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Parent-Child Value Similarity in Families with Young Children: The Predictive Power of
Prosocial Educational Goals

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Abstract

Value transmission from one generation to the next is a key issue in every society, but it is not clear which parents are the most successful in transmitting their values to their children. We propose parents' prosocial educational goals as key predictors of parent-child value similarity and accordingly hypothesized that the more parents wanted their children to endorse values of self-transcendence (helping, supporting, and caring for others) and the less parents wanted their children to endorse the opposing values of self-enhancement (striving for power and achievement), the higher would be parent-child overall value similarity. Findings from two studies of families – Study 1: 261 Swiss families, children aged 7-9 years; Study 2: 157 German families, children aged 6-11 years – confirmed this hypothesis. The effect was even stronger after controlling for values that prevail in the Swiss and German society, respectively. We integrate evidence from this study of values in families with young children with existing findings from studies with adolescent and adult children, and we discuss potential pathways from parents' educational goals to parent-child value similarity.

Parent-Child Value Similarity in Families with Young Children: The Predictive Power of Prosocial Educational Goals

The proverb ‘The apple doesn’t fall far from the tree’ is popular in many cultures around the world, just as its underlying idea that children are similar to their parents. But how far does the apple fall from the tree – how similar are children to their parents? And do particular trees drop their apples more closely – are there parents who bring up children with more similar characteristics to their own?

In this paper, we investigate these questions, looking at parent child similarity with respect to a key societal concept: Values. Values express what is important to a person and function as guiding principles in life (Schwartz, 1992, 2014). The transmission of values to the next generation is regarded a key task, both within the family and within the broader context of society (Roest, Dubas, & Gerris, 2009, Rohan & Zanna, 1996, Schwartz, 2014). As an indicator of successful value transmission, all published studies in the field employ parent-child value similarity (Barni et al., 2014; Boehnke, 2001; Cashmore & Goodwin, 1985; Friedlmeier & Trommsdorff, 2011; Grønhøj & Thøgersen, 2009; Grusec, Goodnow, & Kuczynski, 2000; Knafo & Schwartz, 2004; Phalet & Schönplflug, 2001; Roest, Dubas, & Gerris, 2009; Rohan, & Zanna, 1996; Schönplflug, U., 2001; Vedder, Berry, & Sabatier, 2009; Vollebergh, Iedema, & Raaijmakers, 2001): The more similar children’s values are to their parents’ values, the more successful value transmission has been. A few studies have shed light on how similar children are to their parents (e.g., Boehnke, 2001, Friedlmeier & Trommsdorff, 2011; Grønhøj & Thøgersen, 2009; Knafo & Schwartz, 2004; Phalet & Schönplflug, 2001, Schönplflug, 2001, Vedder, Berry & Sabatier, 2009; Vollebergh, Iedema, & Quinten, 2001), also taking into account the values that prevail in the wider context of society (e.g., Barni, Alfieri, Marta, & Rosnati, 2013). Yet all of these studies surveyed adolescent or adults and their parents, and no data were collected during childhood, which is

when values are shaped and when parents are the primary value transmitters before any substantial influence of peers (Grusec, Goodnow, & Kuczynski, 2000; Roest, Dubas, & Gerris, 2009). The existing studies have thus been looking at later stages of life: Data were collected long after value priorities have already been established (i.e., asking young adults) or during a stage when values are reconsidered and renegotiated (i.e., adolescence).

Recently, a new stream of research has evolved, which studies values in childhood and is based on children's self-report. It was found that children have a differentiated understanding of values, and they clearly prioritize some values over others (e.g., Döring, Daniel, & Knafo-Noam, 2016). Even though none of these new pieces of research include data on parents' values yet, they inform the present study in many ways: We know that children's value priorities are affected by the social context. For example, children who grew up in a religious home valued conservation (tradition, conformity, and security) more than children from a non-religious home (Uzefovsky, Döring, & Knafo-Noam, 2016). Also, social categories such as gender affect values: Girls tend to find values of benevolence and universalism more important and values of achievement and power less important than boys (e.g., Döring et al., 2016). Furthermore, values in childhood have a genetic component (Uzefovsky et al., 2016), pointing to shared value priorities between children and their parents. How and to what extent children's values are shaped within the family is still an open question. The recent development of new tools to measure children's self-reported values (e.g., Döring, Blauensteiner, Aryus, Drögekamp, & Bilsky, 2010) allowed us to start research into this domain and investigate parent child value similarity in families with young children.

The Values Framework: Schwartz's Theory

We used Schwartz's (1992) four higher-order values in our conceptualizations and measures, as they are well established and recently were also validated in children (e.g., see

Schwartz et al., 2012 Döring et al., 2015). These are (1) the prosocial values of self-transcendence (benevolence and universalism) that are opposed to (2) self-enhancement values (power and achievement), and (3) conservation values (tradition, conformity, and security) that are opposed to (4) openness to change values (self-direction, stimulation, and hedonism). Figure 1 depicts the circular model along with sample items. Each person's value priorities can be expressed as a value profile, which is composed of the person's scores on each of the four higher-order values. Similarly, the mean value profile of a society can be calculated. The correlation between parent and child across the four higher order values thus yields a simple indicator of value similarity between parent and child.

Value Socialization in the Family and in Society

During childhood, family is the primary socialization context, while peer groups or school become more important only later in life. As Knafo and Plomin (2006) phrase it, "parents provide for children their first socialization system" (p. 771). Parent-child value similarity in childhood can therefore be largely attributed to transmission in the family (Grusec et al., 2000; Roest, et al., 2009). Taking into account recent evidence that highlights both genetic and environmental components (e.g., Knafo & Plomin, 2006; Uzefovsky et al., 2016), our conceptualization of value transmission is very broad: Values may be transmitted from the parents' to the children's generation through active education (e.g., explaining values to the child), through everyday routines (e.g., modelling desired behavior, such as helping for prosocial values), through providing opportunities (e.g., letting the child be successful and complimenting thereon for achievement values), or through shared genes. While some studies indicate that the impact of genes becomes stronger the older the child grows (see Knafo & Plomin, 2006), values in childhood appear to be affected by both genes and environment (Uzefovsky et al., 2016). Researching parent-child value similarity, newer studies go beyond transmission from parents to children but find support for bi-directional

relationships. For example, not only did a warm and caring parenting style longitudinally predict kindness and prosocial behavior in children, but also did children's prosocial behavior predict caring and nurturing parenting (Newton, Laible, Carlo, Steele, & McGinley, 2014; Pastorelli et al., 2016; see Daniel et al., 2016 for an overview). The intra-family transmission process may thus be cyclical (see Newton et al., 2014; Padilla-Walker, Nielson, & Day, 2016): In the above example, the child may internalize the parents' prosocial interactions and become more prosocial. The parents in turn benefit from their child's prosocial behavior, which further promotes cooperative and warm values on the parents' side.

