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McLoughlin, Shane; Stapleton, Alison; Pendrous, Rosina; Oldham, Peter; Hochard, Kevin D.

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Development and preliminary validation of the Value Clarity Questionnaire in adults and adolescents

Shane McLoughlin<sup>1</sup>

<https://orcid.org/0000-0002-2354-5439>

Alison Stapleton<sup>2</sup>

<https://orcid.org/0000-0001-5719-3657>

Rosina Pendrous<sup>3,4</sup>

<https://orcid.org/0000-0002-9085-9876>

Peter Oldham<sup>1</sup>

<https://orcid.org/0000-0001-6981-3729>

Kevin D. Hochard<sup>3</sup>

<https://orcid.org/0000-0001-9611-4683>

<sup>1</sup>Jubilee Centre for Character and Virtues, School of Education, University of Birmingham, UK

<sup>2</sup>School of Psychology, University College Dublin, Ireland.

<sup>3</sup>School of Psychology, University of Chester, UK

<sup>4</sup>Institute for Applied Health Research, University of Birmingham, UK

#### Author Note

Corresponding author: Shane McLoughlin (Jubilee Centre for Character and Virtues, University of Birmingham; [s.mcloughlin@bham.ac.uk](mailto:s.mcloughlin@bham.ac.uk)). The authors have no conflicts of interest to report. This study was approved by the relevant institutional review boards of the authors' respective universities (Note: Study 1 was initially approved by the university with which the first author was previously affiliated).

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### Abstract

Engaging in behavior that is congruent with the qualities of character to which we aspire is the key behavioral outcome sought in several evidence-based psychotherapies (e.g., “valued action” within Acceptance and Commitment Therapy) and moral education (e.g., “character sought” within Neo-Aristotelian Character Education). However, we cannot deliberately engage in valued action without first thinking through the qualities of character to which we aspire. We therefore developed a novel measure of “value clarity” and established its construct validity. Across two adult samples and one adolescent sample, we established the following psychometric properties of the seven-item Value Clarity Questionnaire: factor structure, concurrent validity, discriminant validity, internal reliability, rest-retest reliability, predictive validity, and incremental criterion validity. Value clarity predicted multiple aspects of flourishing including engaged living, depression, behavioral activation, assertiveness, productiveness, and energy levels over and above known predictors. This measure will be especially useful for assessing the efficacy of values/moral clarification interventions.

*Keywords:* values, value clarity, moral identity, psychometric, validation, process-based therapy, acceptance and commitment therapy

## Development and preliminary validation of the Value Clarity Questionnaire in adults and adolescents

Acting in accordance with our values protects our mental wellbeing. Indeed, several evidence-based therapies explicitly cite valued or meaningful action as they key outcome of psychotherapy. For example, Viktor Frankl's Logotherapy (see Vos & Vitali, 2018) is an existential therapy focusing on Kierkegaard's *will to meaning* as the primary motivational force. Much more recently, Acceptance and Commitment Therapy (ACT; Hayes et al., 1999) has specified value-consistent behavior as *the* main outcome of psychotherapy, with mindfulness, defusion, and self-compassion in service of doing what is meaningful.

### **Defining Values within Meaning-Focused Psychotherapies**

Defining values is more difficult than it first may seem. In therapies such as ACT, and in the present study, values are not just goals (Chase et al., 2013), but rather values are *qualities of character we aspire to embody in pursuit of our goals* (see Wilson et al., 2010 for a full-length discussion). By "values", we also do not mean domain-specific *things/domains that we value* (e.g., parenting, religion, work etc.), because these are not ongoing ways of being and do not describe qualities of our actions.

Values are not the same as virtues. A value like "honesty" might also be a virtue, in the positive psychological or virtue ethical sense. For example, honesty is generally viewed as a positive value to hold, but on the other hand "being a winner (at all costs)" might not be virtuous, even if someone values it. Specific values, such as "openness to experience" do predict wellbeing over time (Grosz et al., 2021) and predict some clinical symptoms (Socci et al., 2021), and so some values may be virtuous but only within in certain contexts. As detailed in Kristjánsson (2013), our values may have hidden costs in other contexts, especially if indulged in

excess. For example, it might generally be good to be brave rather than cowardly, but in excess bravery might manifest as rashness. The same is echoed in personality research, whereby being, for example, “high in Agreeableness” might mean that you are compassionate and polite (generally good), but these qualities of character may not always be virtues in the context of being a defense lawyer wherein the job description entails being argumentative.

Finally, values should be free from pliance and aversive control; values are not held to obtain social approval or avoid socially undesirable consequences from others (Ruiz et al., 2019). In simple terms, a value is not *something* we care about just because others in our lives say we should. People who are aware of what matters to *them* (i.e., report greater Value Clarity), should, in theory, also report lesser pliance.

There is ample evidence that values and valued actions (hereinafter, “VA”) benefit wellbeing. For example, Sonntag et al. (2017) found that engaging in VA precedes psychological suffering rather than it being the other way around. More recently, Hebert et al. (2021) found that people were more willing to approach aversive stimuli if doing so was related to their personal values, showing that values might help to reduce experiential avoidance. Indeed, day-to-day VAs negatively predict negative affect and positively predict wellbeing (Grégoire et al., 2021). Finally, within Neo-Aristotelian virtue ethics, an action is only virtuous if applied for the right reasons, to the right degree, in the right circumstances (The Jubilee Centre for Character and Virtues, 2017) and is conducive to eudemonic flourishing. This begs the question: how can we do what we value unless we are clear on what we value in the first place? The following section focuses on the concept of Value Clarity (hereinafter, “VC”), *the degree to which we have thought through and are aware of the qualities of character we aspire to act out*, and how it might be measured. This awareness might be characterized by the ability to articulate what these

aspirational characteristics are and are not with conviction, remaining resolute in the face of coercive of social contingencies, and knowing how to manifest these characteristics in behavior.

### **Measuring Value Clarity**

Within meaning-focused psychotherapies, there are no measures of VC, but there are measures of VA and measures that conflate the two. For example, the Engaged Living Scale (ELS; Trompetter et al., 2013) has one item, “I have values that give my life more meaning” that appears to assess VC. Conversely, most of its items, such as “I believe my values are really reflected in my behaviour”, appear to assess VA, the degree to which our behavior is congruent with our values. Here we can see that the ELS conflates VA and VC, making it difficult to know what a particular score on this measure entails from a therapeutic perspective (i.e., is a value clarification exercise [hereinafter, VCE] warranted for this client or not?). Similarly, the Valuing Questionnaire (Smout et al., 2013) includes both VA items (e.g., “I worked towards my goals even if I didn’t feel motivated to”) and potential VC items (e.g., “I felt like I had a purpose in life”).

The Sources of Meaning and Meaning in Life questionnaire (Schnell, 2009) includes items that are goal-directed (e.g., “I have a task in life”) rather than focusing on personal qualities, while the Meaning in Life Questionnaire (Steger et al., 2006) focuses on global/transcendent meaning (e.g., “I understand my life’s meaning”), rather than personal qualities that one might embody in their day to day behavior (e.g., “I am always searching for something that makes my life feel significant”).

The Behavioral Activation for Depression Scale Short Form (Manos et al., 2011) assesses the extent to which people have been active over the previous week (e.g., “I engaged in many different activities”), or avoidant (e.g., “I engaged in activities that would distract me from

feeling bad”). More recently, the Personalized Psychological Flexibility Index (Kashdan et al., 2020) assesses psychological flexibility in relation to a valued goal. However, in theory, each of these measures are only valid assessments of valued goals insofar as people understand what it is that they value.

Other measures of values assess *domains that we value*, such as the Valued Living Questionnaire (Wilson et al., 2010), asking users to rate the importance of various life domains (e.g., parenting, work etc.) on a scale of 1-10, which is not quite in line with the *quality of character* definition of values. Finally, Grégoire et al. (2018) developed a bespoke VC scale for their randomized controlled trial including face-valid items such as “I know exactly what my strengths and qualities are and I want to put them forward” which they distinguished from VA in an exploratory factor analysis, but this did not undergo full validation.

