

**The Influence of Alcohol on the Association between a Multidimensional Concept of
Spirituality and Psychological Wellbeing**

Cedric Leonard Middendorff s2333597

Department of Psychology, PCPT, University of Twente

202000384: M12 B.Sc. Thesis PSY

Mieke van Bergen MSC MRES Lecturer , Heidi Toivonen PHD Assistant Professor

13.02.2023

Abstract

Although the association between spirituality and psychological wellbeing has seen extensive research, there is still disagreement on the effects of spirituality (Lifshitz et al., 2019). Spirituality may be one of the most important factors when it comes to reducing alcohol use and abuse, but research is limited on the influence of alcohol use on the concept of spirituality (Lifshitz et al., 2019). Therefore, the current study aims to investigate the association between spirituality on psychological well-being, and whether this association is moderated by alcohol use. In this cross-sectional study, an online questionnaire was used to measure personal, communal, environmental, and transcendental spirituality (Fisher, 2010), alcohol use, and psychological wellbeing among a sample of 95 students from the University of Twente. Multiple linear regression was conducted to assess the association of the different domains of spirituality with psychological wellbeing. Contrary to what was anticipated, the findings of this research did not reveal any significant correlations between the multidimensional concept of spirituality and psychological wellbeing, nor did alcohol use appear as a significant moderator of this association. The current study implied that other variables like age, physical health, social media/technology use and stress/workload play an important role in the association between spirituality and psychological wellbeing as well as in the moderation of alcohol. Future research should focus on these variables in longitudinal and experimental studies while differentiating between ages to find more potential variables that influence the association between spirituality and psychological wellbeing in different age groups.

The Influence of Alcohol on the Association between a Multidimensional Concept of Spirituality and Psychological Wellbeing

In recent years mental health symptoms have been increasing (Yaden et al., 2022). Especially during the covid-19 pandemic rates of depression, anxiety, and chronic mental illness increased (Wu et al., 2021). Therefore, it becomes increasingly important to discover possible perspectives and methods to decrease mental health symptoms and increase wellbeing (Wu et al., 2021). Positive psychology has gained growing attention in the field of mental health care as it focuses on character strengths and behaviours that allow individuals to build a life of meaning and purpose—to move beyond surviving to flourish and involves topics like gratitude, resilience, or life satisfaction (Peterson and Seligman, 2006). Recent studies have shown that character strengths can have a significant positive impact on wellbeing and quality of life (Diego-Cordero et al., 2021; Hodapp & Zwingmann, 2019; Lifshitz et al., 2019; Yaden et al., 2022; Zhang et al., 2022). This underscores the relevance of positive psychology and the need to further investigate the role of character strengths in mental health.

Spirituality

One of the character strengths that showed increasing potential to have a positive effect on wellbeing and the decrease of mental health symptoms is spirituality (Hausler et al., 2017). There is a wide range of conceptions of spirituality, which seem to depend on the researcher's disciplinary field as well as the concept of spirituality being complex and subjective in nature (Lifshitz et al., 2019). The concept of spirituality has evolved from being grounded in religious practice to subjective self-fulfilment (Koenig, 2008). Past research has found significant differences in the concept of religion and spirituality (Koenig, 2008).

Religion is described as a system of ideas or ideological beliefs and commitments and usually refers to the outward, structured, formal, and doctrinal parts of religious activity (Lifshitz et

al., 2019). Spirituality is conceptualized as the subjective experience and practice of believe that is personal (Lifshitz et al., 2019). Consequently, spirituality is free from rules, responsibilities, and regulations (Koenig, 2008; Yaden et al., 2022).

In positive psychology, spirituality is defined as a feeling of "belonging, wholeness, connection, and openness to the limitless" (Peterson & Seligman, 2006). Based on the conceptualisation of Peterson & Seligman (2006), Fisher (2010) redefined spirituality by using four domains personal, communal, environmental, and transcendental spirituality. Personal spirituality is composed of one's relationship with oneself, and one's meaning, purpose, and values in life. Self-awareness, or the ability to be aware of one's thoughts and behaviours, is the function that personal spirituality operates on and may thus be considered its fuel. Communal spirituality encompasses the quality and depth of interpersonal relationships. This is measured and expressed by feelings of love, forgiveness, trust, hope, and faith in humanity. Environmental spirituality consists of caring for the natural environment and nurturing it. This kind of spirituality is expressed by a feeling of connectedness with nature and the environment. Transcendental spirituality entails a relationship with a higher entity, for example, God or a cosmic force. This is expressed by faith, adoration, or worship towards that higher entity and the mystery of the universe. Based on these four domains, Fisher (2010) developed the Spiritual health and life orientation measure (SHALOM) which allows a more accurate measurement of spirituality. Therefore, this study will see any concepts or behaviour that may be in line with these four domains as spirituality.

Spirituality and Psychological Wellbeing

Research into positive psychology has shown that character strengths such as spirituality are associated with one's wellbeing, meaning that increasing the degree of these strengths can alter the amount of wellbeing (Littman-Ovadia & Niemiec, 2016). Wellbeing is one of the possible measurements of the perceived happiness of an individual (Ryff, 1989). Psychological wellbeing (PWB) is the cognitive component of the forms of wellbeing and

includes the absence of mental disorders like depression as well as the presence of enabling elements of the human experience (Ryff, 1989). PWB consists of the aspects of autonomy, environmental mastery, personal growth, personal relationships, purpose in life, and self-acceptance (Hausler et al., 2017).

Past research has suggested that spirituality can have a positive influence on PWB (Hill & Pargament, 2003). Religious spirituality is related to higher scores in personal, communal, and transcendental spirituality (Ivtzan et al., 2013). It is assumed to play a positive role to increase mental health and PWB by providing a sense of identity, a sense of social belonging, and potential answers to existential questions (Ivtzan et al., 2013). Non-religious spirituality is related to higher scores in personal spirituality (Rowold, 2011). It is assumed to have a more significant effect on the personal aspects of PWB since it is subjective and thus supports personal growth, autonomy, and self-acceptance (Rowold, 2011). One's relationship with nature as defined in environmental spirituality and the quality of social relationships as defined in communal spirituality have been found to have positive effects on psychological parts of wellbeing including cognitive functioning, positive affect, and increased self-esteem (Fitzpatrick et al., 1988; Kamitsis & Francis, 2013; Taylor et al., 2022).

However, there is also mixed evidence in existing studies on the association between the domains of spirituality and mental health, including mental illness and PWB (Rowold, 2011). Evidence showed that in some cases, the domains of transcendental and communal spirituality can be associated with higher rates of negative affect and depression (Rowold, 2011). A further investigation of a multidimensional model of spirituality, made by Lifshitz et al. (2019), revealed that the four domains of Fisher (2010) have separate effects on PWB in a sample of elderly adults. While personal and environmental spirituality were positively associated with wellbeing, the domains of communal and transcendental spirituality were found to be least strongly and negatively related to PWB (Lifshitz et al., 2019). Likewise, a recent meta-analysis by Yaden et al. (2022) included research on spirituality and used

religious as well as non-religious measures of spirituality like religious prayer and self-rated spirituality. Even though all measured concepts had low to moderate but statistically significant positive associations with PWB (Yaden et al., 2022), confounding variables, such as situational factors and the degree of coping, were expected to have an impact on the relationship between spirituality measures and PWB (Yaden et al., 2022).

Consequently, there remains a disparity within research on how the domains of spirituality are associated with PWB which need to be investigated further (Yaden et al., 2022). Additionally, because there are several potential variables (Yaden et al., 2022), identifying potential moderators of the relationship between spirituality and PWB is necessary (Lee et al., 2022).

Spirituality, Psychological Wellbeing, and Alcohol Use

Numerous studies have investigated the relationship between alcohol use and wellbeing (Finanger et al., 2022). High alcohol use has consistently been observed to decrease PWB by limiting cognitive functioning and increasing negative mental and physical health symptoms (Bourne et al., 2021, Jacob et al., 2021; Salcido et al., 2022). High, problematic, or heavy alcohol use is defined by a mean score of eight or higher in the AUDIT questionnaire which assesses frequency, amount per occasion, and intoxication (Kathol & Sgoutas-Emch, 2017). According to Callinan et al. (2022), a problematic alcohol score of eight or higher should be intervened to prevent negative health effects.

A possible reason for the negative influence of alcohol use on PWB is assumed to be the negative physiological effects of high alcohol use (Salcido et al., 2022). High alcohol use has been found to have significant health implications for its users (Finanger et al., 2022b). They can range from cardiovascular diseases to cancer, making them heavy impacts on a user's life and their PWB (Finanger et al., 2022b).

