[lrh]VIII. Emerging Issues and New Directions

[rrh]38. Personality Interventions

[cn]Chapter 38

[ct]Personality Interventions

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[bodyni]Personality traits are prospectively associated with a number of important life outcomes, at all ages of the lifespan, sometimes decades in advance (Roberts, Kuncel, Shiner, Caspi, & Goldberg, 2007). A common response to these associations is to ask why they occur, prompting a hunt for mechanisms that relate personality with outcomes such as health, divorce, educational attainment, and job success (e.g., Solomon & Jackson, 2014). An alternative response to the predictive validity of personality is ask whether one can modify personality in order to improve individual outcomes. At present, there is crosscutting, global interest in changing personality (Bleidorn et al., 2019). The sheer magnitude of the self-help literature, as well as self-reported desires to change personality (Hudson & Roberts, 2014**[AU: Add this to the references list]**), indicate that many people are unhappy with their current personality. Furthermore, the potential for impacting many life domains has generated public policy interests (e.g., as universal preschool) that hinge on the ability to cultivate personality (Heckman, 2006). Despite the interest and potential payoff of personality interventions, little is known about what makes an effective personality intervention.

[a]Should We Intervene to Change Personality?

[bodyni]Personality traits have a number of characteristics that make them appealing targets of intervention. First, personality traits are associated with life outcomes in almost all domains, even after accounting for background characteristics. Many of these outcomes take years to accumulate (e.g., health), so an intervention that targets processes early in the causal chain, like personality, would be optimal (Chapman, Hampson, & Clarkin, 2014). Second, a considerable body of research has demonstrated that personality traits are open to change across the lifespan. These changes likely occur due to experiences rather than to aging processes alone, implying that personality interventions are possible (Roberts & Jackson, 2008**[AU: Year verified online]**). Third, personality is relatively consistent across the lifespan, suggesting that if personality is modified through intervention, the effects of the intervention will be longer lasting. Unlike more ephemeral constructs, such as mood, and more stable constructs, such as fluid cognitive ability, personality represents a middle ground of being both open to change and relatively stable.

Despite the promise and the potential importance, it is not clear whether interventions on personality are feasible. First, there are the ethical challenges to changing aspects of personality, as personality often gets equated with a person’s identity and individuality. Interventions would thus reduce the variability in personality, leading to reductions in individuality, echoing the dystopian world of Vonnegut’s novella *Harrison Bergeron* novella, in which the constitution outlaws individual differences, such as cognitive ability. Proponents for personality interventions could argue that interventions are usually targeted to single characteristics, thus mitigating Harrison Bergeron’s concern. Anecdotally, people have fewer problems with intervening on cognitive ability (on which schooling presumably intervenes; Ritchie & Tucker-Drob, 2018**[AU: Year verified online]**) and to a lesser extent self-esteem (which was introduced into select schools; see Baumeister, Campbell, Krueger, & Vohs, 2003; Robins, Trzesniewski, & Donellan, 2012), presumably because the poles of these dimensions are almost universally regarded as positive. In contrast, the benefits of high levels of personality characteristics may not be so apparent. Although being high in conscientiousness is associated with a number of positive outcomes, there are still downsides to the trait that may prove undesirable (Jackson & Hill, 2019). Many people will likely be left uncomfortable with someone dictating what pole of a characteristic is considered positive, especially given evidence that each side has both positive and negative characteristics (Nettle, 2006**[AU: Add this to the references list]**).

The second barrier to feasible personality interventions is that processes underlying naturally occurring personality changes are mostly unknown. Despite a relative acceptance that experiences can shift personality, there are few life events that are consistently associated with changes in personality (e.g., van Scheppingen et al., 2016**[AU: Year verified online]**). It is useful to note this lack of progress toward identifying major events that are responsible for changes in personality before attempting to intervene on personality, because the mechanisms responsible for change in passive longitudinal studies and interventions are likely shared.

There are at least four issues to consider that complicate designing effective interventions. First, there are psychological mechanisms that promote stability in self-concept, presumably leading to greater personality consistency (Roberts, Wood, & Caspi, 2008**[AU: Author order verified online]**). A strictly environmental view on changing personality may not actively change one’s self-concept. Second, each environment is perceived subjectively. In terms of changing personality, it will be difficult to create subjective equivalence from the same objective intervention. Third, as seen in decades of work on interventions for cognitive ability, the extent to which an experience impacts someone is likely to be domain specific (Hertzog et al., 2008**[AU: Year verified online]**). This domain specificity would suggest that narrow changes in behaviors, thoughts, or feelings due to an intervention would not lead to broad personality change (see Jackson & Hill, 2019). In other words, it is easier to change some narrow behaviors but more difficult to change the broad thoughts, feelings, and behaviors that comprise one’s personality. Finally, when discussing changes in personality, it is possible that both personality structure and change occurs idiographically, at the individual level (Beck & Jackson, 2020**[AU: Year verified online]**). If true, then the mechanisms responsible for change are person specific, resulting in the need for personalized interventions to find effects.

