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The 'dark side' of personal values: Relations to clinical constructs and their implications☆

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A B S T R A C T

Personal values are considered as guiding principles in one's life. Much of previous research on values has consequently focused on its relations with variables that are considered positive, including subjective well-being, personality traits, or behavior (e.g. health-related). However, in this study ($N = 366$) the negative 'dark' side of values is examined. Specifically, the study investigated the relations between Schwartz' (1992) ten value types and four different clinical variables — anxiety, depression, stress, and schizotypy with its subdimensions, unusual experience, cognitive disorganization, introverted anhedonia, and impulsive nonconformity. Positive relations between achievement and depression and stress, and negative relations between anxiety and hedonism and stimulation were predicted and found. Multiple regressions revealed that the ten value types explained the most variance in impulsive nonconformity and the least variance in unusual experience. Overall, values were better in predicting more cognitive clinical variables (e.g., cognitive disorganization) whereas clinical constructs were better in predicted more affective values (e.g., hedonism). Implications of the findings for value research are discussed.

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1. Introduction

Personal values are usually considered as cognitive concepts or beliefs that transcend specific situations and guide behavior and its evaluation (Maio, 2010; Schwartz, 1992). There have been different attempts to conceptualize personal values on an individual level. Based on the value approach by Rokeach (1973), Schwartz and Bilsky (Schwartz, 1992; Schwartz & Bilsky, 1987) have developed a motivational circumplex model with 56 personal values which can be grouped into ten value types (Fig. 1): universalism (e.g. equality, protection for the welfare of all people and for nature), benevolence (e.g. helpfulness, preservation of the welfare of people), tradition (e.g. respect, humility), conformity (e.g. obedience, honoring parents), security (e.g. safety and social order), power (e.g. authority, dominance), achievement (e.g. personal success, ambition), hedonism (e.g. pleasure, enjoying life), stimulation (e.g. exciting life, varied life), and self-direction (e.g. independent thought, creativity).

One important feature of Schwartz' circumplex model is its motivational continuum. Two adjacent value types are motivationally similar,

that is positively correlated, orthogonal value types are unrelated according to the assumptions of Schwartz (1992), and opposing value types are negatively correlated. Crucially, this prediction holds true for relations between values and variables such as personality traits (e.g., Parks-Leduc, Feldman, & Bardi, 2014). Thus, when the value types are plotted according to their proposed order along the x-axis and the correlation coefficients on the y-axis, the correlational pattern resembles a sine wave.

Numerous studies have focused on the relations between values and constructs of positive affectivity such as subjective well-being and satisfaction with life. For example, Haslam, Whelan, and Bastian (2009) found that many value types were closely connected to positive affect, but not with negative affect. This is in line with other research that found no relations between personal values and neuroticism (Parks-Leduc, Feldman, & Bardi, 2014; Roccas, Sagiv, Schwartz, & Knafo, 2002). However, other studies have found relations between values and negative affectivity, although the results were inconsistent. Jarden (2010) for instance found negative relations of self-direction, stimulation, and hedonism value types with depressed mood. In a Chinese sample, the burnout dimension exhaustion was found to be related to conformity, but another dimension, losing interest, was not (Jia, Rowlinson, Kvan, Lingard, & Yip, 2009). A study among native American adolescents revealed negative relations between depression and tradition/benevolence. However, power/materialism and security/hedonism values did not display any associations with depression
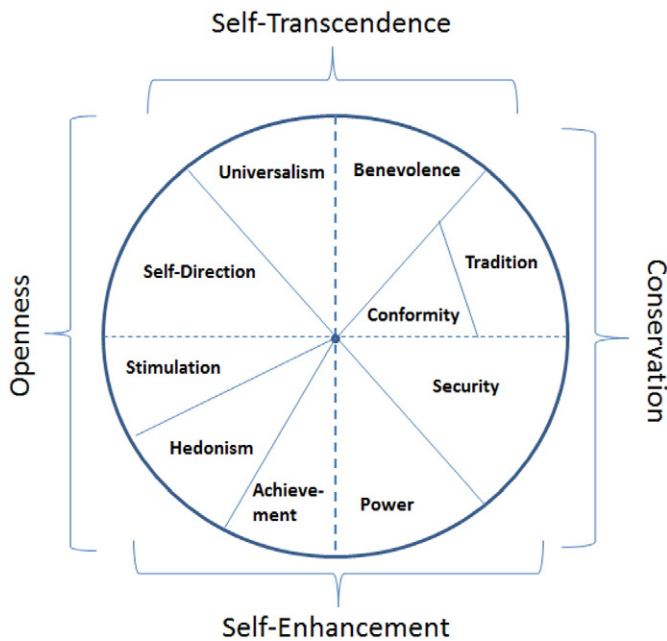
Fig. 1. The value model of Schwartz (1992).

