

# **How are Sociodemographic Factors and Personality Traits Related to Flourishing and Growth Mindset? - A Correlational Study**

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### Abstract

In research, a growing body of knowledge exists about the psychological concepts of flourishing and growth mindset, which play a crucial role in the field of positive psychology. Both concepts are considered to contribute significantly to people's mental health. Accordingly, flourishing individuals show higher levels of functioning in life and have a lower risk of mental illness. In comparison, people with a growth mindset believe that abilities can be changed with effort. However, there is limited insight into what flourishers and individuals holding a growth mindset share in their characteristics. The present study aimed to examine sociodemographic and personality similarities between flourishers and individuals holding a growth mindset. A correlational analysis was conducted with 69 flourishers and 124 people with a growth mindset from Germany to explore the association between gender, age and education level, and the personality traits Extraversion, Conscientiousness and Openness to experience and both flourishing and growth mindset. The results showed no statistically significant correlations between gender, education level and personality traits with the state of flourishing and growth mindset, respectively. However, a moderately significant positive association was found between age and growth mindset ( $r(124) = .36, p < .001$ ) but not flourishing, indicating that age is an essential factor in relation to growth mindset. In conclusion, no similarities between flourishers and individuals with a growth mindset could be identified in the current study.

*Keywords:* flourishing, growth mindset, mental well-being, positive psychology, correlational study

### **How are sociodemographic factors and personality traits related to flourishing and growth mindset?**

With the increasing importance of psychological well-being, a growing number of researchers are examining the value of positive psychological interventions and their effects on human well-being. Researchers suggested that mental health is more than just the absence of mental illness. Accordingly, the WHO (2005, p. 2) defines mental health as “a state of well-being in which the individual realises his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community”. In particular, the three core factors are (1) well-being, (2) effective functioning of an individual and (3) effective functioning for a community (Westerhof & Keyes, 2010; WHO, 2005). The developmental definition given by the WHO is echoed in many holistic approaches to well-being that have been transmitted by many cultural, philosophical and religious representatives over generations. In this respect, the current understanding of well-being contrasts with the deficit-based and symptoms-driven view that prevailed in earlier years (Westerhof & Keyes, 2010).

Consequently, following the debate that the absence of mental diseases like depression and anxiety does not necessarily mean the presence of good well-being, researchers in positive psychology have identified key factors that play a significant role in promoting people’s well-being. It has been found that the state of flourishing and the development of a growth mindset are core concepts in psychology when it comes to how individuals can achieve a complete sense of psychological well-being (Haybron, 2008; Schotanus-Dijkstra et al., 2016; Yoo & Ryff, 2019). In this context, flourishing is understood as a person’s mental health having high eudaimonic and hedonic well-being (Huppert & So, 2013; Keyes, 2002). Nowadays, the eudaimonic perspective is defined as positive functioning (Huppert & So, 2013), involving human purpose and fulfilment (Yoo, & Ryff, 2019), and often used by philosophers as a synonym for happiness (Haybron, 2008). Eudaimonia is understood as psychological and social well-being and operates today under human flourishing (Keyes, 2002; Premchandran & Priyadarshi, 2019; Schotanus-Dijkstra et al., 2016). Another view on well-being is from the hedonistic perspective, in which feeling good is the focus (Huppert & So, 2013). Hedonism assumes an emotion-regulating function that is supposed to predict positive emotions, serenity and vitality (Diener, 2009; Henderson et al.,

2013). It is concerned with the extent to which people have positive experiences in their lives and how they feel about themselves (Kashdan et al., 2008; Pancheva et al., 2020).

Consequently, the combination of eudaimonia and hedonia functions as two conceptions that comprise today's flourishing. According to Henderson and his colleagues (2013), enhancing both hedonic and eudaimonic behaviours is an effective way to increase mental health and reduce psychological stress. According to Keyes (2010), "true mental health" is what he referred to as flourishing. Thereby he explains that people who flourish have a balanced life in which they feel good and function well (Keyes, 2010). As a result, flourishing is now defined as experiencing high levels of both hedonic and eudaimonic well-being, incorporating subjective and psychological well-being (Huppert & So, 2013; Schotanus-Dijkstra et al., 2016; Villieux et al., 2016). According to Keyes' (2002) model of mental health, the counterpart to the concept of human flourishing is languishing, which involves the incompleteness of mental health. Individuals who languish are characterised by lower levels of well-being, accompanied by emptiness and stagnation. Furthermore, people neither flourishing nor languishing are associated with moderate mental health (Keyes, 2002).

Besides human flourishing, a growth mindset plays an essential role in having a positive influence on peoples' mental health (Zeng et al., 2016). According to Dweck (2016), people with a growth or incremental mindset are characterised by an inner belief that one's abilities, talents and intelligence are not fixed constructs but can be advanced by working and strategies (Burnette et al., 2020; Dweck, 2016; Ng, 2018). In contrast, people with a fixed or entity mindset are convinced that their talents are innate gifts (Dweck, 2016). Thus, this comparison implies that people with a growth mindset are intrinsically motivated to learn and address their challenges more flexibly (Dearwork, 2019; Lee et al., 2016). In her TEDxTalk, Dweck based her approach on her 2006 publication "Mindset: The New Psychology of Success", in which she concludes that a person's success in areas such as the workplace, school or sport depends on how that individual thinks about talents and abilities. To identify individuals holding an incremental mindset, it is, therefore, necessary to examine their beliefs about compensability of one's skills, for example, and the perceived importance of intelligence and effort for good performance (Stiensmeier-Pelster & Rheinberg, 2002). Thus, the mental attitude is of crucial importance in achieving desired positive outcomes. In summary, the idea that characteristic factors such as abilities are malleable and the adaptive way in which people with a growth mindset cope with

adverse conditions reflects the nature of the definition of mental health by WHO (2005), which states that a mentally healthy person is, for example, able to function well which indicates a positive correlation between growth mindset and a person's well-being.

Apart from a growth mindset, human beings are also able to have a fixed mindset. Thereby, people with an entity mindset are convinced that human attributes are innate and static because they cannot be changed or developed (Burnette et al., 2020; Wolcott et al., 2020). Compared to individuals holding a growth mindset, people with a fixed mindset believe that success comes from talent and that talent is not naturally given to them (Wolcott et al., 2020; Yeager et al., 2019). Furthermore, holding a fixed way of thinking is associated with helpless regulation strategies and low resilience levels to address challenges (Lee et al., 2016; Van Tongeren & Burnette, 2018). Although the spectrum counts two extremes in terms of growth and fixed mindset, Dweck (2016) explains that a person does not have either one or the other but holds both factors in differing proportions. Whether and who creates a growth mindset depends primarily on a person's fixed-mindset triggers. "When we face challenges, receive criticism, or fare poorly compared with others, we can easily fall into insecurity or defensiveness, a response that inhibits growth" (Dweck, 2016, p. 3). Thus, triggers function as critical stimuli that cause people to find themselves back in a state of fixed thinking and behaviour. In the end, people achieve a counteraction in the direction of growth by learning to perceive and accept their triggers (Dweck, 2016).

