

The Interplay Between Traditional and Modern Values and Interpersonal Variables in Mental Disorders and Mental Health

Eva Heim

Andreas Maercker

University of Zurich, Division of Psychopathology & Clinical Intervention
(maercker@psychologie.uzh.ch)

Abstract

Our research focuses on values and mental health, and possible mediating factors. Based on two value-related theories – Schwartz’s and Inglehart’s - we suggest a complex prediction model: It hypothesises that social support mediates the relationship between traditional values and mental health, whereas the relationship between modern values and mental health is mediated by resilience. We tested our model with three large student samples from China, Russia, and Germany. By and large, our hypotheses were confirmed: Particularly traditional values were relevant for mental health by predicting social support and thence mental health. With regard to modern values, the value of self-direction predicted resilience and – in consequence – mental health. Hedonism did not show the predicted association with resilience. We discuss the implications of these findings and future directions.

Introduction

The World Mental Health Survey (Kessler & Ustun, 2008) showed high prevalences of mental disorders worldwide, as well as cross-national differences in prevalence rates. Previous research by our group (Maercker, 2001, 2004; Maercker *et al.*, 2015; Maercker *et al.*, 2009; M. Müller, Forstmeier, Wagner, & Maercker, 2011) has focused on people’s value orientations to capture the complex relationship between culture and mental health. Values describe what a person believes is meaningful and important in life and are used to guide one’s own behaviour and evaluate other people’s behaviour (Schwartz & Bilsky, 1990).

Two theories on human values

Our work is based on two different value theories by Inglehart (1997) and Schwartz (c.f. Schwartz & Bilsky, 1990). Both theories part from the assumption that human values are developed in view of basic human needs and motivations. Inglehart (1997) drew on Maslow (1954)’s hierarchy of human needs to describe materialist vs. postmaterialist values as opposite poles of a continuum. Following Maslow, Inglehart (1997) argued that the increasing security and unprecedented wealth after World War II went along with a decrease in materialist values (routed in preoccupation with survival and physical needs) and with a concurrent increase in importance of postmaterialist values such as esteem or self-expression. In a later version of his theory, he described two dimensions of values: The first dimension encompasses traditional vs. secular-rational orientations, whereas the second dimension contrasts survival vs. self-expression values as described

before. Inglehart (1997) explained shifts along these two dimensions with macro-economic developments: Industrialisation, *i.e.* the rise of the working class, is associated with a shift from traditional towards secular-rational values. Traditional values represent acceptance of existing hierarchies and power structures (*i.e.* male dominance, parental authority), strong emphasis on religion, and low levels of tolerance for abortion, divorce, and homosexuality. Post-industrialisation, *i.e.* the affluent conditions of the advanced industrial society and the rise of the service and knowledge sector, is associated with the previously described shift from survival towards self-expression values. Survival values are characterised by low subjective well-being and health, high emphasis on materialist values, low tolerance for outgroups, and favouring authoritarian government, and self-expression values the exact opposite. An important aspect of his theory lies in socialization: Values are developed in childhood and adolescence and are transmitted between generations. Based on data from the World Values Survey, Inglehart (1997) found that the current economic conditions in a country – as a proxy for security and the coverage of human basic needs – only partly explained the population’s emphasis on survival vs. self-expression and traditional vs. secular-rational values. The cultural heritage of a country, such as being an Ex-Communist or an Ex-Confucian society, explained much more of variance regarding those values.

The Schwartz value theory (cf. Schwartz & Bilsky, 1990) similarly conveys that human values serve three requirements of human life: biological needs, the requirement of coordinated social interactions, and group survival. Based on this assumption, Schwartz and Bilsky (1990) proposed a circumplex-model of ten values: power; achievement; hedonism; stimulation; self-direction; universalism; benevolence; tradition; conformity and security. Values differ in terms of their motivational content. *E.g.* the power value encompasses the motivational goal of striving for economic wealth. The authors grouped those values into two higher-order dimensions: openness to change vs. conservation, and self-transcendence vs. self-enhancement. The cross-cultural validity of this model has been discussed and confirmed extensively (Bilsky, Janik, & Schwartz, 2011; Cieciuch & Schwartz, 2012; Hinz, Brähler, Schmidt, & Albani, 2005).