(Mousseau, Scott, & Estes, 2013). In a Brazilian sample, relations between values and psychopathy were observed (Monteiro, 2014): pleasure, success, and power were found to be positively related to the psychopathological subdimensions boldness and disinhibition. Kajonius, Persson, and Jonason (2015) found positive relations between hedonism, achievement, and power with the dark triad, which consists of machiavellianism, narcissism, and psychopathy. Silfver et al. (2008) found positive correlations of universalism and benevolence with guilt proneness.

The present study aims to extend the small empirical support that personal values are also related to clinical constructs, in our case anxiety, depression, and schizotypy. Because of the little empirical research on this topic, we first turn to a set of constructs that has a similar theoretical and empirical base as personal values: personality traits. Numerous studies have investigated the relations between many clinical variables and personality traits.

1.1. Personal values and personality traits

Both personal values and personality traits have their common roots in the language, which are encoded as linguistic descriptors for individual traits and behavior (lexical hypothesis). Therefore, several studies considered values and traits as different components of personality (e.g., Saroglou & Muñoz-García, 2008). Another approach emphasizes the biological–motivational basis of values and traits (McCrae & Costa, 2008). This is because both constructs motivate individual behavior. Indeed, a behavioral genetics study showed that personal values as well as personality traits share common genetic factors (Schermer, Vernon, Maio, & Jang, 2011). Further support for a close link between personal values and personality traits of the five-factor model is provided by a meta-analysis that has found consistent correlational patterns (Parks-Leduc et al., 2014). For example, stimulation, self-direction, and universalism correlated positively with openness to experience, whereas security, conformity, and tradition correlated negatively. Agreeableness was highly correlated with benevolence and negatively with power. However, the relations between values and other personality traits are not as consistent as they are for openness and

agreeableness. Neuroticism or emotional stability, for instance, showed no substantial correlation to any of the ten value types.

1.2. Personality traits and clinical constructs

Numerous studies have investigated the relations between the Big-Five and clinical variables, including anxiety and schizotypy. For example, neuroticism correlated positively and extraversion and conscientiousness correlated negatively with anxiety. Agreeableness and openness were mainly unrelated to anxiety disorders, as a meta-analysis revealed (Kotov, Gamez, Schmidt, & Watson, 2010).

Schizotypal traits can be considered as both mild personality features and as a predisposition toward schizophrenia. Schizotypal traits reflected aspects of positive symptoms (unusual experiences), negative symptoms (introverted anhedonia), and impulsive nonconformity and cognitive disorganization (Lenzenweger, 2015). Mason, Claridge, and Jackson (1995) have proposed a multidimensional model of schizotypy with aspects of positive- schizotypy (reflecting the positive symptomatology of schizophrenia), asocial-schizotypy (reflecting antisocial, impulsive and tough-minded behavior), disorganized-schizotypy (reflecting a difficulty with attention and social anxiety), and negative-schizotypy (reflecting the negative symptomatology of schizophrenia). Meta-analyses on the relations between personality traits (Big-Five) and schizotypal traits showed that positive symptoms are positively related to openness to new experience (Samuel & Widiger, 2008; Saulsman & Page, 2004).

1.3. The present study

The aim of the present study is to examine the relations between value priorities and the four clinical constructs anxiety, depression, stress, and schizotypy with its 4 facets. Based on previous findings described above and the common base of values and personality traits, the following hypotheses were derived.

Valuing achievement is defined by Schwartz (1992) as demonstrating competence. This can include (time) pressure and a lot of demanding work, which in turn can lead to stress and even depressive symptoms. Therefore, it was hypothesized that stress and depressive symptoms are positively related to achievement. On the other hand, given that volunteer work and well-being are positively associated (Thoits & Hewitt, 2001), benevolence and universalism should be negatively associated with stress and depressive symptoms. This is also in line with the motivational continuum of the quasi-circumplex model (Schwartz, 1992), which predicts opposing pattern of results for opposing value types (cf. Fig. 1).