A fundamental consideration in relation to flourishing and growth mindset is the individual similarities between people. Researchers examined a wide range of variables such as age, gender and education level as well as personality to see to what extent these can be linked to both psychological concepts. In general, research indicates that sociodemographic disadvantage like gender discrimination and non-access to education has a negative effect on people's well-being, and thus on the flourishing level (Kandasamy et al., 2018; Zhao et al., 2021). Likewise, people with a disadvantaged background show more of an entity mindset than a growth mindset (Claro et al., 2016; Warren et al., 2019). As a result, disadvantageous sociodemographic factors significantly influence the attainment of flourishing and growth mindset. Furthermore, researchers discovered that both flourishers and people with a growth mindset are similar according to gender, as they showed no considerable differences in the acquisition of flourishing and growth mindset between women and men. Accordingly, Momtaz and colleagues (2016)

reported that gender was significantly related to flourishing. Besides, a survey study from 2006 showed that gender differences were small, with few more women that flourish in the northern European countries (Huppert & So, 2009). Whereas in the southern ones, a few more men are flourishing. Keyes' study (2007) supports the findings by Huppert and So (2009), indicating no gender differences in flourishing among white-skinned people. Similarly, numerous studies suggest that there are no gender differences between women and men in the occurrence of developing a growth mindset (Heyman et al., 2002; Kornilova et al., 2009; Yan et al., 2014). However, other studies suggest that women are slightly more likely to develop a growth mindset than men (Macnamara & Rupani, 2017).

Moreover, several studies have shown that people who flourish and those with a growth mindset are similar in age, as findings show that the level of flourishing and growth mindset decreases with age. Correspondingly, Huppert and So (2009) addressed the factor of age and its relationship to flourishing. The results of the study indicated that the tendency to flourish decreases with age. However, other findings suggest no significant relationship between age and flourishing (Momtaz et al., 2016). In the same way, a study by Zhao and colleagues (2018) revealed that age is negatively correlated with growth mindset, which confirms the results of Macnamara and Rupani (2017), who found that the growth mindset level declines the older a person becomes. Furthermore, research indicates that individuals' flourishing and growth mindset levels increase with a higher education level. A study by Momtaz and his colleagues (2016) found the factor education level to be significantly related to flourishing. In addition, Huppert and So (2009) showed that higher flourishing is associated with higher education. In the same way, researchers suggested that a growth mindset positively predicts educational achievement (Blackwell et al., 2007). However, Dweck and her colleagues (1995) noted that education does not correlate significantly with growth mindset.

A person's personality does play an additional role when considering who is flourishing and holds a growth mindset and why. Researchers have discovered that our personality is one of the strongest determining factors for a person's psychological well-being (Huppert, 2009; Keyes, 2014). In general, personality traits explained 30% of the variance in predicting psychological well-being (Villieux et al., 2016). As psychological well-being is an important issue today, researchers have focused on what characteristics are associated with high levels of well-being enabling people to flourish. Particular emphasis was placed on the personality traits

Extraversion, Conscientiousness and Openness to experience. Studies reveal that people with high levels of these traits combined with low levels of Neuroticism are considered to have higher levels of mental well-being being closer to the state of flourishing (Keyes et al., 2002; Schotanus-Dijkstra et al., 2016; Steel et al., 2008; Villieux et al., 2016). Compared to the studies on flourishing, the decisive characteristic for a person to develop a growth mindset is the so-called “proactive trait”. According to De Vries et al. (2016), a proactive personality is positively related to Extraversion, Conscientiousness and Openness to experience. People holding the dispositional attribute proactivity tend to continuously change their environment by means of change orientation, initiative and perseverance, which corresponds to the incremental nature of a growth mindset (Bateman & Crant, 1993). These results confirm the relevance of personality traits for the well-being of people.

Both psychological concepts represent ways to affect a person’s mental health positively. Although much is known about the psychological approaches of flourishing and growth mindset, the sociodemographic and personality factors that both flourishers and individuals holding a growth mindset have in common are scarcely explored. The fact that flourishing and growth mindset play a crucial role considering mental well-being reflects the need to contextualise both concepts and to examine the people who exhibit these attributes. Knowing what the two approaches have in common contributes to researchers, psychologists and patients alike to obtain more insight into who the people are who flourish and have an incremental mindset and what individual determinants they possess. Specifically, it helps to develop more understanding of those individuals who do not hold these psychological concepts in comparison to flourishers and individuals holding a growth mindset. Thus, to offer psychological treatments in a more targeted and efficient way in the future and to contribute to the research of mental health. For this reason, this study explores the link between different factors of individuals and flourishing and growth mindset. The overarching research question for this study is thus: “*How are sociodemographic factors and personality traits related to flourishing and growth mindset?*”. The first objective of this paper is to clarify the role that an individual’s gender, age and level of education play on the state of flourishing and a growth mindset. In terms of sociodemographic similarities between flourishers and people who have a growth mindset, it is expected that previous research will be replicated: (a) H1: *Women and men report equal levels of flourishing and growth mindset*, (b) H2: *Younger people report higher levels of flourishing and growth mindset compared to older*

people, and (c) H3: *People with higher education levels report higher levels of flourishing and growth mindset.* Further, the second research aim is to assess the impact of personality traits on experiencing flourishing and developing a growth mindset. Accordingly, the hypotheses are as follows: (d) H4: *Flourishers and people with a growth mindset report similarly high scores for Extraversion and Conscientiousness, but show varying degrees of Openness to experience.* For each selected direction, a look is taken at where the commonalities lie, comparing flourishing and growth mindset.

## Method

### Design

A cross-sectional survey study with a correlational research design was conducted to measure the statistical relation between sociodemographic factors as well as personality traits and the states of flourishing and growth mindset.

### Participants and Procedure

German participants with a minimum age of 18 years were recruited via convenience sampling in March 2021 through social media such as WhatsApp, Instagram and Facebook. Participation was voluntary, and no compensation was offered. The inclusion criteria were as follows: (1) sufficient knowledge of the German language to understand the study's content and to fill out the questionnaires, (2) internet access and an email address as the study was conducted exclusively online. Responses of flourishing participants were later selected for the statistical analysis by means of a flourishing screening. Similarly, responses of participants holding a growth mindset were selected by means of a growth mindset screening. Only data from flourishers and individuals holding a growth mindset were used, with overlapping participants as the total number of people reporting a flourishing and growth mindset state was utilised. The study was conducted within six days between the 6th and 11th of April 2021. The access link was sent to all registered individuals after the online recruitment via a link to the Qualtrics platform (<https://www.qualtrics.com/>). First, the participants were informed about the nature of the study and the confidential treatment of their data (see Appendix D and E). After clarification, participants were asked for consent. To protect the privacy of the participants, the completed materials have been marked with a participant number. At the end of the data collection process, the gathered data (name and email address) was deleted. With given consent, participants were



directed to the questionnaires of the study. Questions about demographic factors were asked first, followed by closed questions of the growth mindset scale and the well-being and personality traits questionnaires. The survey lasted approximately 30 minutes. At the end of the survey, participants were thanked for their participation and given the opportunity to ask questions or make suggestions using a separate text field. Approval for this study has been obtained by the Ethics Committee of the Faculty of Behavioural and Social Sciences at the University of Twente.

