**	.50**
Step 2		
Curiosity		.21*
ΔR^2	.18**	.02*
R^2	.18**	.21*
F	50.97**	29.08**

Note. Unstandardized coefficients (B) are shown.

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

Mediation effect. From the correlation matrix it is seen that concern correlates with control ($r = .26, p < .01$) and control correlates to career satisfaction ($r = .46, p < .01$). A less strong relation is found between concern and career satisfaction ($r = .25, p < .05$) and job satisfaction ($r = .15, p < .05$). Based on the somewhat lower correlation between concern and CS and JS and the strong correlation of control both on concern and CS and JS, it could be that the relationship between concern and CS and JS is mediated by control. In relation to the model and the hypotheses where moderation is involved, a mediation effect is examined here. A mediation of control is examined, as high levels of concern may encourage high levels of control, and for that reason satisfaction is increased. For this analysis, Model 4 in the PROCESS macro for SPSS (Hayes, 2013) with 2000 bootstrapped samples was used. When control was entered into the model which included concern as the predictor, the relationship between concern and career satisfaction remained significant, $B = .14, SE = .06, t(225) = 2.35, p = .020, 95\% CI [.02, .26]$. The indirect effect of concern on career satisfaction via

control was found to be significant as the 95% confidence interval did not include a zero, $B_{indirect} = .11$, 95% CI [.05, .19]. As such, a partial mediation was found. The relationships between the variables of the mediation model can be found in Figure 2.

A mediation analysis is performed for job satisfaction as well. The indirect effect of concern on job satisfaction via control was found to be significant as the 95% confidence interval did not include a zero, $B_{indirect} = .12$, 95% CI [.05, .20]. As such, a partial mediation for job satisfaction was found as well. The mediation model is almost similar for job satisfaction and can be found in Appendix F. All the results are discussed in more detail in the discussion.

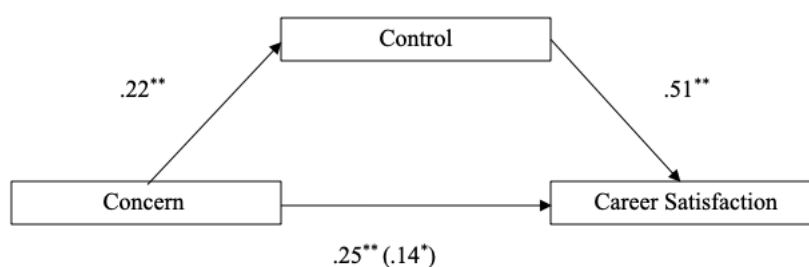


Figure 2. Unstandardized regression coefficients for the relationship between concern and career satisfaction as mediated by control. The regression coefficient for the indirect effect of control is in parentheses.

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

Discussion

This study assessed the relationships between the four dimensions of career adaptability (concern, control, curiosity and confidence) and the interactions among these dimensions and the influence on career satisfaction (CS) and job satisfaction (JS). The question that was central in this study is: *How do the interactions between the four dimensions of career adaptability (concern, control, curiosity, confidence) as predictors, relate to career satisfaction and job satisfaction?* The research was performed among 228 participants, who belong to the active working population.

Interpretation of results

Based on literature analyses, a model has been drawn up in which the relationships between the 4C's are specified. Four hypotheses have been formulated to test the model. Despite the fact that concern is positively correlated to CS and JS, no main effect for concern on CS and JS was found. This is inconsistent with expectations based on the career

construction theory (Savickas, 2005; Zacher, 2014). Therefore, hypothesis 1 was not confirmed. This result indicates that the extent to which employees are future oriented and prepare themselves for future career tasks and challenges (concern) is not the most essential condition for CS and JS. However, a main effect for 'control' is found for both career satisfaction and job satisfaction. All the 4C's are correlated with the dependent variables, but control has the highest correlation. So, there is an effect of concern, but in this model the effect disappears, because it gets overruled by the effect of control.