Spirituality may be one of the most influential factors when it comes to protective effects against high alcohol use (Finanger et al., 2022). Past research showed that higher

levels of spirituality and religiousness can have significant positive associations with the prevention of high alcohol use (Kelly & Eddie, 2020). However, there is a lack of research exploring the effects of alcohol use on spirituality (Hodapp & Zwingmann, 2019). Presently, not many studies have investigated the effects of alcohol use on spirituality (Krentzman, 2017). These studies found that various measures of spirituality like religious commitment and “search for the sacred” decreased when alcohol use increased (Krentzman, 2017). Correspondingly, spirituality measures increased when alcohol use decreased (Krentzman, 2017).

High alcohol use has also been found to lead to both long-term cognitive function impairments and social impairments (Bernardin et al., 2014). Heavy alcohol users are less aware of their thoughts and actions and they experience less perceived control which can cause them to behave inappropriately in social situations compared to less heavy users (Bernardin et al., 2014). Self-awareness is one of the most important spiritual mechanisms that improve PWB (Cloninger, 2006). self-aware individuals are more self-transcendent, able to transcend thoughts and beliefs that cause negative emotion and limit positive emotion which leads to increased PWB (Cloninger, 2006).

Since individuals with higher levels of alcohol use show lower levels of spirituality and lower PWB (Kathol & Sgoutas-Emch, 2017) compared to reserved drinkers, it is relevant to assess the moderating effect of alcohol use on the association between the different forms of spirituality and PWB. As this association has been inconclusive until now (Diego-Cordero et al., 2021; Hodapp & Zwingmann, 2019; Lifshitz et al., 2019; Yaden et al., 2022; Zhang et al., 2022), the role of alcohol use could give insights into whether the extent of this association, depends on the level of alcohol use of the studies population.

Populations in which alcohol use can be a problematic factor are college and university students (Kathol & Sgoutas-Emch, 2017). In College and university students, problematic alcohol use is a common phenomenon (Ham & Hope, 2003). Past research

showed that almost 84 percent of students report high amounts of alcohol per occasion while the frequency of drinking is also considered high (Kathol & Sgoutas-Emch, 2017). In a recent study by Callinan et al. (2022), alcohol abuse was differentiated between age groups showing different patterns that contribute to the diagnosis of problematic alcohol use. For young participants, the results identified frequency of drinking as the most important factor contributing to problematic alcohol use (Callinan et al., 2022). In another study by Kennedy (2016), that investigated the effects of alcohol use on university students, a significant negative association between high frequency of alcohol use and PWB has been found. Therefore, students who drink a large amount of alcohol frequently, tend to experience lower psychological wellbeing.

The Current Study

Following this, the current study aims to test the relationship between different domains of spirituality and the psychological well-being of students. In this way, this study contributes to the existing literature which is still in disagreement with the association between spirituality and PWB. Additionally, this study extends previous research by exploring whether this link is moderated by the alcohol usage of students. Consequently, the research question is how different domains of spirituality are related to the psychological well-being of university students, and whether alcohol usage has a moderating effect on this relationship.

The following hypotheses are proposed:

- H1: High scores in the domains of personal, communal, environmental, and transcendental spirituality predict higher scores in psychological wellbeing.
- H2: High scores in alcohol use weaken the association of the domains of spirituality and psychological wellbeing.

Methods

Participants

A total of 106 participants took part in the study, from which 11 were excluded for further analysis because of missing data points. Therefore, the sample consists of 95 participants aged 18-31 ($M = 21.6$, $SD = .26$). The gender reported was (Female = 64, Male = 30, Other = 1). The age criteria are “at least 18 years old”. This is done since we ask about alcohol consumption which can only legally be done from age 18 in the Netherlands. The participants were recruited voluntarily via snowball sampling and on the Sona website of the University of Twente on which they were rewarded with 0.25 Sona credits upon completing the questionnaire. The study was approved by the ethics committee of the University of Twente (221217) and the participants were only able to participate if they gave their informed consent.

Materials

A cross-sectional collective online questionnaire was used for the current study (appendix 2). To complete the questionnaire, participants were required to use a computer device (computer or mobile phone, or any other device). The questionnaire was created on Qualtrics.com and includes demographic questions about age, gender, and nationality, as well as cross-sectional concepts that are irrelevant to the current study's research question and will not be discussed further. Relevant to the current study are the psychological wellbeing scale (PWB, 18-item), the spiritual health and life orientation measure (SHALOM), and three questions about alcohol use (appendix 2).

Psychological Wellbeing

Psychological wellbeing was measured by using the psychological wellbeing scale (PWB, 18-item) (Li, 2014). Here participants could choose on a scale (1: “Strongly agree” to 7: “Strongly disagree”) what they might agree or disagree with. Examples of statements in the

PWB, 18-item are “I like most parts of my personality” And “When I look at the story of my life, I am pleased with how things have turned out so far” (appendix 2). The PWB, 18-Item questionnaire is a short form of the original questionnaire containing 54 items. The internal validity of the questionnaire has been explored across different population samples, cultural contexts, and versions. The Cronbach’s α that was reported for the short version ranged from .72 to .81 (Lee et al., 2019) which is acceptable. Although controversial, the results of investigations concerning the internal validity of the PWB,18-Item seem to be mostly acceptable which makes it sufficient to use (Lee et al., 2019). The internal consistency of the psychological wellbeing questions showed (Cronbach's $\alpha = .609$) in the current sample. This value of Cronbach's α is deemed questionable to be acceptable.

Spirituality

Spirituality measures were done with the spiritual health and life orientation measure (SHALOM) (Gomez & Fisher, 2005). Participants were asked to answer how they feel about each item and reflected on their personal experience most of the time. The SHALOM uses the scale (1: "very low" to 5:" very high"). The SHALOM questionnaire includes four subscales for the different domains of Personal, Communal, environmental, and transcendental spirituality. Personal spirituality measures the relation to oneself and one's meaning, and purpose. Communal spirituality measures the quality and depth of interpersonal relationships. Environmental spirituality measures the feelings of care for nature and the environment. Transcendental spirituality measures the relationship with a higher entity. Example statements of the SHALOM are ”how do you feel each item reflects your personal experience most of the time?”, personal domain (“a sense of identity”), communal domain (“a love of other people”), environmental domain (“connection with nature”), transcendental domain (“personal relationship with the Divine/God”) (appendix 2). The original assessments of the Internal consistency measure assessing the validity of the SHALOM questionnaire showed a Cronbach’s α of .89 for the combined concept and the separate domains ranged between .74

and .88 (personal domain $\alpha = .75$, communal domain $\alpha = .74$, environmental domain $\alpha = .84$, and transcendental domain $\alpha = .89$) (Gomez & Fisher, 2005). The Cronbach's alpha of the SHALOM questionnaire in the past showed acceptable to good results and is thus sufficient for use. The internal consistency of the spiritual health measure showed (personal domain $\alpha = .81$, communal domain $\alpha = .76$, environmental domain $\alpha = .90$, and transcendental domain $\alpha = .91$) for the separate domains and (Cronbach's $\alpha = .89$) for the combined concept in the current sample. This value of Cronbach's α is deemed good.

Alcohol Use

Lastly, the three questions about alcohol use were included based on another study and the AUDIT questionnaire (Kathol & Sgoutas-Emch, 2017). The questions included in the study was one question about the participant's typical drinking behaviour over the last six month, on each 6 scale items: frequency of drinking occasion (1: "none" to 6: "daily or near daily"), the number of typical drinks consumed (1: "0" to 6: "7 or more" drinks consumed), frequency of becoming drunk when drinking (1: "none" to 6: "daily to near-daily" (Kathol & Sgoutas-Emch, 2017) (appendix 2). The internal consistency of the three alcohol questions showed Cronbach's $\alpha = .71$ in the current sample. This value of Cronbach's α is deemed acceptable to good.

Procedure

The data collection phase started after receiving the final approval from the ethics comity of the University of Twente and after contacting the Sona website to publish our study for the students. After the study was published on Sona, the four researchers used a snowball sampling method to recruit as many participants as they could by sharing a link to the study and asking their participants to share the link with other students from the University of Twente. Participants were presented with a questionnaire that first gave information about the general procedure and informed consent. After reading the general information and completing the informed consent, participants were presented with the questionnaires. After

completing the questions, participants were presented with a contact information screen about the researchers and finally presented with a message from the researchers thanking the participant for their participation.

Data Analysis

All statistical analyses were conducted in IBM SPSS statistics 28.0. For the moderation analysis, the PROCESS tool version 4.2 for SPSS was used. Firstly, to be able to use the dataset, all cases with missing data were omitted. Eleven responses were omitted, leaving the dataset with a total of 95 responses. Next, descriptive statistics were done for the dataset. Additionally, the dataset was prepared by calculating the sum of scores for the PWB, Spirituality, and Alcohol measures to start with the regression analysis.