## **Measure and Materials**

### ***Growth mindset scale***

In order to identify participants holding a growth mindset, the inner belief of these people must be examined in terms of their confidence in the compensability of undesirable factors and abilities and how they perceive the importance of intelligence and effort for good performance. Because the conviction that besides the adverse conditions, abilities, talents and intelligence are also changeable and can be improved contradicts a fixed mindset characterised by not compensating but believing that individual factors are not changeable and have to be accepted (Dweck, 2016; Stiensmeier-Pelster & Rheinberg, 2002). Thus, for the assessment of subjective beliefs about compensability and perceived importance of intelligence and effort for good performance, the German version of the growth mindset instrument (Implicit Theory Scale) by Dweck et al. (1995) was used namely “Skalen zur Erfassung subjektiver Überzeugungen zu Bedingungen von Erfolg in Lern- und Leistungskontexten” (SE-SÜBELLKO) (Stiensmeier-Pelster & Rheinberg, 2002). The growth mindset scale consists of six items in form of statements about the malleability of intelligence, effort, and compensability (see Appendix A). Participants completed these by reporting the degree of malleability of each of those factors. The items were formulated in such a way that the beginning of a sentence is completed by marking a semantic differential on a five-point scale, which is indicated by the two extreme beliefs about the respective dimension (example item: “*Everyone has a particular level of intelligence that cannot be changed versus which can be changed*”). Higher sum scores suggest a stronger belief in the malleability of intelligence, effort, and compensability. In this context, the cut-off score was 3, indicating that a person with a sum score between 3 and 6 could be said to have a low to a high level of a growth mindset. While a sum score below 3 implies that the participant does not have a growth mindset but a low to a high level of a fixed mindset. This measure has been found to have good reliability with an internal consistency of  $\alpha = .85$ , but the scale “Changeability of Effort”

(in German: “Veränderbarkeit von Anstrengung”) has only sufficient internal consistencies ( $\alpha = .66$ ) (Stiensmeier-Pelster & Rheinberg, 2002). However, utilising the data collected for this study, the analysis revealed lower reliability with a value of  $\alpha = .65$ .

### ***Mental Health Continuum Questionnaire***

Participants’ well-being and state of flourishing were assessed using the Mental Health Continuum Test - Short Form (MHC-SF) in German developed by Keyes (2002). For this study, the well-being questionnaire was used, consisting of 14 items that include facets of well-being (Keyes, 2009). Accordingly, three items represent emotional well-being, six items indicate psychological well-being, and five items show social well-being (see Appendix B). An example question would be “*During the past month, how often did you feel happy?*”. The response options measure the frequency of experiencing each symptom of positive mental health which can be indicated on a 6-point Likert scale ranging from 0 = “Never” to 5 = “Every day”. Higher sum scores suggest a higher mental health level. Specifically, for a respondent to flourish, they need to experience “Every day” or ‘Almost every day’ at least one of the three signs of hedonic well-being and at least six of the eleven signs of positive functioning in the past month (Keyes, 2009). The lowest category on the spectrum is mental illness. The short form of the well-being questionnaire has shown in total high internal reliability ( $\alpha = .89$ ), as well as for the subscales of emotional well-being ( $\alpha = .83$ ) and psychological well-being ( $\alpha = .83$ ), and adequate for the subscale social well-being ( $\alpha = .74$ ) (Lamers et al., 2011). The test-retest reliability lies at a moderate level. Furthermore, there is substantial evidence of convergent validity between the emotional, psychological and social well-being subscales (Lamers et al., 2011). For this scale, the analysis with the data collected for this study likewise resulted in excellent reliability of  $\alpha = .90$ .

### ***Personality Traits Questionnaire***

Lastly, to determine to what extent which personality trait is represented in the participants, the HEXACO Personality Inventory-Revised (HEXACO-PI-R) was used in a German version (see Appendix C). The short 60-item form was chosen to measure six personality factors, namely Honesty-Humility (H), Emotionality (E), Extraversion (X), Agreeableness versus Anger (A), Conscientiousness (C), and Openness to Experience (O) (Ashton & Lee, 2009). These six dimensions each comprise four facets: Social Self-Esteem, Social Boldness, Sociability, and Liveliness for Extraversion and Organisation, Diligence,

Perfectionism, and Prudence for Conscientiousness. Accordingly, 10 questions are employed for each dimension and its facets in the short 60-item version of the personality traits questionnaire. The response options range from 1 = “Strongly disagree” to 5 = “Strongly agree” for each item. An exemplary item for the trait Openness to Experience representing the facet of Creativity would be “*I would enjoy creating a work of art, such as a novel, a song, or a painting*”. Higher average scores indicate a stronger expression of the respective personality dimension. At both factor and facet levels, the reliability of internal consistency for the personality traits scales was high (Lee & Ashton, 2004). Reliabilities ranged from .89 (Conscientiousness) to .92 (Honesty-Humility) at the factor level and from .75 (Flexibility) to .88 (Forgiveness) at the facet level. In terms of convergent validity, the personality traits scales showed adequate validity levels with external variables (Lee & Ashton, 2004). The scale analysis using the survey’s data showed good reliability ( $\alpha = .72$ ).

### **Data analysis**

Descriptive and inferential data analyses were undertaken to examine the participants’ sociodemographic factors and personality traits and explore the relationship between gender, age and education level, and the traits Extraversion, Conscientiousness and Openness to experience and flourishing as well as growth mindset. All statistical analyses were performed using the IBM SPSS Statistics 27 program. Descriptive statistics such as frequencies and percentages were used to describe the distribution of categorical variables, namely gender, age and education level; while means ( $M$ ) and standard deviations ( $SD$ ) served to describe continuous variables like scores on the flourishing, the growth mindset and personality measure (Dancey et al., 2012). In addition, inferential statistics such as the point biserial correlation has been utilised to separately investigate the relationship between the dichotomous variable gender and the continuous variables, namely flourishing and growth mindset score (Coolican, 2019). Besides, Pearson’s product-moment correlation coefficients were calculated to separately examine the relationships between age, educational level and personality traits, including specifically Extraversion, Conscientiousness and Openness to experience, respectively, with the continuous variables flourishing and growth mindset score (Dancey et al., 2012). The significance level was set at  $p < .05$  for all hypotheses.

## Results

All participant characteristics are displayed separately for flourishers and people with a growth mindset in Table 1. In total, 153 participants took part in the online study. Of these, the data showed that there were 69 flourishers and 84 non-flourishers. Similarly, 124 people of the total 153 participants reported a growth mindset and 29 an entity mindset. No participants were excluded from the study. Flourishers were on average 33.26 years old ( $SD = 15.16$ ). Similarly, individuals holding a growth mindset were on average 34.14 years old ( $SD = 15.99$ ). Specifically, more women than men and younger participants compared to older participants have reported a state of flourishing and growth mindset. In addition, the highest level of education attained by flourishers and individuals with a growth mindset was a high-school degree followed by an academic education. The evaluation of the flourishing and the growth mindset scale showed that flourishers obtained an average score of 4.29 ( $SD = .45$ ), and people with a growth mindset scored an average of 3.55 ( $SD = .39$ ). Table 2 shows the means and standard deviations obtained by flourishers and people holding a growth mindset for each of the personality trait scales Extraversion, Conscientiousness and Openness to experience. Specifically, flourishers reported the highest average score on the Openness to Experience scale, while individuals with a growth mindset reported the highest average score on Extraversion and Conscientiousness.

