

Gender Differences in the Relationship between Character Strengths and Life Satisfaction

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Abstract

Introduction. Although the relationship between life satisfaction and character strengths is the topic of various studies, there is only little research on gender differences and how they influence this relationship. Thus this thesis sought to examine the relationship between character strengths and life satisfaction by identifying significant gender differences in the utilization of character strengths in relation to life satisfaction.

Methods. A cross-sectional quantitative study design was chosen and an online survey created, and the satisfaction with life scale and the global assessment of character strengths were used. In total 163 participants, 123 women, 39 men and one non-binary person, mostly bachelor students, responded to the questionnaires.

Results. The performed ANOVA to check for gender differences in life satisfaction was insignificant. The results of the MANOVA showed that only in the character strength spirituality a significant gender difference was found. The mediation analyses (PROCESS4.1) showed that the character strengths zest, teamwork, prudence, gratitude, kindness and hope were significant mediators of gender (independent variable) to life satisfaction (dependent variable).

Conclusion. In this population, women and men differed neither in life satisfaction nor in character strengths except for spirituality. Further, gender is significantly mediated by the character strengths zest, teamwork, prudence, gratitude, kindness, and hope to life satisfaction. This research added value by furthering the understanding of the influence of gender differences in the mental health sector, gender's influence on life satisfaction and its association with character strengths and by decreasing existing gender stereotypes.

Keywords: [Life Satisfaction, Character Strengths, Virtues, Gender Differences, Values in

Action, Well-Being, Signature Strengths, Mediation]

Introduction

In times of Covid-19 and societal restrictions, decreasing life satisfaction is a major issue in our society (Bachmann et al., 2021). An important part of (positive) psychology is to study and understand how to improve life satisfaction and which factors influence it (Huebner et al., 2006). For example, various research indicates that gender influences life satisfaction (Graham & Chattopadhyay, 2013; Joshanloo & Jovanović, 2020; Matud et al., 2014).

In general, there are many gender differences in mental health favouring men, found in various statistics and research (Dattani et al., 2018). Since the 1970s, a decline in women's subjective well-being, both absolute and relative to men, across industrialised countries has been identified (Stevenson & Wolfers, 2009). In 2017, 10.7% of people globally had any mental illness; 11.9% were women, while 9.3% were men (Dattani et al., 2018). This trend is visible in various mental illnesses, for example, depression (2.7% men, 4.1% women), anxiety disorders (2.8% men, 4.7% women) or bipolar disorders (0.55% men, 0.65% women). These numbers are only estimates since many cases remain unreported (Dattani et al., 2018). One reason might be because society still puts stigmata on people with mental illnesses, preventing them, especially men, from searching for help (Afifi, 2007; Dattani et al., 2018). Afifi (2007) warns that overlooking gender-based differences or gender bias could have drastic consequences. For example, the researcher states that doctors are more likely to diagnose depression in women than men, even if the scores are similar in standardised measures or present identical symptoms. Similarly, gender stereotypes reinforce social stigmata (women are more prone to emotional problems, men have more alcohol problems) and constrain help-seeking, especially in men (Afifi, 2007). Recent studies on gender and life satisfaction found that women score slightly yet significantly higher than men (Joshanloo & Jovanović, 2020). Also, women seem to score higher life satisfaction levels with a more significant gap in rich countries, with older, more educated, and married groups (Graham & Chattopadhyay, 2013).

There are various ways to improve life satisfaction. One way is to utilize character strengths (Park et al., 2004; Peterson & Seligman, 2004; West, 2006). Individuals can flourish, grow, and adapt better to negative situations by identifying, developing, and utilising character strengths (Park et al., 2004; Peterson & Seligman, 2004). In general, interventions that focus on character strengths increase happiness and other aspects directly concerned with mental, psychological, and emotional well-being, e.g. life satisfaction, while decreasing depression (Acosta, 2013; Proyer et al., 2015).

This thesis will examine the influence of gender on the relationship between character strengths and life satisfaction. The research aims to examine how different character strengths utilized by women and men can explain differences in life satisfaction. Therefore, the research question is: *“What influence has gender on character strengths and life satisfaction?”*

Life Satisfaction

First, it is necessary to define life satisfaction. Life satisfaction can be defined as the general contentment of a person with her own life and includes various sub-factors that influence the overall experience (Diener, 2009; Matud et al., 2014; Prasoon & Chaturvedi, 2016; Proctor et al., 2009). Various researchers defined life satisfaction as an essential construct in positive psychology since it is one primary indicator of well-being (Diener, 2009; Matud et al., 2014; Prasoon & Chaturvedi, 2016). Life satisfaction assesses a person’s overall appraisal of life quality and his/her life experience in general (Matud et al., 2014; Prasoon & Chaturvedi, 2016) based on the person’s chosen criteria (Proctor et al., 2009) and combines feelings and attitudes, positive and negative, towards one’s own life at a specific time (Prasoon & Chaturvedi, 2016).

As recent studies support the view that women score higher in life satisfaction than men (Graham & Chattopadhyay, 2013; Joshanloo & Jovanović, 2020), the following hypothesis is stated:

1. Women score higher in life satisfaction than men.

Character Strengths and Gender

One way to enhance life satisfaction is to utilize character strengths (Acosta, 2013). Character strengths are positive traits that incorporate various cultural and societal values, contributing to an individual’s satisfaction, fulfilment and happiness (Acosta, 2013; Park et al., 2004; Peterson & Seligman, 2004; Proyer et al., 2015). Character strengths may also be called values in action, while the most relevant strength for an individual is called signature strength (Peterson & Seligman, 2004). Researchers identified various character strengths throughout the years and clustered them into higher-order categories. For example, Peterson and Seligman (2004) summarised them into 24 character strengths. They divided them into six higher-order categories called virtues, namely wisdom (creativity, curiosity, judgement/critical judgement, love of learning, perspective/wisdom), courage (bravery/courage, perseverance, honesty, zest), humanity (love, kindness, social intelligence), justice (teamwork, fairness, leadership), temperance (forgiveness, modesty, prudence, self-regulation) and transcendence (appreciation of beauty and excellence, gratitude, hope, humour, spirituality) (Peterson & Seligman, 2004). The extent to which the

character strengths are present in a person can vary between individuals; for example, while scoring high in one strength, it is possible to score low in another one (Park et al., 2004), and they can be enhanced and reinforced (Park & Peterson, 2009). The possible change of character strength levels also entails learning, developing and supporting the usage of strengths on an individual level (Park & Peterson, 2009). Individuals can flourish, grow, and adapt better to negative situations by identifying, developing, and utilising character strengths (Park & Peterson, 2009). In general, interventions that focus on character strengths increase happiness and other aspects directly concerned with mental, psychological, and emotional well-being, e.g. life satisfaction, while decreasing depression (Acosta, 2013; Proyer et al., 2015).