In addition to process that occur within the family, parents are socializing agents that not only transmit the values they personally favor but also the values they perceive to be important in society, acting as filters to societal values (Glass, Bengtson, & Dunham 1986; Rohan & Zanna, 1996; Tam, Lee, Kim, Li, & Chao, 2012). As specified in Bronfenbrenner's (2005) ecosocial model of human development, the primary developmental context of the family is embedded in the broader context of society. This understanding of the family as the primary context of children's value development, which is embedded in the broader developmental context of society guided the design of our study. Parents and their children's values may thus be similar due to successful transmission of values in society (e.g., Schwartz, 2014), due to successful transmission of specific values in the family (e.g., Acock & Bengtson, Vern, 1978; Moen, Erickson & Dempster-McClain, 1997), or due to sociodemographic variables such as gender, educational and socio economic background (Glass, Bengtson & Dunham, 1986; Kohn & Schooler, 1969; Rohan & Zanna, 1996).

Of particular importance is family members' gender. Some studies showed that the offspring's values tend to be more similar to the mothers than to the fathers, and daughters' values tend to be more similar to parents compared to sons' values (Acock et al., 1978; Boehnke, 2001; Knafo & Schwartz, 2004), suggesting that mothers are the more successful

transmitters in the family and daughters are the more susceptible recipients of values. Other studies indicate, while gender is a key variable, patterns of findings are more complex. For example, Montemayor's (1982) research suggests that parent-child similarity may simply be a function of time spent together. Mothers tend to spend more time with their children than fathers, and the more prevalent modelling of values from the mother's side may be the reason for higher value similarity. Montemayor (1982) further found that fathers spent more time with their sons than their daughters, which may give rise to higher similarity in the same-sex dyads (see also Vollebergh et al., 2001). Finally, as children become adolescents, mothers tend to become less involved, especially with their sons, while fathers tend to become more involved, again especially with their sons (Montemayor, 1982). Therefore, data collected from children and their parents may yield findings that are different from those in the literature, as those were based on adolescents' reports. Also, the vast majority of studies focused on mothers, but not fathers, while the father's role in education is becoming increasingly important in today's societies (Daniel, Madigan, & Jenkins, 2016).

Within society, values express a shared understanding of what is important. As parents are members of society, their value profiles are thus similar to societal value profiles. In turn, the degree to which children's value profiles are similar to the society's value profile expresses the extent to which societal values have been successfully transmitted in the family. Similarity between generations is therefore not solely an intra-family issue (Cashmore & Goodnow, 1985). Interestingly, recent family studies with adolescent children (Barni, Alfieri, Marta, & Rosnati, 2013; Barni, Knafo, Ben-Arieh, & Haj-Yahia, 2014) have shown that parent-offspring value similarity can drop to zero, once society's profiles are controlled for. This means that value priorities in the two generations may be similar, solely because parents represent society's values, but not beyond that. These findings strongly suggest to take into

account family and society simultaneously in values research, as we have done in the present study.

Of course, there are many possible interactions among society, family, and gender in the process of value transmission. For example, while a religious family may encourage conservation values, this might be compromised if the child's peers are all non-religious and the country's laws are secular. However, the many different ways in which these factors may interact are beyond the scope of this paper.

Parents' Prosocial Educational Goals

Addressing the question of which parents have children whose values are most similar to theirs, we focused on parents' educational goals, a key variable in the socialization process (e.g., Brezinka, 1995; Klafki, 1970; Knafo & Schwartz, 2004). Specifically, we looked at what values parents want their children to hold. For example, some parents may want their children to conform to norms, to value security and to follow traditions (which we call *conservation educational goals*). In contrast, other parents may want their children to be open to new experiences, to be self-directed and adventurous (*openness to change educational goals*). Some parents may want their children to help and support others, to care for humans and nature (*prosocial or self-transcendence educational goals*). In contrast, other parents may want their children to strive for status and power, to show their abilities and be better than others (*self-enhancement educational goals*). Parents' educational goals are not only abstract guidelines, but they also affect everyday behavior and interactions with the offspring. Borrowing a term from Grusec et al. (2000), educational goals are manifestations of parents' agency. Parents who value prosociality in themselves and others are likely to help and support, and to be loyal and kind in their relationships (Bardi & Schwarz, 2003). Hence, prosocial educational goals are likely to manifest themselves in a caring parenting style, warmth and supportiveness for the child's needs (Baumrind, 1991). Parental warmth and

responsiveness, in turn, have been consistently identified as key characteristics of the parent-child relationship (Ainsworth & Bowlby, 1991; Baumrind, 1991), and have been found to predict value similarity among adolescents and their parents (e.g., Knafo & Schwartz, 2003; Roest, Dubas, & Gerris, 2009; Schönplflug, 2001).

Prosocial parents are also likely to try to be sensitive to their children's need, and they are likely to try to promote their children's awareness of their own and others' needs. Hence these parents may be particularly good at scaffolding (i.e., at providing helpful and structured learning interactions with the child; Newton et al., 2014; Padilla-Walker et al., 2016) and support their children's understanding of values. As children understand values modelled by their parents particularly well, parent-child value similarity is expected to increase. Finally, in families where parents show empathy throughout their children's education and the child understands that help and support are important goals in the parent-child interaction, children are more likely to identify with their parents, to comply with parental requests, and to imitate parents' behavior (Grusec et al., 2000; Padilla-Walker et al., 2016), all of which increase parent-child value similarity. Parents' prosocial educational goals may thus increase intergenerational value transmission in a variety of ways¹. For this reason, we expect prosocial educational goals to be a powerful positive predictor of parent-child value similarity: The more parents want their child to endorse prosocial values the higher we expect the overall parent-child value similarity to be.