Furthermore, this study tested if the effect of concern on CS and JS is more pronounced under high levels of control (hypothesis 2), curiosity (hypothesis 3) and confidence (hypothesis 4). Based on previous research by Zacher (2014) and the fact that career adaptability is a multidimensional and aggregate construct, control, curiosity and confidence were examined as possible moderators on the effect of concern on CS and JS. The moderation effects are expected to be positive, because it includes concern, which is a strong predictor for CS. No significant interaction effects were found for control, curiosity and confidence. Hence, hypotheses 2, 3 and 4 are rejected. This implies that levels of control, curiosity and confidence do not strengthen the positive relation between concern and CS and JS. By this, the research question can be answered. Being concerned about the vocational future is not found to be the most important dimension in predicting CS and JS, and no interaction effects for control, curiosity and confidence were found. Therefore, the model cannot be confirmed. However, the results indicate that having feelings of control over the vocational future is the most important dimension in predicting career satisfaction and job satisfaction. The correlation table shows that all 4C's are important, but due to mutual cohesion, only control 'emerges' as a predictor for CS and JS.

Theoretical implications

Based on previous research, it was expected that concern would be the most predictive variable for CS and JS (Savickas, 2013, Zacher, 2014). There were no specific indicators, it was more based on general notes on career adaptability. However, the correlation matrix shows that control is a stronger predictor for CS and JS, than concern. This is not in line with the results by Zacher (2014), which implies that there is no clear vision on which is the most important dimension for CS and JS. Furthermore, the correlation matrix shows that all 4C's are positively related to CS and JS, and the results of the regression analyses have shown that no interaction were found. This implies that the dimensions do not

enhance each other, when it is researched in multiplicative sense, which was expected based on research by Zacher et al. (2015).

An alternative explanation for the fact that the interaction effects weren't found, is that 'control' turned out to be the most important dimension for CS and JS in this study. The stepwise regression in the post hoc analyses, that considered the main effect for the 4C's, suggests that the extent to which employees take personal responsibility for influencing their development and work environment by displaying self-discipline (control) is more important than being concerned about the vocational future, when enhancing career satisfaction. So, when individuals feel they can control the future, they are more satisfied, because they experience an increased feeling of freedom to choose one's future career (Savickas, 2013; Duffy, Douglas & Autin, 2015). The post hoc analysis suggests that it seems less needed to show curiosity by exploring possible selves and potential scenarios, and to reinforce to confidence to achieve one's aspirations. So, it seems to be more about achievements, than about exploring and feeling confident. For job satisfaction, it also turned out that control was the most predictive variable, followed by curiosity. The effects of concern and confidence weren't found. So, the analyses indicate that all four dimensions have a positive influence on CS and JS, but control is the best predictor to enhance CS and JS.

A second alternative explanation for the fact that hypotheses 2, 3 and 4 were not confirmed, is the fact that the post hoc analyses have shown a positive mediation effect of control on the relation between concern and CS and JS. This implies that when an individual is more concerned about the vocational future, will feel more feelings of control, and therefore will experience more career satisfaction and job satisfaction. After reviewing the literature again, Savickas (2005) also tends to suggest that the 4C's theoretically condition each other. Savickas (2005) implies that feelings of concern encourage to think about control, in a way that when a person feels responsibility for planning the future, this will promote actual decision-making to make it happen. The mediation effect is also partly in line with research by Duffy et al. (2015) on academic satisfaction, the degree to which students are satisfied with their academic life. Their results suggest that students with higher concern in their careers may be more satisfied in their academic domain due, in part, to increased feelings of control and confidence in their career decision making (career decision self-efficacy). Although this is a different population in comparison to this research, this suggests that the relationship of concern on satisfaction is mediated by feelings of control in their decision making. For that purpose, analysis of the mediation effects of the dimensions is useful for further research.

All these results indicate that while the four dimensions of career adaptability share commonalities, they may also play specific roles in predicting various types of work-related outcomes across different contexts, like a period with a lot of job insecurity. Having feelings of control can also be dependent on the level of job insecurity (De Witte, Van der Elst, & de Cuyper, 2015). In this study, it is seen that control ($r = -.17, p < .05$) is significantly related to job insecurity, whereas concern, curiosity and confidence are not. This implies that job insecurity is an important influence on how an individual experiences personal control over the vocational future. The scope of this research did not allow much research into this, but this is a field for further research.