There is only a little research done to identify gender differences in character strengths (Bruna & Hernáez, 2015; Husain, 2021). However, some significant differences were found in various research (Brdar et al., 2011; Bruna & Hernáez, 2015; Husain, 2021). Women showed higher scores in kindness, love, gratitude, teamwork, appreciation of beauty and excellence, curiosity, honesty, wisdom, justice, love of learning, social intelligence, leadership and fairness (Blanca et al., 2018; Brdar et al., 2011; Husain, 2021; Porto Noronha & Martins, 2016; Shimai et al., 2006). On the other hand, men scored higher in perspective, creativity, bravery and self-regulation (Brdar et al., 2011; Shimai et al., 2006). However, the research also shows differences between studies: In some research, men scored higher in love of learning, appreciation of beauty and excellence and wisdom (Brdar et al., 2011; Porto Noronha & Martins, 2016). A recent study by Husain (2021) found that women had higher mean scores in 22 out of 24 character strengths than men. In contrast, men did not score significantly higher in any character strength than women, leading the researcher to conclude that women are more virtuous than men (Husain, 2021). Blanca et al. (2018) had similar results, in which the mean scores in the character strengths were consistently higher for girls than boys.

As recent studies showed that women scored higher in more character strengths and, throughout the researches, higher in curiosity, kindness, gratitude, love, fairness and honesty (Blanca et al., 2018; Brdar et al., 2011; Husain, 2021; Porto Noronha & Martins, 2016; Shimai et al., 2006), the following hypothesis is stated:

2. Women show higher levels of character strengths in curiosity, honesty, gratitude, fairness, love, and kindness than men.

Character Strengths, Life Satisfaction and Gender

Character strengths are significantly associated with life satisfaction, and their utilisation can directly enhance life satisfaction through character strength-based interventions (Park et al., 2004). Life satisfaction correlates to different degrees with each character strength. The highest associations between life satisfaction and character strengths are with zest, curiosity, gratitude, hope, persistence, social intelligence and love (Brdar et al., 2011; Degg, 2018; Park et al., 2004; Porto Noronha & Martins, 2016). The lowest associations were found for modesty, appreciation of beauty, creativity, judgement, and love of learning (Brdar et al., 2011; Degg, 2018; Park et al., 2004; Porto Noronha & Martins, 2016). These similar results between studies indicate consistency and a global trend of which strengths are crucial for high life satisfaction in people. Nevertheless, all character strengths correlate with life satisfaction to some extent (Brdar et al., 2011; Degg, 2018; Park et al., 2004; Porto Noronha & Martins, 2016), as their definition incorporates being psychological fulfilling and contributing to the satisfaction of an individual (Peterson & Seligman, 2004).

Various studies found significant gender differences concerning the correlations between character strengths and life satisfaction: For women, the highest correlations with life satisfaction were found for the character strengths hope, zest, gratitude, curiosity, love, honesty, kindness, love of learning and forgiveness (Blanca et al., 2018; Brdar et al., 2011). Men had the highest correlations with zest, gratitude, hope, honesty and humour. Correlations of life satisfaction with humour and modesty were the lowest, regardless of participants' gender (Blanca et al., 2018; Brdar et al., 2011). There are also gender differences in the highest predictors of life satisfaction. Zest, gratitude, hope, appreciation of beauty and love predicted women's life satisfaction (Brdar et al., 2011). Men's life satisfaction was predicted by creativity, wisdom, fairness and humour (Brdar et al., 2011).

Research suggests that there are significant gender differences in the character strengths zest, gratitude, hope, kindness, appreciation of beauty, love, creativity, perspective/wisdom and fairness. Therefore this is the hypothesis:

3. The character strengths zest, gratitude, hope, kindness, appreciation of beauty, love, creativity, wisdom and fairness mediate the association between gender and life satisfaction.

Methods

Participants

Convenience and snowball sampling were conducted to acquire participants. Further, the study was posted on Sona-Systems, reaching bachelor's students of the University of Twente. The inclusion criteria were, firstly, the age of the participants (at least 18 years old), and secondly, the completion of all questions. If the participant did not answer all questions, it might indicate that he/she was not suitable or was not as engaged or replied as thoughtful as other participants. As a consequence, the data might be distorted. By accepting the informed consent, the participants acknowledged the age criteria. 28 participants were excluded because they did not meet the inclusion criteria of completing all questions. The total sample consisted of 164 participants, composed of 39 men, 124 women and one non-binary/third gender, as seen in Table 1, which displays the participants' demographic data. The population mainly consisted of bachelor's students, especially those studying social sciences during their participation. The mean age of the population was 22.30 years.

Table 1

Demographic Data of the Participants

Demographic Variable	Women		Men		Non-binary		Total	
	N	%	N	%	N	%	N	%
<i>Nationality</i>								
German	82	66.1%	26	66.7%	1	100%	109	66.5%
Dutch	23	18.5%	8	20.7%			31	18.9%
Others	19	15.3%	5	12.8%			24	14.6%
<i>Employment Status</i>								
Working (Full/Part time)	12	9.7%	9	23.1%			21	12.8%
Retired	1	0.8%					1	0.6%
Unemployed	2	1.6%					2	1.2%
Students	109	87.1%	30	76.9%	1	100%	139	84.8%
<i>Study Programs</i>								
Business studies and Public Policy	2	1.6%					2	1.2%
Information Technology			2	1.6%			2	1.2%
Life Sciences and Medicine	4	3.2%					4	2.4%
Natural Sciences	3	2.4%					3	1.8%
Social Sciences	100	80.6%	28	71.8%	1	100%	129	78.7%

Note. Variables without cases were left out.