Anxiety was expected to be negatively related to hedonism and stimulation, as for both of these value types, Schwartz stated that courage and outgoingness are needed to at least some degree. Furthermore, a negative relation to self-direction was not expected because those values are more cognitive than stimulation and hedonism. Previous studies have found relations between conservatism and different types of anxiety (e.g., death anxiety and fear of threat and loss (Jost, Glaser, Kruglanski, & Sulloway, 2003). Therefore, a positive relation between anxiety and security, tradition, and conformity was expected.

Positive relations between the schizotypal subdimension impulsive nonconformity with stimulation and hedonism, as well as negative ones with security, tradition, and conformity were expected, because impulsive nonconformity can be considered as an extreme form of openness. This prediction is in line with the above discussed finding that the personality trait openness is linked to impulsive nonconformity (Samuel & Widiger, 2008; Saulsman & Page, 2004). Introverted anhedonia is predicted to be negatively related to stimulation and hedonism. However, we do not expect positive relations between introverted anhedonia with tradition and conformity because we consider them as conceptually different constructs. As valuing security implies harmony

and stability (Schwartz, 1992), a negative relation with the cognitive disorganization subdimension of schizotypy was hypothesized. Unusual experience was expected to be unrelated to all value types.

Furthermore, in an exploratory step, we investigated in a series of multiple regressions, which clinical construct can be best predicted by all value types and, reversing the dependent and independent variables, which value type can be best predicted by all clinical constructs. This can give us greater insight into the nature of personal values as it can help to reveal which psychological states (i.e., clinical variables) are completely unrelated and provide evidence of the discriminant validity of values. We only expected, based on the rational given above that rather affective value types such as hedonism and stimulation will more strongly predict the clinical variables than more cognitive value types such as self-direction and universalism (cf. Schwartz, 1992), because the clinical variables used are mainly affective.

2. Method

2.1. Participants

Participants were 366 students of various disciplines from an East German university (M_{age} = 21.72, SD = 3.38, range = 18–39, 236 females). Participants volunteered to participate and were not compensated.

2.2. Measures

The full Portrait Value Questionnaire (PVQ-40) was used (Schwartz et al., 2001) in its German translation (Schmidt, Bamberg, Davidov, Herrmann, & Schwartz, 2007) to assess the 10 value types of Schwartz' (1992) value model. Participants were given a short description of a person (i.e., 'portrait') and were asked to rate how similar they are to this person on a 6-point Likert scale ranging from 1 very similar to 6 very dissimilar. To facilitate interpretation, all value items have been recoded prior to the analyses reported below. The reliabilities (Table 1) are similar to the ones reported in the original validation paper of the PVQ (Schwartz et al., 2001). Following the suggestions of Schwartz (1992) and Schwartz et al. (2001), the 40 items of the PVQ were centered in order to control for individual scale use tendencies.

The short form of the Depression, Anxiety and Stress Scale (DASS-21; Henry & Crawford, 2005) was used to measure depression, anxiety, and stress. Example items are "I couldn't seem to experience any positive feeling at all" for depression, "I felt scared without any good reason" for anxiety, and "I found it difficult to relax" for stress. Each of the three clinical personality constructs was measured with seven items on a 4-point Likert scale ranging from 0 never to 3 almost always.

Finally schizotypy was measured with the Oxford–Liverpool Inventory of Feelings and Experiences (O-Life; Mason, Linney, & Claridge, 2005), a short scale consisting of 43 items consisting of the four factors: unusual experience, cognitive disorganization, introverted anhedonia, and impulsive nonconformity. Answers were given on a yes–no response scale (0 and 1).

The scales described were part of a larger survey, unrelated to the present study.

2.3. Procedure

The questionnaire was completed within one large group session.

3. Results

The data file is available at osf.io/32ja6.

Table 1
Zero-order-correlations between personal values and clinical measures.