**Table 1**

*Sociodemographic Characteristics of Flourishers and Individuals with a Growth Mindset*

Sample characteristic	Individuals with a growth mindset			
	Flourishers		mindset	
	<i>n</i>	%	<i>n</i>	%

Gender

Female	45	65.2	77	62.1
Male	24	34.8	47	37.9
Age group				
18 - 29	41	59.1	73	58.7
30 - 49	13	18.4	22	17.6
50 - 69	14	20.1	25	20
70+	1	1.4	4	3.2
Education level				
Middle-level applied education	12	17.2	25	20.2
High-school degree	36	52.1	61	49.2
Academic education	19	27.5	34	27.5
Post academic education	1	1.4	2	.16

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*Note.*  $n = 69$  for condition flourishing.  $n = 124$  for condition growth mindset.

**Table 2**

*Mean and standard deviations of personality traits scores of flourishers and individuals with a growth mindset*

Personality trait	Flourishers		Individuals with a growth mindset	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Extraversion	2.39	.44	2.47	.51
Conscientiousness	2.43	.56	2.47	.55
Openness to experience	2.47	.55	2.45	.57

*Note.*  $n = 69$  for condition flourishing.  $n = 124$  for condition growth mindset.

Moreover, Table 3 displays the bivariate correlations separately of flourishing, growth mindset, sociodemographic factors and personality traits. The results of the point biserial correlation analyses revealed no significant correlations between gender and, respectively, flourishing ( $r(69) = -.21, p = .078$ ) and growth mindset ( $r(124) = -.03, p = .708$ ). Additionally, Pearson's product-moment correlation tests showed no significant relationship between education level and both flourishing ( $r(69) = -.14, p = .256$ ) and growth mindset ( $r(124) = .04, p = .693$ ). Moreover, Pearson's product-moment correlation tests, which examined the relationship between age and flourishing and growth mindset, respectively, indicated no significant correlation between flourishing and the age of the participants ( $r(69) = .23, p = .057$ ). In contrast, the findings revealed a moderate significant positive correlation between growth mindset and age,  $r(124) = .36, p < .001$ . However, in contrast to previous studies, the hypothesis that younger people report higher levels of flourishing and growth mindset than older people is rejected because the significant result was positively directed. Specifically, the results of this study indicate the higher the level of growth mindset, the older a person is considered to be, which

contradicts the study hypothesis. Furthermore, results of the Pearson's product-moment correlation tests showed no significant correlation between the personality traits Extraversion ( $r(69) = -.16, p = .189$ ), Conscientiousness ( $r(69) = -.07, p = .583$ ) and Openness to experience ( $r(69) = -.04, p = .726$ ) and respectively with flourishing. Similarly, no significant relationships were found between Extraversion ( $r(124) = .10, p = .257$ ), Conscientiousness ( $r(124) = .13, p = .141$ ) and Openness to experience ( $r(124) = .02, p = .832$ ) and each with growth mindset. Taken together, results of the bivariate correlation analyses revealed no significant relationship between the sociodemographic factors gender and education level as well as personality traits and each of the two psychological concepts. Instead, the findings indicate a moderate significant positive correlation between age and growth mindset but not flourishing. Consequently, all study hypotheses are rejected.

**Table 3**

*Descriptive Statistics and Correlations for Study Variables for Flourishers and Individuals with a Growth Mindset*

Variable	1	2	3	4	5	6	7	8
1. Flourishing	-							
2. Growth mindset	-.05	-						
3. Gender	-.22	-.03	-					
4. Age	.23	.36*	.10	-				
5. Education level	-.14	.04	.04	.26*	-			
6. Extraversion	-.16	.10	.11	-.17*	-.08	-		
7. Conscientiousness	-.07	.13	-.04	.05	-.07	.07	-	
8. Openness to	-.04	.02	-.26*	.04	.12	.07	-.04	-

experience

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*Note.*  $n = 69$  for condition flourishing.  $n = 124$  for condition growth mindset.

\* $p < .001$ .

### Discussion

The purpose of this study was to examine the role of sociodemographic factors as well as personality traits on the state of flourishing and growth mindset in a representative population sample from Germany. The overarching goal was to answer the research question: “*How are sociodemographic factors and personality traits related to flourishing and growth mindset?*”. In line with previous research, this study assumed that people’s gender, age and education level, as well as the personality traits Extraversion, Conscientiousness and Openness to experience, correlate with both flourishing and growth mindset. However, correlational analyses conducted in the current study demonstrated no significant relationship between sociodemographic and personality factors between flourishing and growth mindset, except age and growth mindset. As a result, the present study could not find any significant similarities between flourishing and growth mindset.

Based on earlier studies, associations between the sociodemographic factor gender and both flourishing and growth mindset were expected to show gender similarities in acquiring a state of flourishing and growth mindset (Keyes, 2007; Momtaz et al., 2016; Yan et al., 2014). The current survey study showed no significant similarities between flourishers and individuals holding a growth mindset comparing their genders. Overall, this result is surprising and inconsistent with previous studies as there are numerous studies that show a significant correlation between gender and both the state of flourishing and growth mindset (Huppert & So, 2009; Keyes, 2007; Macnamara & Rupani, 2017; Momtaz et al., 2016). This discrepancy in the results could be explained by the fact that for the current study, no sub-categories such as hedonic and eudaimonic well-being in flourishing or beliefs about compensability and the perceived importance of effort in growth mindset were specifically examined as both flourishing and growth mindset are composed of different underlying factors (Huppert & So, 2013; Stiensmeier-Pelster & Rheinberg, 2002). As a result, the interplay of these sub-factors and influential external factors on individual factors could be insufficiently explored in the present study in order to draw significant conclusions about whether the superordinate categories of



being a flourisher and an individual holding a growth mindset are associated with gender. In other words, some of the sub-categories may be overly influenced by different external facets not considered in this work, thus distorting the results of this study.

Additionally, the present study expected to find a significant relationship between education level and both flourishing and growth mindset, indicating education level differences between flourishers and people holding a growth mindset. Findings showed no significant similarities between flourishers and individuals with a growth mindset comparing their education levels. This outcome was not surprising, as Dweck and her colleagues (1995) confirmed the result of the study, arguing that there is no significant association between educational level and growth mindset. This result could be explained by the fact that instead of the education level, a person's educational status should be considered more closely (Mirzaei-Alavijeh et al., 2021). Various studies show that a person's education status correlates positively and significantly with flourishing and growth mindset (Datu, 2018; Macnamara & Rupani, 2017; Mirzaei-Alavijeh et al., 2021; Yanardağ et al., 2021). However, this status does not refer to the rank order levels of education as in the present study, but to academic achievements, which include good grades and lecture attendance, for example. Thus, it could be assumed that exploring an association between education status and flourishing and growth mindset, respectively, would have been more likely to lead to significant results.