Design & Procedure

A cross-sectional quantitative study design was used to investigate the mediation effect of the character strengths on the association between gender and life satisfaction. The data collection took place from 28.03.2022 till 30.05.2022. The online survey was created using Qualtrics, which was also used to create a distribution link. The study was distributed among students through the platform Sona-Systems, and the students received 0.25 credit points for completing the study. The participation took about 15 to 25 minutes. Further, the survey was distributed through the link on other social media. Additionally, an informed consent was provided, explaining the aim of the study, the design and procedure and the declaration of consent (Appendix A).

First, the link was obtained directly (snowball and convenience sample through social media) or through Sona-Systems (students). Then, the informed consent was provided. If the participants disagreed, they were forwarded to the end of the study. In this case, the participant did not receive the credit points. After the informed consent, the participants filled out the five demographic questions and the questionnaires measuring life satisfaction and character strengths.

The last question was whether the participant would like to be credited in Sona Systems and if yes, they were asked for their identity code. At the end of the survey, the participant could read a confirmation message, including the researcher's contact information and the request to share the survey with others.

Materials

Demographic Questionnaire

Firstly, five demographic questions were asked about gender, age, nationality, employment status and, if applicable, the study program (Appendix B).

Satisfaction with Life Scale (SWLS)

The Satisfaction with Life Scale (Diener et al., 1985; Pavot & Diener, 2008) is used to assess the participants' life satisfaction, allowing the individual to weigh the importance of sub-facets, like finances or health, on their own. The scale includes five items, e.g. „In most ways, my life is close to my ideal“ (Appendix C). The participants were supposed to indicate their agreement with each item on a 7 – point Likert scale ranging from „strongly disagree“ (1 point) to „strongly agree“ (7 points). The scoring varies between 5 points (extremely dissatisfied) and 35 (extremely satisfied). SWLS showed a high convergent and discriminant validity and is considered a reliable measure of life satisfaction (Diener et al., 1985; Pavot & Diener, 2008). The Cronbach's Alpha in this study is $\alpha=0.80$, indicating a high internal consistency level.

Global Assessment of Character Strengths (GACS-72)

The global assessment of character strengths (McGrath, 2019) was used to examine each participant's level of 24 character strengths like creativity, curiosity or love of learning. The questionnaire consists of 72 items (Appendix D), divided into three items per character strength, for example, „Honesty is an essential part of who I am in this world“. The participants had to indicate their agreement on a 7-point Likert scale ranging from „strongly disagree“ (1 point) to „strongly agree“ (7 points). The GACS-72 is a short, still highly reliable measure and showed high convergent and discriminant validity (McGrath, 2019). For this study, Cronbach's Alpha is $\alpha=.93$, indicating a very high internal consistency. The reliability of each character's strength varies between $\alpha=.66$ (judgement strength) and $\alpha=.91$ (creativity strength).

Data Analysis

SPSS (Version 28) was used to analyse the data. Means and standard deviations were calculated for all study variables.

In order to examine hypothesis 1, a one-way ANOVA with the dependent variable life satisfaction and gender as the between-subjects variable was used to examine whether women score higher in life satisfaction than men.

In order to answer hypothesis 2, a one-way MANOVA was performed, with the independent variable gender and the dependent variables character strengths. It was expected that women show higher levels of character strengths in curiosity, honesty, gratitude, fairness, love, and kindness than men. Significant gender differences were not expected for the other character strengths. However, the analysis was performed for all character strengths, which gave a better overview of the data.

In order to examine hypothesis 3, mediation analyses through PROCESS 4.1 by Hayes (2017) were performed for each character strengths. The dependent variable was life satisfaction, the independent variable was gender, and the character strengths were used as mediators. A bootstrap sample of 5000 cases was used to identify the significance of the results through confidence intervals of 95% and $\alpha=.05$. A significant mediation was expected for the character strengths zest, gratitude, hope, appreciation of beauty and excellence, love, creativity, wisdom and fairness. However, significant mediations were not expected of the other character strengths.

Results

Descriptives

The mean score of life satisfaction ($M = 16.80$, $SD = 5.40$) shows that the sample experiences life as slightly dissatisfying, as described in the scoring advice by Diener et al. (1985); Pavot and Diener (2008), which shows that a score lying between 15 and 19 represents a slightly dissatisfied sample (Appendix C). Additionally, the individual scores for women and men showed that the sample is still slightly dissatisfied on a gender-specific level, as displayed in Table 2, which describes the mean scores and standard deviations by gender, as well as the gender differences of the 24 character strengths. The mean scores of the character strengths bravery, zest, love, social intelligence, teamwork, fairness, leadership, prudence, appreciation of beauty and excellence, gratitude, hope and spirituality tend to be higher in women than men. The lowest character strength in men was spirituality, the highest humour. For women, the lowest character strength was prudence, the highest kindness.

Hypothesis 1

It was hypothesized that women score higher in life satisfaction than men. However, a one-way ANOVA revealed no statistically significant difference between men's and women's life satisfaction, as seen in Table 2.

Therefore Hypothesis 1 is rejected.

Hypothesis 2

It was hypothesized that women show higher scores in the character strengths curiosity, honesty, gratitude, fairness, love, and kindness than men. However, the performed MANOVA revealed significant gender differences only in spirituality but not for the other character strengths, as seen in Table 2.

Therefore Hypothesis 2 is rejected.