After the preparation of the dataset, the data were assessed for parametric assumptions. To test the assumptions, residual plots were created. All the assumptions seem to be met for the regression of spirituality and wellbeing (appendix 1). After investigating the assumptions, a linear regression was run, with the combined concept of spirituality as the independent variable and psychological wellbeing as the dependent variable to see if there is a positive significant association between spirituality and wellbeing. Next, the four separate domains of spirituality were used as independent variables in a multiple linear regression analysis with PWB as the dependent variable. This was done to see if there are differences in the association with PWB and in the prevalence of the separate domains.

Lastly, all three alcohol measures were tested separately as a potential moderators for the association of spirituality and wellbeing via the PROCESS tool in SPSS. Spirituality was used as the predictor variable, days of drinking in a week, the number of drinks on a drinking occasion, and times of getting drunk in a week were separately used as the moderator variable, and psychological wellbeing was used as the outcome variable. Additionally, the scores of the three alcohol questions were combined and tested as a potential moderator for spirituality and wellbeing via the PROCESS tool in SPSS. Here, spirituality was used as the

predictor variable, the combined concept of alcohol was used as the moderator variable, and psychological wellbeing was used as the outcome variable. Finally, descriptive statistics for the three alcohol questions were calculated.

Results

Descriptive Statistics

The sample shows that the highest score for spirituality is Communal spirituality ($M = 19.557$; $SD = 3.069$) which ranged from 11-25. This was closely followed by Personal spirituality ($M = 18.894$; $SD = 3.615$) which ranged from 8-25 and Environmental spirituality ($M = 17.547$; $SD = 5.031$) which ranged from 5-25. Transcendental spirituality ($M = 9.084$; $SD = 4.834$), which ranged from 5-25 is least prevalent in the sample by a large margin. For the three alcohol measures, the number of drinks consumed on a day of drinking ($M = 2.8$; $SD = 1.145$) ranged from 1-5 and was the most prevalent. After that, the days on which participants drank ($M = 1.91$; $SD = 0.935$) ranged from 1-6 and was closely followed by the times the participants got drunk in a week ($M = 1.62$; $SD = 0.622$) which ranged from 1-4.

The domains of Spirituality and Psychological Wellbeing

To investigate the association between the four domains of spirituality and psychological wellbeing (H1) a multiple linear regression was performed to evaluate the prediction of psychological wellbeing from communal ($F(1, 94) = 1.946$, $b = .138$, $p = .711$), environmental ($F(1, 94) = 2.467$, $b = .161$, $p = 0.465$), transcendental ($F(1, 94) = 0.530$, $b = .045$, $p = .448$) and personal spirituality ($F(1, 94) = 2.620$, $b = .240$, $p = .825$). The results of the multiple linear regression analysis showed that the predictors only explained 3.9% of the variance ($R^2 = .039$) in psychological wellbeing and none of the predictors were statistically significant ($p < 0.05$). Spirituality as a combined factor was found to have a statistically insignificant effect on psychological wellbeing ($F(4, 90) = 0.924$, $b = .126$, $p = .76$). Therefore, the hypothesis that high scores in the domains of personal, communal,

environmental, and transcendental spirituality predict higher scores in psychological wellbeing, was rejected.

Alcohol use as a Moderator

To investigate the effect of alcohol use on the association of spirituality (H2), a moderator analysis was performed using the PROCESS tool for SPSS. The interaction between Spirituality and Alcohol use was not found to be statistically significant ($R^2 = 1.7\%$, $F(3, 91) = 1.745$, $p = .687$). These results identify Alcohol use as a non-significant moderator of the relationship between spirituality and psychological wellbeing. Thus, the hypothesis that high scores in alcohol use weaken the association between the domains of spirituality and psychological wellbeing, was rejected.

Discussion

The current study aimed to investigate the unclear association between spirituality and PWB. Also, moderation of this association by alcohol was theorised since different variables may influence the association between spirituality and PWB, and alcohol may be related to both variables. The research question of the current study was: How different domains of spirituality are related to the psychological well-being of university students, and whether alcohol use has a moderating effect on this relationship? First, it was hypothesized that high scores in the domains of personal, communal, environmental, and transcendental spirituality predict higher scores in psychological wellbeing (H1). Secondly, it was hypothesized that high scores in alcohol use weaken the association of the domains of spirituality and psychological wellbeing (H2). In contrast to expectations, for H1 the data showed a positive but non-significant association between spirituality and psychological wellbeing. Further, in contrast to expectations for H2, the data showed that alcohol use is not a moderator of the relationship between spirituality and psychological wellbeing.

Spiritual Health and Psychological Wellbeing

For H1, against expectations, the four domains of spirituality showed non-significant associations with PWB. For personal spirituality, the results are not in line with past research that found personal spirituality may have a positive influence on PWB (Lifshitz et al., 2019). Similarly, in a study that integrated the SHALOM questionnaire into the Hebrew language, significant positive associations were found between personal spirituality and PWB, subjective wellbeing, the will to live, and life satisfaction (Elhai et al., 2018). The disparity of findings in this study and past research may be due to the population characteristics of the sample. Compared to other studies ($M = 58.8$) that found consistent positive associations between personal spirituality and PWB, this study's population is relatively young ($M = 21.6$) (Lifshitz et al., 2019; Rowold, 2011). Personal spirituality has been observed to have a more significant effect on wellbeing in the later stages of life since it is suggested that older people are more likely to have a more established life and personality (Ivtzan et al., 2013). Moreover, they can invest more time and resources into their personal spirituality due to their more settled life (Mystakidou et al., 2008).

Finding non-significant associations between communal spirituality and PWB was the most surprising result in a sample of university students. Past research has consistently found evidence of a positive influence on the quality of social relationships and PWB in young participants and students (Fitzpatrick et al., 1988; Huppert, 2009; Kamitsis & Francis, 2013). This is consistent with findings that determined communal spirituality as the most important domain for young individuals because of their strong need for a sense of belonging in a still unsettled stage of their lives (Fitzpatrick et al., 1988). The differences between past research and the results of this study may be due to the importance of technology and social media usage that is connected to the recent Covid-19 pandemic (Goodfellow et al., 2022). Especially for university students the importance of technology and social media has increased over the past years due to physical isolation and online curricula (S. H. Taylor et al., 2022). Increased social media use has been found to negatively influence the quality and depth of interpersonal

relationships by shifting one's focus from the quality of interpersonal relationships to the quantity of interactions via likes and comments (S. H. Taylor et al., 2022). Since young students may therefore be less used to maintain and nurture deep relationships, they may also be less able to use the quality and depth of interpersonal relationships to increase their PWB (Goodfellow et al., 2022).

For environmental spirituality, the results were partly in line with past research that found no relationship between exposure and connection to nature and PWB (Beyer et al., 2014). Other studies observed a significant association between environmental spirituality and PWB (Fitzpatrick et al., 1988; Kamitsis & Francis, 2013; Taylor et al., 2022). The differences between the results of this study and past research may be due to the sample characteristics of the current study. In studies that found significant associations between exposure and connection to nature and PWB, participants were generally older (Lifshitz et al., 2019). This is consistent with findings that showed exposure to nature to be effective only if the participants can experience a silent and peaceful nature (Taylor et al., 2022). It may be argued that university students experience high levels of perceived stress due to their high workload (Kausar, 2010). Consequently, because of the high levels of stress, students may focus on different coping mechanisms that are more familiar to them like resorting to technology and social media (Kausar, 2010). Therefore students might not commit enough time and mental resources to experience the full silence and peacefulness of nature compared to well-established adults, which may negate the potentially positive effects of environmental spirituality (Taylor et al., 2022).

Divergent from the results of this study, past research found significant associations between transcendental spirituality and PWB (Lifshitz et al., 2019; Lynch et al., 2012). In line with this study, according to Elhai et al. (2018), transcendental spirituality was non-significantly associated with PWB. The non-significant association of transcendental spirituality may partly be explained by the overlap with religion that has been observed in past

research (Bishop, 2011). Respondents could have had difficulties distinguishing between the concept of transcendental spirituality and religion due to the items including religion-like concepts such as “a higher entity” (appendix B) that may have contributed to the differences with past research (Bishop, 2011).

Since all concepts of spirituality showed non-significant associations with PWB in this sample of young adults, there seems to be a strong inclination for additional variables that may influence the significance of the results. Spirituality measures may be most strongly associated with wellbeing in older age (Yaden et al., 2022, Lifshitz et al., 2019). Older age is assumed to influence spirituality measures and PWB because older people are closer to the end of their life which makes them face the difficulties of older age (Hodapp & Zwingmann, 2019). These difficulties include health issues that are more likely to increase in later life (Hodapp & Zwingmann, 2019). One of the main mechanisms of the association between spirituality and psychological wellbeing is protective health behaviours, which occur since the body is seen as important and sacred (George et al., 2000). Physical health declines in later life and may have an increasingly negative effect on PWB. Protective health behaviour such as specific diets or abstinence from substances (Hodapp & Zwingmann, 2019) is promoted in spirituality and religion, which might therefore be one of the most important mechanisms for the impact of spirituality on psychological wellbeing that may not be present in our sample since the highest age is 31. The young age of the participants in the sample may therefore account for the generally non-significant results and the differences with past research.