As Barrett et al. (2019) alluded to in their systematic review of values measures within ACT, value clarification is typically not distinguished within clinical values measures, and indeed, measures of VC are often required for such measures to be valid. The need for a measure of value clarity is detailed further in McLoughlin and Roche (2022). As such, across two studies, we aimed to develop and validate a novel VC measure using cross-sectional and longitudinal data, respectively.

### **Study 1**

Study 1 sought to develop an initial assessment of VC; how clear people are about which personal qualities they would like to characterize their behavior. This addresses an important gap in the meaning-focused research literature, as one cannot truly engage in value-consistent behavior without clarity over whatever is that they happen to value in the first place. Furthermore, VC represents a distinct process theoretically implicated within process- and

meaning-focused therapies (Hofmann & Hayes, 2019) that can be targeted using VCEs (see Hochard et al., 2021; O'Connor et al., 2020).

## **Method**

### ***Participants***

There is a lack of consensus for what determines a sufficient sample size for factor analyses, with suggestions ranging from either a 5:1, 10:1, or 20:1 ratio of participants to item (see Carpenter, 2018). We recruited an online sample of 590 participants. We excluded participants who spent less than five minutes (300 seconds for 126 items) completing the study, given that response time of less than 2 seconds per item can be indicator of insufficient effort in the study (Huang et al., 2012). 506 participants remained (218 male, 280 female, 8 missing data) with a mean age of 27.80 ( $SD_{age} = 9.45$ ). Of these, 14 participants completed only the demographics and the VCQ, however, were retained for analyses pertaining to the VCQ scale validation. Participants were allocated to one of two random samples for factor analyses, using the larger of the two random samples ( $n = 258$ ;  $M_{age} = 27.40$  [ $SD_{age} = 8.37$ ]; 111 male, 142 female, 5 missing) for the exploratory factor analysis (EFA) and the smaller sample ( $n = 248$ ;  $M_{age} = 28.20$  [ $SD_{age} = 10.50$ ]; 107 male, 138 female, 3 missing) for the confirmatory factor analyses (CFA) following item reduction in the EFA.

### ***Measures***

**Item Generation.** We generated a wide range of possible items that might load onto a VC factor. We included face-valid items such as “I have a clear idea of what personal values are important to me”, recognition of value conflict such as “I know exactly what type of person I do not want to be”, articulation items like “I could easily explain to my loved ones what is important to me in life”, social coercion of values such as “what I say is important to me depends on who I



am with”, moral assertiveness items such as “I would rather be criticized for expression my values than to avoid criticism and stay silent”, disengagement items such as “I often feel directionless, like I have no purpose in life”, moral maturity items like “I accept that doing things that matter to me means not doing other things that also matter”, and goal disengagement items such as “I can easily reduce effort towards a goal if it is stopping me from doing what is most important to me”. After the initial array of items was generated, SM and AS re-screened the item list to ensure no items were measuring VA instead of VC, at face value. The items were reviewed by relevant experts (an expert in values in ACT therapy, a clinical neuropsychologist, and a speech and language pathologist) to rate the degree to which the items were congruent with the item categories listed above, and easily understood. They were also given the opportunity to comment on each item. A final list of 35 items was then generated for psychometric analyses. The full item list, data, and analyses are available via the Open Science Framework (OSF) database at <https://osf.io/3ptz4>.

### ***Validation Measures.***

**Personality.** We measured personality using the 61-item Big Five Inventory 2 (BFI-2; Soto & John, 2017). This measures the five main factors of personality, with each fractionated into further subscales: Open-mindedness ( $\alpha = .80$ ; Aesthetic Sensitivity [ $\alpha = .65$ ], Intellectual Curiosity [ $\alpha = .61$ ], Creative Imagination [ $\alpha = .63$ ]), Conscientiousness ( $\alpha = .84$ ; Organization [ $\alpha = .79$ ], Productiveness [ $\alpha = .75$ ], Responsibility [ $\alpha = .62$ ]), Extraversion ( $\alpha = .90$ ; Sociability [ $\alpha = .78$ ], Energy Levels [ $\alpha = .72$ ], Assertiveness [ $\alpha = .73$ ]), Agreeableness ( $\alpha = .78$ ; Compassion [ $\alpha = .53$ ], Respectfulness [ $\alpha = .62$ ], Trust [ $\alpha = .65$ ]), Negative Emotionality ( $\alpha = .91$ ; Depression [ $\alpha = .82$ ], Anxiety [ $\alpha = .77$ ], Emotional Volatility [ $\alpha = .84$ ]). This was included (i) as a catch-all measure of personal proclivities for establishing criterion validity given the novelty of the

measure we sought to develop, and (ii) to ensure that our measure was not inadvertently measuring negative emotion/neuroticism, a folly of some other prominent measures within meaning-focused psychotherapies (e.g., Tyndall et al., 2019).

**Pliance.** We measured pliance using the Generalized Pliance Questionnaire (GPQ-9; Ruiz et al., 2019), a nine-item measure ( $\alpha = .90$ ) of the degree to which behaviors are directed towards obtaining social approval for conformity (e.g., saying we hold a particular value just because others in our lives say we should). A sample item is “My decisions are very much influenced by other people’s opinions”. This measure was included because people reporting greater value clarity should, in theory, also report lesser pliance. Research has supported the factor structure, convergent validity, and reliability of the GPQ-9 (F. J. Ruiz et al., 2019; Stapleton et al., 2022; Waldeck et al., 2019)).

**Valued Action.** We included two separate measures of VA that are popular within contemporary therapeutic literature. The first was the Engaged Living Scale, Short Form (Trindade et al., 2016), a nine-item measure of VA ( $\alpha = .85$ ), with items such as “I make choices based on my values, even if it is stressful”. This measure also includes one item that at face value assesses VC (e.g., “I have values that give my life more meaning”), but this item is not differentiated from the VA items. The second was the Behavioral Activation for Depression Scale, Short Form (BADS-SF; Manos et al., 2011), a nine-item self-report retrospective measure wherein participants are asked about how often they engaged in VA during the previous week. For example, “I am content with the amount and types of things I did”. In addition to a composite BADS Total scale, there are two subscales: Avoidance ( $\alpha = .68$ ) and Activation ( $\alpha = .81$ ). Rochefort’s (2018) psychometric analysis argues that Avoidance is the inverse of Acceptance, an important component of ACT. Indeed, Hayes (2016) states that “experiential

avoidance and acceptance are useful and acceptable ways to describe [psychological flexibility, ACT therapy's core mechanism]". Therefore, hereinafter, we will refer to the BADS-SF's Avoidance subscale as Acceptance/Avoidance.

### ***Procedure***

We collected data online via social media and via research participation schemes at two British universities and one Irish university. To help mitigate against attrition, the VC items were presented first. Next, the validation measures were presented in a random order before participants were thanked for their participation and debriefed. The purpose of presenting these items in random order was to mitigate against systematic missingness from order effects (e.g., [https://pure.mpg.de/rest/items/item\\_3195677/component/file\\_3195678/content](https://pure.mpg.de/rest/items/item_3195677/component/file_3195678/content)).

### **Results**

Jamovi version 2.2 (*Jamovi*, 2022), a free and open-source software based on R (*A language environment for statistical computing*, 2021), was used to analyse the data.

### ***Preliminary Item Reduction***

We ran bivariate correlations between all 35 items for two reasons; (i) to remove any item which did not correlate (at  $p < .05$ ) with our most face-valid item (Item 1: "I have a clear idea of what personal values are important to me") and (ii) to remove any items which showed extreme levels of multicollinearity (at  $r > .80$ ; Field, 2013). Spearman's rho correlations were used given some degree of non-normality across all items. The results of these correlations, including item-level data on normality, can be found in the EFA analysis supplementary file on the OSF page. Five items (8, 12, 15, 26, and 35) were removed as they did not correlate with the first item. We removed three further items (19, 20, and 3) at this stage given as they appeared to measure valued action to some degree. For example, item 20 ("I find it easy to make decisions

because I know what truly matters to me”) refers to the explicit action of making value-based decisions. This reduced our item pool from 35 to 27 for the initial EFA.