Table 2

Mean scores, Standard Deviations and Gender Differences of Character Strengths

Variable	Women		Men		Gender Differences	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>F-Values</i>	<i>p-Values</i>
Life Satisfaction	16.75	5.09	15.51	5.34	.875	.427
Creativity	14.19	3.79	14.33	4.12	.278	.758
Curiosity	16.99	2.99	17.59	2.99	.634	.532
Judgement	16.08	2.95	17.10	2.57	1.889	.155
Love of Learning	16.03	3.33	16.95	3.38	1.252	.289
Wisdom	16.48	2.92	16.64	2.81	.064	.938
Bravery	14.65	3.67	14.08	3.79	.793	.454
Perseverance	14.57	3.72	14.61	4.13	.201	.818
Honesty	16.20	3.21	16.49	3.22	.633	.532
Zest	13.82	4.08	12.82	4.35	1.06	.349
Love	17.15	3.02	16.92	4.04	.068	.934
Kindness	18.21	2.38	18.28	2.22	.702	.497
Social Intelligence	17.28	3.42	16.69	3.82	.599	.551
Teamwork	15.39	3.61	14.80	4.53	.827	.452
Fairness	17.55	2.36	16.92	2.79	.942	.392
Leadership	13.67	3.83	13.05	3.81	.798	.452
Forgiveness	14.06	3.85	14.51	3.78	.363	.696
Humility	15.35	2.85	15.59	3.38	.108	.898
Prudence	14.45	3.23	12.97	4.28	2.711	.070
Self-Regulation	13.43	3.81	13.64	4.84	.110	.896
Beauty & Excellence	16.62	3.25	16.30	3.31	.236	.790
Gratitude	16.23	3.60	16.17	2.95	.434	.649
Hope	15.20	3.75	15.18	3.99	.002	.998
Humour	17.52	3.09	18.36	2.68	1.557	.214
Spirituality	14.12	4.35	12.13	5.15	3.158	.045*

Note. Level of confidence of 95.00 with $\alpha=.05$ was chosen. Marked as significant with * if $p<.05$. *M* equals Means; *SD* equals standard deviation.

Hypothesis 3

It was hypothesised that the character strengths zest, gratitude, hope, kindness, appreciation of beauty and excellence, love, creativity, wisdom and fairness mediate the association between gender and life satisfaction. Therefore, mediation analyses were performed, and the character strengths zest, teamwork, prudence, gratitude, kindness and hope significantly mediated gender to life satisfaction, as seen in Table 3. Table 3 describes the mediation analysis with gender as the independent variable X, the character strengths as mediators M and the dependent variable life satisfaction, the beta values of the prediction paths of X to M and M to Y, as well as the indirect effect, and the confidence intervals of the mediation.

Since significant mediators were identified, including the hypothesized character strengths zest, gratitude, kindness and hope, Hypothesis 3 is partially accepted.

Table 3

Character Strengths Mediating Gender to Life Satisfaction

X	X→M Value of Beta	M	M→Y Value of Beta	Y	Indirect effect	Confidence Interval of the Mediation	
						LLCI	ULCI
Gender	-.03	Creativity	-.28	Life Satisfaction	.01	-.49	-.07
	-.53	Curiosity	-.31		.17	-.58	-.04
	-.99	Judgement	-.12		.12	-.17	.40
	-.80	Love of Learning	-.32		.26	-.56	-.08
	-.18	Wisdom	-.29		.05	-.57	-.01
	.68	Bravery	-.08		.06	-.30	.14
	.06	Perseverance	-.22		-.01	-.44	-.01
	-.40	Honesty	-.07		.03	-.32	-.20
	-.85	Zest	-.72*		-.61	-.88	-.56
	.21	Love	-.35		.07	-.60	-.10
	.05	Kindness	-.53*		.03	-.87	-.19
	.48	Social Intelligence	-.21		.10	-.44	.02
	.71	Teamwork	-.32*		.23	-.54	-.12
	.57	Fairness	-.31		.18	-.64	-.02
	.73	Leadership	-.23		.17	-.44	-.02
	-.51	Forgiveness	-.21		.11	-.42	-.01
	-.25	Humility	.07		-.02	-.20	-.35
	1.37	Prudence	-.10*		-.01	-.33	.13
	-.14	Self-Regulation	-.25		.04	-.45	-.05
	.36	Beauty & Excellence	-.30		.11	-.54	-.05
	-.08	Gratitude	-.39*		.03	-.61	-.16
	.01	Hope	-.66*		-.01	-.85	-.47
	-.90	Humour	-.34		.30	-.60	-.07
	1.75	Spirituality	-.17		.30	-.35	.01

Note. Level of confidence of 95.00 with $\alpha=.05$ was chosen. Marked significant with * if $p<.05$. *X* equals the independent variable gender, *Y* equals the dependent variable life satisfaction, and *M* equals the mediators (character strengths). *X→M* and *M→Y* equal the beta values.

Discussion

This thesis aimed to examine how different character strengths utilized by women and men can explain differences in life satisfaction. The research question was: “*What influence has gender on character strengths and life satisfaction?*” The sample consisted mainly of young women who studied social sciences. The expectations included three hypotheses.

Firstly, women were expected to have higher life satisfaction than men. Hypothesis 1 is rejected. The results showed that both men and women were slightly dissatisfied with life. However, no significant gender differences were identified. The results are similar to those of Della Giusta et al. (2011), who could not identify significant differences in life satisfaction. Their study included a European sample, which covered a long period of eight years and over 10,000 participants. However, many other studies identified gender differences in life satisfaction (Blanca et al., 2018; Graham & Chattopadhyay, 2013; Joshanloo & Jovanović, 2020; Shimai et al., 2006).

One major influence on the samples' life satisfaction might be the long-term restrictions and difficulties due to Covid-19. As these were primarily social restrictions, the emotional impact on women's life satisfaction might be higher, which might explain the absence of gender differences in this sample since research has shown that life satisfaction depends on different factors and different weighing of these factors for men and women (Della Giusta et al., 2011; Di Cesare & Amori, 2006; Matud et al., 2014). Women's life satisfaction was found to depend mainly on social activities/leisure, relationships, and health, while men's depends primarily on their occupational status and satisfaction (Della Giusta et al., 2011; Di Cesare & Amori, 2006; Matud et al., 2014). Additionally, gender differences often disappear while investigating subgroups, e.g. people who cannot work due to health issues (Matud et al., 2014). Due to Covid-19, the ability to work (or study), e.g. due to health issues or restrictions, was impaired and might negatively influence the life satisfaction of both men and women.