Moreover, the study revealed a significant correlation between an individual's age and growth mindset but not flourishing, indicating that a person's age is an important factor to hold an incremental mindset. This finding was not surprising, as there is research confirming no significant association between age and flourishing, which corresponds to the results of previous studies in their ambiguity as some others could find a significance (Huppert & So, 2009; Momtaz et al., 2016). In comparison, the sample of Momtaz and colleagues (2016) consisted exclusively of older people with an average age of 69.05 ( $SD = 6.24$ ) whose age was significantly associated with flourishing. However, the current study sample included a wide range of ages and more younger people than older people. Hence, it can be suggested that the results of Momtaz et al. (2016) do not apply to the current study when considering the significance between age and flourishing. In addition, the findings of the present work showed that age and growth mindset have a moderate significant positive association, in contrast to previous study results indicating that the growth mindset level decreases with age. This difference in findings could be since only

a few older people took part in the current study, whereas younger people made up the majority of participants as 78 % of the flourishers and 77 % of the people with a growth mindset belong to the younger age group. Hence, it is possible that the number of older participants was not representative to identify a significant relationship between age and growth mindset.

In addition to sociodemographic factors, it was expected that flourishers and individuals holding a growth mindset report similarly high scores for Extraversion and Conscientiousness but show varying degrees of Openness to experience. The present study indicated no significant correlations between personality traits and both the state of flourishing and growth mindset. This result was somewhat surprising since numerous previous studies have argued that especially Extraversion, Conscientiousness and Openness to experience are essential traits that have a significant positive impact on people's state of flourishing (DeNeve & Cooper, 1998; Huppert, 2009; Keyes, 2014; Steel et al., 2008). One explanation for this finding could be that earlier studies suggested that rather high levels of Extraversion and Conscientiousness are positively related to flourishing rather than moderate or lower levels (Huppert, 2009; Keyes, 2014). In the present study, no distinction was made between lower, moderate and high levels of Extraversion, Conscientiousness and Openness to experience, but the total score the participants reported for each trait was associated with flourishing. However, in the current work, these total scores were on average in the middle range. Thus, it could be suggested that only high levels of Extraversion and Conscientiousness correlate significantly with flourishing, which is why no significance was found in the current paper. In addition, studies on Openness to experience revealed a low significant relation to flourishing, indicating that it is not surprising that no significance could be found in the present study. In contrast, it was not surprising to find that growth mindset is not significantly related to personality traits because the most decisive characteristic besides the basic individual dispositions and traits for having a growth mindset is the proactive personality trait (De Vries et al., 2016; Dinc & Akcakanat, 2020). The non-significance between the three personality traits and growth mindset could be due to the fact that the present work did not focus on the proactive characteristic and the extent to which this trait influences the personality traits Extraversion, Conscientiousness and Openness to experience and the states of flourishing and growth mindset.

### **Strengths, limitations and directions for future research**

One of the strengths of the present study is the sample that was used, as it was more representative than others based on previous studies since the participants had a wide age range and different social backgrounds due to their level of education. Other flourishing and growth mindset studies focus on a particular group of people with specific characteristics. For example, Hone and colleagues (2015) studied workers from New Zealand and linked flourishing to job-related factors. Whereas others worked with people with chronic diseases such as rheumatoid arthritis or epilepsy, college students or only female participants to see to what extent these characteristics have an impact on acquiring a state of flourishing and growth mindset (Brez et al., 2020; Burnette et al., 2018; Trompetter et al., 2019; Stough et al., 2015). Moreover, an additional strength of the present study is that validated instruments were used to address the research question. The screening tools used to identify flourishers and people with a growth mindset as well as the questionnaire to assess personality traits are well established and widely used (Cooper et al., 2020; Lee & Ashton, 2004; Luijten et al., 2019). Since validated and reliable assessment measures allow for robust conclusions, it can be assumed that the results of the present study are accurate and representative (Sullivan, 2011).

Besides the positive aspects of the study, there are also some limitations. First, the study results showed that nearly twice as many flourishers ( $n = 69$ ) were included as individuals with a growth mindset ( $n = 124$ ). Accordingly, the evaluations of the study are based on an unequally distributed number of participants in each category, meaning that the conclusions of the study should be treated with caution. The finding that fewer people were flourishing could be due to the fact that this study was conducted during the global pandemic COVID-19 one year after the outbreak. Participants commented that the Coronavirus disease circumstances had a significantly negative impact on how well people felt and their attitudes towards compensating for adverse situations. Thus, this study's "snapshot" nature may have hindered and biased the results, as both well-being and growth mindset depend on external factors such as life circumstances that are significantly and negatively affected by the COVID-19 pandemic (Macnamara & Rupani, 2017). Hence, it could be assumed that more flourishing people would be involved if the study would be carried out outside of a pandemic in future research.

A further limitation is the correlational design of the present work, which gives only limited insights into factors mediating the relationship between sociodemographic factors,

personality and, respectively, flourishing and growth mindset. Based on the study results that there are no significant associations between gender, education level as well as Extraversion, Conscientiousness and Openness to experience and the two states flourishing and growth mindset (except age and growth mindset), the fact that correlation analyses do not establish causality is an important motivation to find out whether there are other third factors that influence the study parameters (Queirós et al., 2017). Accordingly, future studies could include correlation as well as regression analyses, taking into account various factors such as life circumstances, the influence of the proactive personality trait and the so far unconsidered mutual effects of flourishing and growth mindset to better understand the dynamics of individual characters, flourishing and growth mindset (De Vries et al., 2016; Macnamara & Rupani, 2017; Uyanık & Güler, 2013). In this respect, researchers should not only focus on the total scores of the proposed factors but also include scores of sub-categories so that additional components are covered more effectively. The use of multiple statistical methods may advance the knowledge of the nature and extent of the relationship between sociodemographic factors as well as personality traits and flourishing and growth mindset (Verma & Tiwari, 2017).

### **Conclusion**

The present study has contributed to exploring the characteristics associated with flourishing and holding a growth mindset. It offered initial insights into factors shared by the two groups of people, flourishers and individuals with a growth mindset, but additional similar research is needed. Correlational analyses conducted in this study could not identify sociodemographic and personality similarities, which highlights the importance of detailed research into the respective psychological concepts and their influencing parameters. Its exploration is another step towards a more holistic understanding of well-being as well as growth mindset and its contributing factors. Future studies should conduct their analyses over a longer period of time in order to ensure that the well-being and growth mindset of participants as a study variable is robust, as irregularities can be considered. Furthermore, external factors associated with flourishing and growth mindset and the mutual influence of the two psychological concepts should be investigated.

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## Appendices

### Appendix A

Translated growth mindset questionnaire “Skalen zur Erfassung subjektiver Überzeugungen zu Bedingungen von Erfolg in Lern- und Leistungskontexten” (SE-SÜBELLKO)

Geben Sie an, inwieweit Sie mit der Aussage einverstanden sind:

#### Veränderbarkeit von Intelligenz

Jeder besitzt ein bestimmtes Ausmaß an Intelligenz, das ...

... nicht verändert werden kann      verändert werden kann.