Alcohol as a Moderator for the Association of Spirituality and Psychological Wellbeing

The current study investigated alcohol use as a moderator for the association between spirituality and PWB (H2). Against expectations, the moderation analysis showed that alcohol use did not moderate the association between spirituality and PWB. This is not in line with past research. Previous studies found positive and significant associations between high alcohol use and an increase in mental health symptoms as well as a decrease in PWB

(Finanger et al., 2022; Kathol & Sgoutas-Emch, 2017). Also, not in line with the results of this study, according to Krentzman (2017), spirituality measures decreased when alcohol use increased. Further, the scores of alcohol use in this sample were not in line with previous research clearly showing higher scores in all three measurements of alcohol use in students aged 18 to 31 (Callinan et al., 2022; Finanger et al., 2022; Kathol & Sgoutas-Emch, 2017).

It has been established that alcohol use may influence the two main mechanisms of the association between spirituality and PWB, protective health behaviours and self-awareness (explained above) (George et al., 2000). Therefore, it is important to further investigate the alcohol scores of the current sample since they show clear differences compared to past research. The scores for the separate questions and the sum scores indicated that this sample collected from university students showed particularly low to medium amounts of alcohol use specifically concerning the frequency of drinking and the number of days on which participants get drunk. The results of this sample might have been due to partying behaviour of the students. This means that if at all, students in this sample drank at parties and if they drank, they consumed large amounts of alcohol, but they did not drink frequently (Cooke, 2022). The frequency of alcohol use was found to be the most important factor in problematic alcohol use of young adults (Callinan et al., 2022). Therefore, since our sample showed low rates of frequency of use, our participants may be considered non-problematic drinkers which may negate the negative effects of high alcohol use on the physical and mental health of the participants (Callinan et al., 2022). If alcohol use in the current sample was not enough to facilitate negative physical health, there might not have been enough inclination for the participants to resort to the health benefits of spirituality. This may be since they did not need to cope with the negative health effects of problematic alcohol use (George et al., 2000). Correspondingly, if the consumption of alcohol might have taken a different pattern in this sample (drinking more frequently instead of drinking a lot but infrequently), it might have

affected the results so that alcohol would have moderated the association between spirituality and PWB significantly.

Implications

This study has some theoretical and practical implications. The current study underlines that age may be an important variable in the measurement of spirituality and PWB. The extent to which different age groups can use spirituality to increase their PWB may differ. Therefore, it may be important for research to clearly distinguish between younger and older ages and further investigate variables like stress or social media use and their impact on both spirituality and PWB in younger and older ages. Since this contrasts with past research, students should be better educated regarding the potential benefits of spirituality. This is so that students may be able to commit more time and mental resources and may experience the potential benefits of spirituality for PWB. Another implication of this study is that a low frequency of alcohol use in students may lead to fewer negative health effects. Correspondingly, interventions that aim to prevent problematic drinking in students, should mainly focus on populations that show high frequencies of alcohol use.

Strengths and Limitations

This study used a snowball sampling method as well as published the questionnaire on the university's internal website SONA to gather participants. The approach of snowball sampling may have resulted in a non-representative sample since the majority of participants are German and female (Gilbert et al., 2022). This might have influenced the results of the sample since they seem not in line with previous findings observing higher alcohol use in university students (Kathol & Sgoutas-Emch, 2017). Female participants have been observed to show less problematic alcohol use which may have contributed to the low alcohol scores and the non-significant results (Kathol & Sgoutas-Emch, 2017).

Additionally, the usage of a combined questionnaire may pose a limit to the results of this study since it might have compromised the internal consistency of the questionnaire. Past

research found that longer web-based questionnaires can limit response rate (Edwards et al., 2009) and the use of a cross-sectional questionnaire may pose implications to the empirical results (Al Dhaheri et al., 2021). The internal consistency measures of the questionnaires used for this study showed Cronbach's alpha of 0.609 for the PWB-18 item which can be considered as insufficient to sufficient and 0.71 for the three alcohol questions, which can be considered barely sufficient. These relatively low internal consistency measures might have been higher if the questionnaires would not be presented in a cross-sectional design (Al Dhaheri et al., 2021). Therefore, they may account for some of the inconsistencies with past research.

A strength of the current study may be the internal consistency of the spirituality measurement. The internal consistency measures showed 0.74-0.89 which can be considered sufficient to be good. Although spirituality is difficult to conceptualize, the SHALOM questionnaire seems to present a consistently valid measure that redefines the concept of spirituality in its nuances. Despite non-significant results, this study may have contributed to the clarification of the association between spirituality and PWB. Alcohol use was found to not have a significant influence on this association in students. Correspondingly, it becomes clear that there may be other variables that influence the association between spirituality and PWB which need to be investigated further.

Future Directions

It can be said that the association between spirituality and PWB needs to be investigated further. Future research should focus on experimental designs instead of a cross-sectional design to be able to clarify the causal relationship between spirituality and wellbeing. Also, different variables that may influence this association like age, physical health, social media/technology use and stress/workload should be included. An example of an experimental design would be to have two groups of participants either taking part in a spirituality course (experimental group) or not taking part in that course (condition group) and

afterward testing the participant's spirituality measures and their change in wellbeing measure (before and after the course). The spirituality course should include practices and methods that participants can use to facilitate each of the four domains (personal, communal, environmental, and transcendental). To clarify the potential influence of the other variables, age, physical health, social media/technology use and stress/workload as well as alcohol measures should be added to the experiment to investigate whether the participants are influenced by these variables.

The current study was one of few studies that looked at the influence of alcohol use on spirituality. To extend this investigation, future research should focus on the domains of spirituality and their effect on different forms of wellbeing like emotional and physical wellbeing as well as PWB. Research should also focus on the long-term effects of alcohol use on spirituality. This is especially important since age may heavily influence spirituality and thus age groups should be compared in their level of spirituality. Correspondingly, factors that may influence the association between spirituality and PWB in different age groups should be determined. Therefore, interventions may be designed more properly to suit their population's unique characteristics.

Conclusion

In conclusion, this study provided further insights into the association between the domains of spirituality by Fisher (2010) and psychological wellbeing. Spirituality measures showed a non-significant association with PWB. More specifically, none of the domains of spirituality were significantly associated with PWB which may emphasize the non-significance of spirituality for the increase of wellbeing in students. Alcohol use was tested as a potential moderator and did not show a significant moderation effect on the association between spirituality and PWB. Several limitations and explanations such as the age of the sample, the sampling method, and the use of a combined cross-sectional questionnaire have been identified to possibly explain the overall non-significant results of this study. In this

process, several variables were identified that might have had an important effect on spirituality and PWB namely age, physical health, social media/technology use and stress/workload. Age seemed to be most important since it can be argued that the age of the participants influenced all the domains of spirituality as well as the moderation effect of alcohol. Future research should further focus on the investigation of the association between the domains of spirituality and PWB in different age groups and possibly identify other variables that have an influence on this association via longitudinal or experimental designs. This is because future interventions may then be able to target student populations and help to facilitate the potential beneficial effects of spirituality on PWB which are more present in older populations.