When looking at these two value theories, the question arises how they relate to each other, or whether they could be integrated into one framework. Datler, Jagodzinski, and Schmidt (2013) tested both theories for their internal, external and construct validity. Based on extensive analyses, they concluded that Inglehart’s theory had lower internal and weaker construct validity, whereas the Schwartz values were less consistent in their predications of other parameters such as political attitudes, life-satisfaction, or gender equality. With regard to the question of how the two theories relate to each other, Wilson (2005) found that postmaterialism was positively related to Schwartz’ self-direction and universalism, and negatively to security. In the analysis of Beckers, Siegers and Kuntz (2012), postmaterialism and self-expression values correlated positively with

self-direction and universalism, and negatively with tradition, conformity, and security. However, correlations were not higher than 0.4. The authors concluded that none of the Schwartz values – neither the single values nor the higher-order dimensions – did fully cover postmaterialism and self-expression.

Our own approach is driven by the question of whether and how values might influence mental health. On the one hand, Inglehart (1997)'s theory provides a clear historical framework on the development and transmission of human values, which is most relevant when dealing with rapidly changing societies such as China or Russia (Datler *et al.*, 2013). Both China and Russia appeared in the upper left quadrant of Inglehart's two dimensional display of values: Both countries were characterised by high emphasis on secular-rational (in contrast to traditional) and on survival (in contrast to self-expression) values. Inglehart (1997) explained the former result by the secularising effect of Communism and Confucianism. However, the theory as such could not be used for our purpose, since the two value dimensions as proposed by Inglehart are not clearly distinguishable, and the validity of the measurement remains far behind the Schwartz values. Moreover, since Inglehart included subjective well-being in his conceptualisation of survival values, using this concept for investigating mental health would be a circular argument. On the other hand, the Schwartz theory offers a very sophisticated, broadly validated and tested operationalisation of human values. The conceptualisation of values in terms of motivational goals seems most relevant for mental health, since motivational goals play an important role in mental health and mental illness (for a review, see Trew, 2011). However, as we will discuss later, we assume that values do not directly affect mental health, but through mediator variables that cover interpersonal aspects of social sharing and dealing with adverse events. The ten values scheme is far too sophisticated for such complex analyses.

In the studies from our lab (Maercker, 2001, 2004; Maercker *et al.*, 2009; M. Müller *et al.*, 2011), we have combined the Schwartz' values into traditional and modern values. Our concept of traditional and modern values differs from Inglehart's value definition: In our concept, traditional values comprise the two Schwartz higher-order dimensions self-transcendence and conservation, with a high emphasis on collectivism, submissive self-restriction, preservation of traditional practices, protection, and stability. Modern values comprise the two higher-order dimensions self-enhancement and openness to change and represent motivations to pursue autonomy, success and dominance over others. Our conceptualisation follows Inglehart's basic assumption that economic growth goes along with a shift in values towards more self-expression and autonomy, but that cultural heritage (*i.e.* traditional values) would persist, as changes in values occur slowly. A recent meta-analysis on the circular structure of the Schwartz values (Steinmetz, Isidor, & Baeuerle, 2012) provided support for our theoretical assumption, at least for Non-Western countries. This meta-analysis (including 88 studies and the ESS) comprised 318 matrices with the correlations among the 10 values. The matrices were

sorted into eight clusters with similar correlation profiles before testing for the circular structure in each cluster. Three clusters including Latin European, American, German and Nordic European countries fitted the theorised model very well. The "ambiguous cluster" comprised different countries, one of which was as study by Maercker *et al.* (2009) in China. In this cluster, the analysis resulted in a two-factor solution, with openness and self-enhancement values on one side, and conservation and self-transcendence values on the other side. According to Steinmetz *et al.* (2012) this two-factor solution "could imply that values in these populations can reflect a modernism versus traditionalism dimension" (p. 71).

Empirical findings

Our research initially focused on the relationship between traditional vs. modern values, posttraumatic stress disorder (PTSD), and possible mediator variables (Maercker *et al.*, 2009; M. Müller *et al.*, 2011). The traditional values sum score was obtained by summing the following three Schwarz values: conformity, tradition and benevolence, as measured with the Portrait Values Questionnaire (PVQ). Modern values encompassed the PVQ scales of stimulation, hedonism and achievement. In the prediction model, two mediator variables were used which had previously proven to be relevant in the development of PTSD: social acknowledgement as a victim and disclosure intention (Maercker & Müller, 2004; J. Müller, Mörgeli, & Maercker, 2008). In one study with Chinese and German crime victims (Maercker *et al.*, 2009), traditional values were negatively associated with social acknowledgement as a victim, which was in turn positively associated with inner pressure to disclose. High disclosure intentions predicted PTSD symptoms in both samples, which is congruent with previous findings. In a second study with Swiss elderly (M. Müller *et al.*, 2011), a different picture emerged: Traditional values were negatively related to PTSD, and social acknowledgement was not a mediator this time.