#### Veränderbarkeit von Anstrengung

Wie sehr man sich anstrengen kann, ist etwas, das ...

... immer gleich bleibt      verändert werden kann.

#### Bedeutsamkeit von Intelligenz für Erfolg

Um in der Schule/im Studium gute Leistungen zu erbringen, muss man ...

... nicht besonders intelligent sein      besonders intelligent sein.

#### Bedeutsamkeit von Anstrengung für Erfolg

Um in der Schule/im Studium gut zu sein, muss man sich ...

... nicht besonders anstrengen      sehr anstrengen.

#### Kompensierbarkeit mangelnder Intelligenz

In der Schule/im Studium kann geringe Intelligenz durch Anstrengung ...

... nicht ausgeglichen werden      völlig ausgeglichen werden.

#### Kompensierbarkeit mangelnder Anstrengung

Wenn sich jemand in der Schule/im Studium wenig anstrengt, kann das durch hohe Intelligenz ...

... nicht ausgeglichen werden      völlig ausgeglichen werden.

**Appendix B**

## Mental Health Continuum Questionnaire - Short Form (MHC-SF) in German

Die folgenden Fragen beschreiben Gefühle die Menschen erfahren können. Lesen Sie bitte jede Aussage gründlich durch und markieren Sie die Antwort die am besten beschreibt wie Sie sich im vergangenen Monat gefühlt haben.

In den letzten 4 Wochen, wie oft hatten Sie das Gefühl, ...

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	Nie	1--2mal im Monat	1 mal in der Woche	2--3 mal in der Woche	Fast täglich	Täglich
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dass Sie glücklich waren?

dass Sie Interesse am Leben hatten?

dass Sie zufrieden waren?

dass Sie einen wichtigen  
gesellschaftlichen Beitrag geleistet  
haben?

dass Sie zu einer Gemeinschaft gehörten  
(z.B. einer sozialen Gruppe, Ihrer  
Nachbarschaft oder Ihrer Stadt)?

dass unsere Gesellschaft besser für Ihre  
Bürger wird?

dass Menschen von Natur aus gut sind?

dass Sie verstehen, wie unsere  
Gesellschaft funktioniert?

dass Sie die meisten Aspekte Ihrer  
Persönlichkeit wertschätzen?

dass Sie Ihre täglichen Aufgaben und  
Verpflichtungen gut erfüllen konnten?

dass Sie warme und vertraute  
Beziehungen zu anderen haben?

dass Sie sich entwickeln oder ein  
besserer Mensch werden?

dass Sie selbstbewusst Ihre eigenen  
Ideen und Gedanken gedacht und  
geäußert haben?

dass Ihr Leben Richtung und Sinn hat.

---

**Appendix C**

## Questionnaire HEXACO Personality Inventory - Revised (HEXACO-PI-R)

Auf den folgenden Seiten finden Sie eine Liste mit Aussagen (60), die mehr oder weniger aus Sie zutreffen können (Dies sind die letzten Fragen dieses Fragebogens!). Es gibt keine richtigen oder falschen Antworten. Bitte geben Sie an, wie sehr Sie den einzelnen Aussagen zustimmen oder sie ablehnen. Bitte antworten Sie auf jede Aussage, auch wenn Sie sich Ihrer Antwort nicht ganz sicher sind.

Dafür stehen Ihnen die folgenden Antwortmöglichkeiten zur Verfügung:

5 = starke Zustimmung

4 = Zustimmung

3 = neutral

2 = Ablehnung

1 = starke Ablehnung

- 1        Der Besuch einer Kunstausstellung würde mich ziemlich langweilen.  
\_\_\_\_\_
- 2        Ich plane im Voraus und organisiere, damit in letzter Minute kein Zeitdruck aufkommt.  
\_\_\_\_\_
- 3        Ich habe selten Wut im Bauch, nicht mal gegen Leute, die mich sehr ungerecht behandelt haben.  
\_\_\_\_\_
- 4        Im Allgemeinen bin ich mit mir ziemlich zufrieden.  
\_\_\_\_\_
- 5        Ich hätte Angst, wenn ich bei schlechten Wetterbedingungen verreisen müsste.  
\_\_\_\_\_
- 6        Ich würde keine Schmeicheleien benutzen, um eine Gehaltserhöhung zu bekommen oder befördert zu werden, auch wenn ich wüsste, dass es erfolgreich wäre.  
\_\_\_\_\_
- 7        Ich bin daran interessiert, etwas über die Geschichte und Politik anderer Länder zu lernen.  
\_\_\_\_\_

- 8 Ich treibe mich oft selbst sehr stark an, wenn ich versuche, ein Ziel zu erreichen.
- 
- 9 Andere sagen mir manchmal, dass ich zu kritisch gegenüber anderen bin.
- 
- 10 Bei Gruppentreffen sage ich nur selten meine Meinung.
- 
- 11 Ich kann manchmal nichts dagegen machen, dass ich mir über kleine Dinge Sorgen mache.
- 
- 12 Wenn ich wüsste, dass ich niemals erwischt werde, wäre ich bereit, eine Million zu stehlen.
- 
- 13 Ich würde es genießen, ein Kunstwerk zu schaffen, etwa einen Roman, ein Lied oder ein Gemälde.
- 
- 14 Wenn ich an irgendetwas arbeite, beachte ich kleine Details nicht allzu sehr.
- 
- 15 Andere sagen mir manchmal, dass ich zu dickköpfig bin.
- 
- 16 Ich ziehe Berufe, in denen man sich aktiv mit anderen Menschen auseinandersetzt solchen vor, in denen man alleine arbeitet.
- 
- 17 Wenn ich wegen einer schmerzvollen Erfahrung leide, brauche ich jemanden, der mich tröstet.
- 
- 18 Viel Geld zu haben ist nicht besonders wichtig für mich.
- 
- 19 Ich denke, dass es Zeitverschwendung ist, radikalen Ideen Aufmerksamkeit zu schenken.
- 
- 20 Ich treffe Entscheidungen eher aus dem Bauch heraus als durch sorgfältiges Nachdenken.
- 
- 21 Andere halten mich für jähzornig.
- 
- 22 An den meisten Tagen bin ich fröhlich und optimistisch.
-



- 23 Ich könnte weinen, wenn ich andere Personen sehe, die weinen.
- 
- 24 Ich denke, dass ich mehr Respekt verdiene als ein durchschnittlicher Mensch.
- 
- 25 Wenn ich die Gelegenheit dazu hätte, würde ich gerne ein Konzert mit klassischer Musik besuchen.
- 
- 26 Wenn ich arbeite, habe ich manchmal Schwierigkeiten, weil ich unorganisiert bin.
- 
- 27 Meine Einstellung gegenüber Personen, die mich schlecht behandelt haben, ist "vergeben und vergessen".
- 
- 28 Ich bin der Meinung, dass ich nicht beliebt bin.
- 
- 29 Wenn es um körperliche Gefahren geht, bin ich sehr ängstlich.
- 
- 30 Wenn ich von jemandem etwas will, lache ich auch noch über dessen schlechteste Witze.
- 
- 31 Ich habe es noch nie wirklich gemocht, eine Enzyklopädie durchzublättern.
- 
- 32 Ich arbeite nur so viel wie nötig, um gerade so durchzukommen.
- 
- 33 Ich neige dazu, nachsichtig zu sein, wenn ich andere beurteile.
- 
- 34 In sozialen Situationen bin ich gewöhnlich der, der den ersten Schritt macht.
- 
- 35 Ich mache mir viel weniger Sorgen als die meisten Leute.
- 
- 36 Ich würde niemals Bestechungsgeld annehmen, auch wenn es sehr viel wäre.
- 
- 37 Man hat mir schon oft gesagt, dass ich eine gute Vorstellungskraft habe.
-