References

- Al Dhaheri, A. S., Bataineh, M. a. F., Mohamad, M. N., Ajab, A., Al Marzouqi, A., Jarrar, A. H., . . .
- Cheikh Ismail, L. (2021). Impact of COVID-19 on mental health and quality of life: Is there any effect? A cross-sectional study of the MENA region. *PLOS ONE*, *16*(3), e0249107.
<https://doi.org/10.1371/journal.pone.0249107>
- Bernardin, F., Maheut-Bosser, A., & Paille, F. (2014). Cognitive impairments in alcohol-dependent subjects. *Frontiers in psychiatry*, *5*, 78.
- Beyer, K. M., Kaltenbach, A., Szabo, A., Bogar, S., Nieto, F. J., & Malecki, K. M. (2014). Exposure to neighborhood green space and mental health: evidence from the survey of the health of Wisconsin. *International journal of environmental research and public health*, *11*(3), 3453-3472.
- Bishop, A. J. (2011). Spirituality and religiosity connections to mental and physical health among the oldest old. In L. W. Poon & J. Cohen-Mansfield (Eds.), *Understanding well-being in the oldest old*. (pp. 227-239). Cambridge University Press.
<https://doi.org/10.1017/CBO9780511920974.014>
- Bourne, P. A., Bennett, J., Williamson, B., McLean, C., Fallah, J., Campbell, C., . . . White, M. (2021). Impact of Alcohol Consumption on the Psychological Well being of Jamaicans during the Coronavirus Disease-19 (COVID-19) Pandemic. *International Journal of Collaborative Research on Internal Medicine & Public Health*, *13*(9), 32-42.
- Callinan, S., Livingston, M., Dietze, P., Gmel, G., & Room, R. (2022). Age-based differences in quantity and frequency of consumption when screening for harmful alcohol use. *Addiction*, *117*(9), 2431-2437. <https://doi.org/https://doi.org/10.1111/add.15904>
- Ceciie RL Boot, Johan FM Rosiers, Frans J Meijman, & Guido FG Van Hal. (2010). Consumption of tobacco, alcohol, and recreational drugs in university students in Belgium and the Netherlands: The role of living situation. *International Journal of Adolescent Medicine and Health*, *22*(4), 527-534. <https://doi.org/doi:10.1515/IJAMH.2010.22.4.527>

- Cloninger, C. R. (2006). The science of well-being: an integrated approach to mental health and its disorders. *World Psychiatry*, 5(2), 71-76.
- Cook, C. C. H. (2020). Spirituality, religion & mental health: exploring the boundaries. *Mental Health, Religion & Culture*, 23(5), 363-374. <https://doi.org/10.1080/13674676.2020.1774525>
- Cooke, J. (2022). *Influence of spirituality on university students' emotional intelligence, perceived stress, and life quality* ProQuest Information & Learning]. APA PsycInfo.
<http://ezproxy2.utwente.nl/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2022-34086-108&site=ehost-live>
- Dehnavi, S. R., Heidarian, F., Ashtari, F., & Shaygannejad, V. (2015). Psychological well-being in people with multiple sclerosis in an Iranian population. *J Res Med Sci*, 20(6), 535-539.
<https://doi.org/10.4103/1735-1995.165942>
- Diego-Cordero, R., Zurrón Pérez, M. P., Vargas-Martínez, A. M., Lucchetti, G., & Vega-Escañó, J. (2021). The effectiveness of spiritual interventions in the workplace for work-related health outcomes: A systematic review and meta-analysis. *Journal of Nursing Management*, 29(6), 1703-1712. <https://doi.org/10.1111/jonm.13315>
- Edwards, P. J., Roberts, I., Clarke, M. J., DiGuseppi, C., Wentz, R., Kwan, I., . . . Pratap, S. (2009). Methods to increase response to postal and electronic questionnaires. *Cochrane database of systematic reviews*(3).
- Elhai, N., Carmel, S., O'Rourke, N., & Bachner, Y. G. (2018). Translation and validation of the Hebrew version of the SHALOM spiritual questionnaire. *Aging & Mental Health*, 22(1), 46-52.
<https://doi.org/10.1080/13607863.2016.1222350>
- Finanger, T., Vaaler, A. E., Spigset, O., Aamo, T. O., Andreassen, T. N., Gråwe, R. W., & Skråstad, R. B. (2022a). Identification of unhealthy alcohol use by self-report and phosphatidylethanol (PEth) blood concentrations in an acute psychiatric department. *BMC Psychiatry*, 22.
<https://doi.org/10.1186/s12888-022-03934-y>
- Finanger, T., Vaaler, A. E., Spigset, O., Aamo, T. O., Andreassen, T. N., Gråwe, R. W., & Skråstad, R. B. (2022b). Identification of unhealthy alcohol use by self-report and phosphatidylethanol

- (PEth) blood concentrations in an acute psychiatric department. *BMC Psychiatry*, 22(1), 286.
<https://doi.org/10.1186/s12888-022-03934-y>
- Fisher, J. (2010). Development and Application of a Spiritual Well-Being Questionnaire Called SHALOM. *Religions*, 1(1), 105-121.
- Fitzpatrick, R., Newman, S., Lamb, R., & Shipley, M. (1988). Social relationships and psychological well-being in rheumatoid arthritis. *Social Science & Medicine*, 27(4), 399-403.
[https://doi.org/https://doi.org/10.1016/0277-9536\(88\)90275-4](https://doi.org/https://doi.org/10.1016/0277-9536(88)90275-4)
- George, L. K., Larson, D., Koenig, H., & McCullough, M. (2000). Spirituality and health: What we know. *Journal of social and clinical psychology*, 19(1), 200.
- Gilbert, P. A., Saathoff, E., Russell, A. M., & Brown, G. (2022). Gender differences in lifetime and current use of online support for recovery from alcohol use disorder. *Alcohol: Clinical and Experimental Research*, 46(6), 1073-1083.
<https://doi.org/https://doi.org/10.1111/acer.14827>
- Gomez, R., & Fisher, J. W. (2005). The spiritual well-being questionnaire: Testing for model applicability, measurement and structural equivalencies, and latent mean differences across gender. *Personality and Individual Differences*, 39(8), 1383-1393.
<https://doi.org/https://doi.org/10.1016/j.paid.2005.03.023>
- Goodfellow, C., Hardoon, D., Inchley, J., Leyland, A. H., Qualter, P., Simpson, S. A., & Long, E. (2022). Loneliness and personal well-being in young people: Moderating effects of individual, interpersonal, and community factors. *Journal of Adolescence*, 94(4), 554-568.
<https://doi.org/10.1002/jad.12046>
- Ham, L. S., & Hope, D. A. (2003). College students and problematic drinking: A review of the literature. *Clinical Psychology Review*, 23(5), 719-759.
[https://doi.org/https://doi.org/10.1016/S0272-7358\(03\)00071-0](https://doi.org/https://doi.org/10.1016/S0272-7358(03)00071-0)
- Hausler, M., Strecker, C., Huber, A., Brenner, M., Höge, T., & Höfer, S. (2017). Distinguishing relational aspects of character strengths with subjective and psychological well-being. *Frontiers in psychology*, 8, 1159.

- Hill, P. C., & Pargament, K. I. (2003). Advances in the conceptualization and measurement of religion and spirituality: Implications for physical and mental health research. *American psychologist*, *58*(1), 64.
- Hodapp, B., & Zwingmann, C. (2019). Religiosity/spirituality and mental health: A meta-analysis of studies from the German-speaking area. *Journal of Religion and Health*, *58*(6), 1970-1998. <https://doi.org/10.1007/s10943-019-00759-0>
- Hull, J. G. (1981). A self-awareness model of the causes and effects of alcohol consumption. *Journal of Abnormal Psychology*, *90*(6), 586-600. <https://doi.org/10.1037/0021-843X.90.6.586>
- Huppert, F. A. (2009). Psychological Well-being: Evidence Regarding its Causes and Consequences†. *Applied Psychology: Health and Well-Being*, *1*(2), 137-164. <https://doi.org/https://doi.org/10.1111/j.1758-0854.2009.01008.x>
- Ivtzan, I., Chan, C. P. L., Gardner, H. E., & Prashar, K. (2013). Linking Religion and Spirituality with Psychological Well-being: Examining Self-actualisation, Meaning in Life, and Personal Growth Initiative. *Journal of Religion and Health*, *52*(3), 915-929. <https://doi.org/10.1007/s10943-011-9540-2>
- Jacob, L., Smith, L., Armstrong, N. C., Yakkundi, A., Barnett, Y., Butler, L., . . . Tully, M. A. (2021). Alcohol use and mental health during COVID-19 lockdown: A cross-sectional study in a sample of UK adults. *Drug and Alcohol Dependence*, *219*, 108488. <https://doi.org/https://doi.org/10.1016/j.drugalcdep.2020.108488>
- Kamitsis, I., & Francis, A. J. P. (2013). Spirituality mediates the relationship between engagement with nature and psychological wellbeing. *Journal of Environmental Psychology*, *36*, 136-143. <https://doi.org/https://doi.org/10.1016/j.jenvp.2013.07.013>
- Kathol, N., & Sgoutas-Emch, S. (2017). Alcohol Use in College: The Relationship Between Religion, Spirituality, and Proscriptive Attitudes Toward Alcohol. *Journal of Religion and Health*, *56*(2), 437-449. <https://doi.org/10.1007/s10943-016-0210-2>
- Kausar, R. (2010). Perceived Stress, Academic Workloads and Use of Coping Strategies by University Students. *Journal of behavioural sciences*, *20*(1).