### ***Exploratory Factor Analyses (Sample 1)***

The *psych* package (Revelle, 2019) was used to run the EFAs in Jamovi. Bartlett’s test of sphericity indicated that the items were intercorrelated overall ( $X^2[231] = 1453, p < .001$ ) and the Kaiser-Meyer-Olkin test revealed a mean sampling adequacy of .87, suggesting that our data were adequate for EFA. We ran an initial, unrotated EFA with 27 items, adopting a principal axis factoring extraction method. We used parallel analysis (Horn, 1965) to determine factor retention decisions given that Kaiser’s criterion tends to overestimate the number of factors and the scree plot can be subjective (Hayton et al., 2004). Only items with loadings over .40 were retained as the recommended minimum cutoff (Costello & Osborne, 2005). The EFA suggested one-dimensionality. We then re-ran the EFA specifying one factor to establish the factor loadings (Table 1). Fifteen items, all with factor loadings again over .40, were retained for CFA.

[TABLE 1]

### ***Confirmatory Factor Analysis***

The *lavaan* package (Rosseel et al., 2018) was used to run the CFAs. The 15 items comprising a single factor as identified within the EFAs were specified in a CFA with Sample 2 (Table 2). The CFA showed poor model fit: Tucker-Lewis Index (TLI) and comparative fit index (CFI) were not above the commonly-used threshold of .90 (CFI = .79, TLI = .76); neither the standardized root mean residual (*SRMR*) nor the root mean square error of approximation (*RMSEA*) were below .05 (*SRMR* = .07; *RMSEA* = .09 CI = [.08-.10]), and Chi-square was significant,  $X^2(90) = 272, p < .001$ . All items had standardized loadings over .30.

Model revision can occur to improve model fit and to simplify the model (Brown & Moore, 2012). To improve model fit, we inspected modification indices (i.e., the values indicating the extent to which Chi-square would be reduced should any items be removed). Given that modifying the *a priori* confirmatory model should also involve a theoretical rationale (Brown & Moore, 2012; Schreiber et al., 2010), we examined items with scores greater than 10 (a criterion used elsewhere in the measurement literature; e.g., Hopwood & Donnellan, 2010) and considered the conceptual relevance of the items in measuring value clarity. We removed two items (items 21 and 22) on the basis that they instead referred to the frequency of value clarity (i.e., phrased as “I often feel”). Indeed, it is possible that participants may have been responding to how the question is phrased rather than the content (i.e., common method variance) given the particularly high MI scores between these items (64.92). Removing these two items in a second CFA improved the model’s fit ( $\chi^2[65] = 153, p < .001$ ;  $CFI = .87$ ,  $TLI = .84$ ;  $SRMR = .06$ ;  $RMSEA = .07$ ,  $CI = [.06-.09]$ ).

We then reduced the number of items further. Item 5 shared a high residual covariance modification index (13.57) with item 1. Item 1 was retained instead as it was the most face valid item for what we wanted to measure. Conceptually, items 6 and 13 referred to value clarity in the context of other people (e.g., Item 6: “I have a clear sense of what type of person I do not want in my life”) rather than personal value clarity (e.g., Item 9: “I could easily explain to my loved ones what is important to me in life”), so we removed these to improve conceptual clarity. At this stage, we also removed items 4 and 11 for simplicity and ease of scoring as they were the only remaining reverse-coded items. Finally, we removed item 23 because of the potential for conceptual overlap with valued action. The resultant 7-item model (Table 2) showed excellent model fit ( $\chi^2[14] = 14.60, p = .407$ ;  $CFI = .99$ ,  $TLI = .99$ ;  $SRMR = .03$ ;  $RMSEA = .01$ ,  $CI =$

[.00-.06]) according to commonly used cut-offs mentioned previously, and using simulated cutoffs (McNeish & Wolf, 2021) identified using the standardized factor loadings in Table 2 as reference points (cutoffs calculated as:  $CFI > .972$ ,  $RMSEA < .05$ ,  $SRMR < .044$ ) in the dynamic fit application ([www.dynamicfit.app/connect/](http://www.dynamicfit.app/connect/)).

[TABLE 2]

According to both Cronbach's alpha and McDonald's Omega, the 7-item scale showed good internal reliability ( $\alpha = .73$ ;  $\omega = .74$ ). The scale had a Flesch Reading Ease score of 68.3 and a Flesch-Kincaid Grade Level of 7.5 suggesting that the scale could be easily understood by most 12-15-year-olds.

**Structural Independence.** Perhaps the most popular process measure within the ACT therapy literature, the AAQ-II, inadvertently measured trait negative affect (Tyndall et al., 2019). Therefore, it was important to establish that the measured construct was not saturated with negative affect, avoidance/acceptance, and VA. We therefore tested whether our single VC factor cross-loaded with these measures using an EFA with an oblimin rotation, similar to the measurement validation study by Kashdan et al. (2021). As shown in Table 2, (i) the ELS-9 seems to be part VC, part Behavioral Activation, and part Negative Emotion/Neuroticism, (ii) the Negative Emotion scale seems to be part Pliance, part Engaged Living, part Behavioral Activation, part Behavioral Avoidance, and two separate aspects of Engaged Living, (iii) the GPQ9 and VC scales each seem to be distinct constructs as their items only load onto one factor. Also, the Behavioral Activation scale also loads onto the two pre-specified subscales as predicted. That is, the Negative Emotion/Neuroticism and Engaged Living scales appear to be undifferentiated constructs, as their items load onto various unexpected factors. This is a problem

as they each seem to be a complex gamut of multiple factors, potentially making these constructs harder to manipulate.

[TABLE 3]

### ***Criterion Validity***

**Correlations.** Table 4 presents a Spearman's correlation matrix with the degree to which VC was related to other variables in the full dataset (i.e., samples 1 and 2 combined) that may be of particular interest to clinicians.

[TABLE 4]

Furthermore, we found positive correlations between VC and Open Mindedness ( $r = .38$ ,  $p < .001$ ), including across all three of its sub-components, Aesthetic Sensitivity ( $r = .23$ ,  $p < .001$ ), Intellectual Curiosity ( $r = .29$ ,  $p < .001$ ), and Creative Imagination ( $r = .39$ ,  $p < .001$ ), showing that VC does not entail rigidity and closed-mindedness. Readers can explore further correlations using the supplementary file "Study 1 – Criterion Validity".

**Incremental Criterion Validity.** To help establish the overall construct validity of this measure, it was important to establish that it predicts outcomes of interest *over and above* existing predictors from which we have established structural independence. To this end, we ran a series of multiple regression analyses in which existing measures were used to predict outcomes of interest at Step 1 and VC was used to predict them at Step 2. The results are summarized below, but the full analyses can be found in the supplementary file "Study 1 – Criterion Validity".

Anxiety explained a large proportion (47.7%) of the variance in Depression. However, VC explained an additional 7.7% beyond this ( $\Delta F[1, 487] = 84.20, p < .001$ ). Furthermore, Anxiety and Pliance together explained only 12.6% of the variance in Assertiveness, with VC explaining an additional 14.6% above and beyond this ( $\Delta F[1, 486] = 97.40, p < .001$ ). Depression explained 27.7% of the variance in Energy Levels. However, VC explained an additional 6.75% variance in Energy Levels over and above Depression ( $\Delta F[1, 486] = 50.00, p < .001$ ). Organization and Creative Imagination explained 33.9% of the variance in Productiveness. However, VC explained an additional 4.39% variance in Productiveness over and above Organization and Creative Imagination ( $\Delta F[1, 486] = 34.60, p < .001$ ). Together, Behavioral Activation and Negative Emotionality / Neuroticism explained 48% of the variance in Engaged Living. However, VC explained an additional 12.4% variance in Engaged Living over and above these factors ( $\Delta F[1, 486] = 151, p < .001$ ).