In the most recent study, Maercker *et al.* (2015) investigated the relationship between values, mental health indicators, and possible mediator variables in student populations from three different countries (Germany, Russia and China). This study was based on data from a comprehensive multi-site study of university students' mental health, Bochum Optimism and Mental Health (BOOM) Studies (Margraf & Schneider, 2014), a large research programme investigating predictors of mental health in a series of cross-sectional and longitudinal studies. The sample sizes were N = 1,105 in Germany, N = 3,743 in Russia, and N = 9,019 in China. In all three samples, the frequency of females outweighed frequency of male respondents (60.3% in Germany, 65.5% in Russia, and 64% in China). For more socio-demographic information, readers are kindly referred to the original paper (Maercker *et al.*, 2015). Mental health was assessed with a 9 items questionnaire (Lukat, Margraf, Becker, van der Veld, & Lutz, 2014) which includes statements such as "I enjoy my life" or "I am often carefree and in good spirits". No previous validation existed in Russian and Chinese language, thus the scale was

translated and back-translated. The scale was tested for measurement invariance and showed metric (but not scale) invariance (Bieda *et al.*, 2015). For examining relationships between variables, metric invariance is sufficient (Byrne, 2008; Davidov, Schmidt, & Schwartz, 2008).

First, we analysed correlations between the ten Schwartz values and mental health, in order to define which values would be most relevant for predicting mental health. In China and Russia, all values were positively correlated with positive mental health, whereas in Germany, only five values showed significant correlations (see Table 1). The power value was the only one which correlated negatively with mental health in China (Pearson's $r = -.05$). The positive association between the Schwartz values and positive mental health is not surprising: All values can be conceptualized as approach motivational goals, and thus none includes avoidance motivational goals. Research shows that approach motivation is beneficial for mental health, whereas avoidance motivation negatively affects mental health (Spielberg, Heller, Silton, Stewart, & Miller, 2011).

Table 1
Correlations between human values and mental health (Pearson's r)

	Germany	Russia	China
Security	-.01	.09***	.07***
Conformity	-.04	.12***	.19***
Tradition	.02	.09***	.09***
Benevolence	.14***	.26***	.35***
Universalism	.09**	.16***	.34***
Self-direction	.24***	.22***	.28***
Stimulation	.27***	.21***	.20***
Hedonism	.45***	.29***	.33***
Achievement	-.00	.13***	.20***
Power	.03	.09***	-.05***

*** $p < .001$

Second, we compared the countries regarding the importance they gave to the ten values. Drawing on Inglehart's model of value persistence, which posits that both traditional and modern values will be strongly held in rapidly changing societies, it was predicted that there would be national differences in the prevalence of traditional and modern values, with the prevalence being highest in China, followed by Russia then Germany. As predicted, both traditional and modern values were most prevalent in China, providing support for Inglehart's model; however traditional and modern values were least prevalent in the Russian sample. To explain this finding the authors turned to Durkheim's conception of 'anomie' as a lack or frailty of value orientations, most commonly found at societal level in countries that have experienced setbacks.

Third, we proposed a prediction model to explain the relationship between values

and mental health. For this aim, we used two mediator variables, *i.e.* social support and resilience. The choice of mediator variables was based on two different theoretical frameworks. The concept of social support was drawn from theories of social belongingness (Baumeister, 2005) which state that regular, satisfying social interaction are a basic human need and therefore relevant to psychological wellbeing. The concept of resilience is relatively new to psychology; it refers to ability to cope successfully with life stress (Richardson, 2002). The concept of resilience encompasses personality factors and specific skills that help an individual to achieve self-actualisation or re-establish their sense of self after disruption. Social support and resilience were measured with previously validated scales: For social support, the F-SOZU was used (Fydrich, Sommer, Tydecks, & Brähler, 2009). This scale measures perceived emotional and instrumental support and social integration, the three of which are combined into one sum score. Resilience was measured using the Resilience Scale (Schumacher, Leppert, Gunzelmann, Strauss, & Brähler, 2005) which consists of 11 items assessing personality characteristics. Both scales were tested for measurement invariance. The F-SOZU showed full metric and the Resilience Scale partial metric invariance (Bieda *et al.*, 2015).