Opposite values, like self-transcendence and self-enhancement, have conflicting behavioral implications, and empirically they predict behaviour in opposite directions (Bardi & Schwartz, 2003; Schwartz, 1992). Hence, parents who value self-enhancement are not likely to encourage self-transcendence in their children. Behaviours that express conflicting values (like self-enhancement and self-transcendence) also tend to be negatively related

¹ These are not mutually exclusive, but may simultaneously be present in a parent-child dyad.

(Bardi & Schwartz, 2003). Hence, it is likely that parents who encourage self-transcendence do not encourage self-enhancement. Therefore, we further expect educational goals of self-enhancement (i.e., achievement and power) to be a negative predictor of parent-child value similarity: The less parents want their child to endorse values of self-enhancement (i.e., achievement and power) the higher we expect the overall parent-child value similarity to be. The existing literature does not imply that there would be an effect of educational goals of conservation or openness to change on parent-child value similarity.

The Present Studies

Our research covers data from two countries: Switzerland (Study 1) and Germany (Study 2), providing a replication across two similar cultures (see, e.g., Schwartz, 2009). We assessed the four higher-order values of self-transcendence (prosocial values) versus self-enhancement, and conservation versus openness to change in young children, their parents, and the Swiss and German societies (representative samples). To assess parents' educational goals, we asked parents to complete the values questionnaire as they would want their child to complete it. We hypothesized that parents' educational goals of self-transcendence (positive) and self-enhancement (negative) predict overall and unique (i.e., controlling for societal values) parent-child value similarity. Both studies thus share the same rationale and methodology. Study 2 improves on Study 1, as it includes a sociodemographically more diverse sample, it expands the range of children's age, and assesses parents' educational goals in more detail.

Study 1

Method

Sample. The study included 261 families in Switzerland. In every family, data were collected from child (124 daughters, 137 sons), mother, and father. Children were between

seven and nine years old ($M = 7.82$, $SD = 0.70$, see Table 1 for details). Parents' level of education was high, as shown in Table 2.

Instruments.

PBVS-C. All children completed the PBVS-C (Döring et al., 2010). The PBVS-C presents values in 20 pictures. Each picture is accompanied by a brief caption that directs the child's focus to the underlying values (e.g., "to help others" for one of the self-transcendence items; "to be rich and powerful" for one of the self-enhancement items, "to follow the rules" for one of the conservation items", and "to experience adventures" for one of the openness to change items). The child then ranks the pictures according to the importance he or she ascribes to them. Across a range of studies, the PBVS-C showed to have good structural validity, as structural analyses yielded a clear distinction between the four higher-order values (Cieciuch, Davidov, & Algesheimer, 2016; Cieciuch, Döring, & Harasimczuk, 2013; Döring et al., 2010, 2015; Uzefovsky et al., 2016). Multitrait-multimethod analyses of data from older children who were capable of completing an established values questionnaire for adults (the Portrait Values Questionnaire, PVQ, see below) in addition to the PBVS-C confirmed concurrent validity (Cieciuch et al., 2013; Döring et al., 2015): Correlations for the higher-order values measured across both instruments ranged from .42 to .72. The higher order values as measured with the PBVS-C were further shown to be relatively stable over time: For eight-to-eleven-year-old children, Cieciuch and colleagues (2016) report a stability of between .25 and .63 over one year and between .14 to .43 over two years. In our data set in the present study, there were no missing data for the PBVS-C.

Assessing Values with the Portrait Values Questionnaire (PVQ). All parents completed the 21-item version of Schwartz's Portrait Values Questionnaire (PVQ) that is also employed in the European Social Survey (ESS, a large-scale cross-national study on life in

Europe²³). The PVQ presents values as portraits, phrased in the same gender as the parent, and the respondent indicates how similar he or she is to this portrait, where higher similarity ratings show higher importance given to the value expressed in the portrait. For example, the portrait “It is very important to her to help the people around her. She wants to care for their well-being.” expresses self-transcendence values; the portrait “It is important to her to be rich. She wants to have a lot of money and expensive things.” expresses self-enhancement values; the portrait “She believes that people should do what they are told. She thinks people should follow rules at all times, even when no-one is watching.” expresses conservation values; and the portrait “She looks for adventures and likes to take risks. She wants to have an exciting life.” expresses openness to change values. As recommended by Schwartz,⁴ we checked that no parent missed out five or more items or gave the same answer to sixteen or more items.

Assessing Parents’ Educational Goals with the Portrait Values Questionnaire (PVQ). To assess parents’ educational goals, parents were requested to complete the 21-item version of Schwartz’s Portrait Values Questionnaire (PVQ) again, but this time to imagine that their child was completing the PVQ. Parents were requested to answer each item as they would want their child to answer it. Swiss parents completed one questionnaire together based on the rationale that many important family decisions that encourage particular values are a product of the parents’ mutual agreement (e.g., how strict to be in monitoring the child’s behavior).

Procedures of Data Collection. Data were collected in rural and urban areas of six major regions of the German-speaking part of Switzerland. Children completed the PBVS-C during one school lesson and received an envelope for their parents that included the PVQ, sociodemographic questions, instructions and further information about the study.

² <http://www.europeansocialsurvey.org/>

³ <http://essedunet.nsd.uib.no/cms/topics/1/>; see here for details on the measure’s validity and reliability

⁴ <http://essedunet.nsd.uib.no/cms/topics/1/4/>

Analysis of Value Priorities. Both measures – PBVS-C and PVQ – were z-standardized, so that across all items, the mean for each person is 0 and the standard deviation is 1. This allowed us to compare value priorities across the two instruments⁵. For each higher-order value type, a score for each person was then calculated as the mean of all items belonging to it. This yielded a value profile for each child, each mother, and each father, which is composed of the person's scores of self-transcendence, conservation, self-enhancement, and openness to change.

Analysis of Value Similarity within Families. Following our understanding of values as systems, we computed value similarity between each two family members as the correlation between their value profiles (as in Barni et al., 2013; Knafo & Schwartz, 2003, 2004; Schönplflug, 2009). This yielded one similarity score for each pairing of two family members: child-mother, child-father, mother-father. In order to have these correlations in a normal distribution, which is required for our further analyses, we employed a Fisher Z transformation on these correlations.