- Kelly, J. F., & Eddie, D. (2020). The role of spirituality and religiousness in aiding recovery from alcohol and other drug problems: An investigation in a national US sample. *Psychology of Religion and Spirituality*, 12(1), 116-123. <https://doi.org/10.1037/rel0000295>
- Kennedy, S. (2016). Lights! Camera! Action projects! Engaging psychopharmacology students in service-based action projects focusing on student alcohol abuse. *The Journal of Undergraduate Neuroscience Education*, 14(2), A138-A142.
- Khazaeli, K., & Saberi, F. (2022). The relationship between spirituality and quality of life in patients with spinal cord injury, Iran. *Journal of Spirituality in Mental Health*, 1-9. <https://doi.org/10.1080/19349637.2022.2147467>
- Kim-Prieto, C., Diener, E., Tamir, M., Scollon, C., & Diener, M. (2013). Integrating the Diverse Definitions of Happiness: A Time-Sequential Framework of Subjective Well-Being. In A. Delle Fave (Ed.), *The Exploration of Happiness: Present and Future Perspectives* (pp. 47-75). Springer Netherlands. https://doi.org/10.1007/978-94-007-5702-8_4
- Koenig, H. G. (2008). Concerns About Measuring "Spirituality" in Research. *The Journal of Nervous and Mental Disease*, 196(5).
- Krentzman, A. R. (2017). Longitudinal differences in spirituality and religiousness between men and women in treatment for alcohol use disorders. *Psychology of Religion and Spirituality*, 9(Suppl 1), S11-S21. <https://doi.org/10.1037/rel0000096>
- Lee, S., Park, J. T., Bang, M., An, S. K., Namkoong, K., Park, H. Y., & Lee, E. (2022). Theory of mind and hair cortisol in healthy young adults: the moderating effects of childhood trauma. *European Journal of Psychotraumatology*, 13(2), 2116826. <https://doi.org/10.1080/20008066.2022.2116826>
- Lee, T., Sun, H.-F., & Chiang, H.-H. (2019). Development and validation of the short-form Ryff's psychological well-being scale for clinical nurses in Taiwan [Original Article]. *Journal of Medical Sciences*, 39(4), 157-162. https://doi.org/10.4103/jmedsci.jmedsci_191_18

- Lifshitz, R., Nimrod, G., & Bachner, Y. G. (2019). Spirituality and wellbeing in later life: a multidimensional approach. *Aging & Mental Health, 23*(8), 984-991.
<https://doi.org/10.1080/13607863.2018.1460743>
- Littman-Ovadia, H., & Niemiec, R. M. (2016). Character Strengths and Mindfulness as Core Pathways to Meaning in Life. In P. Russo-Netzer, S. E. Schulenberg, & A. Batthyany (Eds.), *Clinical Perspectives on Meaning: Positive and Existential Psychotherapy* (pp. 383-405). Springer International Publishing. https://doi.org/10.1007/978-3-319-41397-6_19
- Lynch, C. P., Hernandez-Tejada, M. A., Strom, J. L., & Egede, L. E. (2012). Association between spirituality and depression in adults with type 2 diabetes. *The Diabetes Educator, 38*(3), 427-435. <https://doi.org/10.1177/0145721712440335>
- Mathibela, F., & Skhosana, R. M. (2021). I just knew that something was not right! Coping strategies of parents living with adolescents misusing substances. *Journal of Substance Abuse Treatment, 120*, 108178. <https://doi.org/https://doi.org/10.1016/j.jsat.2020.108178>
- Mystakidou, K., Tsilika, E., Parpa, E., Hatzipli, I., Smyrnioti, M., Galanos, A., & Vlahos, L. (2008). Demographic and clinical predictors of spirituality in advanced cancer patients: a randomized control study. *Journal of clinical nursing, 17*(13), 1779-1785.
- Park, N., Peterson, C., & Seligman, M. E. (2004). Strengths of character and well-being. *Journal of social and Clinical Psychology, 23*(5), 603-619.
- Peterson, C., & Seligman, M. (2006). The values in action (VIA) classification of strengths. *A life worth living: Contributions to positive psychology, 29-48*.
- Romeiro, J., Nogueira, P. J., Fisher, J., & Caldeira, S. (2022). Portuguese Version of the Spiritual Well-Being Questionnaire: Validation Study in People under Assisted Reproductive Techniques. *Religions, 13*(5), 400.
- Rowold, J. (2011). Effects of Spiritual Well-Being on Subsequent Happiness, Psychological Well-Being, and Stress. *Journal of Religion and Health, 50*(4), 950-963. <https://doi.org/10.1007/s10943-009-9316-0>

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57(6), 1069-1081.

<https://doi.org/10.1037/0022-3514.57.6.1069>

Salcido, V. V., Christophe, N. K., & Stein, G. L. (2022). Familism and psychological wellbeing among Latinx youth: The role of parental alcohol use. *Journal of Family Psychology*, 36(4), 565-573.

<https://doi.org/10.1037/fam0000924>

Sher, K. J., & Epler, A. J. (2004). Alcoholic Denial: Self-Awareness and Beyond. In B. D. Beitman & J. Nair (Eds.), *Self-awareness deficits in psychiatric patients: Neurobiology, assessment, and treatment*. (pp. 184-212). W. W. Norton & Company.

Sparaco, M., Miele, G., Abbadessa, G., Ippolito, D., Trojsi, F., Lavorgna, L., & Bonavita, S. (2022). Correction to: Pain, quality of life, and religiosity in people with multiple sclerosis.

Neurological Sciences, 43(12), 7007-7007. <https://doi.org/10.1007/s10072-021-05814-x>

Su, R., Tay, L., & Diener, E. (2014). The development and validation of the Comprehensive Inventory of Thriving (CIT) and the Brief Inventory of Thriving (BIT). *Applied Psychology: Health and Well-Being*, 6(3), 251-279.

Taylor, E. M., Robertson, N., Lightfoot, C. J., Smith, A. C., & Jones, C. R. (2022). Nature-Based Interventions for Psychological Wellbeing in Long-Term Conditions: A Systematic Review. *International Journal of Environmental Research and Public Health*, 19(6), 3214.

Taylor, S. H., Zhao, P., & Bazarova, N. N. (2022). Social media and close relationships: a puzzle of connection and disconnection. *Current Opinion in Psychology*, 45, 101292.

<https://doi.org/https://doi.org/10.1016/j.copsyc.2021.12.004>

Wink, P., & Dillon, M. (2008). Religiousness, spirituality, and psychosocial functioning in late adulthood: findings from a longitudinal study.

Wu, T., Jia, X., Shi, H., Niu, J., Yin, X., Xie, J., & Wang, X. (2021). Prevalence of mental health problems during the COVID-19 pandemic: A systematic review and meta-analysis. *Journal of Affective Disorders*, 281, 91-98.