[TABLE 5]

### ***Predicting Value Clarity***

A hierarchical regression was used to predict VC. Trait measures Openness, Conscientiousness, Extraversion, Agreeableness, and Negative Emotionality were entered into Model 1, as they are relatively invariant, and together they explained 41.3% of the variance in VC ( $F[5, 484] = 69.70, p < .001$ ). Model 2 included Acceptance/Avoidance and Activation from the BADS-SF, neither of which explained any variance in VC above personality factors ( $\Delta F[2, 482] = 1.31, p = .270$ ), with all five traits remaining as significant predictors of VC. In Model 3, we added Pliance as a predictor of VC, and it explained an additional 3.5% of the variance over and above Models 1 and 2 ( $\Delta F[1, 481] = 30.84, p < .001$ ). Finally, in Model 4, we added Engaged Living as a predictor of VC, and it explained an additional 6.4% of the variance in VC over and



above Models 1-3 ( $\Delta F[1, 480] = 63.70, p < .001$ ). Within the final model, Openness, Conscientiousness, Negative Emotionality, Extraversion, Agreeableness, Pliance, and Engaged Living collectively explained 51.1% of the variance in VC, while Acceptance/Avoidance and Activation, Agreeableness, and Negative Emotionality were not independent predictors (see Table 6).

[TABLE 6]

### ***Distributional Properties***

VC appeared to be approximately normally distributed in our sample ( $M = 27.3, SD = 4.31, Mdn = 27, Min = 12, Max = 35; Skewness = -.59, SE = .11; Kurtosis = .53, SE = .22$ ), as illustrated in Figure 1.

[FIGURE 1]

### ***Value Clarity, Age, and Sex***

Finally, we explored whether VC differed by Age and Sex. There was a weak positive association between Age and VC ( $r = .20, p < .001$ ), and there were sex differences in VC ( $t[493] = -2.80, p = .005, d = .25$ ) with men ( $M = 26.70, SD = 4.48$ ) being marginally lower in VC than women ( $M = 28.80, SD = 4.14$ ). Moreover, the relationship between VC and outcome variables of interest was broadly consistent for both sexes (see Figure 2).

[FIGURE 2]

## Study 2

Given that Study 1 relied solely on cross-sectional data, in Study 2, we aimed to explore the degree to which the VCQ would retain its psychometric properties in a younger sample in a school setting as well as establish test-retest reliability and predictive validity of the measure with longitudinal data.

### Method

#### *Participants*

We recruited a cohort of 468 boys from a UK secondary school with a mean age of 13.92 ( $SD_{age} = 1.50$ ). There were no missing data.

#### *Design*

This was a within-subjects design, measuring VC and wellbeing on three occasions, each measurement one month apart. All 468 participants completed the VCQ along with measures of wellbeing, purpose in life (PIL), and autonomous functioning (IAF) at Time 1. Repeated measures of VC and wellbeing were completed by 102 participants from the sample due to timetabling availability within the school.

#### *Measures*

**Value Clarity.** We measured VC using the VCQ-7 measure developed in Study 1. We found good measurement invariance across samples and across time points, with good Time 1 (CFI = 1.00; TLI = 1.02; SRMR = .03; RMSEA = .00, CI = [.00-.08];  $\alpha = .81$ ), Time 2 (CFI = .97; TLI .95; SRMR = .04; RMSEA = .07, CI = [.00-.13];  $\alpha = .84$ ), and Time 3 (CFI = .90; TLI = .85; SRMR = .05; RMSEA = .15, CI = [.10-.20];  $\alpha = .86$ ) model fit and internal reliability statistics.

**Wellbeing.** We measured wellbeing using the Short Warwick-Edinburgh Mental Wellbeing Scale (SWEMWBS; Stewart-Brown & Jahnmoheled, 2008). This scale includes

seven items and has undergone extensive validation in children aged 13-15 (Clarke et al., 2010). All items are scored positively on a 1-5 Likert scale (possible range = [7-35]). A sample item is “I’ve been feeling optimistic about the future”. This scale showed good internal reliability ( $\alpha = .78$ ) in our sample.

**Purpose in Life.** We measured PIL using the Purpose in Life Test Short Form (PIL-SF; Schulenberg et al., 2011), a four item abbreviation of the original scale co-developed with Viktor Frankl. This measure aimed to index Frankl’s conception of existential frustration “*noogenic* neurosis” wherein the “will-to-power” and “will-to-pleasure” compete with the “will-to-meaning”. This test was originally validated in adults, but was later used with adolescents aged 11-18 (Schulenberg et al., 2016). Sample items include (i) “In life I have:” with response options ranging from 1 (“no goals or aims at all”) to 7 (“very clear goals and aims”) and “My personal existence is:” with responses options also ranging from 1 (“utterly meaningless, without purpose”) to 7 (“very purposeful and meaningful”). This scale also showed good internal reliability ( $\alpha = .77$ ) in our sample.

**Autonomous Functioning.** We measured AF using the Index of Autonomous Functioning (IAF; Weinstein et al., 2012). The IAF ( $\alpha = .82$ ) has 15 items and consists of three subscales: “authorship/self-congruence” (ASC;  $\alpha = .79$ ) with items such as “my decisions represent my most important values and feelings”, interest taking (IT;  $\alpha = .71$ ) with items like “I often reflect on why I act the way I do”, and susceptibility to control (SC;  $\alpha = .69$ ) with items like “I believe certain things so that others will like me”. This has not yet been validated in adolescents, we ran a CFA to confirm its structural properties in our sample, finding good model fit ( $X^2[87] = 172, p < .001; CFI = .95, TLI = .94; RMSEA = .05 CI = [.04-.06]; BIC = 20632$ ). This

measure is widely used within the Self-Determination Theory literature (see Deci & Ryan, 2014).

### ***Procedure***

Before the first measurement, gatekeeper (the school's Headteacher) permission was sought, and a letter was sent to parents with information about the study. To inform students about the study, a video was played to all participants explaining the mechanics, purpose, and nature of the study and they were then asked to anonymously complete each measure under teacher supervision. An alternative task was provided for those who did wish to participate. This took place during a 25-minute tutor time slot, thereby avoiding the use of any curriculum time. The second part of the study started four weeks later. The smaller subsample was given the VCQ and SWEMWBS three times, each at the start of a Mathematics lesson, following a similar explanation to the one given to the whole cohort; this time, the major difference being that the participants were informed that they would need to provide their names so that questionnaires could be matched across time points, after which the data were anonymized.

### **Results**

#### ***Descriptive Statistics***

Table 3 shows the means, standard deviations, medians, and range for AF and its sub-components (measured using the IAF), PIL (measured using the PIL-SF), wellbeing (measured using the SWEMWBS) and VC (measured using the VCQ-7) at baseline, one month later, and two months later; this was the cross-sectional component of Study 2.

Table 7 shows the means, standard deviations, medians, and range for wellbeing (measured using the SWEMWBS) and VC (measured using the VCQ) at baseline, one month later, and two months later; this was the longitudinal component of Study 2.

[TABLE 7]

***Criterion Validity***

**Concurrent Criterion Validity.** We correlated the VCQ with wellbeing, PIL, and AF (including its subscales: interest-taking, susceptibility to control, and authorship/self-congruence). We found the expected pattern of results (see Table 8), suggesting strong concurrent criterion validity.

[TABLE 8]

**Predictive Validity.** We also tested the predictive validity of the VCQ by predicting wellbeing one and two months later. VC at Time 1 explained 37% of the variance in wellbeing at one month later ( $F[1, 100] = 59.60, \beta = .61, p < .001$ ) and 37% of the variance in wellbeing at two months later ( $F[1, 100] = 60.30, \beta = .61, p < .001$ ). Further detail on these analyses can be found in the “Study 2 Longitudinal Data” supplementary file.

We repeated this analysis, this time controlling for prior wellbeing (i.e., adding baseline wellbeing as the sole predictor in Block 1 of a hierarchical regression, and baseline VC at Block 2). As expected, baseline wellbeing predicted wellbeing one month later ( $F[1, 100] = 101.80$ ), explaining 50% of the variance. In Block 2, VC explained an additional 3.67% variance in wellbeing one month later ( $\Delta F[1, 99] = 7.91, p = .006$ ) over and above baseline wellbeing. Similarly, baseline wellbeing predicted wellbeing two months later ( $F[1, 100] = 88.50$ ), explaining 46.40% of the variance. In Block 2, VC explained an additional 4.43% variance in wellbeing two months later ( $\Delta F[1, 99] = 9.02, p = .003$ ) over and above baseline wellbeing. Coefficients for this model can be found in Table 9.