Research also found that gender differences in life satisfaction seem to depend on other variables, like age, education, marriage status, and national levels of development (Graham & Chattopadhyay, 2013). Also, women seem to score higher life satisfaction levels with a more significant gap in rich countries, with older, more educated, and married groups (Graham & Chattopadhyay, 2013). In this sample, the age was very young, making it more likely that only a small percentage of women were married. As marriage and age are relevant for life satisfaction in women (Graham & Chattopadhyay, 2013), it might explain the absence of gender differences.

Secondly, women were expected to have higher levels of curiosity, honesty, gratitude, fairness, love, and kindness than men. Hypothesis 2 is rejected. The results showed insignificant

differences, with the only exception being spirituality. Compared to other studies investigating this issue, it is relatively uncommon to have found no significant differences in the other character strengths, as they were present in various other studies (Blanca et al., 2018; Brdar et al., 2011; Bruna & Hernáez, 2015; Husain, 2021; Porto Noronha & Martins, 2016), with many arguing that women score higher in heart strengths, while men score higher on intellectual strengths. However, not all studies on gender differences in character strengths showed significant differences (Shimai et al., 2006), which indicates that other variables might be influencing gender differences. For example, age might be an accountable variable. Heintz et al. (2019) found that age moderated up to 14 character strengths. If age is a moderation variable, the homogeneity in the age of this sample might explain the absence of differences. The missing gender differences in the results might also show that the sample strongly believes in equality and does not bend to the expected social or cultural roles. This is congruent to Lopez-Zafra and Garcia-Retamero's (2012) study, which found that the perception of the social roles and the expectations placed on gender is currently shifting, admitting women to be more independent and take leadership roles while men are allowed to show weaknesses.

In the case of spirituality, other studies found similar results, in which women showed significantly higher mean scores in the degree and daily experience of spirituality (Kelley & Miller, 2007; Khan & Singh, 2013; Mirkovic et al., 2021; Robinson et al., 2019). This is also the case in college students: women were spiritually significantly more inclined than men (Bryant, 2007). Additionally, it was found that women tend to use religion or spirituality as a coping mechanism and seek social support (Mirkovic et al., 2021). Due to Covid-19 seeking social support was often not possible, making it more likely that women focused on spirituality or experienced spirituality as more relevant than in other studies.

Finally, it was expected that the character strengths zest, gratitude, hope, kindness, appreciation of beauty, love, creativity, perspective/wisdom and fairness mediate the association between gender and life satisfaction. Hypothesis 3 is partially accepted. The character strengths zest, teamwork, prudence, gratitude, kindness and hope are significant mediators, while zest, gratitude, kindness and hope were expected. Heintz et al. (2019) found that gender differences often vanish, the sample's age is below 20, while only minor effects remain for slightly older samples. This might be the case for the character strengths appreciation of beauty, love, creativity, wisdom and fairness.

However, the other significant mediators, prudence and teamwork, were not expected, and various reasons might be responsible. Teamwork was found to be especially important in

relationships and life satisfaction for women, while the association for men was insignificant (Weber & Ruch, 2012). Additionally, teamwork predicted life satisfaction for women, while it did not for men (Weber & Ruch, 2012), which might be responsible for the mediation. Further, teamwork was found to significantly impact work satisfaction (Shujaat et al., 2014), which in turn is essential for men's life satisfaction (Della Giusta et al., 2011; Matud et al., 2014). As Covid-19 especially impaired work-life, the difference between women and men might be enhanced.

Prudence is usually less likely present in younger populations, as age represents an important variable in the degree and importance in which it occurs (Brdar et al., 2011; Peterson et al., 2007). However, this might also be due to Covid-19: Since prudence is a strength that is per definition about being cautious and careful, especially concerning unnecessary risks (McGrath, 2019), people might experience this as more important than during other studies. Further, prudent health behaviour mediates life satisfaction (Grant et al., 2009).

Value, Limitations, & Future Recommendations

This thesis adds value to the understanding of the influence of gender on life satisfaction and the influence of the utilization of character strengths by different genders in association with life satisfaction. Additionally, understanding gender differences in the mental health sector is furthered. Finally, it advocates for decreasing existing gender stereotypes, which is still an issue in the mental health sector (Afifi, 2007). This research shows that gender differences are less prominent than often expected and suggested by literature and society (Ellemers, 2018), at least for young adults in higher education. The study shows very high reliability, which means that the results are very consistent and implicate some careful generalization: It is possible that the students of the University of Twente, especially in social sciences, are slightly dissatisfied with their life at the current time. Also, the sample size was adequately large.

Limitations of this study include that the study primarily included students of social sciences. As positive psychology has become more important over the last years (Seligman & Csikszentmihalyi, 2014), these social sciences students likely gained some knowledge of character strengths beforehand, which might influence the results, as prior knowledge was not investigated. Since the students could be familiar with other definitions of character strengths, studies about character strengths and life satisfaction or other tests they already participated in, their prior knowledge might distort the results of this study. Additionally, the generalizability of the results is limited. Another point to consider is that the study consisted of self-reports, which carry the usual constraints with interpretative issues. For once, dishonesty and social desirability: some people

might answer according to how they would like to be, e.g. very kind, instead of how it truly is. Another reason might be that they do not focus on their answer and wish to finish quickly, as they have to participate in multiple studies since the students are required to get 15 credit points by the end of the second bachelor's student year. By finishing this study, they received only 0.25 points, which is not much compared to the time they spent on participation. Therefore, they might lack motivation for engaged participation. Further, another difficulty might be that many participants did not have English as a primary language, as most subjects had German or Dutch nationality.