<https://doi.org/https://doi.org/10.1016/j.jad.2020.11.117>

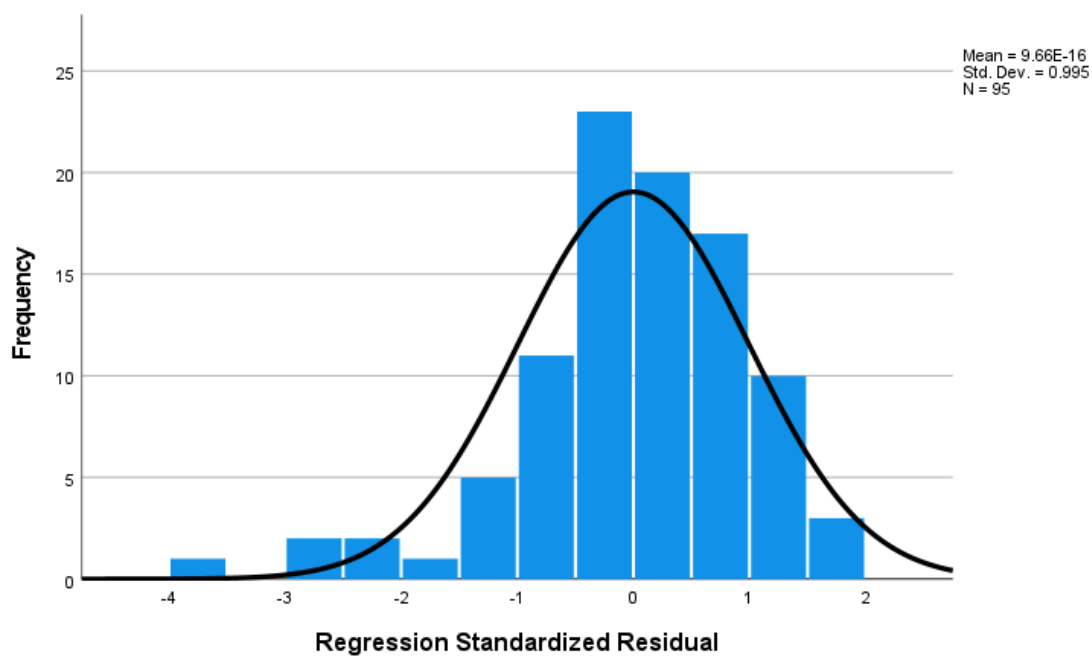
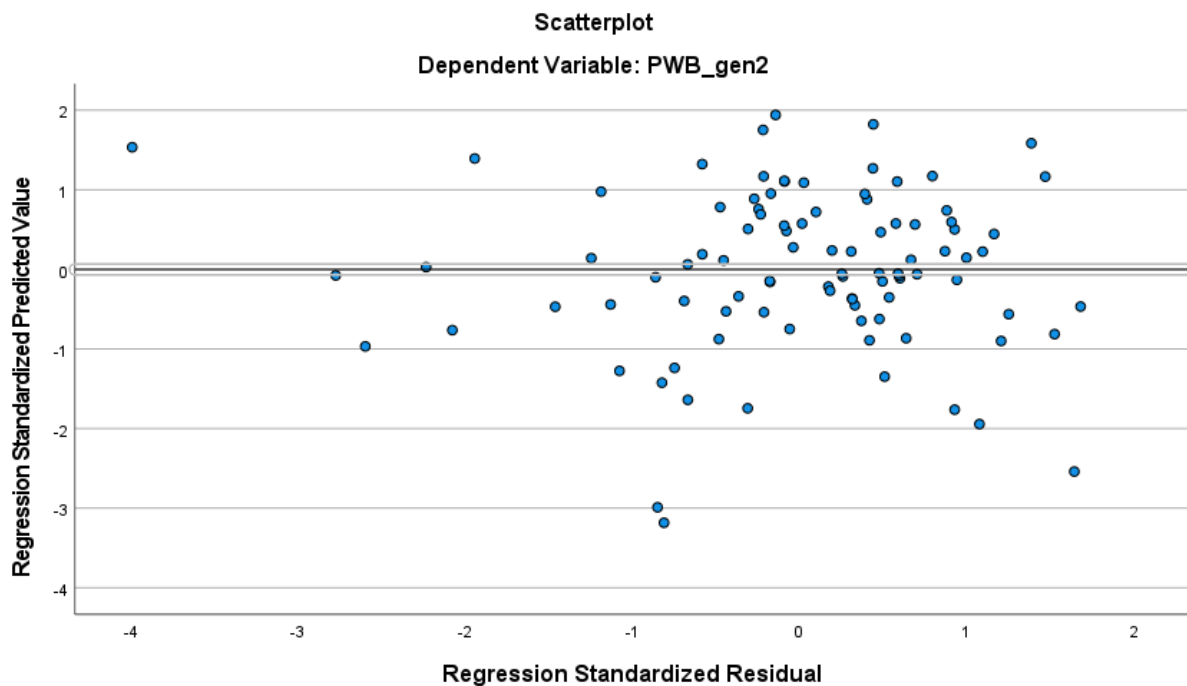
Wycoff, A. M., Carpenter, R. W., Hepp, J., Piasecki, T. M., & Trull, T. J. (2021). Real-time reports of drinking to cope: Associations with subjective relief from alcohol and changes in negative affect. *Journal of Abnormal Psychology, 130*(6), 641-650.

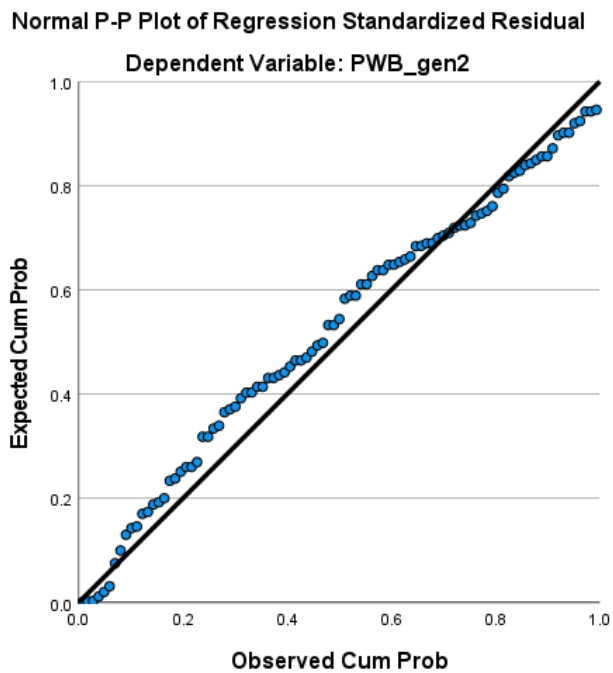
<https://doi.org/10.1037/abn0000684>

Yaden, D. B., Batz-Barbarich, C. L., Ng, V., Vaziri, H., Gladstone, J. N., Pawelski, J. O., & Tay, L. (2022). A Meta-Analysis of Religion/Spirituality and Life Satisfaction. *Journal of Happiness Studies, 23*(8), 4147-4163. <https://doi.org/10.1007/s10902-022-00558-7>

Zhang, H., Hook, J. N., Hodge, A. S., Van Tongeren, D. R., Davis, D. E., & Jin, L. (2022). Nonreligious spirituality, mental health, and well-being. *Spirituality in Clinical Practice, 9*(1), 60.

Appendix A





Bachelor Thesis; Are Good People Happy People?

Start of Block: Informed Consent

Q3 The purpose of this research study is to investigate the effect of character strengths on well-being. For this reason, you will be asked to fill out the provided questionnaire. The questionnaire includes questions regarding your well-being and your character strengths such as spirituality, hope, perseverance, and hardiness. The questionnaire takes approximately 30 minutes to fill out. The data will be used for our report only and will not be shared for any other purpose. Your responses will be saved and stored to properly analyze your answers. However, after analyzing your answers all the data that has been collected will be deleted. The deletion of your data will be no later than the 27th of February 2023. Lastly, in the individual reports of this research, all data will be anonymized.

By giving consent you indicate that you: have read and understood the study information dated.

voluntarily participate in this study. understand that you can refuse to answer questions and that you can withdraw from the study at any time, without having to give a reason. understand that taking part in the study involves answering questions related to the topic of character strengths and well-being, understand that the information you provide will be used for quantitative research in the context of a university project. understand that the data that is collected will be stored for analysis. understand that the stored data is archived until no later than the 27th of February, 2023. understand that the information you provide in this survey will not be shared beyond the study team and the study teams' supervisor.

Study contact details.

Names of Students: Cedric Middendorf, Chiara Stegemann, Gijs Smid, Jérôme Zablotny

Supervisor: M.J.M. Van Bergen MSc. MRes.

Email address: j.zablotny@student.utwente.nl

Contact Information for Questions about Your Rights as a Research Participant.

If you have questions about your rights as a research participant, or wish to obtain information, ask questions, or discuss any concerns about this study with someone other than the researcher(s), please contact the Secretary of the Ethics Committee/domain Humanities Social Sciences of the Faculty of Behavioural, Management and Social Sciences at the University of Twente by ethicscommittee-hss@utwente.nl.

Q4 I agree and give my informed consent

- Yes (1)
- No (2)

End of Block: Informed Consent

Start of Block: Demographics

General 3 What is your nationality?

- Dutch (1)
- German (2)
- Other: (3) _____
-

General 2 How would you describe your gender?

- Male (1)
- Female (2)
- Non-binary / third gender (3)
- Other: (4) _____
- Prefer not to say (5)
-



General 1 What is your age?

End of Block: Demographics

Start of Block: Gijs Smid's Block

PANAS 1/2 This scale consists of a number of words that describe different feelings and emotions.

Read each item and **indicate to what extent you have felt this way during the past week.**

	Very slightly or not at all (1)	A little (2)	Moderately (3)	Quite a bit (4)	Extremely (5)
Interested (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Distressed (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Excited (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Upset (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Strong (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Guilty (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Scared (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hostile (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enthusiastic (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Proud (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Page Break

PANAS 2/2 This scale consists of a number of words that describe different feelings and emotions. Read each item and **indicate to what extent you have felt this way during the past week.**

	Very slightly or not at all (1)	A little (2)	Moderately (3)	Quite a bit (4)	Extremely (5)
Irritable (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alert (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ashamed (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inspired (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nervous (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Determined (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Attentive (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jittery (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Active (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Afraid (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

SWLS Below are five statements about how satisfied you are with your life that you may agree or disagree with. Using the 1 - 7 scale below, **indicate your agreement with each item** by placing the appropriate number on the line preceding that item. Please be open and honest in your responding.

	Strongly disagree (1)	Disagree (2)	Slightly disagree (3)	Neither agree nor disagree (4)	Slightly agree (5)	Agree (6)	Strongly agree (7)
In most ways my life is close to my ideal. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The conditions of my life are excellent. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am satisfied with my life. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
So far I have gotten the important things I want in life. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I could live my life over, I would change almost nothing. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

ECR-S The following statements concern **how you feel in romantic relationships or other significant close relationships**. Please respond to each statement by **indicating how much you agree or disagree**.