	M	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1) Universalism	.28	.62	.77																
2) Self-direction	.63	.56	.06	.51															
3) Stimulation	−.20	.86	.02	.28***	.68														
4) Hedonism	.50	.81	−.19***	.04	.41**	.79													
5) Achievement	−.06	.78	−.46***	−.07	−.14**	.01	.77												
6) Power	−.98	.92	−.48***	−.07	−.13*	.04	.39***	.70											
7) Security	−.11	.62	−.23***	−.29***	−.44***	−.33***	.10	.04	.57										
8) Tradition	−.29	.71	−.18***	−.45***	−.44***	−.29***	−.11*	−.14*	.20***	.35									
9) Conformity	−.94	.74	.07	−.25*	−.28***	−.36***	−.37***	−.26***	−.01	.27***	.64								
10) Benevolence	.88	.57	.14**	.02	−.02	−.05	.07	−.34***	−.27***	.02	.05	.63							
11) Anxiety	.38	.36	.10*	−.03	−.14**	−.18**	−.06	−.06	.05	.04	.06	−.01	.61						
12) Depression	.64	.53	−.01	−.05	−.09	−.20***	.02	.00	.00	.10	−.00	.04	.51***	.82					
13) Stress	.94	.58	−.02	−.11*	−.11*	−.20***	.14*	−.02	.06	.09	.02	.04	.54***	.66***	.83				
14) S: unusual experiences	.29	.21	.13*	−.07	−.06	−.02	−.00	.00	−.09	.01	.01	.04	.44***	.37***	.35***	.71			
15) S: cognitive disorganization	.41	.24	.14**	−.14**	.07	.14**	−.06	−.12*	−.20***	.08	.09	−.04	.30***	.35***	.39***	.41***	.72		
16) S: introverted anhedonia	.15	.14	−.01	−.08	−.26***	−.18**	.15*	.15*	.12*	.13*	.10	−.18**	.23***	.26**	.23***	.18**	.18***	.47	
17) S: impulsive nonconformity	.38	.18	.02	.10	.21***	.20**	.15*	.19**	−.15*	−.22***	−.32***	−.11	.27***	.28**	.24**	.39***	.35***	.12*	.49

Note. Numbers in main diagonal are Cronbach's α. S: schizotypy.

* $p < .05$.
** $p < .01$.
*** $p < .001$.

Table 2
Amount of explained variance by all ten value types.

	R^2	Adj. R^2	F
Anxiety	.06	.04	2.56**
Depression	.08	.06	3.37***
Stress	.10	.08	3.95***
Schizotypy: unusual experiences	.05	.02	1.90*
Schizotypy: cognitive disorganization	.13	.11	5.43***
Schizotypy: introverted anhedonia	.12	.09	4.76***
Schizotypy: impulsive nonconformity	.18	.15	7.55***

* $p < .05$.
** $p < .01$.
*** $p < .001$.

3.1. Descriptive statistics and correlations

First, the overall zero-order-correlations were calculated. As can be seen in Table 2 most hypotheses were supported. As predicted, stress and depression were positively related to achievement values, but also negatively with hedonism. Anxiety was negatively related to stimulation and hedonism values. Contrary to our expectation, we did not find significant relations between anxiety and security, tradition, and conformity, although all three correlation coefficients were in the predicted direction. Combining all the conservation values (security, tradition, conformity) into one variable did not result in a significant correlation either $r(364) = .08$, $p = .07$.

Impulsive nonconformity correlated positively with stimulation and hedonism values, but also, somewhat surprisingly, with achievement and power values. As predicted, we found negative correlations between introverted anhedonia and stimulation and hedonism, but also, unexpectedly, positive correlations with power, security, and tradition. The correlation between cognitive disorganization and security was negative, as predicted. Unusual experience did not correlate with any value type, except for universalism. The pattern of correlations remained the same after controlling for gender and age.

3.2. Multiple regressions

In the next step, we explored which clinical variables are best predicted by personal values. Impulsive nonconformity was best predicted by all ten value types combined while unusual experience was the least predicted clinical variable. None of the 10 value types reached statistical significance in any of the seven multiple regressions after controlling for the other nine value types.

Finally, a series of regression was conducted to test which value types were better predicted by all seven clinical variables. As can be seen in Table 3, hedonism and tradition were best predicted by the seven clinical variables, whereas universalism was very weakly predicted. The subdimensions of schizotypy explained in a hierarchical regression additional variance, if entered in a second step (columns 5 and 6 in Table 3). For most value types, schizotypy explained substantial more variance than anxiety, depression, and stress. For example, the four schizotypy dimensions explained 14% out of the total 16% variance of stimulation. Overall, no multicollinearity was observed (all VIFs <2.1).

4. Discussion

The aim of the present study was to investigate the relations between personal values and clinical aspects of personality. It focused on anxiety, depression, stress, and four subdimensions of schizotypy.