Based on the correlation matrix, we selected two pairs of values – one each for traditional and modern values – as predictors in our mediator model. The selection criteria were that the variables should be highly correlated with mental health and not being directly adjacent in the circular model of values. The traditional values selected were conformity and benevolence; the modern values were hedonism and self-direction. We hypothesised two different prediction paths for all three samples: there would be a positive association between traditional values and mental health mediated by social support, whilst the positive association between modern values and mental health would be mediated by resilience. The results of SEM generally supported the hypothetical model (see Figure 2): Benevolence and conformity (both traditional values) predicted social support, whereas self-direction (a modern value) predicted resilience; both interpersonal variables were associated with positive mental health. The predicted association between hedonism and resilience was not observed, but hedonism was directly associated with positive mental health. There was also an unexpected association between hedonism and social support, which warrants further investigation; hedonism remains an under-researched phenomenon. (For fit indices, readers are kindly referred to the original paper).

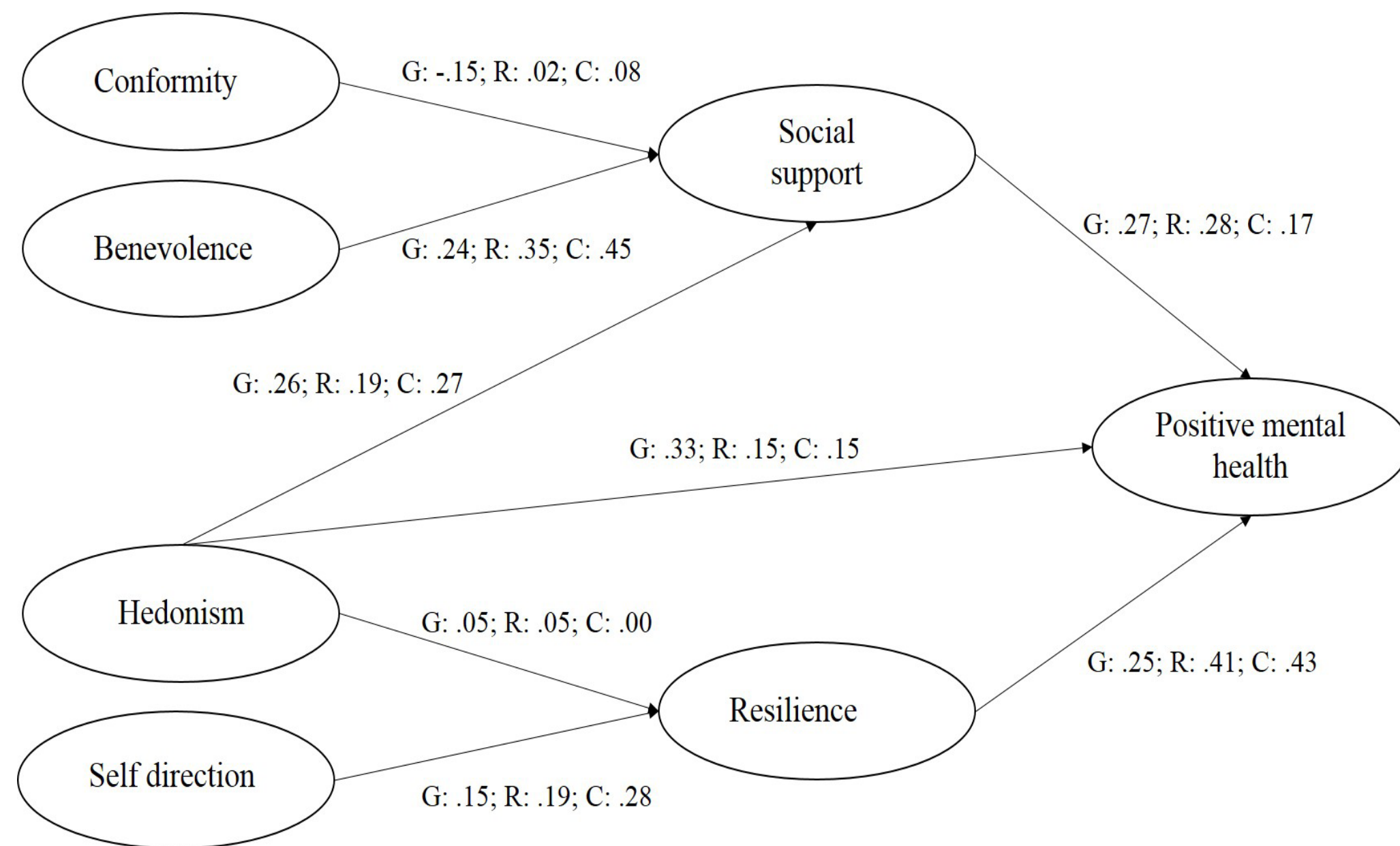


Figure 1

Simplified path model for Germany (G), Russia (R), and China (C).

All paths in the German sample with loadings $>.10$ are significant, the equivalent values for the Russian and Chinese samples are $.02$ and $.01$ respectively. Complete path models for each country with fit indices can be found in the original publication (Maercker et al., 2015).

Conclusions and Future Research

Value orientation – and particularly traditional values – seem to be related to mental health, both in view of specific disorders such as PTSD and more generally (*e.g.*, positive mental health). The influence of traditional values on mental health is mediated by parameters of social interaction, *i.e.* social acknowledgement as a victim in PTSD, and social support in a more general way. In other words, values seem to shape ways of social interaction, which in turn has an effect on mental health. This finding is consistent with Schwartz' assumption that one function of values lies in the coordination of social interaction. Values affect how people deal with each other, what they consider appropriate, how they evaluate behaviour and whether certain events are considered part of normal life or not. In consequence, values (or at least some kinds of values) regulate the seeking and provision of help from others, particularly after stressful life events. Thus mental health is in the outcome of a complex interplay between values at the individual and societal levels and the patterns of social interaction that are associated with these values.