In this study, it turned out that career adaptability is a somewhat better predictor for CS than for JS, based on the explained variance, but the differences are small. The results for CS and JS are similar in the way that control is the best dimension for both. However, curiosity seems important for JS as well. Hence, it needs to be researched again, to see what the actual variations in CS and JS are, and the various antecedents in the 4C's.

Practical implications

From a practical perspective, the study results may be useful for organizations, in improving the HR-policy in terms of sustainable employability of employees. As career control, and feelings of independency is revealed as the most important predictor for CS and JS in current research, HR should pay more attention to this dimension and help employees develop aspects that foster feelings of control. It is known that increased perceived employability of employees leads to a higher level of career satisfaction (De Vos, De Haus, & van der Heijden, 2011). Decision making is directly linked to employment quality (a good match between the individual, the job and the organization) (Koen, Klehe, van Vianen, Zikic, Nauta, 2010). Therefore, organizations may consider designing training sessions to encourage career control for employees, in order to improve employees' performance and support their career development. Furthermore, managers should help their employees to be self-reliant. They need to stand up for their own opinion, take responsibility for their actions and should be able to count on themselves. The individual needs to be central. This is a trend in society for the current generation, linked to individualism. People become more and more individualistic and depend their satisfaction on the degree to which they have the freedom to make choices. Therefore, improving the feelings of control, and the feelings that employees can make their own choices, is essential in fostering career satisfaction and job satisfaction. It is also suggested for managers to stimulate employees to craft their own resources and

demands, in order to increase employability and satisfaction. Empirically, only control is required to improve CS and JS, but four different dimensions are considered from a theoretical viewpoint, and the other three dimensions should not be overlooked, as it is found that they positively correlate with CS and JS. As the resources of career adaptability reside at the intersection of person-in-environment (Savickas & Porfeli, 2012), it may be plausible that for every individual, different C-constructs are important in enhancing CS and JS. Van Vianen et al. (2012) have found relations between the Big Five personality traits and the dimensions of career adaptability, which make it plausible that for every individual, different C-constructs are important in enhancing CS and JS. Therefore, it is important to focus on all the 4C's in enhancing satisfaction among individuals, and to design trainings and interventions on all four dimensions, but with a particular focus on control.

Limitations and future research

This study has a number of limitations. First, it should be acknowledged that this cross-sectional data of the present study excludes the possibility of determining causality between the study variables. Second, it has to be noted that this research is being carried out during the Corona-Crisis, so the findings are not consistent in all circumstances. During this period, it is assumed that more people may experience job insecurity, due to the changing work environment (Rigotti et al., 2020). Thirdly, it could be argued that the research sample is not very representative of the research population. Around 50 percent of the participants are 50 years or older, whereas this should be around 20% of the working population (CBS, 2018). Around 80 percent of the participants were highly educated (hbo or wo). This study shows that education is correlated with career satisfaction, which implies that when an individual is higher educated, he/she will experience more career satisfaction, or vice versa. The fact that around 80% of the population is highly educated, can result in above average levels of career adaptability. If this study is repeated, the results could be different, which raises the question on whether the results are generalizable.

A fourth limitation regards the reliability of the scales that are used. The Cronbach's alpha for curiosity (.68) and for confidence (.66) are questionable. Therefore, it is uncertain to assume that the same results for curiosity and confidence would be obtained under the same conditions. The PCA also showed that not all 6 items for curiosity and confidence load on the factor for curiosity and confidence. Therefore, the itemset for career adaptability needs to be examined in further research, since this is beyond the scope of this study. This may have influenced the results. In addition to that, the intercorrelations between the scales make

it difficult to statistically test these types of models. As little variation between the factors as possible is preferred, such that each variable has as much unique contribution as possible, although they don't.