First, all variables with the exception of the schizotypal subdimension, unusual experience, were related in a theoretical meaningful way with personal values. Stimulation and hedonism were negatively related to anxiety. The findings are in line with the results of Monteiro (2014), who has found positive relations between boldness and openness values such as stimulation and hedonism. Because openness to experience as a personality trait was unrelated to anxiety and depression (Kotov et al., 2010), this indicates that openness values and traits, despite being related (Parks-Leduc et al., 2014), differ in predicting clinical constructs.

Second, stimulation and hedonism correlated positively with the schizotypal subdimension impulsive nonconformity. This is interesting, because impulsive nonconformity may be considered as an undesirable construct, as it refers to impulsive, aggressive, and asocial aspects of psychosis based on the Eysenck dimension psychoticism (Eysenck & Eysenck, 1975) and the hypomania construct (elevation of mood, feeling of grandiosity, risk taking etc.). In other words, stimulation and hedonism are both positively and negatively related to undesirable constructs (impulsive nonconformity and the DAS-scales, respectively). On the other hand, it was argued that impulsive nonconformity can also be considered as a beneficial trait, because of its relations to creativity (Acar & Sen, 2013; Cohen, Mohr, Ettinger, Chan, & Park, 2015). Further, we assume that benevolence is negatively related to impulsive nonconformity, because altruistic values such as loyalty and honesty require some reliability on the person, which may be incompatible with impulsivity.

Introverted anhedonia was as predicted negatively related to stimulation and hedonism, likely because anhedonia is a key symptom of major depression (Pizzagalli, 2014) and those two value types are negatively related to depression (see above). However, somewhat surprisingly, introverted anhedonia was positively related to power, security and tradition, and negatively to benevolence. The latter is consistent with previous research reporting a negative relation between negative schizotypy and interest in social contact (Kwapil, Brown, Silvia, Myin-Germeys, & Barrantes-Vidal, 2012). The finding that introverted anhedonia is positively related to power contradicts previous studies that suggest that power correlates with extraversion (Parks-Leduc et al., 2014). Further research is needed to resolve this contradiction. Disentangling both constructs, introverted anhedonia and extraversion, may very well be a promising approach.

As assumed, cognitive disorganization was negatively related to security, but also with power and self-direction. This can indicate that at least some structure is required for power and self-direction. Overall, the correlational pattern of openness values such as hedonism and stimulation with schizotypy was similar to the one found between the personality trait openness and schizotypy (Samuel & Widiger, 2008; Saulsman & Page, 2004).

It is of theoretical interest that our findings, although predicted and meaningful, did in general not follow the expected sinusoidal pattern (Schwartz, 1992). That is, if a clinical variable is positively related to one value type, it should also be positively related to adjacent value types, unrelated to orthogonal value types, and negatively related to

Table 3
Amount of explained variance by all clinical variables and for schizotypy above anxiety, depression, and stress.

	R^2	Adj. R^2	F	ΔR^2	ΔF
Universalism	.05	.03	2.82**	.03	3.13*
Self-direction	.06	.04	3.15**	.05	4.34**
Stimulation	.16	.14	9.79***	.14	14.81***
Hedonism	.19	.17	11.86***	.14	15.03***
Achievement	.09	.07	4.74***	.05	4.85***
Power	.12	.10	6.63***	.11	10.84***
Security	.10	.08	5.39***	.09	8.77***
Tradition	.17	.15	10.46***	.17	17.76***
Conformity	.11	.09	6.21***	.10	9.80***
Benevolence	.06	.05	3.48**	.06	5.73***

Note. ΔR^2: Amount of explained variance of schizotypy above anxiety, depression, and stress (hierarchical regression).

* $p < .05$.
** $p < .01$.
*** $p < .001$.

opposing value types. For example, albeit stress was negatively related to self-direction, stimulation, and hedonism, it was positively related to achievement and again (non-significant) negative to power, violating the assumption of a motivational *continuum*. A similar violation can be found for the other clinical variables, with the exception of impulsive nonconformity, which follows the proposed sinusoidal pattern well. This indicates that variables can be related to Schwartz' values without following the proposed sinusoidal pattern (cf. Schwartz, 1992).