The available evidence suggests that this complex network of interactions is context-specific. A given level of endorsement of traditional values does not necessarily influence mental health outcomes in the same way in different groups; the nature of the association between values and mental health very much depends on the societal environment in which an individual lives. In other words, emphasis on traditional values

might have both protective and negative effects on PTSD, depending on the social environment of a person. For example, it might be easier for Swiss elderly people with traditional values to disclose suffering resulting from grief or other stressful life events that would be relatively normal in this phase of life than it would be for Russian middle-aged adults to disclose post-traumatic stress, which is often related to fear and shame and thus more difficult to talk about.

In our student samples from three different countries, traditional values were associated with social support and positive mental health, which points to a protective effect of those values. We conclude that in groups where traditional values are more prevalent, 'normal' stressful life events (such as the loss of partner in late life) may elicit social acknowledgement and support, whereas unexpected negative life events such as being a victim of crime may be more likely to generate feelings of shame and guilt. Shame and guilt may in turn have a negative effect on both on victims' intention to disclose the relevant experience and on the other people's willingness to hear about it and provide practical and emotional support. Thus it is conceivable that traditional values might be protective for mental health as long as one "fits in". In turn, once an individual does not "fit in", either in terms of aversive life events or other conditions (*e.g.* homosexuality), traditional values might have negative effects on mental health. The findings presented here provide evidence of the complexity of the relationships among values, social support systems and mental health outcomes.

With regard to modern values, our results display a complex picture. In our most recent study (Maercker *et al.*, 2015), only self-direction, but not hedonism, predicted resilience, and resilience was positively associated with positive mental health as hypothesised. Self-direction is defined as 'independent choice of thought and action' and is closely related to autonomy; individuals who are highly self-directed prefer to be self-reliant and are less likely to seek support from others, which is consistent with its association with resilience. Hedonism is defined in terms of pleasure-seeking rather than social interaction, thus its positive association with social support remains to be explained. As already mentioned however, the body of evidence linking hedonism and mental health is limited.