A methodological limitation is that the model can be designed in different ways, and this is not clearly mentioned in previous literature. Therefore, relatively many tests have been performed. This may have increased the level of significance (α). As more variables are used to model the data, the probability of finding a significant relationship between two of those variables increases, while that relationship is coincidental.

The study provided suggestions for further research. Further research should focus on the mediation model, which assumes that the relation between concern and CS and JS is mediated by control. It is possible that feelings of concern lead to more feelings of control, which leads to curiosity, which leads to feelings of confidence. In addition to that, the results suggest that not all four dimensions are equally important in predicting CS and JS. Therefore, further research is needed into the antecedents of the four dimensions, to see what induced the different dimensions. This might be more relevant than taking career adaptability as a general framework, so more tailored guidance can be offered on how to strengthen career satisfaction and job satisfaction.

Conclusion

In conclusion, adding to the growing literature on career adaptability, the results of this study demonstrate that all four dimensions of adaptability correlate with career satisfaction and job satisfaction. All four dimensions are important in enhancing career satisfaction and job satisfaction, but by testing the model, only 'control' turned out to be a significant predictor of CS and JS. The study indicated that concern is not the most important dimension in predicting career satisfaction and job satisfaction, but feelings of 'control' is more important. No empirical evidence for interactions among the four dimensions (concern, control, curiosity, confidence) were found. Explorative analyses have shown that a mediation model, instead of a moderation model, which researches the mediation effect among the 4C's is a promising area for further research.

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Appendix A: Questionnaire

Startpagina

Hallo en welkom bij dit onderzoek!

Mijn naam is Eva van Mourik. Ik nodig je graag uit om deel te nemen aan mijn afstudeeronderzoek. Dit gaat over **hoe mensen omgaan met hun ambities en werk**. Dit om te bepalen wat belangrijk is voor **tevredenheid** in werk en loopbaan. Dit inzicht kan nuttig zijn voor het verbeteren van HR-beleid. Daarom ben ik geïnteresseerd in je mening en situatie, om beter zicht te krijgen op **wat mensen happy maakt in hun werk**.

Ik volg de **master Arbeids- & Organisationspsychologie aan de Universiteit Utrecht**. De werkwijze van de universiteit wordt gevolgd.

- Voor een goed zicht op jouw mening, vraag ik je vriendelijk om de volledige vragenlijst in te vullen (en geen vragen weg te laten), omdat de gegevens anders onvolledig zouden zijn.
- Je hebt het recht om de eindresultaten van het onderzoek in te zien. Je kunt daarvoor contact opnemen met mij, via onderstaand mailadres.
- Je krijgt stellingen te zien die relevant zijn voor je werken je eigen professionele ontwikkeling. **Je antwoorden blijven gedurende het hele onderzoek anoniem**. De antwoorden zijn alleen toegankelijk voor de hoofdonderzoeker en worden alleen gebruikt voor het voltooien van deze studie.

Deelnemersinformatie

- Om deel te nemen aan dit onderzoek, is het vereist dat je momenteel **werkzaam** bent. Probeer om zo eerlijk mogelijk op de vragen te reageren. **Er zijn geen verkeerde of juiste antwoorden**.
- Aan het begin van de vragenlijst krijg je een paar vragen over je geslacht, leeftijd en opleidingsniveau. Deze vragen worden gesteld om zicht te krijgen op kenmerken van de groep van deelnemers.
- Het invullen van de vragenlijst duurt ongeveer **5-10 minuten**. Deelname aan dit onderzoek is geheel vrijwillig. Je hebt het recht om op elk moment tijdens het onderzoek te stoppen.
- Door op deze pagina op "**Ik ga akkoord**" te klikken, erkent je dat jouw deelname aan het onderzoek inderdaad vrijwillig is, dat je ten minste **18 jaar oud** bent en dat je weet dat je op elk moment ervoor kunt kiezen om te stoppen.

Contactgegevens

Wanneer je voor, tijdens of na het onderzoek vragen of suggesties hebt, kun je mij bereiken via **e.s.vanmourik@students.uu.nl**

Alvast hartelijk dank voor je deelname! Jouw hulp wordt enorm gewaardeerd.