Finally, a series of multiple regression analyses revealed that the subdimensions of schizotypy with the exception of unusual experience were better predicted by all of Schwartz' (1992) ten value types than anxiety, depression, and stress. This finding is interesting from a theoretical point of view because it indicates that personal values are more strongly associated with cognitive variables than affective ones, which is in line with predominant definitions of values as cognitive constructs (e.g., Maio, 2010). The schizotypy subdimensions (Mason et al., 2005) represent the cognitive aspects of experiences in comparison to the dimension of the DASS, which reflect more negative affect (Henry & Crawford, 2005). This assumption is further supported by the fact that anxiety, depression, and stress are stronger related to affective value types such as hedonism and stimulation compared to cognitive value types such as self-direction or universalism.

Our findings show that personal values can be positively related to negative constructs. In other words, essential principles that are personally important can be both negatively as well as positively related to behavior, feelings, and affect that are generally considered as negative and unwanted. Given that achievement, hedonism, and stimulation can be considered as value types with a strong personal focus (Schwartz et al., 2012), which are promoted in individualistic countries such as Germany (Hofstede, Hofstede, & Minkov, 2010), the findings also reveal a potential 'dark side' of individualism. Individualistic culture emphasizes the individual autonomy more and a low power distance with the consequences of more norm transgressions. On the other hand, more conservative/collectivistic values such as tradition and conformity are mostly unrelated to the clinical variables used in the present study. This is somewhat contradictory to previous findings, stating that individualism is in general positively associated with well-being and negatively with social anxiety (Diener, Diener, & Diener, 1995). Therefore it would be interesting to investigate whether the same pattern of relations can be found in collectivistic societies.

Our study has also some limitations. Just as previous studies investigating the relations between personal values and clinical variables (e.g., Jarden, 2010; Jia et al., 2009; Mousseau et al., 2013), a non-clinical sample was used in the present study. Clinical samples would reveal further interesting insights about the structure and priorities of personal values with regard to the claimed universality of both (Schwartz, 1992; Schwartz & Bardi, 2001). Moreover, future studies could investigate whether the relations between personal values and clinical variables are mediated by the Big-Five traits, as are the relations between values and well-being (Haslam, Whelan, & Bastian, 2009).

In conclusion, the present study shows interesting relations between personal values and clinical variables. Values were better in predicting cognitive clinical variables (e.g., cognitive disorganization) and more affective values (e.g., hedonism) were better predicted by them. In a broader framework, personality traits, personal values, goals, and needs should be integrated in a general theory of the structure of motivation to understand the underlying processes among the similar constructs (Schwartz, 2011). McAdams (1995) has already shown that traits and values can be hierarchically ordered on different personality levels. In a recent study by McGabe and Fleeson (2016) the role of traits for motivational processes, goal attaining, was examined. They found that person differed from each other in traits because they pursued different goals. We would like to add, this finding may have occurred because they have different personal values.

References

Acar, S., & Sen, S. (2013). A multilevel meta-analysis of the relationship between creativity and schizotypy. *Psychology of Aesthetics, Creativity, and the Arts*, 7, 214–228. http://dx.doi.org/10.1037/a0031975.

Cohen, A. S., Mohr, C., Ettinger, U., Chan, R. C. K., & Park, S. (2015). Schizotypy as an organizing framework for social and affective sciences. *Schizophrenia Bulletin*, 41, S427–S435. http://dx.doi.org/10.1093/schbul/sbu195.

Diener, E., Diener, M., & Diener, C. (1995). Factors predicting the subjective well-being of nations. *Journal of Personality and Social Psychology*, 69(5), 851–864.

Eysenck, H. J., & Eysenck, S. B. G. (1975). *Manual of the Eysenck Personality Questionnaire.* London: Hodder and Staughton.

Haslam, N., Whelan, J., & Bastian, B. (2009). Big Five traits mediate associations between values and subjective well-being. *Personality and Individual Differences*, 46(1), 40–42. http://dx.doi.org/10.1016/j.paid.2008.09.001.

Henry, J. D., & Crawford, J. R. (2005). The short-form version of the Depression Anxiety Stress Scales (DASS-21): Construct validity and normative data in a large non-clinical sample. *British Journal of Clinical Psychology*, 44, 227–239. http://dx.doi.org/10.1348/014466505X29657.

Hofstede, G., Hofstede, G. J., & Minkov, M. (2010). *Cultures and organizations: Software of the mind* (3rd ed.). New York: McGraw-Hill.