- 38 Ich versuche immer, fehlerfrei zu arbeiten, auch wenn es Zeit kostet.
- 
- 39 Ich bin gewöhnlich ziemlich flexibel in meinen Ansichten, wenn andere Leute mir nicht zustimmen.
- 
- 40 Das erste, was ich an einem neuen Ort tue, ist, Freundschaften zu schließen.
- 
- 41 Ich kann mit schwierigen Situationen umgehen, ohne dass ich emotionale Unterstützung von irgendjemandem brauche.
- 
- 42 Es würde mir viel Freude bereiten, teure Luxusgüter zu besitzen.
- 
- 43 Ich mag Leute, die unkonventionelle Ideen haben.
- 
- 44 Ich mache viele Fehler, weil ich nicht nachdenke, bevor ich handele.
- 
- 45 Die meisten Leute werden schneller ärgerlich als ich.
- 
- 46 Die meisten Leute sind aufgedrehter und dynamischer als ich es im Allgemeinen bin.
- 
- 47 Ich fühle starke Emotionen, wenn jemand, der mir nahe steht, für eine längere Zeit weggeht.
- 
- 48 Ich will, dass alle wissen, dass ich eine wichtige angesehene Person bin.
- 
- 49 Ich halte mich nicht für einen künstlerischen oder kreativen Menschen.
- 
- 50 Andere nennen mich oft einen Perfektionisten.
- 
- 51 Selbst wenn Leute viele Fehler machen, sage ich nur selten etwas Negatives.
- 
- 52 Manchmal habe ich den Eindruck, dass ich wertlos bin.
-

- 53        Selbst in einem Notfall würde ich nicht in Panik geraten.
- 
- 54        Ich würde nicht vortäuschen, jemanden zu mögen, nur um diese Person dazu zu bringen, mir Gefälligkeiten zu erweisen.
- 
- 55        Ich finde es langweilig, über Philosophie zu diskutieren.
- 
- 56        Ich ziehe es vor, das zu tun, was mir gerade in den Sinn kommt, anstatt an einem Plan festzuhalten.
- 
- 57        Wenn mir andere sagen, dass ich falsch liege, ist meine erste Reaktion, mit ihnen zu streiten.
- 
- 58        Wenn ich in einer Gruppe von Leuten bin, bin ich oft derjenige, der im Namen der Gruppe spricht.
- 
- 59        Ich bleibe emotionslos, selbst in Situationen, in denen die meisten Leute sehr sentimental werden.
- 
- 60        Ich würde in die Versuchung geraten, Falschgeld zu benutzen, wenn ich sicher sein könnte, damit durchzukommen.
-

**Appendix D**

Registration message and study information

**Registration for study about positive mental health**

**Informationen für Teilnehmer der Bachelor Studie über “Flourishing”**

Vielen Dank für Ihr Interesse an unserer Studie über positive mentale Gesundheit! Hiermit werden Sie Teil unserer Forschung darüber wie mentales Wohlbefinden mit gesundheitsbezogenen Verhaltensweisen und Konzepten interagiert. Im folgenden werden die Details der Studie ausführlicher erklärt.

**Zweck der Studie**

Die Forscher an der Universität Twente wollen neue Einblicke in das Konzept ‘Flourishing’ (Aufblühen/Gedeihen) von Deutschen Bürgern erhalten. Eine aufblühende/gedeihende Person ist jemand, der sich glücklich fühlt und gut im Alltag funktionieren kann. Die Studie beabsichtigt herauszufinden, ob ein Zusammenhang zwischen ‘Flourishing’ und anderen gesundheitsbezogenen Konzepten, wie Persönlichkeit und Verhaltensweisen, besteht und wann und wie Menschen diesen Zustand erleben.

**Zeitaufwand**

Die Registrierung für diese Studie ist bis zum **1. April 2021** geöffnet. Die Teilnehmer werden gebeten, an drei unterschiedlichen Zeitpunkten, mit je einer Woche Abstand, unterschiedliche Fragebögen zu beantworten. Der erste Fragebogen kann zwischen dem **6. und 11. April** ausgefüllt werden, besteht aus geschlossenen Fragen und wird ungefähr 20-30 Minuten in Anspruch nehmen. Die zweite Umfrage kann zwischen dem **15. und 20. April** ausgefüllt werden und besteht aus einigen offenen Fragen, bei denen die Teilnehmer gebeten werden, schriftliche Antworten zu geben. Diese sollen etwa eine halbe DIN A4 Seite pro Frage lang sein. Dies wird 20-40 Minuten in Anspruch nehmen. Der letzte Fragebogen kann zwischen dem **29. April und 7. Mai** ausgefüllt werden und wird aus geschlossenen Fragen bestehen und ungefähr 5 Minuten in Anspruch nehmen. Insgesamt wird der Zeitaufwand über den dreiwöchigen Zeitraum ungefähr 45-75 Minuten betragen.

**Einwilligung nach erfolgter Aufklärung**

Zu Beginn des ersten Fragebogens werden Sie danach gefragt den Bedingungen der Studie nach erfolgter Aufklärung zuzustimmen. Wir möchten Sie darum bitten, jeden Teil der Studie über den oben genannten Zeitraum auszufüllen, erinnern Sie jedoch daran, dass Ihre Teilnahme an der Studie freiwillig ist und Sie sich jederzeit von der Teilnahme zurückziehen können, ohne einen Grund nennen zu müssen.

**Anonyme Teilnahme**

Ihre Informationen werden in allen Instanzen der Studie und des Forschungsprozesses vertraulich behandelt und anonymisiert. Ihr Vorname und ihre E-mail-Adresse werden für die Zusendung der Fragebögen benötigt und werden von der Studienleiterin separat von den anonymisierten Daten gesammelt. Diese persönlichen Daten (Vorname und Email-Adresse) werden vernichtet nachdem die Datensammlung abgeschlossen ist. Die persönlichen Daten werden nicht mit Dritten geteilt.

**Fragen?**

Falls Sie weitere Informationen über die Studie jetzt oder in Zukunft benötigen, wenden Sie sich bitte an Dr. Marijke Schotanus-Dijkstra unter [m.schotanus@utwente.nl](mailto:m.schotanus@utwente.nl). Wenn Sie jetzt oder während dieser Studie Fragen haben, können Sie sich am Besten an Eric Reininghaus unter [e.reininghaus@student.utwente.nl](mailto:e.reininghaus@student.utwente.nl) wenden, um eine schnelle Antwort auf Deutsch zu erhalten.

**Appendix E**

## Informed consent

Herzlich Willkommen!