Despite these roadblocks and an unclear road map of how to change personality, a number of existing interventions provide an indication of the features of an effective personality intervention. These studies mostly originate outside the field of personality and attempt to change consistent behaviors, thoughts, and/or feelings that could be considered “personality.” It is worth noting, however, that in most cases, changes in personality could be considered a side effect, separate from the original intent of the intervention. Below we describe the evidence that various interventions have had on broad behaviors, thoughts, and feelings that, in turn, may help identify what an intervention for changing personality would look like.

[a]Types of Personality Interventions

[b]Parent and School Programs

[bodyni]Many high-quality interventions occur in early childhood, predicated on the idea that if existing habits and tendencies exist, they can more easily be overwritten due to the “newness” of a child’s personality relative to that of an adult. These interventions take advantage of the fact that a child’s life is almost completely dictated by his or her guardians, thus allowing for interventions that target multiple aspects of a child’s life, from the family environment to the school environment. In addition to being presumed to be more malleable, childhood interventions are also sold as cost-effective: Early intervention provides more long-term effects due to the cumulative nature of most life outcomes (Heckman, 2006).

Several series of studies have focused on improving childhood mental and physical health. For example, the Nurse–Family Partnership program provides low-income, first-time mothers with pre- and postnatal education and home visits from nurses until the child reaches 2 years of age. Follow-ups indicate potential impact on personality in adolescence, with program participants being less likely to engage in risky smoking, alcohol, or sexual behavior and to have been arrested (Olds et al., 1998). Similarly, the Chicago Child–Parent Centers (CPC) program creates a stable environment so as to promote optimal academic and behavioral development (Reynolds, Temple, Robertson, & Mann, 2002) and is associated with better graduation rates and reduced arrest rates (Reynolds, Ou, & Topitzes, 2004). Studies such as these indicate that early interventions can have later life influences, potentially via personality, but the mechanisms responsible could operate through pathways other than personality. The Carolina Abecedarian Project (Campbell et al., 2014**[AU: Add this to the references list; here on first mention, name authors if there are 5 or fewer of them]**) found that the intervention effects are partially, but not entirely, due to socioeconomic status (SES), education, IQ (Conti, Heckman, & Pinto, 2016), leaving the door open to changes in personality mediating some of these childhood intervention effects. However, few early-life interventions include measures of personality.

One of the only long-term intervention studies to include a measure of personality is the Perry Preschool Project (Heckman, Pinto & Savelyev, 2013). A broad behavioral measure assessed during adolescence suggests that this intervention led to childhood differences in personality, which influenced later life health and labor-market outcomes (Heckman, Pinto, & Savelyev, 2013). The Perry Preschool Project was based on a Vygotskian approach that utilized active participatory learning. The program emphasized organizational skills, such as the ability to plan and execute tasks, as well as social skills, such as conflict management and cooperation. Although this is a promising study that provides a framework for the early life interventions that influence later personality, the Perry Project is limited in generalizability by being a single, small sample study of a relatively disadvantaged population.

The Perry Project was a prototype version of what effective early interventions could be and, as such, has since been emulated. A great number of Head Start programs, for example, employ a modified version of the Perry curriculum (Head Start Impact Study, 2010). Like the Perry Project, Head Start also shows later life benefits that are not attributable to the effects of cognitive ability (Carneiro & Ginja, 2014; Deming, 2009; Feller et al., 2016**[AU: Year verified online]**). However, a recent study found no personality differences during adolescence between those that were in Head Start versus a matched sample that either received a different type of daycare or no daycare at all (Jackson, Beck, & Weston, 2019). Altogether, childhood programs appear to be effective later in life, there is limited evidence that their effectiveness is due to changes in personality.

[b]Antisocial Behavior and Juvenile Delinquent Programs

[bodyni]Another common type of intervention is centered around antisocial behavior. Preventive awareness programs, such as Scared Straight, are based on the idea that youth can be deterred or scared away from deviant behavior by familiarizing them with the consequences. In Scared Straight, children are taken to visit prisons to deter them from engaging in misconduct. Such juvenile awareness programs quickly gained popularity, despite evidence that they are largely ineffective. Indeed, a meta-analysis of randomized clinical tests of juvenile awareness programs found that such programs had detrimental effects on postvisit criminal behavior (Petrosino, Turpin-Petrosino, & Buehler, 2003).