[TABLE 9]

### ***Test-retest Reliability***

Finally, we sought to establish the test-retest reliability of the VCQ in this sample. A within-subjects ANOVA revealed that VC scores did not significantly change over the two month period ( $F[2, 202] = .60, p=.553$ ). These findings are plotted in Figure 3. VC at 0 Months correlated with VC at 1 Month ( $r[101] = .61, p<.001$ ) and at 2 Months ( $r[101] = .68, p<.001$ ). Additionally, VC at 1 Month correlated with VC at 2 Months  $r[101] = .76, p<.001$ ).

[FIGURE 3]

### **Discussion**

In these two studies we sought to develop a measure of the extent to which people understand which personal qualities they aspire to act out in their lives, while ensuring that we did not inadvertently re-measure VA or negative affect. We reduced an initial array of 35 items to an 7-item measure which showed good model fit in both adults and adolescents, reasonably strong internal and test-retest reliability, and evidence of strong criterion validity (concurrent validity, incremental criterion validity, and predictive validity). In Study 1, we also found that value clarity was positively associated with age and that females scored higher in VC than males in an online general population sample.

A reasonably large proportion (51.1%) of the variance in VC was explained by personality, pliance, and engaged living. Of this variance, 41.3% was explained by relatively fixed (Costa et al., 2019; Roberts et al., 2017; Vukasovic & Bratko, 2015; Zwir et al., 2018) personality traits, which was unsurprising to us given research suggesting that value dimensions

and personality are largely synonymous (Anglim et al., 2017; Fetvadjiev & He, 2019; Smith & Hatemi, 2020). Interestingly, pliance predicted VC over and above personality, suggesting pliance plays an important role in valuing. We were surprised that engaged living predicted VC over and above these factors by only 6.4%, as at face value some of this scale's items appeared to also assess VC. One possible reason for this is that the relatively few VC items on this scale do not provide construct coverage. This suggests to us that within Process-Based Therapy (Hofmann & Hayes, 2019), which seeks to operationalize wellbeing into manipulable component processes, using a measure of valued action that is not conflated with VC alongside this separate measure of VC may be useful. In this case, one might score low on a measure of VA for any number of reasons (e.g., low VC, cognitive fusion, maladaptive rules, temperamental predisposition to negative emotion etc.), but if someone scores low on VC the therapist might know to work with VCEs. However, measures such as the ELS-9 are still likely to be useful and arguably more parsimonious if a researcher's goal is to explain variance in another construct but have no need to differentiate VA from VC.

VC explained a large amount of variance ( $\Delta r^2 = 12.4$ ) in engaged living over and above both negative emotionality and behavioral activation ( $r^2 = 0.48$ ). This provides initial evidence that VC may be an important aspect of flourishing in life above and beyond having an absence of negative emotion and being active. Flourishing may be more likely when an individual also has a clear idea about what it is that they value *before* taking action. Anxiety was a strong predictor of depression, however VC explained additional 7.7% variance in depression not accounted for by anxiety. This may suggest that being clear on one's values is an important part of meaningful life engagement despite the presence of negative affect. Perhaps surprisingly, while anxiety and pliance accounted for 12.6% of the variance in assertiveness, VC explained an additional 14.6%

of the variance in assertiveness above and beyond this, suggesting that a lack of assertiveness may be due to a lack of clarity and conviction about one's values. Those who were organized and had good creative imagination reported higher productiveness ( $r^2 = 33.9$ ), with VC explaining an additional 4.39% of the variance in productiveness above and beyond this. Finally, those who were higher in depression had lower energy levels ( $r^2 = 27.7$ ), but value clarity explained an additional 6.75% of the variance in energy levels above and beyond this. Taken together, these findings suggest VC to be a powerful and unique predictor of multiple aspects of flourishing.

In Study 2, we found that the unifactorial structure generally held in a much younger, all male sample. VC did not appear to change over a two-month period and predicted wellbeing just as well at one- ( $r^2 = .37$ ) and two-month ( $r^2 = .37$ ) intervals. This suggests, perhaps, that it will be important to develop evidence-based VCEs; the VCQ may be a useful test of “near transfer” effects of VCEs (i.e., value clarification exercises should change value clarity before changing more distal outcomes such as wellbeing). For psychotherapy, however, gaining VC is only one part of the wellbeing puzzle, with “far transfer” effects ultimately being what is most important to achieve. That is, while the VCQ may be useful for understanding the processes of change within psychotherapy, psychotherapists and coaches must strive to help their clients to flourish across various life domains.

### **Strengths**

A strength of this study is that factor analyses included over ten participants per item (Jöreskog & Sörbom, 1996) in both exploratory and confirmatory analyses. The single factor structure identified in the EFA was confirmed in a second sample, with excellent overall model fit, and in a third sample of teenagers over three time points. Furthermore, we used parallel



analysis to determine factor cutoffs instead of Kaiser's criterion (dropping factors with an eigenvalue  $< 1$ ). This is a strength of the present study as parallel analysis determines factor cutoffs based on the parameters of the dataset in question instead of using a general rule (Horn, 1965). In addition, we examined the VCQ both cross-sectionally (Study 1) and across three time-points (Study 2). A further strength of this study is that we ensured that we did not measure negative emotionality/neuroticism as these were structurally distinct constructs. This is especially important when developing a new psychopathology measure, as negative emotionality/neuroticism or its component factors such as experiential avoidance are so pervasive that items from a putatively new scale may load onto a negative emotionality/neuroticism factor (see Rochefort et al., 2018; Tyndall et al., 2019), as seen with the ELS-9 in the present study. In other words, it is easy to re-measure the same negative emotionality/neuroticism construct but with a different set of items. Similarly, VC was structurally independent of behavioral Activation and Acceptance/Avoidance showing that VC does not necessarily entail VA, nor does it necessarily entail mindfulness (insofar as this is usefully indexed by higher acceptance/lower avoidance). That is, VC appears to constitute a unique process pertinent to process-based psychotherapy. Finally, this measure will not just be useful for process-based therapy researchers, but also for clinicians with individual clients. We have converted raw scores to percentile ranks to allow clinicians to make sense of individual clients' VC scores relative to the general population insofar as it is indexed in this sample (see Appendix 1). We recommend that this will be useful for assessing most adults of a similar age to those in Study 1, but further research will be necessary to test and validate this measure in either children or adults aged approximately 38+ before standardized scores can be interpreted for these populations.

### **Limitations and Future Research**

Limitations of this study that, although VC was approximately normally distributed, the upper tail of the distribution was smaller. This may suggest that this measure might have limited utility for measuring people who are extremely high in VC. It is not obvious to us that extremely high VC is necessarily a good thing if it were to manifest as closed-mindedness or ideology. VC was positively correlated with Open Mindedness in this study, however. A further limitation is that we did not test whether the VCQ predicts real-world behavior; this would be very much desirable in future studies. Similarly, although gender differences were observed in Study 1, the all-male sample in Study 2 prevented us from examining these differences further; this is a viable avenue for future research (i.e., do gender differences exist in VC across phases of development?).

VC explains large proportions of variance in other outcomes over and above conventional predictors, which may be of particular interest to clinicians. For example, VC predicts assertiveness over and above anxiety, energy levels over and above depression, and productivity over and above creative imagination. This perhaps suggests that it may be useful to measure VC when mitigating adverse effects of low assertiveness (e.g., when asking for a raise/promotion), within behavioral medicine/health psychology (e.g., increasing energy levels), and organizational psychology (increasing productivity). Similarly, VC may be useful to consider within moral education as a measure of how well thought through one's idealized moral identity may be.

In an effort to inform future wellbeing interventions, future research should also determine whether increasing VC in those with high negative affect helps people to flourish over time. More specifically, there is currently very little research on the differential effectiveness of

VCEs. In assessing the effectiveness of VCEs, one might first assess ‘near transfer’ of VCEs towards this measure of VC (a manipulation check) before then establishing subsequent ‘far transfer’ of increased VC towards other outcomes (e.g., wellbeing, moral decision making, health behavior etc.). In meaning-focused psychotherapies, we expect that VC will mediate intervention effectiveness, and that VC will be manipulable through intervention – especially longer-term holistic interventions (e.g., Character Education within school curricula or long-term psychotherapy). This will be an important area of future research given the relatively large proportions of additional variance explained by VC in several outcomes of interest over and above known predictors, as demonstrated in this study.