Met vriendelijke groet,

Eva van Mourik

- Ik ga akkoord**

Achtergrondgegevens

Wat is uw geslacht?

- Man
- Vrouw
- Anders

Wat is uw leeftijd in jaren?

-

Wat is uw hoogst afgeronde opleiding?

- Lagere school
- MAVO, LBO, VMBO
- HAVO
- VWO
- MBO
- HBO
- WO

In welke sector bent u werkzaam?

- Gezondheidszorg en welzijn
- Handel en dienstverlening
- ICT
- Justitie, veiligheid en openbaar bestuur
- Landbouw, natuur en visserij
- Media en communicatie
- Onderwijs, cultuur en wetenschap
- Techniek, productie en bouw
- Toerisme, recreatie en horeca
- Transport en logistiek

Heeft u een leidinggevende functie?

- Ja
- Nee

Bent u zelfstandig ondernemer?

- Ja
- Nee

Hoeveel jaar bent u werkzaam? Bij minder dan een jaar, vul 0 in.

-

Hoeveel jaar bent u werkzaam in uw huidige functie? Bij minder dan een jaar, vul 0 in.

-

Voor hoeveel uur per week heeft u contractueel een aanstelling?

-

Career Adaptability Scale

De volgende stellingen gaan over je werk.

Geef aan in hoeverre je het eens of oneens bent met de volgende stellingen, door de volgende vraag aan jezelf te stellen: ik ben goed in...

(1) Helemaal oneens tot (5) helemaal eens

Concern

1. Nadenken over hoe mijn toekomst eruit zal zien
2. Realiseren dat de keuzes die ik nu maak, mijn toekomst bepalen
3. Me voorbereiden op de toekomst
4. Bewust worden van de opleiding- en beroepskeuzes die ik moet maken
5. Plannen hoe ik mijn doelen ga bereiken
6. Bewust bezig zijn met mijn (studie) loopbaan

Control

1. Optimistisch blijven
2. Zelf beslissingen nemen
3. Verantwoordelijkheid nemen voor mijn daden
4. Opkomen voor mijn eigen mening
5. Op mezelf rekenen
6. Doen wat het beste is voor mij

Curiosity

1. Mijn omgeving verkennen
2. Op zoek gaan naar kansen voor persoonlijke ontwikkeling
3. Verschillende mogelijkheden onderzoeken voordat ik een keuze maak
4. Verschillende manieren zien om dingen te doen
5. Diep nadenken over vragen waar ik mee zit
6. Nieuwsgierig zijn naar nieuwe mogelijkheden

Confidence

1. Taken efficiënt (snel en goed) uitvoeren
2. Ervoor zorgen de dingen goed te doen
3. Nieuwe vaardigheden leren
4. Naar beste vermogen werken
5. Hindernissen overwinnen
6. Problemen oplossen

Career Satisfaction Scale

De volgende vragen gaan over je loopbaantevredenheid.

Geef aan in hoeverre je het eens of oneens bent met de volgende stellingen.

1. Ik ben tevreden over het succes dat ik mijn loopbaan heb behaald
2. Ik ben tevreden over de vooruitgang die ik heb geboekt om mijn algemene loopbaandoelen te bereiken.
3. Ik ben tevreden over de vooruitgang die ik heb geboekt bij het bereiken van mijn inkomensdoelen.
4. Ik ben tevreden over de vorderingen die ik heb gemaakt bij het behalen van mijn doelstellingen voor vooruitgang.

5. Ik ben tevreden over de vooruitgang die ik heb gemaakt om mijn doelen te bereiken bij het ontwikkelen van nieuwe vaardigheden.

Job Satisfaction Scale

De volgende vragen gaan over jouw werktevredenheid.

Geef aan in hoeverre je het eens of oneens bent met de volgende stellingen.

1. In het algemeen ben ik zeer tevreden over mijn werk
2. Ik ben heel erg geïnteresseerd in mijn werk
3. Ik haal veel voldoening uit mijn werk

Job Insecurity Scale – Covid19

De volgende vragen gaan over de mate van baanonzekerheid die jij ervaart. De volgende vragen zijn bedoeld om een indruk te krijgen van uw situatie tijdens en na **Corona**. **Denk bij de volgende vragen aan de huidige situatie.**

Geef aan in hoeverre je het eens of oneens bent met de volgende stellingen.