For future research, various things can be considered, for example, a closer focus on the cultural influence on gender differences, as some researchers found that they influence the relationship while others do not (Graham & Chattopadhyay, 2013; Heintz et al., 2019). For example, Shimai et al. (2006) found significant differences between an American and a Japanese sample. Further cross-cultural comparisons between collectivistic and individualistic cultures might reveal other differences or similarities, which could enhance the understanding of mental health, gender identity and cross-cultural trends in life satisfaction and character strengths.

Another focus of future research is identifying and examining the influence of stereotypes on gender differences in the relationship between character strengths and life satisfaction. Stereotypes are present in all societies for both men and women and place gender-based restrictions and expectations on them (Ellemers, 2018). All societies assign specific adult roles based on sex and teach children to adhere to them through socialisation (Bem, 1981). Individuals are expected to learn gender-specific skills, follow gender-specific concepts, and acquire particular personality attributes to become masculine or feminine, as understood by society (Bem, 1981). For instance, society expects men to be confident, independent and self-focused (Moss-Racusin et al., 2010). Other indicators of men's agency are assertiveness and performance (Kite et al., 2008). A man should prioritise his work and performance while being allowed to neglect interpersonal relationships (Ellemers, 2018). At the same time, women should be more communal, show modest and other-orientated behaviour (Moss-Racusin et al., 2010), and be responsible for the family and household while being expected to neglect professional achievement (Ellemers, 2018). All this might influence the way people try to represent themselves in a survey. One way to analyse this might be to let men and women answer three different surveys about how they rate which strengths men or women should possess, and on in which they rate their own strengths. This comparison might help identify the influence of stereotypes.

Further, the gender differences in other populations could be compared, e.g. retired sample vs working sample, as this is especially important for men's life satisfaction (Della Giusta et al., 2011; Di Cesare & Amori, 2006; Matud et al., 2014).

Conclusion

This thesis aimed to examine how different character strengths utilized by women and men can explain differences in life satisfaction. Gender differences were insignificant for life satisfaction and all character strengths except spirituality. However, the character strengths zest, teamwork, prudence, gratitude, kindness and hope significantly mediate gender to life satisfaction. This research adds to the current information about gender differences in mental health, especially the relatively scarce information about gender differences in the association of character strengths and life satisfaction.

Literature

- Acosta, M. C. (2013). *Identification and utilization of character strengths in depressed individuals*. Southern Connecticut State University.
- Afifi, M. (2007). Gender differences in mental health. *Singapore medical journal*, 48(5), 385.
- Bachmann, R., Gonschor, M., Korfhage, T., & Wübker, A. (2021). Covid-19 and life satisfaction across Europe. *Applied Economics Letters*, 1-5.
- Bem, S. L. (1981). Gender schema theory: A cognitive account of sex typing. *Psychological review*, 88(4), 354.
- Blanca, M. J., Ferragut, M., Ortiz-Tallo, M., & Bendayan, R. (2018). Life satisfaction and character strengths in Spanish early adolescents. *Journal of Happiness Studies*, 19(5), 1247-1260.
- Brdar, I., Anić, P., & Rijavec, M. (2011). Character strengths and well-being: are there gender differences? In *The human pursuit of well-being* (pp. 145-156). Springer.
- Bruna, M. M. O., & Hernáez, V. C. (2015). Las fortalezas humanas desde la perspectiva de género: Un estudio exploratorio en población española. *Revista Mexicana de Investigación en Psicología*, 72-92.
- Bryant, A. N. (2007). Gender differences in spiritual development during the college years. *Sex roles*, 56(11), 835-846.
- Dattani, S., Ritchie, H., & Roser, M. (2018, 2021). *Our World in Data - Mental Health*. OurWorldInData.org. Retrieved 15.03.2022 from <https://ourworldindata.org/mental-health>
- Degg, M.-R. (2018). *Character strengths and life satisfaction*. GRIN Verlag.
- Della Giusta, M., Jewell, S. L., & Kambhampati, U. S. (2011). Gender and life satisfaction in the UK. *Feminist Economics*, 17(3), 1-34.
- Di Cesare, M., & Amori, A. (2006). Gender and happiness in Italy. Population Association of America Annual Meeting,
- Diener, E. (2009). Subjective well-being. *The science of well-being*, 11-58.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of personality assessment*, 49(1), 71-75.
- Ellemers, N. (2018). Gender stereotypes. *Annual review of psychology*, 69, 275-298.
- Graham, C., & Chattopadhyay, S. (2013). Gender and well-being around the world. *International Journal of Happiness and Development*, 1(2), 212-232.

- Grant, N., Wardle, J., & Steptoe, A. (2009). The relationship between life satisfaction and health behavior: a cross-cultural analysis of young adults. *International journal of behavioral medicine*, 16(3), 259-268.
- Hayes, A. F. (2017). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. Guilford publications.
- Heintz, S., Kramm, C., & Ruch, W. (2019). A meta-analysis of gender differences in character strengths and age, nation, and measure as moderators. *The Journal of Positive Psychology*, 14(1), 103-112.
- Huebner, E. S., Suldo, S. M., & Gilman, R. (2006). Life Satisfaction.
- Husain, W. (2021). Women are the better halves: gender-based variations in virtues and character strengths. *Journal of Human Values*, 09716858211039984.
- Joshanloo, M., & Jovanović, V. (2020). The relationship between gender and life satisfaction: analysis across demographic groups and global regions. *Archives of women's mental health*, 23(3), 331-338.
- Kelley, B. S., & Miller, L. (2007). Life satisfaction and spirituality in adolescents. *Research in the social scientific study of religion*, 18, 233.
- Khan, I., & Singh, N. (2013). A study on gender differences on gratitude, spirituality and forgiveness among school teachers. *International Journal of Applied Science and Engineering*, 1(1), 9.
- Kite, M. E., Deaux, K., & Haines, E. L. (2008). *Gender stereotypes*. Praeger Publishers/Greenwood Publishing Group.
- Matud, M. P., Bethencourt, J. M., & Ibáñez, I. (2014). Relevance of gender roles in life satisfaction in adult people. *Personality and Individual Differences*, 70, 206-211.
- McGrath, R. E. (2019). *The VIA Assessment Suite for Adults: Development and Initial Evaluation Revised Edition*.
- Mirkovic, B., Belloncle, V., Pellerin, H., Guilé, J.-M., & Gérardin, P. (2021). Gender differences related to spirituality, coping skills and risk factors of suicide attempt: A cross-sectional study of French adolescent inpatients. *Frontiers in psychiatry*, 12, 1027.
- Moss-Racusin, C. A., Phelan, J. E., & Rudman, L. A. (2010). When men break the gender rules: status incongruity and backlash against modest men. *Psychology of Men & Masculinity*, 11(2), 140.
- Park, N., & Peterson, C. (2009). Character strengths: Research and practice. *Journal of college and character*, 10(4).
- Park, N., Peterson, C., & Seligman, M. E. (2004). Strengths of character and well-being. *Journal of social and Clinical Psychology*, 23(5), 603-619.