Analysis of Value Similarity with National Profiles We used data from representative samples in Switzerland that were collected at the same year (2010) of our own data collection as part of Round 5 of the European Social Survey (ESS)⁶. The ESS version of the PVQ is identical to the one that was completed by the parents in our study, and data management was thus identical. Having dropped data from respondents who did not respond to more than five items or gave the same answer to more than sixteen items, our Swiss ESS samples were 1,467 respondents (750 men, 717 women), age 15-96 ($M = 47.78$, $SD = 18.74$). As with the parents' PVQ data, we z-standardized and then computed scores for the higher-order value types. The Swiss national profiles was: self-transcendence: $M = 0.57$, $SD = 0.32$,

⁵ To further substantiate validity and reliability of our measurement across generations, we added Appendix 1 with additional analyses.

⁶ European Social Survey Round 5 Data (2010). Data file edition 3.3. NSD - Norwegian Centre for Research Data, Norway – Data Archive and distributor of ESS data for ESS ERIC.

conservation: $M = -0.08$, $SD = 0.45$, self-enhancement: $M = -0.53$, $SD = 0.48$, openness to change: $M = -0.04$, $SD = 0.43$. Family members' value similarity with the national profile was then calculated as correlation between the two profiles, as has been done in previous research (see Barni et al., 2014, for a review). Again, similarity scores were transformed using Fisher-Z, so that they had a normal distribution.

Analysis of Unique Parent-Child Value Similarity. To quantify unique parent-child value similarity, we first subtracted the national profile from each parent's profile and then correlated the unique profiles with the children's profiles. Again, similarity scores were Fisher-Z standardized.

Analysis of Parents' Educational Goals. To obtain scores for parents' educational goals, the second version of the PVQ where parents were requested to answer each item as they would want their child to answer it were analyzed as described above for the first version of the PVQ. This yielded a profile of educational goals for parents, which is composed of their educational goals scores of self-transcendence, conservation, self-enhancement, and openness to change. Because parents completed this questionnaire together, mother and father obtained the same profile.

Results

Values in the Family. Value priorities among parents confirmed universal and gender-typical patterns reported in previous research. Moreover, the same patterns occurred in childhood: To all family members, self-transcendence values were most important on average, whereas self-enhancement values were least important on average. Children found values of self-transcendence most important ($M = 0.48$, $SD = 0.43$), followed by openness to change ($M = 0.03$, $SD = 0.35$), conservation ($M = 0.02$, $SD = 0.33$), and self-enhancement ($M = -0.54$, $SD = 0.53$). Also, female family members ascribed more importance to self-

transcendence and conservation values than male family members who ascribed more importance to self-enhancement and openness to change values (see Appendix for details).

Parents' Educational Goals. With regard to what values parents want their children to hold (i.e., parents' educational goals), Swiss parents gave the highest importance to self-transcendence, followed by openness to change, conservation, and finally self-enhancement: self-transcendence: $M = 0.66$, $SD = 0.40$, openness to change: $M = 0.12$, $SD = 0.39$, conservation: $M = -0.30$, $SD = 0.43$, self-enhancement: $M = -0.56$, $SD = 0.50$.

Parent-Child Value Similarity. Children's value profiles were substantially similar to their parents' value profiles with a mean parent-child value similarity of .53 (Pearson correlations that were obtained through back-transformation of the mean Fisher-Z score). Children were more similar to their mother than to their father. Parents' educational background did not show a systematic relationship with parent-child value similarity, neither did parents' or children's age. The only correlation that differed significantly from zero was between children's age and mother-child value similarity ($r = .15$), showing how little standard predictors contribute.

Parent-Child Value Similarity and Parents' Educational Goals. Our analysis of how parents' educational goals were related to parent-child value similarity yielded consistent patterns (Table 3): There are moderate positive correlations between parents' educational goals of self-transcendence and moderate negative correlations between parents' educational goals of self-enhancement and parent-child value similarity. The more parents wanted their child to endorse self-transcendence values and the less parents wanted their child to endorse self-enhancement values, the more similar children's overall value profile was to their parents' overall value profile, confirming our hypotheses. A follow-up regression analysis in which parent-child value similarity was predicted from parents' educational goals of self-transcendence and self-enhancement, and also from parents' and child's gender yielded

a good model fit: $F(4, 517) = 5.49, p < .001$. As shown in Table 4, parent's educational goals of self-transcendence was a significant positive predictor of parent-child value similarity.

Value Similarity with National Profiles. The mean similarity with the representative Swiss value profile was .88 for mothers, .70 for fathers, and .80 for children (.88 for daughters and .70 for sons; all $p < .001$).

Unique Parent-Child Value Similarity. The mean unique parent-child value similarity was .09. The higher parents' unique value similarity with their children, the higher was their parent-child value similarity in general (correlations of .77 for Swiss mothers and .75 for Swiss fathers). There was no systematic pattern of correlations between unique parent-child value similarity and sociodemographic variables other than parents' and child's gender (again with the only correlation that differed significantly from zero being the correlation between children's age and unique mother-child value similarity: $r = .17$). Parents' educational goals were systematically and strongly related to unique parent-child value similarity (Table 4): The more parents wanted their child to value self-transcendence and the less parents wanted their child to value self-enhancement, the higher was the unique parent-child value similarity. Again, we followed up these patterns with linear regressions analysis (Model fit: $F[4, 517] = 12.52, p < .001$) and found that parents' educational goals of self-transcendence positively predicted and parents' educational goals of self-enhancement negatively predicted unique parent-child value similarity.

Study 2

While Study 1 yielded promising findings, methodological limitations make generalizations more difficult. First, the sample in Study 1 was homogenous, where parents had a high level of education, and the range of children's age was narrow. Second, parents reported joint educational goals, where in fact mothers' educational goals for their children may substantially differ from fathers'. Study 2 therefore aimed to not only contribute further

evidence from a different country – Germany – but also was designed to improve on Study 1's methodology.

Method

Sample. Data were collected in the Ruhrgebiet, which is an area around the river Ruhr in West Germany. Even though the area is densely populated, a significant amount of families lives in suburbs or villages around the cities. The study thus covers both urban and rural settings. One hundred and fifty-seven families participated. Children were between six and eleven years old in ($M = 7.91$, $SD = 1.28$, see Table 5 for details); 79 daughters and 78 sons participated. Parents' level of education was diverse: While most parents' education went beyond the compulsory nine years of schooling, a quarter of the parents have compulsory education only, and two mothers and two fathers did not have compulsory education according to the German standards (see Table 6). This is because the parents had immigrated to Germany after completing school in another country.