1. De kans bestaat dat ik binnenkort mijn baan verlies
2. Ik weet zeker dat ik deze baan kan behouden (R)
3. Ik voel me onzeker over de toekomst van mijn baan
4. Ik denk dat ik mijn baan zal verliezen in de nabije toekomst

Appendix B: Descriptive statistics

Table B1.

Descriptive statistics (N=228)

	Category	N	%
Gender	Male	102	44.7%
	Female	126	55.3%
Age	21 – 30	46	20.2 %
	31 – 40	29	12.7 %
	41 – 50	42	18,4 %
	51 – 60	90	39.5 %
	61 – 70	21	9.2 %
Educational level	Lagere school	1	.4%
	Mavo, lbo, vmbo	6	2.6%
	Havo	7	3.1%
	Vwo	3	1.3%
	Mbo	31	13.6%
	Hbo	101	44.3%
	Wo	79	34.6%
Branches	Healthcare and well-being	48	21.1%
	Trade and service	30	13.2%
	ICT	9	3.9%
	Justice, security and public administration	9	3.9%
	Agriculture, nature, fishing	4	1.8%
	Media and communication	9	3.9%
	Education, culture and science	69	30.3%
	Engineering, production, construction	20	8.8%
	Tourism, recreation and catering	4	1.8%
	Transport and logistics	5	2.2%
	Different	21	9.2%
Years of work experience	1 – 5	39	17.1 %
	6 – 10	18	7.3 %
	11 – 15	13	5.7 %
	16 - 20	17	7.5 %
	< 21	141	61.8%
Managerial position	No	149	65.4%
	Yes	79	34.6%
Entrepreneur	No	179	78.5%

Yes	49	21.5%
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Appendix C: Principal Component Analyses

Table C1.

Oblimin Rotated Factor Structure of the 24-item Career Adaptability Questionnaire.

Item	Loadings						
	1	2	3	4	5	6	
Nadenken over hoe mijn toekomst eruit zal zien		.736					
Realiseren dat de keuzes die ik nu maak, mijn toekomst bepalen		.554		.354			
Me voorbereiden op de toekomst		.722					
Bewust worden van de opleiding- en beroepskeuzes die ik moet maken		.703					
Plannen hoe ik mijn doelen ga bereiken		.733					
Bewust bezig zijn met mijn (studie) loopbaan		.747					
Optimistisch blijven	.331				-.475		
Zelf beslissingen nemen	.652					.338	
Verantwoordelijkheid nemen voor mijn daden	.468			.412			
Opkomen voor mijn eigen mening	.722						
Op mezelf rekenen	.717						
Doen wat het beste voor mij is	.636						
Mijn omgeving verkennen					-.406		
Op zoek gaan naar kansen voor persoonlijke ontwikkeling		.340	.314		-.301	-.313	
Verschillende mogelijkheden onderzoeken voordat ik een keuze maak			.759				
Verschillende manieren zien om dingen te doen			.550			.450	
Diep nadenken over vragen waar ik mee zit			.776				
Nieuwsgierig zijn naar nieuwe mogelijkheden					-.421		
Taken efficiënt (snel en goed) uitvoeren						.709	
Ervoor zorgen de dingen goed te doen				.815			
Nieuwe vaardigheden leren					-.694		
Naar beste vermogen werken				.676			
Hindernissen overwinnen					-.691		
Problemen oplossen					-.565	.487	
	Eigenvalues	5.45	2.55	1.77	1.54	1.25	1.08
	Percentage of Variance	22.69	10.62	7.36	6.42	5.21	4.50

Extraction Method: Principal Component Analysis

Rotation Method: Oblimin with Kaiser Normalization

Table C2.