Given that no measure has exclusively indexed VC to date, we hope that the development of this measure will allow for a new program of quantitative research testing the effectiveness of specific interventions for helping people to articulate the qualities of character to which they will aspire. Currently, clinicians and educators use value clarification interventions such as ‘value card sorting’ tasks (Harris, 2021; Morris, 2021; The Good Project, 2022) in the absence of quantitative evidence for their effectiveness. Indirectly, we hope that this measure enables a greater degree of evidence-based practice in any domain in which knowing one’s values are pertinent.

## **Conclusion**

In this study we raised a relatively straightforward question pertinent to clinical psychological and moral educational practice: how can we engage in VA if we have not yet thought through the characteristics to which we aspire in the first place? To this end, we sought to develop a measurement tool to quantify the degree to which people understand what their

values are, adopting ACT's definition of values as being qualities of our behavior to which we aspire, rather than specific *goals* or *things* or *life domains* that we happen to value. We hope that this measure will help to add to the conceptual and empirical development of meaning-focused and process-based psychotherapies, especially in assessing the differential effectiveness of VCEs to inform evidence-based clinical practice. We also expect that this measure will have some utility within character education, moral psychology, and any other settings in which the quality of our character is important, as our characters are necessarily entangled with our values. However, we caution here that not all values we hold (e.g., the value "being ruthless") are virtuous, an important criticism levelled at meaning-focused psychotherapies previously (M. R. Ruiz & Roche, 2007). That is, the VCQ can measure VC, but psychotherapists also have the ethical responsibility to ensure clarified values are good for both the client and those around them in the medium to long term. Nonetheless, VC appears from our data to be a distinct construct that has gone unassessed to date and may be a key part of the overall psychotherapy and moral educational picture, and a robust quantitative research program on VC will likely be of benefit within a range of applied settings.

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Appendix 1: The Value Clarity Questionnaire

Below you will find a list of statements. Please indicate the degree to which you agree these statements apply to you.

	1 Strongly disagree	2 Somewhat disagree	3 Neither agree nor disagree	4 Somewhat agree	5 Strongly agree
I have a clear idea of what personal qualities are important to me					
I have a clear sense of what is important to me, rather than what others say should be important to me					
I can stop engaging in behaviours that are not allowing me to be the best possible version of myself					
I know exactly what type of person I do not want to be					
I am confident that I can explain what matters to me to others					
I would rather be criticised for expressing my values than to avoid criticism and stay silent					
There are multiple ways of showing the personal qualities I would like to show					

**Scoring Instructions**

Sum items 1-7. No items need be reverse scored.

For individual clients, we recommend converting the total score into a percentile rank using the table below to understand their value clarity score in relation to those of other people in the wider population we sampled. This should only be used with clients in approximately the 18-37 age range.

**Assessing individual clients: Understanding your score in relation to others in this**

<b>study (mean age approx. 28 years old).</b>	
<b>If your score is ____...</b>	<b>...you score higher than approximately ____ % of our participants.</b>
< 12	0
12	.29
13	.68
14	.97
15	1.16
16	1.94
17	2.91
18	3.49
19	4.36
20	5.81
21	7.85
22	11.05
23	15.02
24	19.96
25	27.23
26	36.05
27	45.83
28	55.23
29	63.37
30	71.61
31	79.46
32	85.95
33	91.09
34	95.54
35	98.93

**Figures**

Figure 1.

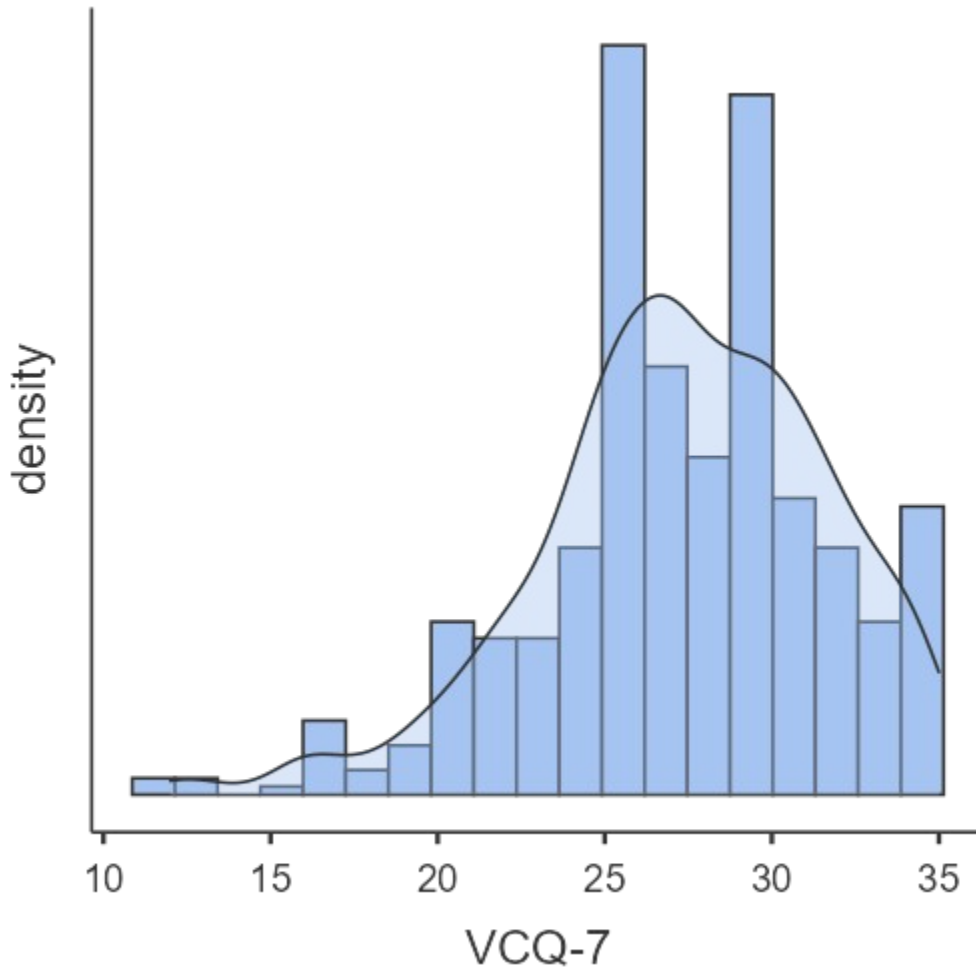


Figure 2.