Important questions remain to be addressed. One of the major challenges remains in finding a valid and parsimonious assessment of values for future prediction models. The Schwartz values scale is sophisticated and has proven to be valid in many cross-cultural studies. Schwartz recently refined his theory and expanded it onto 19 values (Schwartz *et al.*, 2012). This makes it nearly impossible to calculate more complex mediation models for predicting mental health outcomes, since the single values might have divergent effects and influence mental health through a variety of mediator and moderator variables. So far, our own division of the Schwartz values into traditional and modern values has proven to be a fruitful way of dealing with this problem. Theoretically, we followed In-

glehart's reflexions on value change and value persistence in the face of rapid economic and societal change. In terms of measurement, though, we drew on the well-established and cross-culturally validated measurement by Schwartz. Recent findings provided empirical evidence on both overlaps and differences between these two theories (Beckers *et al.*, 2012; Datler *et al.*, 2013; Wilson, 2005). In our own research, we have used different combinations out of the Schwartz' values scale to describe traditional and modern values. We will continue in investigating a clear and coherent set of values to predict mental health.

A further important limitation of our results is that they are all based on cross-sectional studies; longitudinal data are needed to understand the causal relationships among the variables investigated. Moreover, longitudinal data are needed on the dynamics of values in changing environments. By definition values transcend specific situations and are generally assumed to be stable, trait-like constructs; however a longitudinal study of Ingrian-Finnish migrants (Lönnqvist, Jasinskaja-Lahti & Verkasalo, (2011, 2013) found that one year after migration, the importance of universalism and security had increased whereas the importance of power and achievement had decreased. A second follow-up showed that these values had returned to their original levels of importance. These results are highly relevant to our findings on values and mental health, as they provide evidence that values are responsive to social disruption. Given this evidence that values are dynamic, future research should consider how interpersonal processes are affected by changes in values in the long run. One might also consider whether and how mental health is influenced by changes in the priority given to particular values. These questions are of theoretical and practical importance in the rapidly changing environments of a globalised world.