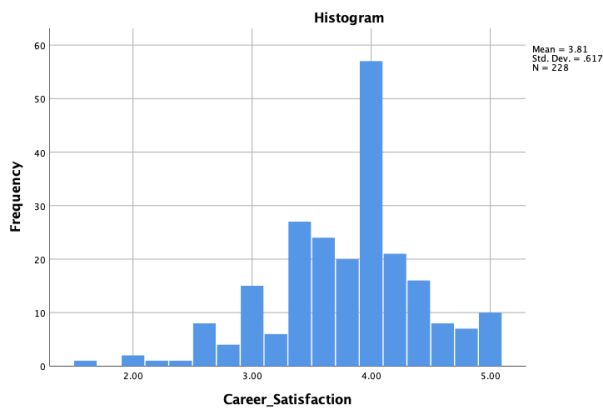
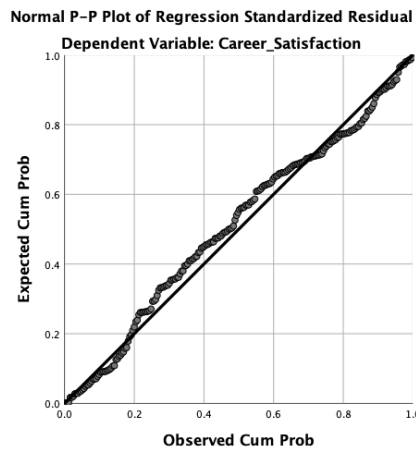
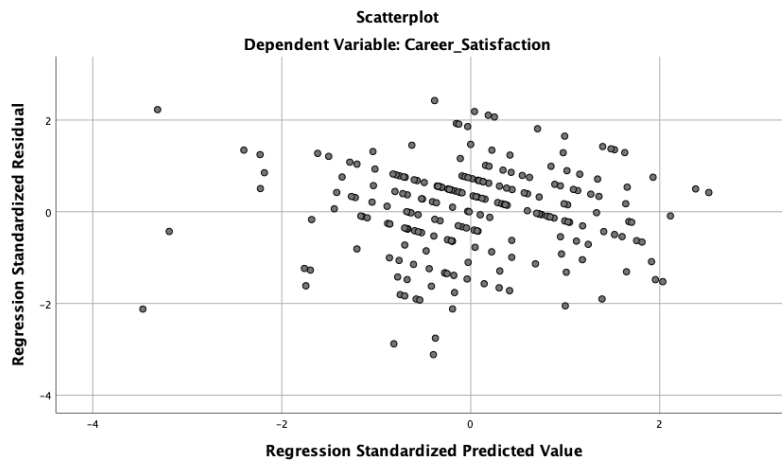
Oblimin Rotated Factor Structure of the 24-item Career Adaptability Questionnaire, fixed numbers of 4 factors.

Item	Loadings			
	1	2	3	4
Nadenken over hoe mijn toekomst eruit zal zien		.736		
Realiseren dat de keuzes die ik nu maak, mijn toekomst bepalen		.513		.349
Me voorbereiden op de toekomst		.685		
Bewust worden van de opleiding- en beroepskeuzes die ik moet maken		.703		
Plannen hoe ik mijn doelen ga bereiken		.735		
Bewust bezig zijn met mijn (studie) loopbaan		.781		
Optimistisch blijven	.591			
Zelf beslissingen nemen	.781			
Verantwoordelijkheid nemen voor mijn daden	.414			.420
Opkomen voor mijn eigen mening	.622			
Op mezelf rekenen	.682			
Doen wat het beste voor mij is	.493			
Mijn omgeving verkennen				
Op zoek gaan naar kansen voor persoonlijke ontwikkeling		.432	.450	
Verschillende mogelijkheden onderzoeken voordat ik een keuze maak			.670	
Verschillende manieren zien om dingen te doen			.604	
Diep nadenken over vragen waar ik mee zit	-.372		.619	
Nieuwsgierig zijn naar nieuwe mogelijkheden	.358		.413	
Taken efficiënt (snel en goed) uitvoeren	.425			
Ervoor zorgen de dingen goed te doen				.833
Nieuwe vaardigheden leren			.572	
Naar beste vermogen werken				.675
Hindernissen overwinnen	.401			
Problemen oplossen	.526		.339	
Eigenvalues	5.45	2.55	1.77	1.54
Percentage of Variance	22.69	10.62	7.36	6.42