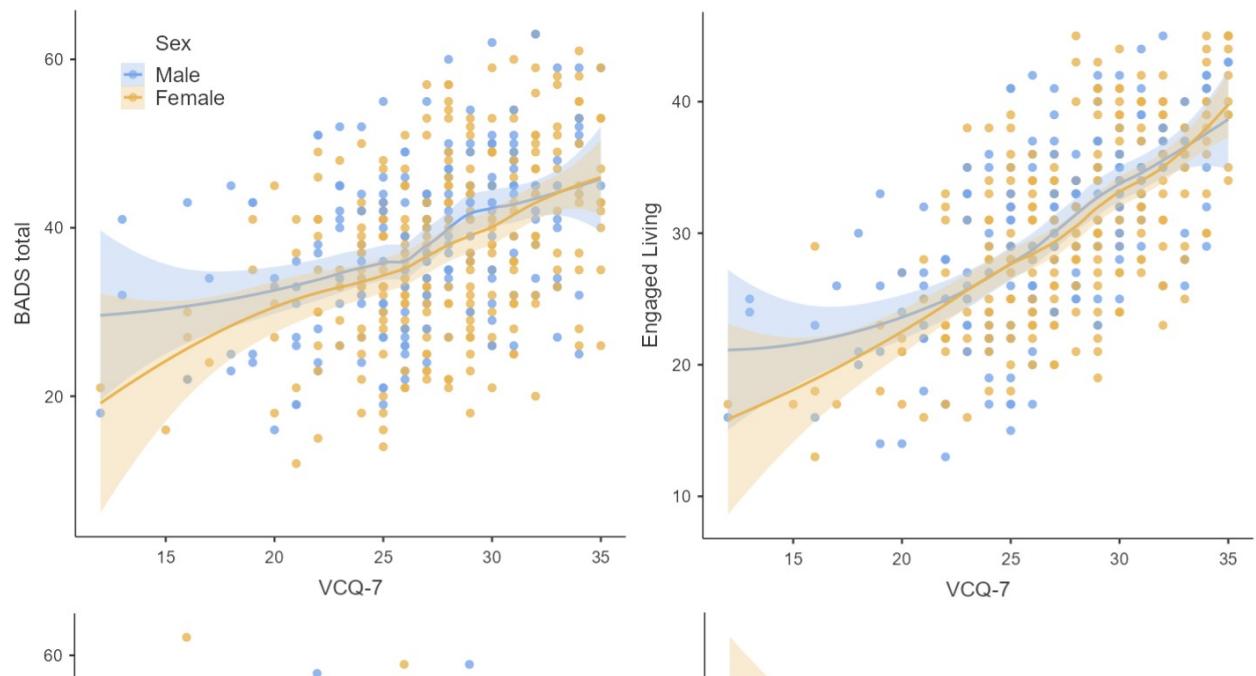
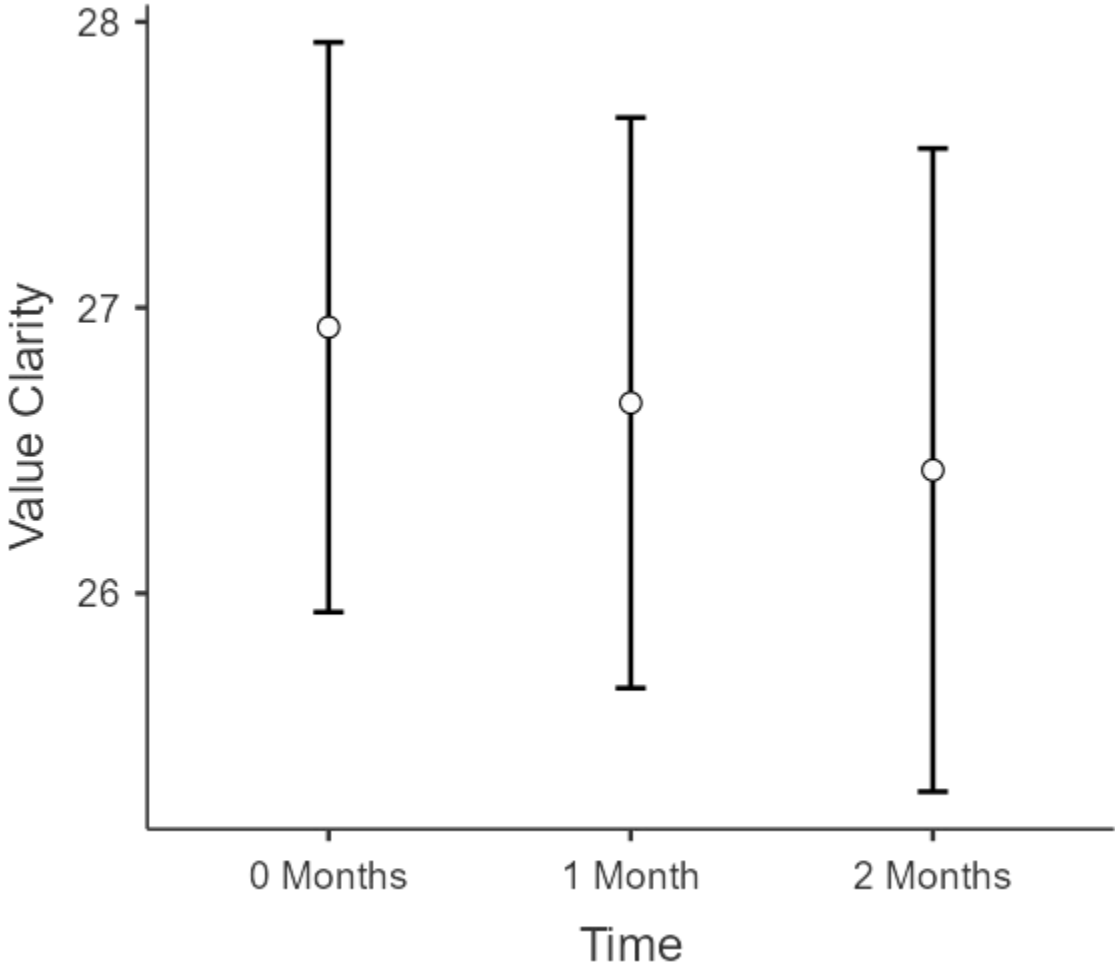






Figure 3.



**Figure Titles**

**Figure 1.**

*Density plot for the distribution of Value Clarity.*

**Figure 2.**

*Scatterplots demonstrating gender invariance.*

**Figure 3.**

*Stability of the VCQ-7 over time.*

## Tables

**Table 1**  
*EFA specifying factor loadings.*

	Factor	Uniqueness
	1	
VC_10	0.723	0.477
VC_16	0.718	0.485
VC_1	0.669	0.552
VC_9	0.651	0.576
VC_21	-0.547	0.700
VC_5	0.544	0.704
VC_22	-0.538	0.711
VC_4	-0.504	0.746
VC_13	-0.491	0.759
VC_11	-0.469	0.780
VC_29	0.462	0.787
VC_6	0.447	0.801
VC_17	0.427	0.818
VC_30	0.413	0.829
VC_23	0.407	0.835
VC_28		0.849
VC_32		0.869
VC_18		0.886
VC_2		0.899
VC_14		0.906
VC_34		0.940
VC_7		0.953

Note. 'Principal axis factoring' extraction method was used in combination with a 'none' rotation

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VC_18		0.886
VC_2		0.899
VC_14		0.906
VC_34		0.940
VC_7		0.953

Note. 'Principal axis factoring' extraction method was used in combination with a 'none' rotation

**Table 2**  
*Factor loadings for the final VCQ-7*

Factor	Item	<i>b</i>	<i>SE</i>	95% Confidence Interval		<i>Z</i>	<i>p</i>	<i>β</i>
				Lower	Upper			
Factor 1	VC_1	0.384	0.0492	0.288	0.481	7.81	<.001	0.514
	VC_9	0.724	0.0709	0.585	0.863	10.21	<.001	0.646
	VC_10	0.764	0.0633	0.640	0.888	12.08	<.001	0.746
	VC_16	0.558	0.0551	0.450	0.666	10.13	<.001	0.646
	VC_17	0.383	0.0698	0.246	0.520	5.49	<.001	0.374
	VC_29	0.380	0.0747	0.234	0.527	5.09	<.001	0.349
	VC_30	0.330	0.0491	0.234	0.426	6.72	<.001	0.450

**Table 3**

*Factor loadings for the Value Clarity (VC), Engaged Living (ELS9), Generalized Pliance (GPQ9), Behavioral Activation (BADSF), and Negative Emotion/Neuroticism (BFI2) items*