References

- Baumeister, R. F. (2005). *The cultural animal: Human nature, meaning, and social life*. Oxford: Oxford University Press.
- Beckers, T., Siegers, P., & Kuntz, A. (2012). Congruence and performance of value concepts in social research. *Survey Research Methods*, 6(1), 13-24.
- Bieda, A., Hirschfeld, G., Schönfeld, P., Brailovskaia, J., Zhang, X., & Margraf, J. (2015). Universal happiness? Cross-cultural measurement invariance of scales assessing positive mental health. Submitted.
- Bilsky, W., Janik, M., & Schwartz, S. H. (2011). The Structural Organization of Human Values-Evidence from Three Rounds of the European Social Survey (ESS). *Journal of Cross-Cultural Psychology*, 42(5), 759-776. doi: 10.1177/0022022110362757
- Byrne, B. M. (2008). Testing for multigroup equivalence of a measuring instrument: a walk through the process. *Psicothema*, 20(4), 872-882.
- Cieciuch, J., & Schwartz, S. H. (2012). The number of distinct basic values and their structure assessed by PVQ-40. [Article]. *Journal of Personality Assessment*, 94(3), 321-328. doi: 10.1080/00223891.2012.655817
- Datler, G., Jagodzinski, W., & Schmidt, P. (2013). Two theories on the test bench: Internal and external validity of the theories of Ronald Inglehart and Shalom Schwartz. *Social Science Research*, 42(3), 906-925. doi: <http://dx.doi.org/10.1016/j.ssresearch.2012.12.009>
- Davidov, E., Schmidt, P., & Schwartz, S. H. (2008). Bringing values back in: The adequacy of the European Social Survey to measure values in 20 countries. [Article]. *Public Opinion Quarterly*, 72(3), 420-445.
- Fydrich, T., Sommer, G., Tydecks, S., & Brähler, E. (2009). Social Support Questionnaire (F-SozU): Standardization of short form (K-14). *Zeitschrift für Medizinische Psychologie*, 18, 43-48.
- Hinz, A., Brähler, E., Schmidt, P., & Albani, C. (2005). Investigating the circumplex structure of the Portrait Values Questionnaire (PVQ). *Journal of Individual Differences*, 26(4), 185-193. doi: 10.1027/1614-0001.26.4.185
- Inglehart, R. (1997). *Modernization and postmodernization: Cultural, economic and political change in 43 societies*. Princeton, NJ: University press.
- Kessler, R. C., & Ustun, T. B. (Eds.). (2008). *The WHO World Mental Health Surveys. Global Perspectives on the Epidemiology of Mental Disorders*: Cambridge University Press.
- Lönnqvist, J.-E., Jasinskaja-Lahti, I., & Verkasalo, M. (2011). Personal values before and after migration: A longitudinal case study on value change in Ingrian-Finnish migrants. *Social Psychological and Personality Science*, 2(6), 584-591. doi: 10.1177/1948550611402362
- Lönnqvist, J.-E., Jasinskaja-Lahti, I., & Verkasalo, M. (2013). Rebound effect in personal values: Ingrian-Finnish migrants: Values two years after migration. *Journal of Cross-Cultural Psychology*, 44(7), 1122-1126. doi: 10.1177/0022022113480040
- Lukat, J., Margraf, J., Becker, E., van der Veld, W., & Lutz, R. (2014). *Test criteria of the positive mental health scale (P-scale)*. Unpublished manuscript. University of Bochum.
- Maercker, A. (2001). Association of cross-cultural differences in psychiatric morbidity with cultural values: A secondary data analysis. *German Journal of Psychiatry*, 4(1), 16-23.
- Maercker, A. (2004). The study of values: An unconventional approach to cross-cultural and social psychiatry. *International Journal of Social Psychiatry*, 50(2), 99-101.
- Maercker, A., Chi Zhang, X., Gao, Z., Kochetkov, Y., Lu, S., Sang, Z., . . . Margraf, J. (2015). Personal value orientations as mediated predictors of mental health: A three-culture study of Chinese, Russian, and German university students. *International Journal of Clinical and Health Psychology*, 15(1), 8-17. doi: <http://dx.doi.org/10.1016/j.ijchp.2014.06.001>
- Maercker, A., Mohiyeddini, C., Müller, M., Xie, W., Hui Yang, Z., Wang, J., & Müller, J. (2009). Traditional versus modern values, self-perceived interpersonal factors, and posttraumatic stress in Chinese and German crime victims. *Psychology and Psychotherapy*, 82(Pt 2), 219-232. doi: 10.1348/147608308X380769
- Maercker, A., & Müller, J. (2004). Societal acknowledgment as victim or survivor: A scale to measure a recovery factor of PTSD. *Journal of Traumatic Stress*, 17, 345-351.
- Margraf, J., & Schneider, S. (2014). *Bochum Optimism and Mental Health (BOOM) Research Program: Background, methods and aims*. (Manuscript in preparation).
- Maslow, A. K. (1954). *Motivation and Personality*. New York: Harper and Row.
- Müller, J., Mörgeli, H., & Maercker, A. (2008). Disclosure and social acknowledgement as predictors of recovery from posttraumatic stress. *Canadian Journal of Psychiatry*, 53, 160-168.
- Müller, M., Forstmeier, S., Wagner, B., & Maercker, A. (2011). Traditional versus modern values and interpersonal factors predicting stress response syndromes in a Swiss elderly population. *Psychology, Health & Medicine*, 16(6), 631-640. doi: 10.1080/13548506.2011.564192
- Richardson, G. E. (2002). The metatheory of resilience and resiliency. *Journal of Clinical Psychology*, 58, 307-321.
- Schumacher, J., Leppert, K., Gunzelmann, T., Strauss, B., & Brähler, E. (2005). Resilience scale - a questionnaire to assess psychological resilience as personality trait. *Zeitschrift für Klinische Psychologie und Psychotherapie*, 53, 16-39.
- Schwartz, S. H., & Bilsky, W. (1990). Toward a theory of the universal content and structure of values: Extensions and cross-cultural replications. *Journal of Personality and Social Psychology*, 58(5), 878-891. doi: 10.1037/0022-3514.58.5.878
- 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.

Spielberg, J., Heller, W., Siltan, R., Stewart, J., & Miller, G. (2011). Approach and avoidance profiles distinguish dimensions of anxiety and depression. *Cognitive Therapy and Research*, 35(4), 359-371. doi: 10.1007/s10608-011-9364-0

Steinmetz, H., Isidor, R., & Baeuerle, N. (2012). Testing the circular structure of human values: A meta-analytical structural equation modelling approach. *Survey Research Methods*, 6(1), 61-75.

Trew, J. L. (2011). Exploring the roles of approach and avoidance in depression: An integrative model. *Clinical Psychology Review*, 31(7), 1156-1168. doi: 10.1016/j.cpr.2011.07.007

Wilson, M. S. (2005). A social-value analysis of postmaterialism. [Article]. *Journal of Social Psychology*, 145(2), 209-224.