Ihre Teilnahme an dieser Studie über ‘Flourishing’ (Deutsch: blühen; gedeihen) ist freiwillig. Es ist wichtig, dass Sie sich vorher zu der Studie einige Informationen durchlesen. Wenn Sie noch Fragen haben, können Sie Dr. Marijke Schotanus-Dijkstra oder Eric Reininghaus kontaktieren. Kontaktdetails befinden sich am Ende dieses Informationsbriefes.

**Zweck der Studie**

Die Forscher an der Universität Twente wollen neue Einblicke in das Konzept ‘Flourishing’ (Aufblühen/Gedeihen) von Deutschsprachigen erhalten. Eine aufblühende/gedeihende Person ist jemand, der sich glücklich fühlt und gut im Alltag funktionieren kann. Die Studie beabsichtigt herauszufinden, ob ein Zusammenhang zwischen ‘Flourishing’ und anderen gesundheitsbezogenen Konzepten wie Persönlichkeit und Verhaltensweisen besteht und wann und wie Menschen diesen Zustand erleben.

**Wer kann an dieser Studie teilnehmen?**

Alle Personen, die mindestens 18 Jahre alt sind und Deutsch sprechen, können an dieser Studie teilnehmen. Teilnehmer benötigen eine Internetverbindung und eine E-Mail-Adresse, da die Studie ausschließlich online durchgeführt wird. Die Registrierung für diese Studie ist bis zum 1. April geöffnet.

**Zeitaufwand**

Die Teilnehmer werden gebeten, an drei unterschiedlichen Zeitpunkten, mit je einer Woche Abstand, unterschiedliche Fragebögen zu beantworten. Der erste Fragebogen kann zwischen dem 6. und 11. April ausgefüllt werden, besteht aus geschlossenen Fragen und wird ungefähr 20-30 Minuten in Anspruch nehmen. Die zweite Umfrage kann zwischen dem 15. und 20. April ausgefüllt werden und besteht aus zwei offenen Fragen, bei denen die Teilnehmer gebeten werden schriftliche Antworten zu geben. Diese sollen etwa eine halbe Din A4 Seite pro Frage lang sein. Dies wird 20-40 Minuten in Anspruch nehmen. Der letzte Fragebogen kann zwischen

dem 29. April und 7. Mai ausgefüllt werden und wird auf geschlossenen Fragen bestehen und ungefähr 5 Minuten in Anspruch nehmen. Insgesamt wird der Zeitaufwand über den dreiwöchigen Zeitraum ungefähr 45-75 Minuten betragen.

### **Wie nimmt man an der Studie teil?**

#### *Registrierung und Einwilligungserklärung*

Bevor Sie beginnen können, werden Sie gebeten, den Teilnahmebedingungen zuzustimmen. Ihre Daten werden ausschließlich online gesammelt und vertraulich behandelt. Wir nutzen Ihren Namen und Ihre E-Mail-Adresse nur, um Ihnen die drei Umfragen zu schicken. Die ausgefüllten Materialien werden mit einer Teilnehmernummer kenntlich gemacht und nicht mit Ihrem Namen versehen. Ihre Daten werden mit höchster Vertraulichkeit behandelt und sind nur für die Leiterin der Studie, Dr. Marijke Schotanus-Dijkstra, zugänglich. Ihre Privatsphäre wird in allen Dokumenten und Ergebnissen der Studie bewahrt. Ihre Daten (Name und E-Mail-Adresse) werden vernichtet, nachdem die Datensammlung abgeschlossen ist.

Die Teilnahme an der Studie ist freiwillig. Wenn Sie sich zur Teilnahme entscheiden, werden Sie gebeten, den Teilnahmebedingungen zuzustimmen. Danach haben Sie noch immer jederzeit die Möglichkeit die Teilnahme abubrechen, ohne eine Erklärung abzugeben. Die Einwilligungserklärung befindet sich unterhalb dieses Briefes.

#### *Fragebögen*

Die Datensammlung wird über einen Zeitraum von drei Wochen stattfinden. Die Einladung zu diesen Umfragen wird an die jeweilige E-Mail-Adresse gesendet, die Sie bei der Anmeldung zur Studie hinterlegt haben. Die Fragebögen werden auf einer Internetseite durchgeführt und sind von einem Mobilgerät oder Computer zugänglich. Für die Beantwortung der offenen Fragen wird die Nutzen eines Computers empfohlen, da das Tippen dann schneller sein wird und Sie effizienter mehr Informationen mit uns teilen können.

### **Vor- und Nachteile der Teilnahme**

Der Vorteil der Teilnahme an dieser Studie ist der Beitrag zu wissenschaftlichen Erkenntnissen über positive mentale Gesundheit und ‘Flourishing’. Jegliche Kenntnisse, die aus der Studie

gewonnen werden, haben das Potenzial zum Verständnis von ‘Flourishing’ beizutragen. Auf dies kann in zukünftigen Studien eingegangen werden und es kann bei der Suche nach Möglichkeiten das ‘Aufblühen/Gedeihen’ von Menschen zu verbessern angewandt werden. Des Weiteren kann die Studie Ihnen interessante Einsichten in Ihr eigenes Wohlergehen liefern. Außer der Zeit, die Sie investieren müssen, bestehen keinerlei Nachteile für Sie.

### **Ethik**

Die Studie wurde von dem Ethik Komitee an der Universität Twente genehmigt und entspricht somit international anerkannten Richtlinien für ethische Forschung.

### **Kontakt details**

Eric Reininghaus, e.reininghaus@student.utwente.nl

Unter Aufsicht von Dr. Marijke Schotanus-Dijkstra, Studienleiterin an der Universität Twente, m.schotanus@utwente.nl

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### **Einwilligung nach erfolgter Aufklärung**

Hiermit bestätige ich, dass ich über die Art und Methode der Studie in einer für mich klaren Weise aufgeklärt wurde. Alle meine Fragen wurden zu meiner Zufriedenstellung beantwortet. Ich stimme freiwillig meiner Teilnahme an dieser Studie zu. Ich behalte mir das Recht vor, jederzeit meine Teilnahme zu beenden. Falls meine persönlichen Ergebnisse im Rahmen einer wissenschaftlichen Veröffentlichung genutzt werden, oder auf jegliche andere Art und Weise öffentlich gemacht werden, wird dies komplett anonym geschehen. Meine persönlichen Daten werden ohne meine ausdrückliche Erlaubnis an keine Dritten weitergegeben. Sollte ich jetzt oder in Zukunft weitere Informationen zu dieser Studie erhalten wollen, kann ich Dr. Marijke Schotanus-Dijkstra, m.schotanus@utwente.nl kontaktieren und wenn ich Fragen vor und während der Studie habe, kann ich Eric Reininghaus, e.reininghaus@student.utwente.nl kontaktieren. Durch das Ankreuzen des unterhalb liegenden Feldes “Ja” bestätige ich, dass ich meine Rechte verstanden habe und einwillige an dieser Studie teilzunehmen.



Ich habe die oben genannte Information gelesen und zur Kenntnis genommen. Ich stimme freiwillig zu an dieser Studie teilzunehmen.

X Nein

X Ja