	Factor						Uniqueness
	1	2	3	4	5	6	
VC_1			0.697				0.549
VC_9			0.577				0.591
VC_10			0.673				0.507
VC_16			0.608				0.546
VC_17			0.338				0.801
VC_29			0.312			0.232	0.728
VC_30			0.420				0.789
EL9_1			0.530				0.599
EL9_2			0.427				0.706
EL9_3			0.422			0.238	0.605
EL9_4			0.428	0.225			0.662
EL9_5		-0.304				0.257	0.541
EL9_6				0.336		0.452	0.464
EL9_7				0.365	0.238	0.362	0.368
EL9_8	-0.207		0.234	0.269		0.334	0.596
EL9_9				0.448		0.326	0.414
GPQ9_9	0.550		-0.223				0.593
GPQ9_8	0.774						0.317
GPQ9_7	0.630						0.631
GPQ9_6	0.625					0.229	0.587
GPQ9_5	0.668						0.455
GPQ9_4	0.797						0.297
GPQ9_3	0.810						0.348
GPQ9_2	0.817						0.323
GPQ9_1	0.689						0.484
BADS_SF_1					0.439		0.737
BADS_SF_2				0.683			0.351
BADS_SF_3				0.721			0.524
BADS_SF_4				0.668			0.425
BADS_SF_5				0.664			0.458
BADS_SF_6					0.784		0.330
BADS_SF_7		-0.218			0.552		0.517
BADS_SF_8					0.579		0.700
BADS_SF_9				0.666			0.572
BFI2_4		0.603				-0.276	0.387
BFI2_9		0.259	-0.262			-0.226	0.581
BFI2_14		0.554					0.488
BFI2_19		0.376					0.743
BFI2_24		0.280	-0.311			-0.380	0.377
BFI2_29		0.715					0.319

**Table 3**

*Factor loadings for the Value Clarity (VC), Engaged Living (ELS9), Generalized Pliance (GPQ9), Behavioral Activation (BADSF), and Negative Emotion/Neuroticism (BFI2) items*

	Factor						Uniqueness
	1	2	3	4	5	6	
BFI2_34		0.529					0.482
BFI2_39		0.348			-0.326	-0.266	0.394
BFI2_44		0.798					0.425
BFI2_49		0.470				-0.326	0.560
BFI2_54		0.350		-0.205	-0.294	-0.264	0.395
BFI2_59		0.792				0.266	0.370

Note. 'Principal axis factoring' extraction method was used in combination with a 'oblimin' rotation



**Table 4**  
*Spearman's correlations between Value Clarity and the main variables of clinical interest*

	<i>M</i>	<i>SD</i>	<i>Mdn</i>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
1. Value Clarity	27.3	4.31	27	—									
2. Engaged Living	30.4	6.80	30	0.620 ***	—								
3. Behavioral Activation Total	38.0	10.1	38	0.395 ***	0.619 ***	—							
4. BADS Avoidance	12.6	4.33	13	0.247 ***	0.368 ***	0.732 ***	—						
5. BADS Activation	25.4	7.38	25	0.401 ***	0.631 ***	0.923 ***	0.429 ***	—					
6. Pliance	30.4	10.8	31	-0.404 ***	-0.377 ***	-0.226 ***	-0.229 ***	-0.175 ***	—				
7. Negative Emotionality	37.2	10.90	27	-0.421 ***	-0.586 ***	-0.555 ***	-0.454 ***	-0.492 ***	0.458 ***	—			
8. Anxiety	13.8	3.82	14	-0.315 ***	-0.483 ***	-0.443 ***	-0.354 ***	-0.396 ***	0.399 ***	0.885 ***	—		
9. Depression	11.5	4.25	12	-0.471 ***	-0.654 ***	-0.584 ***	-0.482 ***	-0.517 ***	0.431 ***	0.879 ***	0.693 ***	—	
10. Age	27.8	9.45	25	0.200 ***	0.160 ***	0.152 **	0.194 ***	0.099 *	-0.161 ***	-0.106 *	-0.048	-0.144 **	—

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

**Table 5**  
*Incremental criterion validity of the VCQ-7*

	<i>b</i>	<i>SE</i>	95% Confidence Interval		<i>t</i>	<i>p</i>	<i>β</i>
			Lower	Upper			
<b>Depression</b>							
Intercept	10.220	1.1231	8.013	12.426	9.10	< .001	
Anxiety	0.668	0.0354	0.598	0.737	18.88	< .001	0.601
Value Clarity	-0.290	0.0316	-0.352	-0.228	-9.17	< .001	-0.292
<b>Assertiveness</b>							
Intercept	5.3250	1.3451	2.6821	7.96794	3.96	< .001	
Anxiety	-0.1356	0.0401	-0.2144	-0.05673	-3.38	< .001	-0.1454
Pliance	-0.0198	0.0150	-0.0493	0.00960	-1.32	0.186	-0.0595
Value Clarity	0.3546	0.0359	0.2840	0.42514	9.87	< .001	0.4254
<b>Energy Levels</b>							
Intercept	10.463	1.2037	8.098	12.828	8.69	< .001	
Depression	-0.322	0.0351	-0.391	-0.253	-9.17	< .001	-0.384
Value Clarity	0.245	0.0347	0.177	0.314	7.07	< .001	0.296
<b>Productiveness</b>							
Intercept	-0.174	0.9027	-1.9475	1.600	-0.193	0.847	
Organization	0.445	0.0361	0.3736	0.516	12.303	< .001	0.4623
Creative Imagination	0.109	0.0442	0.0225	0.196	2.474	0.014	0.0967
Value Clarity	0.198	0.0337	0.1318	0.264	5.882	< .001	0.2378
<b>Engaged Living</b>							
Intercept	11.228	2.0458	7.209	15.248	5.49	< .001	
BADS total	0.210	0.0238	0.163	0.257	8.80	< .001	0.312
Negative Emotionality	-0.164	0.0222	-0.208	-0.120	-7.39	< .001	-0.263
Value Clarity	0.630	0.0513	0.529	0.731	12.28	< .001	0.397

**Table 6**  
*Predicting Value Clarity*

Predictor	<i>b</i>	<i>SE</i>	95% Confidence Interval		<i>t</i>	<i>p</i>	$\beta$
			Lower	Upper			
Intercept	11.17539	1.6539	7.9256	14.4252	6.757	<.001	
Open Mindedness	0.08949	0.0196	0.0509	0.1280	4.561	<.001	0.1606
Conscientiousness	0.06823	0.0193	0.0303	0.1062	3.531	<.001	0.1349
Extraversion	0.08994	0.0193	0.0520	0.1279	4.657	<.001	0.1890
Agreeableness	0.02181	0.0201	-0.0178	0.0614	1.083	0.279	0.0382
Negative Emotionality	0.00638	0.0180	-0.0291	0.0418	0.354	0.724	0.0162
BADS Avoidance	-0.02300	0.0374	-0.0965	0.0505	-0.615	0.539	-0.0233
BADS Activation	-0.02119	0.0257	-0.0717	0.0293	-0.825	0.410	-0.0366
Pliance	-0.06677	0.0149	-0.0960	-0.0375	-4.487	<.001	-0.1668
Engaged Living	0.24805	0.0311	0.1870	0.3091	7.981	<.001	0.3937



**Table 8.**

*Correlation matrix including value clarity, wellbeing, purpose in life, autonomous functioning, authorship/self-congruence, interest-taking, and susceptibility to control.*

	1	2	3	4	5	6	7
1. Value Clarity	—						
2. Autonomous Functioning	0.445 ***	—					
3. Susceptibility to Control	0.104 *	0.224 ***	—				
4. Authorship/Self-congruence	0.416 ***	0.623 ***	-0.246 ***	—			
5. Interest Taking	0.211 ***	0.658 ***	-0.400 ***	0.361 ***	—		
6. Purpose in Life	0.526 ***	0.339 ***	0.054	0.303 ***	0.177 ***	—	
7. Wellbeing	0.554 ***	0.344 ***	0.147 **	0.334 ***	0.083	0.540 ***	—

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

**Table 9***Predicting wellbeing longitudinally with value clarity, controlling for baseline wellbeing*

Predictor	<i>b</i>	<i>SE</i>	95% Confidence Interval		<i>t</i>	<i>p</i>	$\beta$
			Lower	Upper			
<b>1 Month Later</b>							
Intercept	2.748	2.0688	-1.3573	6.853	1.33	0.187	
Wellbeing 0 Months	0.614	0.1029	0.4099	0.818	5.97	< .001	0.541
Value Clarity 0 Months	0.247	0.0879	0.0728	0.422	2.81	0.006	0.255
<b>2 Months Later</b>							
Intercept	1.539	2.3126	-3.049	6.128	0.666	0.507	
Wellbeing 0 Months	0.616	0.1151	0.387	0.844	5.350	< .001	0.500
Value Clarity 0 Months	0.295	0.0983	0.100	0.490	3.004	0.003	0.281