Jarden, A. J. (2010). *Relationships between personal values, and depressed mood and subjective wellbeing.* (Dissertation) University of Canterbury (Retrieved from http://ir.canterbury.ac.nz/handle/10092/5205).

Jia, Y. A., Rowlinson, S., Kvan, T., Lingard, H. C., & Yip, B. (2009). Burnout among Hong Kong Chinese architecture students: The paradoxical effect of Confucian conformity values. *Construction Management and Economics*, 27(3), 287–298. http://dx.doi.org/10.1080/01446190902736296.

Jost, J. T., Glaser, J., Kruglanski, A. W., & Sulloway, F. J. (2003). Political conservatism as motivated social cognition. *Psychological Bulletin*, 129(3), 339–375. http://dx.doi.org/10.1037/0033-2909.129.3.339.

Kajonius, P. J., Persson, B. N., & Jonason, P. K. (2015). Hedonism, achievement, and power: Universal values that characterize the dark triad. *Personality and Individual Differences*, 77, 173–178. http://dx.doi.org/10.1016/j.paid.2014.12.055.

Kotov, R., Gamez, W., Schmidt, F., & Watson, D. (2010). Linking "big" personality traits to anxiety, depressive, and substance use disorders: A meta-analysis. *Psychological Bulletin*, 136(5), 768–821. http://dx.doi.org/10.1037/a0020327.

Kwapil, T. R., Brown, L. H., Silvia, P. J., Myin-Germeys, I., & Barrantes-Vidal, N. (2012). The expression of positive and negative schizotypy in daily life: An experience sampling study. *Psychological Medicine*, 42, 2555–2566. http://dx.doi.org/10.1017/S0033291712000827.

Lenzenweger, M. F. (2015). Thinking clearly about schizotypy: Hewing to the schizophrenia liability core, considering interesting tangents, and avoiding conceptual quicksand. *Schizophrenia Bulletin*, 41, S483–S491. http://dx.doi.org/10.1093/schbul/sbu184.

Maio, G. R. (2010). Mental representations of social values. In M. P. Zanna (Ed.), *Advances in experimental social psychology, vol. 42. Vol. 42.* (pp. 1–43). San Diego, CA: Academic Press.

Mason, O., Claridge, G., & Jackson, M. (1995). New scales for the assessment of schizotypy. *Personality and Individual Differences*, 18(1), 7–13. http://dx.doi.org/10.1016/0191-8869(94)00132-C.

Mason, O., Linney, Y., & Claridge, G. (2005). Short scales for measuring schizotypy. *Schizophrenia Research*, 78(2–3), 293–296. http://dx.doi.org/10.1016/j.schres.2005.06.020.

McAdams, D. P. (1995). What do we know when we know a person? *Journal of Personality*, 63(3), 365–396. http://dx.doi.org/10.1111/j.1467-6494.1995.tb00500.x.

McCabe, K. O., & Fleeson, W. (2016). Are traits useful? Explaining trait manifestations as tools in the pursuit of goals. *Journal of Personality and Social Psychology*, 110(2), 287. http://dx.doi.org/10.1037/a0039490.

McCrae, R. R., & Costa, P. T. (2008). Empirical and theoretical status of the five-factor model of personality traits. In G. J. Boyle, G. Matthews, & D. H. Saklofske (Eds.), *Handbook of personality theory and assessment. Vol. 1.* (pp. 273–294). London: Sage.

Monteiro, R. P. (2014). *Entendendo a Psicopatia: Contribuição dos traços de personalidade e valores humanos [Understanding psychopathy: Contribution of personality traits and human values].* (Master dissertation) João Pessoa, Brazil: Universidade Federal da Paraíba (Retrieved from http://vvgouveia.net/index.php?option=com_phocadownload&view=category&download=204:monteiro-r-p-2014-entendendo-a-psicopatia-contribuicao-dos-tracos-de-personalidade-e-valores-humanos-dissertacao-de-mestrado-departamento-de-psicologia-universidade-federal-da-paraiba-joao-pessoa&id=18:dissertacoes&Itemid=175&lang=pt-br.).

Mousseau, A. C., Scott, W. D., & Estes, D. (2013). Values and depressive symptoms in American Indian youth of the northern plains: Examining the potential moderating roles of outcome expectancies and perceived community values. *Journal of Youth and Adolescence*, 43(3), 426–436. http://dx.doi.org/10.1007/s10964-013-9982-9.