Instruments, Procedure, and Data Analysis. Study 2 employed the same instruments as Study 1. In contrast to Study 1, mothers and fathers completed separate questionnaires to report their educational goals. The procedure and data analysis were identical to Study 1. As mothers and fathers reported their educational goals separately, we obtained a profile of educational goals for each parent, which is composed of the person's educational goals scores of self-transcendence, conservation, self-enhancement, and openness to change. As in Study 1, we included the country's representative profile in our analysis. This is based on 2,943 German respondents (1,501 men, 1,442 women), age 15-97 ($M = 47.53$, $SD = 18.39$). The German national profile was: self-transcendence: $M = 0.56$, $SD = 0.33$, conservation: $M = 0.01$, $SD = 0.47$, self-enhancement: $M = -0.56$, $SD = 0.50$, openness to change: $M = -0.11$, $SD = 0.44$.

Results

Values in the Family. On average, all family members found self-transcendence values most and self-enhancement values least important. Children valued self-transcendence most ($M = 0.37$, $SD = 0.43$), followed by conservation ($M = 0.05$, $SD = 0.32$), openness to change ($M = 0.00$, $SD = 0.36$), and self-enhancement ($M = -0.44$, $SD = 0.58$) (for gender-specific patterns, see Appendix).

Parents' Educational Goals. German parents' most important educational goal was self-transcendence ($M = 0.55$, $SD = 0.37$ for mothers; $M = 0.45$, $SD = 0.41$ for fathers), followed by openness to change ($M = 0.04$, $SD = 0.36$ for mothers; $M = 0.05$, $SD = 0.34$ for fathers), conservation ($M = -0.15$, $SD = 0.39$ for mothers; $M = -0.12$, $SD = 0.44$), and finally self-enhancement ($M = -0.52$, $SD = 0.51$; $M = -0.46$, $SD = 0.53$).

Parent-Child Value Similarity. Children's value profiles were substantially similar to their parents' value profiles with a mean parent-child value similarity of .46. Daughters were more similar to their parents than sons. Parents' educational background, and children's and parents' age were not systematically related to parent-child value similarity (with the only correlation that differs significantly from zero being between mothers' highest level of education and mother-child value similarity: $r=.25$).

Parent-Child Value Similarity and Parents' Educational Goals. Again, we found moderate positive correlations between parent-child value similarity and parents' educational goals of self-transcendence and moderate negative correlations between parent-child value similarity and parents' educational goals of self-enhancement. Our follow-up regression analysis which predicted parent-child value similarity from parents' educational goals of self-transcendence and self-enhancement, and also from parents' and child' gender yielded a good model fit: $F(4, 309) = 18.00$, $p < .001$ (see Table 8).

Value Similarity with National Profiles. The mean similarity with the national value profile was .84 for mothers, .66 for fathers, and .71 for children (.82 for daughters and .55 for sons, all $p < .001$).⁷

Unique Parent-Child Value Similarity. The mean unique parent-child value similarity in the German sample was .06. Again, the higher parents' unique value similarity with their children, the higher was their parent-child value similarity in general (correlations of .74 for German mothers and .66 for German fathers, all $p < .001$). Parents' educational background did not correlate systematically with unique parent-child value similarity (again with the only correlation that differs significantly from zero being the correlation between mothers' highest level of education and unique mother-child value similarity: $r=.23$). Parents' educational goals were systematically and strongly related to unique parent-child value similarity in the same way as in Study 1 (see Table 7): The linear regressions analysis (Model fit: $F [4, 309] = 23.10, p < .001$) showed that parents' educational goals of self-transcendence positively predicted and parents' educational goals of self-enhancement negatively predicted unique parent-child value similarity.

Discussion

These first studies of values in the family involving young children's self-reported values aimed to find out which parents are more the successful value-transmitters. Our samples from two countries (Switzerland and Germany) revealed that parents' prosocial educational goals were a powerful predictor of parent-child value similarity. The more parents wanted their children to endorse values of self-transcendence and the less parents wanted their children to endorse the opposing values of self-enhancement, the more similar their children were to them.

⁷ European Social Survey Round 5 Data (2010). Data file edition 3.3. NSD - Norwegian Centre for Research Data, Norway – Data Archive and distributor of ESS data for ESS ERIC.

Our studies yielded additional converging findings across samples: Parents' value profiles showed substantial similarity with their children's value profiles. Once we controlled for value profiles in Switzerland and Germany, the mean parent-child value similarity dropped to zero, replicating findings from studies with adolescent children (Barni et al., 2013, 2014). This underscores parents' role as socializing agents who transmit values that prevail in the wider context of society. Family members' gender also played an important role: Male and females' value priorities differed (see Schwartz & Rubel, 2005; Döring et al., 2015, in press). Additionally, mothers' values were more similar to their children's values than fathers' values in the Swiss sample (Study 1), and daughters' values were more similar to their parents' values than sons' values in the German sample (Study 2). This replicates results from studies with adolescents and adults and their parents (e.g., Boehnke, 2001; Knafo & Schwartz, 2004). Other family variables that had been suggested in the literature – parents' age and children's age, and parents' education (e.g., Schönplflug, 2001) – did not show systematic relationships with parent-child value similarity across both samples. Swiss children were a little more similar to their parents the older they were, and German mothers were more similar to their children the higher their level of education. While this is in line with previous findings in older samples, the effects were small and unsystematic, yielding parents' prosocial educational goals the clear predictor of parent-child value similarity.

Study 1 had a number of limitations, including the narrow age range of children, parents' high level of education, and the reliance on joint report of educational goals. Still, the pattern of findings was clear and in line with to our hypotheses. In Study 2, which included a more heterogeneous sample and mothers' and fathers' individual educational goals, parents' educational goals of self-transcendence (positive) and self-enhancement (negative) are even stronger predictors. Confounding variables and limited variance in Study 1 may have weakened the findings. The two countries where we collected data, Switzerland

and Germany, not only share the same language, but also have multiple shared cultural roots.⁸ The replication of findings across countries supports their validity, but future research with more heterogeneous samples may show if it is worth following up the effect of sociodemographic characteristics of the family.