- Pavot, W., & Diener, E. (2008). The satisfaction with life scale and the emerging construct of life satisfaction. *The Journal of Positive Psychology*, 3(2), 137-152.
- Peterson, C., Ruch, W., Beermann, U., Park, N., & Seligman, M. E. (2007). Strengths of character, orientations to happiness, and life satisfaction. *The Journal of Positive Psychology*, 2(3), 149-156.
- Peterson, C., & Seligman, M. E. (2004). *Character strengths and virtues: A handbook and classification* (Vol. 1). Oxford University Press.
- Porto Noronha, A. P., & Martins, D. d. F. (2016). Associations between character strengths and life satisfaction: A study with college students. *Acta Colombiana de Psicología*, 19(2), 97-103.
- Prasoon, R., & Chaturvedi, K. (2016). Life satisfaction: a literature review. *The Researcher: International Journal of Management, Humanities and Social Sciences*, 1(02), 24-31.
- Proctor, C. L., Linley, P. A., & Maltby, J. (2009). Youth life satisfaction: A review of the literature. *Journal of Happiness Studies*, 10(5), 583-630.
- Proyer, R. T., Gander, F., Wellenzohn, S., & Ruch, W. (2015). Strengths-based positive psychology interventions: A randomized placebo-controlled online trial on long-term effects for a signature strengths-vs. a lesser strengths-intervention. *Frontiers in psychology*, 6, 456.
- Robinson, O. C., Hanson, K., Hayward, G., & Lorimer, D. (2019). Age and cultural gender equality as moderators of the gender difference in the importance of religion and spirituality: Comparing the United Kingdom, France, and Germany. *Journal for the Scientific Study of Religion*, 58(1), 301-308.
- Seligman, M. E., & Csikszentmihalyi, M. (2014). Positive psychology: An introduction. In *Flow and the foundations of positive psychology* (pp. 279-298). Springer.
- Shimai, S., Otake, K., Park, N., Peterson, C., & Seligman, M. E. (2006). Convergence of character strengths in American and Japanese young adults. *Journal of Happiness Studies*, 7(3), 311-322.
- Shujaat, S., Manzoor, A., & Syed, N. A. (2014). Impact of team work on employee satisfaction. *IBT Journal of Business Studies (JBS)*, 2(2).
- Stevenson, B., & Wolfers, J. (2009). The paradox of declining female happiness. *American Economic Journal: Economic Policy*, 1(2), 190-225.
- Weber, M., & Ruch, W. (2012). The role of character strengths in adolescent romantic relationships: An initial study on partner selection and mates' life satisfaction. *Journal of adolescence*, 35(6), 1537-1546.
- West, N. M. (2006). *The relationship among personality traits, character strengths, and life satisfaction in college students*. The University of Tennessee.

Appendix

Appendix A: Informed Consent

Welcome to the research study!

Informed Consent

Goal

This study aims to investigate gender differences of the correlational and predictive relationship between Character Strengths and Life satisfaction.

Procedure & Data Collection

Firstly, you will be asked some demographic questions. Afterwards, questions about your life satisfaction and your character strengths follow. There are no right or wrong answers, and I appreciate your open and honest answers. Please choose the answer you believe fits you the best. The survey should take you around 20-25 Minutes. Your data is anonymized, and your participation bears no risks or consequences for you. You can withdraw at any time without further explanation.

If you have any questions, please do not hesitate to ask and contact me. The contact details are indicated below and at the end of the survey.

Declaration

By clicking the button "I consent, begin the study", you acknowledge:

- Your participation in the study is voluntary.
- You are at least 18 years of age.
- You are aware that you may choose to terminate your participation at any time for any reason.
- You may contact the researcher through email

Appendix B: Demographic Questions

1. What is your gender?
2. How old are you?
3. What is your nationality?
4. What is your current employment status?
5. Which study program are you following?

Appendix C: Satisfaction with Life Scale & Scoring Indication

Satisfaction with Life Scale by Diener et al. (1985)

1. In most ways, my life is close to my ideal
2. The conditions of my life are excellent.
3. I am satisfied with life.
4. So far, I have gotten the important things I want in life.
5. If I could live my life over, I would change almost nothing.

Table 4

Indication of possible interpretations of scores by Diener et al. (1985)

Points	Indication
31-35	Extremely Satisfied
26-30	Satisfied
21-25	Slightly satisfied
20	Neutral
15-19	Slightly dissatisfied
10-14	Dissatisfied
5-9	Extremely dissatisfied

Appendix D: Global Assessment of Character Strengths

Figure 1

Global Assessment of Character Strengths as stated in McGrath (2019)

Global Assessment of Character Strengths

Instructions: This survey asks you to describe aspects of your personality. The first page describes 24 elements of personality. On the other pages, you will be asked questions about each of those elements. Be as honest as you can.