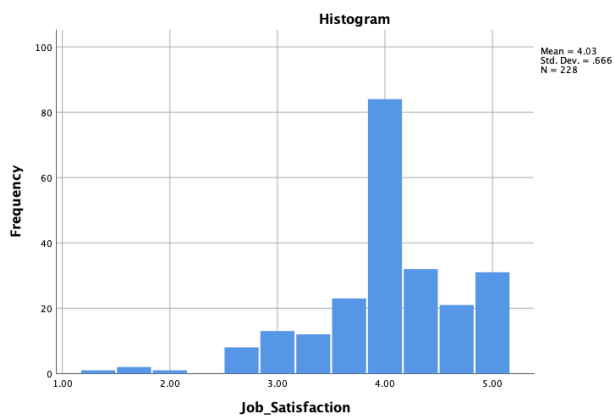
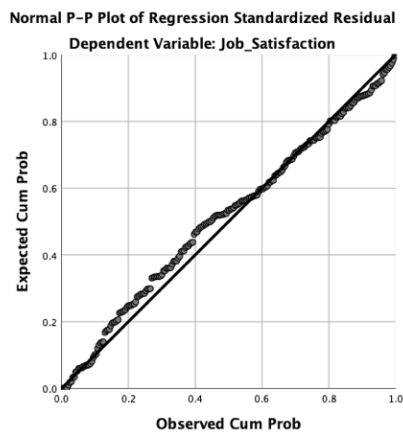
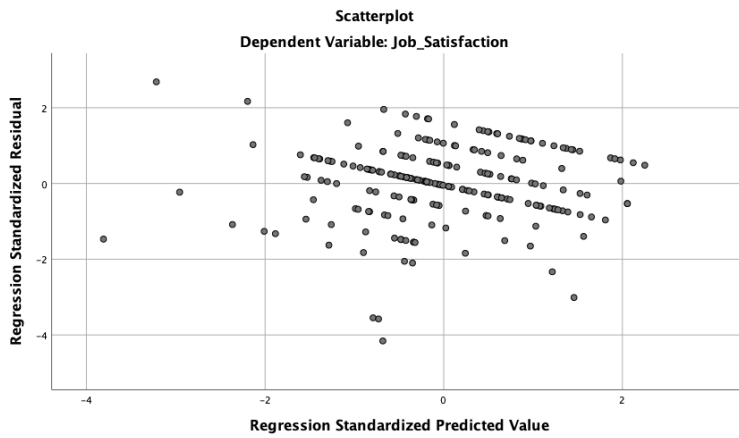
Extraction Method: Principal Component Analysis

Rotation Method: Oblimin with Kaiser Normalization

Appendix D: Normality, linearity and homoscedasticity of career satisfaction



Appendix E: Normality, linearity and homoscedasticity of job satisfaction



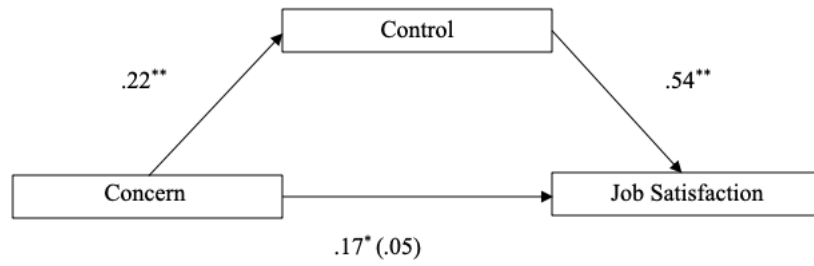
Appendix F: Mediation model for Job Satisfaction

Figure G1. Unstandardized regression coefficients for the relationship between concern and job satisfaction as mediated by control. The regression coefficient between concern and job satisfaction, while controlling for control, is in parentheses. * $p < .05$ ** $p < .01$.