Our main finding, that parents who want their children to value self-transcendence are more successful in transmitting their values, points to the key role of educational goals in the process of socialization (cf. Brezinka, 1995; Klafki, 1970; Knafo & Schwartz, 2004). The finding that the opposing educational goals of self-enhancement negatively predicted parent-child value similarity once more underscores the circular nature of Schwartz's (1992) value model and its potential for research (see also Döring et al., 2016 for more applications in research with children). Parent-child value similarity was however not predicted by parents' educational goals of conservation and openness to change. Whether parents want their children to follow rules and traditions and be safe does not seem to affect parent-child values similarity neither does parents' goal for their children to be open, self-directed and adventurous.

Our review of the literature yielded a variety of potential transmission mechanisms through which children become similar to their parents, such as the explicit teaching of values, everyday routines and behavior, the provision of opportunities, shared genes, but also bi-directional and cyclical processes where children also transmit values to their parents (Daniel et al., 2016; Knafo & Plomin, 2006; Newton et al., 2014; Padilla-Walker et al., 2016; Pastorelli et al., 2016; Uzevovsky et al., 2016). We predicted and found that parents' prosocial educational goals play a key role here. However, future research is needed to understand the process of transmission better. For example, these parents may show an

⁸ As shown in a cross-cultural study by Hofstede (1991), Germany and the German-speaking part of Switzerland do not differ substantially along dimensions of cultural differences. [Germany's and Switzerland's scores on the dimensions of power distance, individualism, masculinity, and uncertainty avoidance are very similar: 35 vs. 34, 67 vs. 68, 66 vs. 70, and 65 vs. 58 respectively](https://geert-hofstede.com/germany.html) (see <https://geert-hofstede.com/germany.html>).

empathetic and the less rigid-authoritarian parenting style, which in turn was found to result in close emotional bonds between parents and children and to ultimately strengthen value transmission (Baumrind, 1991; Knafo & Schwartz, 2003; Schönplflug, 2001). Also, these parents may be more sensitive to their others' (including their children's) needs and goals and may therefore be better at scaffolding, promoting their children's awareness and understanding of values (Newton et al., 2014; Padilla-Walker et al., 2016). It is also possible that, as children understand how important helping and support are to their parents, they are more likely to accept and identify with their parents' values (Grusec et al., 2000; Padilla-Walker et al., 2016). Future, ideally longitudinal, studies may specifically look at these mechanisms through which parents' educational goals affect parent-child value similarity.

Parents who wanted their children to embrace self-transcendence values but not self-enhancement values were not only more successful in transmitting their country's values (macro-level), but also more successful in transmitting additional unique values (micro-level). The effect of parents' educational goals was indeed stronger once shared values in the Swiss or German society respectively had been taken into account. In other words, parents' educational goals were more relevant once we specifically examined unique value similarity in the family, which reflects the rationale of our study: Parents are socializing agents that transmit values of the society they live in (Roest et al., 2009; Schwartz, 2014). To these shared values, parents may add a unique component, which is for example based on the educational goals they hold. Due to the cross-sectional nature of our data set, the interplay of how values in society and in the family affect the child's development over time could not be investigated. We hope for future longitudinal studies to help understand these processes.

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Table 1

Age of Swiss Children and Parents

	Age			
	<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>
Daughters	7	9	7.75	0.69
Sons	7	9	7.88	0.71
Mothers	23	54	39.94	4.54
Fathers	26	65	42.60	5.32

Table 2

Swiss Parents' Highest Level of Education

Highest Education	Mother		Father	
	<i>N</i>	Valid %	<i>N</i>	Valid %
No compulsory education	2	0.8	2	0.8
Compulsory education	17	6.5	13	5.1
Post compulsory education	243	92.7	239	94.1
Total	262	100.0	254	100.0

Table 3

Correlations Between Parent-Child Value Similarity and Parents' Educational Goals in Swiss Families

a. Parent-Child		Parents' Educational Goals			
Value Similarity	SeTr	SeEn	Con	OtC	
Mother-Child	.20**	-.09	-.02	-.07	
Father-Child	.10	-.13*	.07	-.05	
b. <u>Unique</u> Parent-Child		Parents' Educational Goals			
Value Similarity	SeTr	SeEn	Con	OtC	
Mother-Child	.27**	-.22**	-.07	.03	
Father-Child	.14*	-.21**	.03	.03	

Note. SeTr = Self-Transcendence, Con = Conservation, SeEn = Self-Enhancement, OtC = Openness to Change. * $p < .05$; ** $p < .01$.

Table 4

Linear Regression: Predicting Parent-Child Value Similarity from Parent's Educational Goals and Parent's and Child's Gender in Swiss Families

	b	SE b	β	p
Constant	0.14	0.10		.181
SeTr Goals	0.31	0.12	.13	.008
SeEn Goals	-0.11	0.10	-.05	.257
Child's Gender	0.17	0.09	.08	.052
Parents' Gender	0.19	0.09	.10	.025

Note. SeTr = Self-Transcendence, SeEn = Self-Enhancement. ¹ 1 = Female, 0 = Male.

Adjusted R² = .03.

Table 5

Age of German Children and Parents

	Age			
	<i>Min</i>	<i>Max</i>	<i>M</i>	<i>SD</i>
Daughters	6	10	7.86	1.40
Sons	6	11	7.97	1.15
Mothers	27	54	37.38	5.40
Fathers	26	60	40.81	6.02

Table 6

German Parents' Highest Level of Education

Highest Education	Mother		Father	
	<i>N</i>	Valid %	<i>N</i>	Valid %
No compulsory education	20	13.2	14	9.9
Compulsory education	38	25.2	38	26.8
Post compulsory education	93	61.6	90	63.4
Total	151	100.0	142	100.0

Table 7

Correlations Between Parent-Child Value Similarity and Parents' Educational Goals in German Families

a. Parent-Child		Parents' Educational Goals			
Value Similarity	SeTr	SeEn	Con	OtC	
Mother-Child	.32**	-.35**	.07	-.03	
Father-Child	.27**	-.37**	.08	.01	
b. <u>Unique</u> Parent-Child		Parents' Educational Goals			
Value Similarity	SeTr	SeEn	Con	OtC	
Mother-Child	.37**	-.46**	.15	-.06	
Father-Child	.35**	-.41**	.10	-.08	

Note. SeTr = Self-Transcendence, Con = Conservation, SeEn = Self-Enhancement, OtC = Openness to Change. * $p < .05$; ** $p < .01$.