I usually discuss my problems and concerns with my partner. (9)

I get frustrated if my romantic partner is not available when I need them. (10)

I am nervous when my partner gets too close to me. (11)

I worry that a romantic partner won't care about me as much as I care about them. (12)

VIA-120 1/3 Please choose one option in response to each statement. Many of the questions reflect statements that many people would find desirable, but we want you to **answer only in terms of whether the statement describes what you are like.**

	Very Much Unlike Me (1)	Unlike Me (2)	Neutral (3)	Like Me (4)	Very Much Like Me (5)
I really enjoy doing small favors for friends. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
There are people in my life who care as much about my feelings and well-being as they do about their own. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
As a leader, I treat everyone equally well regardless of his or her experience. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I rarely hold a grudge. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I go out of my way to cheer up people who appear down. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
One of my strengths is helping a group of people work well together even when they have their differences. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At least once a day, I stop and count my blessings. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I welcome the opportunity to brighten someone else's day with laughter. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I never seek vengeance. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I love to make other people happy. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I do not give up. (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am the most important person in someone else's life. (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I work at my very best when I am a group member. (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to have fun in all kinds of situations. (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
To be an effective leader, I treat everyone the same. (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am an extremely grateful person. (16)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to add some humor to whatever I do. (17)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I believe it is best to forgive and forget. (18)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I always feel the presence of love in my life. (19)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

VIA-120 2/3 Please choose one option in response to each statement. Many of the questions reflect statements that many people would find desirable, but we want you to **answer only in terms of whether the statement describes what you are like.**

	Very Much Unlike Me (1)	Unlike Me (2)	Neutral (3)	Like Me (4)	Very Much Like Me (5)
I am as excited about the good fortune of others as I am about my own. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can express love to someone else. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Without exception, I support my teammates or fellow group members. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My friends always tell me I am a strong but fair leader. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel thankful for what I have received in life. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I never quit a task before it is done. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have a great sense of humor. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I rarely try to get even. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I enjoy being kind to others. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can accept love from others. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I always finish what I start. (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Even if I disagree with them, I always respect the leaders of my group. (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

As a leader, I try to make all group members happy. (13)

When I look at my life, I find many things to be grateful for. (14)

I am usually willing to give someone another chance. (15)

It is important to me to respect decisions made by my group. (16)

I feel a profound sense of appreciation every day. (17)

I gladly sacrifice my self-interest for the benefit of the group I am in. (18)

I am known for my good sense of humor. (19)

I finish things despite obstacles in the way. (20)

I stick with whatever I decide to do. (21)

VIA-120 3/3 Please choose one option in response to each statement. Many of the questions reflect statements that many people would find desirable, but we want you to **answer only in terms of whether the statement describes what you are like.**

	Very Much Unlike Me (1)	Unlike Me (2)	Neutral (3)	Like Me (4)	Very Much Like Me (5)
I always look on the bright side. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am a spiritual person. (22)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know how to handle myself in different social situations. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I practice my religion. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am always busy with something interesting. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No matter what the situation, I am able to fit in. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I experience deep emotions when I see beautiful things. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Despite challenges, I always remain hopeful about the future. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My faith never deserts me during hard times. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have the ability to make other people feel interesting. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I see beauty that other people pass by without noticing. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I have a clear picture in my mind about what I want to happen in the future. (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I love what I do. (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am excited by many different activities. (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have often been left speechless by the beauty depicted in a movie. (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I look forward to each new day. (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have many interests. (16)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am always aware of the natural beauty in the environment. (17)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My faith makes me who I am. (18)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have lots of energy. (19)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I can find something of interest in any situation. (20)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I am good at sensing what other people are feeling. (21)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I know that I will succeed with the goals I set for myself. (23)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I am in awe of simple things in life that others might take for granted. (24)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I think my life is extremely interesting. (25)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I always know what to say to make people feel good. (26)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If I feel down, I always think about what is good in my life. (27)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My beliefs make my life important. (28)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I awaken with a sense of excitement about the day's possibilities. (29)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People describe me as full of zest. (30)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Gijs Smid's Block

Start of Block: Jerome Zablony's Block

AHS Below are twelve statements that you may respond to using the eight answering options that are shown on top. For each statement, please **indicate your answer by ticking the appropriate description.**

I've been pretty successful in life. (10)

I usually find myself worrying about something. (11)

I meet the goals that I set for myself. (12)

Page Break

PWB Below are eighteen statements that you may agree or disagree with. Using the answering options on top, please **indicate your response to each of these statements by ticking the appropriate option.**

I have confidence in my own opinions, even if they are different from the way most other people think. (17)

I judge myself by what I think is important, not by the values of what others think is important. (18)

Page Break

DRS-15 Below are twelve statements that you may agree or disagree with. Using the answering options on top, **please indicate your response to each of these statements by ticking the appropriate option.**

	Not at all True (1)	A little True (2)	Quite True (3)	Completely True (4)
Most of my life gets spent doing things that are meaningful. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
By working hard you can nearly always achieve your goals. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't like to make changes in my regular activities. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I feel that my life is somewhat empty of meaning. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Changes in routine are interesting to me. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How things go in my life depends on my own actions. (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I really look forward to my daily activities. (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't think there's much I can do to influence my own future. (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I enjoy the challenge when I have to do more than one thing at a time. (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Most days, life is really interesting and exciting for me. (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It bothers me when my daily routine gets interrupted. (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
It is up to me to decide how the rest of my life will be. (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Life in general is boring for me. (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

I like having a daily schedule that doesn't change very much. (14)

My choices make a real difference in how things turn out in the end. (15)

End of Block: Jerome Zablotny's Block

Start of Block: Chiara Stegemann's Block

Extracurricular How many hours per week do you spend on extracurricular activities? (Extracurricular activities are activities which don't fall within the scope of the regular curriculum, which are usually organized student activities, which are connected to the University and which carry no academic credit. (e.g. sports, participating in an association))

End of Block: Chiara Stegemann's Block

Start of Block: Cedy's Block

Q31 Spirituality can be described as that which lies at the heart of a person being human. Spiritual health can be seen as a measure of how good you feel about yourself and how well you relate to those aspects of the world around you, which are important to you.

Please **give one response to each of the following items**

how do you feel each item reflects your personal experience most of the time.

1 = very low 2 = low 3 = moderate 4 = high 5 = very high.

Do not spend too much time on any one item. It is best to record your first thoughts.

	very low (1)	low (2)	moderate (3)	high (4)	very high (5)
a love of other people (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
personal relationship with the Divine/God (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
forgiveness toward others (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
connection with nature (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
a sense of identity (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
worship of the Creator (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
awe at a breathtaking view (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
trust between individuals (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
self-awareness (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
oneness with nature (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
oneness with God (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
harmony with the environment (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
peace with God (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
joy in life (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
prayer life (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
inner peace (16)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

respect for others (17)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
meaning in life (18)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
kindness towards other people (19)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
a sense of 'magic' in the environment (20)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How important is religion in your life (21)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
How important is spirituality in your life (22)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Cedy's Block

Start of Block: Cedy

Q46 The next three questions concern your alcohol use.

Please only consider your alcohol consumption in the last 6 months.

On how many days in a general week do you have a drink containing alcohol?

- none (1)
 - one or two days (2)
 - two or three days (3)
 - three or four days (4)
 - five days (5)
 - daily or near daily (6)
-

Q47 How many standard drinks do you have on a typical day when you are drinking?

- 0 (1)
 - 1-2 (2)
 - 3-4 (3)
 - 5-6 (4)
 - 6-7 (5)
 - 7 or more (6)
-

Q48 On how many days do you get drunk in a typical week when you are drinking?

- never (1)
- once or twice a week (2)
- two or three times a week (3)
- three or four times a week (4)
- five times a week (5)
- daily or near daily (6)

End of Block: Cedy

Start of Block: Thank you + contact details

Q35 You have come to the end of the survey! Thank you for your participation!

Study contact details.

Names of Students: Cedric Middendorf, Chiara Stegemann, Gijs Smid, Jérôme Zablotny

Supervisor: M.J.M. Van Bergen MSc. MRes.

Email address: j.zablotny@student.utwente.nl

Contact Information for Questions about Your Rights as a Research Participant.

If you have questions about your rights as a research participant or wish to obtain information, ask questions, or discuss any concerns about this study with someone other than the researcher(s), please contact the Secretary of the Ethics Committee/domain Humanities Social Sciences of the Faculty of Behavioural, Management and Social Sciences at the University of Twente by ethicscommittee-hss@utwente.nl.

End of Block: Thank you + contact details