Parks-Leduc, L., Feldman, G., & Bardi, A. (2014). Personality traits and personal values: A meta-analysis. *Personality and Social Psychology Review, 19*, 3–29.

Pizzagalli, D. A. (2014). Depression, stress, and anhedonia: Toward a synthesis and integrated model. *Annual Review of Clinical Psychology, 10*, 393–423. http://dx.doi.org/10.1146/annurev-clinpsy-050212-185606.

Roccas, S., Sagiv, L., Schwartz, S. H., & Knafo, A. (2002). The Big Five personality factors and personal values. *Personality and Social Psychology Bulletin, 28*(6), 789–801. http://dx.doi.org/10.1177/0146167202289008.

Rokeach, M. (1973). *The nature of human values.* New York: Free Press.

Samuel, D. B., & Widiger, T. A. (2008). A meta-analytic review of the relationships between the five-factor model and DSM-IV-TR personality disorders: A facet level analysis. *Clinical Psychology Review, 28*(8), 1326–1342. http://dx.doi.org/10.1016/j.cpr.2008.07.002.

Saroglou, V., & Muñoz-García, A. (2008). Individual differences in religion and spirituality: An issue of personality traits and/or values. *Journal for the Scientific Study of Religion, 47*(1), 83–101. http://dx.doi.org/10.1111/j.1468-5906.2008.00393.x.

Saulsman, L. M., & Page, A. C. (2004). The five-factor model and personality disorder empirical literature: A meta-analytic review. *Clinical Psychology Review, 23*(8), 1055–1085. http://dx.doi.org/10.1016/j.cpr.2002.09.001.

Schermer, J. A., Vernon, P. A., Maio, G. R., & Jang, K. L. (2011). A behaviour genetic study of the connection between social values and personality. *Twin Research and Human Genetics, 14*(03), 233–239. http://dx.doi.org/10.1375/twin.14.3.233.

Schmidt, P., Bamberg, S., Davidov, E., Herrmann, J., & Schwartz, S. H. (2007). Die Messung von Werten mit dem "Portraits Value Questionnaire" [The measurement of values with the "Portraits Value Questionnaire"]. Zeitschrift Für Sozialpsychologie. *Journal of Social Psychology, 38*(4), 261–275. http://dx.doi.org/10.1024/0044-3514.38.4.261.

Schwartz, S. H. (1992). Universals in the content and structure of values: Theoretical advances and empirical tests in 20 countries. *Advances in Experimental Social Psychology, 25*, 1–65.

Schwartz, S. H. (2011). Studying values: Personal adventure, future directions. *Journal of Cross-Cultural Psychology, 42*(2), 307–319. http://dx.doi.org/10.1177/0022022110396925.

Schwartz, S. H., & Bardi, A. (2001). Value hierarchies across cultures taking a similarities perspective. *Journal of Cross-Cultural Psychology, 32*(3), 268–290. http://dx.doi.org/10.1177/0022022101032003002.

Schwartz, S. H., & Bilsky, W. (1987). Toward a universal psychological structure of human values. *Journal of Personality and Social Psychology, 53*(3), 550–562. http://dx.doi.org/10.1037/0022-3514.53.3.550.

Schwartz, S. H., Cieciuch, J., Vecchione, M., Davidov, E., Fischer, R., Beierlein, C., ... Konty, M. (2012). Refining the theory of basic individual values. *Journal of Personality and Social Psychology, 103*(4), 663–688. http://dx.doi.org/10.1037/a0029393.

Schwartz, S. H., Melech, G., Lehmann, A., Burgess, S., Harris, M., & Owens, V. (2001). Extending the cross-cultural validity of the theory of basic human values with a different method of measurement. *Journal of Cross-Cultural Psychology, 32*(5), 519–542. http://dx.doi.org/10.1177/0022022101032005001.

Silfver, M., Helkama, K., Lönnqvist, J. -E., & Verkasalo, M. (2008). The relation between value priorities and proneness to guilt, shame, and empathy. *Motivation and Emotion, 32*(2), 69–80. http://dx.doi.org/10.1007/s11031-008-9084-2.

Thoits, P. A., & Hewitt, L. N. (2001). Volunteer work and well-being. *Journal of Health and Social Behavior, 42*(2), 115–131. http://dx.doi.org/10.2307/3090173.