Table 8

Linear Regression: Predicting Parent-Child Value Similarity from Parent's Educational Goals and Parent's and Child's Gender in German Families

	b	SE b	β	p
Constant	-0.24	0.12		.038
SeTr Goals	0.39	0.17	.14	.021
SeEn Goals	-0.062	0.12	-.30	<.001
Child's Gender	0.43	0.11	.20	<.001
Parents' Gender	0.06	0.11	.03	.606

Note. SeTr = Self-Transcendence, SeEn = Self-Enhancement. ¹ 1 = Female, 0 = Male.

Adjusted R² = .18.

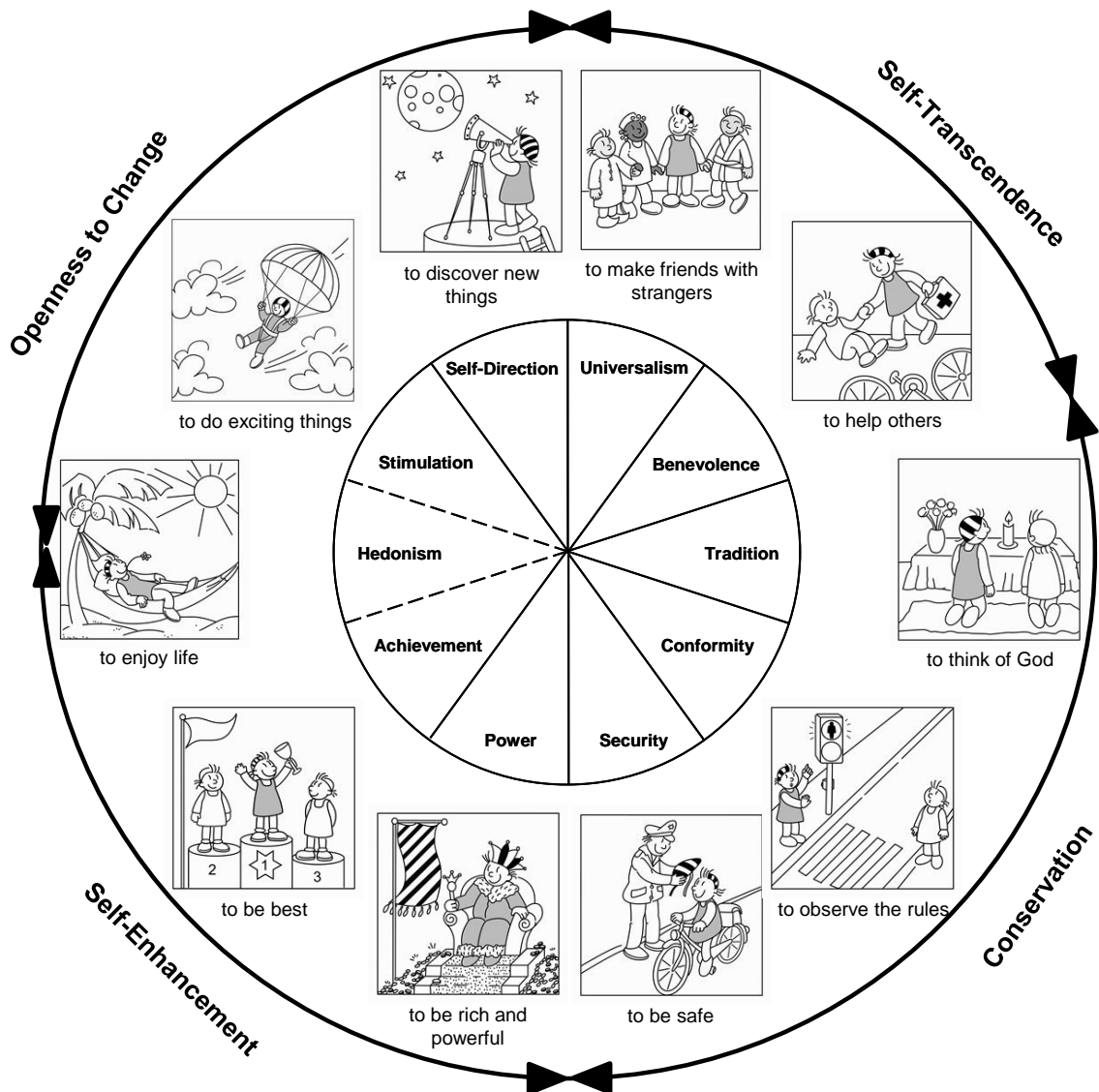


Figure 1. Schwartz's model of values and exemplary items from the PBVS-C.

Appendix 1: Value Structures in the Family

To substantiate our measurement of values across generations, we analysed value structures in the family. Numerous studies have shown that the Picture-Based Value Survey for Children (PBVS-C) is a valid and reliable tool to assess children's values (e.g., Ciecuch et al., 2013; Döring et al., 2010), and that the 21-item version of the Portrait Values Questionnaire (PVQ) is a valid and reliable tool to assess adults' values⁹. To further underscore our assumption of measurement equivalence across generations – i.e., the assumption that we measure the same higher order values in children and parents – we ran Multidimensional Scaling (MDS) analyses. For this purpose, we portrayed children's and parents' value items in a joint two-dimensional space. In order to reduce the amount of items to be portrayed (given our relatively small sample), we computed a mean parents' item score from the scores of mother and father respectively. We then computed a matrix of intercorrelations of all forty-one items (twenty items for children plus twenty-one for parents). The MDS portrays these correlations as distances in space: The higher the correlation between each two items, the closer they are in space. Following all recent studies on value structures, we employed a starting configuration (see for example Döring et al., 2010), where each items starts at its ideal position within Schwartz's value model. We then tested whether the space could be partitioned according to the higher order values. As a measure of fit between the pattern of correlations and their representation in space, we inspected Stress 1.

The joint value structure is presented in Figure S1. The value structure clearly confirms Schwartz's prototypical model, and the space can be clearly partitioned into regions for the higher order values, where these regions for each higher order value include the items for both children and parents. The arrangement of regions follows Schwartz's circular structure.