1. Creativity: You are viewed as a creative person; you see, do, and/or create things that are of use; you think of unique ways to solve problems and be productive.
2. Curiosity: You are an explorer; you seek novelty; you are interested in new activities, ideas, and people; you are open to new experiences.
3. Judgment/Critical Thinking: You are analytical; you examine things from all sides; you do not jump to conclusions, but instead attempt to weigh all the evidence when making decisions.
4. Love of Learning: You often find ways to deepen your knowledge and experiences; you regularly look for new opportunities to learn; you are passionate about building knowledge.
5. Perspective/Wisdom: You take the “big picture” view of things; others turn to you for wise advice; you help others make sense of the world; you learn from your mistakes.
6. Bravery/Courage: You face your fears and overcome challenges and adversity; you stand up for what is right; you do not shrink in the face of pain or inner tension or turmoil.
7. Perseverance: You keep going and going when you have a goal in mind; you attempt to overcome all obstacles; you finish what you start.
8. Honesty: You are a person of high integrity and authenticity; you tell the truth, even when it hurts; you present yourself to others in a sincere way; you take responsibility for your actions.
9. Zest: You are enthusiastic toward life; you are highly energetic and activated; you use your energy to the fullest degree.
10. Love: You are warm and genuine to others; you not only share but are open to receiving love from others; you value growing close and intimate with others.
11. Kindness: You do good things for people; you help and care for others; you are generous and giving; you are compassionate.
12. Social Intelligence: You pay close attention to social nuances and the emotions of others; you have good insight into what makes people “tick”; you seem to know what to say and do in any social situation.
13. Teamwork: You are a collaborative and participative member on groups and teams; you are loyal to your group; you feel a strong sense of duty to your group; you always do your share.
14. Fairness: You believe strongly in an equal and just opportunity for all; you don’t let personal feelings bias your decisions about others; you treat people the way you want to be treated.
15. Leadership: You positively influence those you lead; you prefer to lead than to follow; you are very good at organizing and taking charge for the collective benefit of the group.
16. Forgiveness/Mercy: You readily let go of hurt after you are wronged; you give people a second chance; you are not vengeful or resentful; you accept people’s shortcomings.
17. Humility/Modesty: You let your accomplishments speak for themselves; you see your own goodness but prefer to focus the attention on others; you do not see yourself as more special than others; you admit your imperfections.
18. Prudence: You are wisely cautious; you are planful and conscientious; you are careful to not take undue risks or do things you might later regret.
19. Self-Regulation: You are a very disciplined person; you manage your vices and bad habits; you stay calm and cool under pressure; you manage your impulses and emotions.
20. Appreciation of Beauty & Excellence: You notice the beauty and excellence around you; you are often awe-struck by beauty, greatness, and/or the moral goodness you witness; you are often filled with wonder.
21. Gratitude: You regularly experience and express thankfulness; you don’t take the good things that happen in your life for granted; you tend to feel blessed in many circumstances.
22. Hope: You are optimistic, expecting the best to happen; you believe in and work toward a positive future; you can think of many pathways to reach your goals.
23. Humor: You are playful; you love to make people smile and laugh; your sense of humor helps you connect closely to others; you brighten gloomy situations with fun and/or jokes.
24. Spirituality: You hold a set of beliefs, whether religious or not, about how your life is part of something bigger and more meaningful; those beliefs shape your behavior and provide a sense of comfort, understanding, and purpose.

Gender Differences in the Relationship of Character Strengths and Life Satisfaction 25

Instructions: Put an X in the box in each row that best describes you.

	Very Strongly Disagree	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Very Strongly Agree
Creativity is an essential part of who I am in this world.							
Curiosity is an essential part of who I am in this world.							
Judgment/Critical Thinking is an essential part of who I am in this world.							
Love of Learning is an essential part of who I am in this world.							
Perspective/Wisdom is an essential part of who I am in this world.							
Bravery/Courage is an essential part of who I am in this world.							
Perseverance is an essential part of who I am in this world.							
Honesty is an essential part of who I am in this world.							
Zest is an essential part of who I am in this world.							
Love is an essential part of who I am in this world.							
Kindness is an essential part of who I am in this world.							
Social Intelligence is an essential part of who I am in this world.							
Teamwork is an essential part of who I am in this world.							
Fairness is an essential part of who I am in this world.							
Leadership is an essential part of who I am in this world.							
Forgiveness/Mercy is an essential part of who I am in this world.							
Humility/Modesty is an essential part of who I am in this world.							
Prudence is an essential part of who I am in this world.							
Self-Regulation is an essential part of who I am in this world.							
Appreciation of Beauty & Excellence is an essential part of who I am in this world.							
Gratitude is an essential part of who I am in this world.							
Hope is an essential part of who I am in this world.							
Humor is an essential part of who I am in this world.							
My Spirituality is an essential part of who I am in this world.							

Gender Differences in the Relationship of Character Strengths and Life Satisfaction 26

Instructions: Put an X in the box in each row that best describes you.

	Very Strongly Disagree	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Very Strongly Agree
It is natural and effortless for me to express my Creativity strength.							
It is natural and effortless for me to express my Curiosity strength.							
It is natural and effortless for me to express my Judgment/Critical Thinking strength.							
It is natural and effortless for me to express my Love of Learning strength.							
It is natural and effortless for me to express my Perspective/Wisdom strength.							
It is natural and effortless for me to express my Bravery/Courage strength.							
It is natural and effortless for me to express my Perseverance strength.							
It is natural and effortless for me to express my Honesty strength.							
It is natural and effortless for me to express my Zest strength.							
It is natural and effortless for me to express my Love strength.							
It is natural and effortless for me to express my Kindness strength.							
It is natural and effortless for me to express my Social Intelligence strength.							
It is natural and effortless for me to express my Teamwork strength.							
It is natural and effortless for me to express my Fairness strength.							
It is natural and effortless for me to express my Leadership strength.							
It is natural and effortless for me to express my Forgiveness/Mercy strength.							
It is natural and effortless for me to express my Humility/Modesty strength.							
It is natural and effortless for me to express my Prudence strength.							
It is natural and effortless for me to express my Self-Regulation strength.							
It is natural and effortless for me to express my Appreciation of Beauty & Excellence strength.							
It is natural and effortless for me to express my Gratitude strength.							
It is natural and effortless for me to express my Hope strength.							
It is natural and effortless for me to express my Humor strength.							

It is natural and effortless for me to express my Spirituality.							
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