⁹ <http://essedunet.nsd.uib.no/cms/topics/1/>

The PBVS-C items that were completed by the children are represented in the outer circle, and the PVQ-items that were completed by the parents are represented in the inner circle. This effect reflects differences in the two questionnaires (as discussed for example in Döring et al., 2010) and was found in other studies that employed PBVS-C and PVQ. Through our data management (i.e., z-standardization and correction for individual differences in scale use) we controlled for these differences. A few items in the structure are slightly misplaced and located in the adjacent region. The Stress 1 for this solution is .288, which is significantly smaller (i.e., better) than for random data (Spence & Ogilvie, 1973: presenting random data for 41 items in two dimensions would yield a Stress 1 of .358 with a standard deviation of .004).

Additional Reference

Spence, I., & Ogilvie, J. C. (1973). A table of expected stress values for random rankings in nonmetric multidimensional scaling. *Multivariate Behavioral Research*, 8, 511-517.

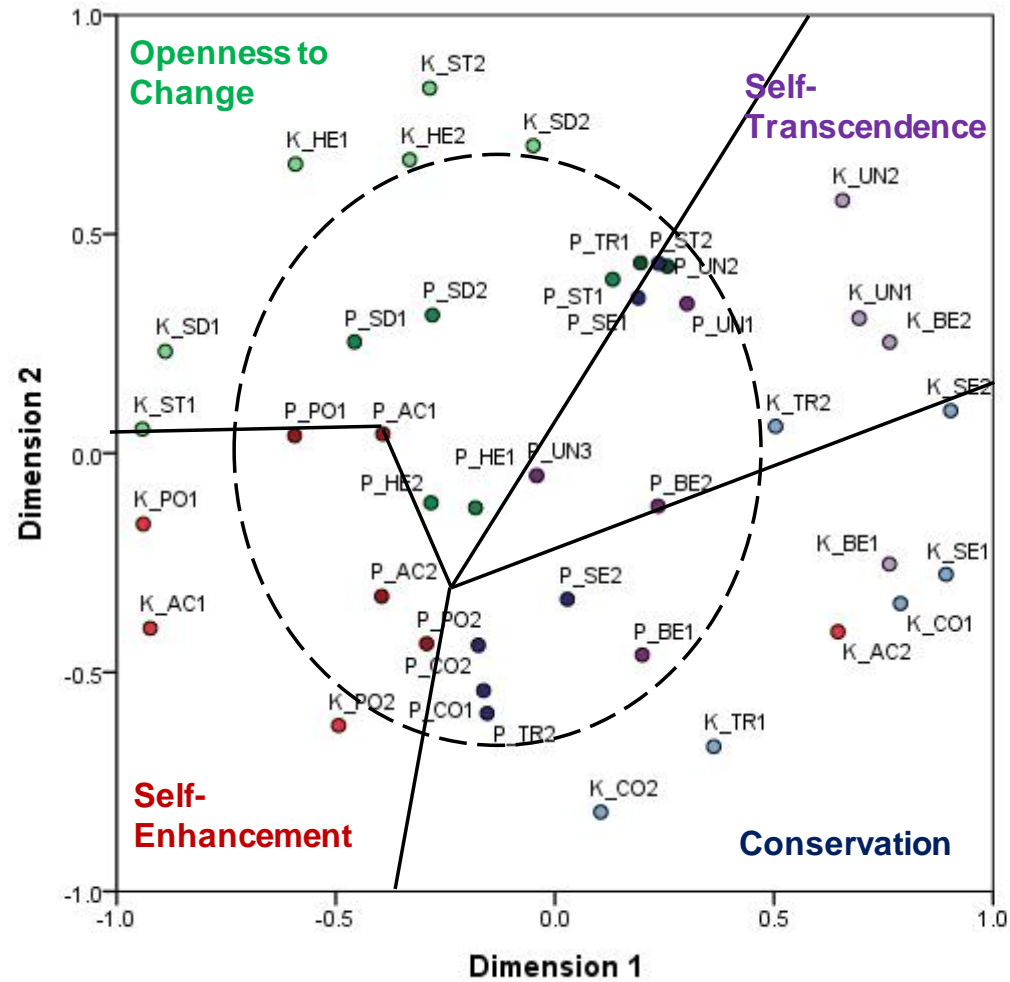


Figure A1. Multidimensional scaling of children's and parents' values. Each point represents one item. K=Child ("Kind" in German means child); P=Parent. Stress 1 = .288; UN=Universalism, BE=Benevolence, TR=Tradition, CO=Conformity, SE=Security, PO=Power, AC=Achievement, HE=Hedonism, ST=Stimulation, SD=Self-Direction.

Appendix 2: Sex-Differences in Value Priorities

Table A1

Gender Differences in Value Priorities

Values ¹	Swiss Sample (Study 1)						German Sample (Study 2)					
	Children			Parents			Children			Parents		
	<i>M (SD)</i>		<i>d</i>	<i>M (SD)</i>		<i>d</i>	<i>M (SD)</i>		<i>d</i>	<i>M (SD)</i>		<i>d</i>
Daughter	Son	Mother		Father	Daughter		Son	Mother		Father		
SeTr	0.59 (0.36)	0.37 (0.47)	0.53***	0.75 (0.33)	0.53 (0.39)	0.61***	0.50 (0.36)	0.25 (0.45)	0.61***	0.64 (0.37)	0.42 (0.45)	0.53***
SeEn	-0.69 (0.45)	-0.42 (0.57)	-0.53***	-0.67 (0.47)	-0.33 (0.56)	-0.66***	-0.60 (0.50)	-0.27 (0.60)	-0.60***	-0.60 (0.47)	-0.39 (0.60)	-0.39***
Con	0.06 (0.33)	-0.01 (0.34)	0.21	-0.06 (0.43)	-0.18 (0.47)	0.27***	0.12 (0.31)	-0.03 (0.32)	0.48**	0.03 (0.40)	-0.10 (0.42)	0.32**
OtC	0.01 (0.32)	0.04 (0.38)	-0.09	-0.12 (0.40)	-0.04 (0.47)	-0.18*	-0.06 (0.37)	0.05 (0.36)	-0.30	-0.17 (0.41)	0.01 (0.41)	-0.44***

Note. ¹ SeTr = Self-Transcendence, Con = Conservation, SeEn = Self-Enhancement, OtC = Openness to Change (including hedonism); *d* = mean differences effect sizes indicated by Cohen's *d*; *t*-Test **p* < .05, ***p* < .01, ****p* < .001.