A more extreme form of preventive awareness programs are boot camps modeled after military programs. These boot camps hinge on Gottfredson and Hirschi’s (1990) general theory of crime, which proposes that deviancy is a consequence of inadequate constraints on an individual’s behavior. The discipline that is integral to boot camps should improve juveniles’ self-control and decrease future delinquency and recidivism. However, similar to awareness programs, a meta-analysis suggests that boot camps have been largely ineffective in reducing markers of antisocial behavioral such as recidivism (MacKenzie, Wilson, & Kider, 2001).

Another type of intervention for antisocial behavior, social-cognitive skills training, emphasizes changing the cognitive and information processing mechanisms that presumably underlie delinquent behavior. It draws on research suggesting that aggressive people tend to attribute others’ actions to hostile intentions and to attend to hostile cues more than do less aggressive people (e.g., Crick & Dodge, 1996; Dodge, 1993). Thus, by changing these maladaptive cognitions, one can reduce aggressive behaviors. Programs in this family target these cognitions by changing attention and response to social cues, updating goals and contingent responses to cues, and training those responses as habits (Crick & Dodge, 1994).

The prototypical example of this approach is the GREAT program (Guiding Responsibility and Expectations in Adolescents Today and Tomorrow; Meyer, Allison, Reese, Gay, & Multisite Violence Prevention Program, 2004) Although the program has been successful in changing social-cognitive information processing, it is less clear whether this results in behavioral change and whether the changes are long-lasting. A series of reviews and meta-analyses of the GREAT program suggests that the program may have detrimental effects: Participants in the program reported increased aggression and support for proaggression norms relative to controls. However, for the children at highest risk, the results suggest that the program is behaviorally effective (Simon, Ikida, & Smith, 2008**[AU: As meant? See references.]**).

Although many of the juvenile awareness, boot camp, and social-cognitive interventions are largely ineffective and potentially harmful, there is considerable heterogeneity in the effectiveness of programs within categories. A recent meta-analysis of the effectiveness of preventive and treatment-based interventions on adolescents’ antisocial behavior found that prevention-based interventions were less effective than therapy-based interventions in reducing antisocial behavior (Sawyer, Borduin, & Dopp, 2015). The effectiveness of more therapeutic approaches relative to other approaches suggests that notable change likely takes time to occur. Several key moderators indicate that including peer group members in the intervention protocol was effective for younger boys but not adolescent boys, and that parent involvement was more effective in samples that included a higher proportion of minorities. Another meta-analysis that focused specifically on which program features were associated with positive intervention effects identified intervention quality as a key factor (Lipsey, 2009). Overall, these mixed results suggest that therapeutic approaches for high-risk youth may be effective for antisocial tendencies, but despite considerable time and effort, it is unclear whether aspects of personality changed, or whether situations were changed such that opportunities for antisocial behaviors were reduced.

[b]Clinical Interventions

[bodyni]Within the clinical domain, a number of studies incorporate personality trait measures as one way to assess the pre- and posttreatment effects of therapeutic interventions on individuals’ functioning (e.g., Bagby, Joffe, Parker, Kalemba, & Harkness, 1995; Piedmont, 2001; M. Smith, Glass, & Miller, 1980; Trull, Useda, Costa, & McCrae, 1995). Therapy can be considered a direct intervention on personality, with the goal to change an aspect of a person’s maladaptive behaviors and/or thought process (Allemand & Flückiger, 2017).**[COMP: Special character ü in previous sentence]** A recent, large-scale meta-analysis found broad evidence for positive changes in personality as a response to therapy. Compared to controls, personality evidenced large magnitudes of change (*d* ≈ 0.47), across different therapy types and multiple assessment methods, was lasting after therapy ended (2+ months), and was effective regardless of age.**[COMP: Special character ≈ in previous sentence]** Furthermore, both clinical and nonclinical samples, using quasi- and truly experimental designs found evidence for a robust effect (Roberts et al., 2017).

Emotional stability and extraversion showed the most marked change in response to intervention. Agreeableness and conscientiousness changed more modestly, and openness appeared not to change. The findings for these traits are to be expected given that emotional stability includes components of anxiety and depression, often explicit targets of therapy. Because reducing components of neuroticism is often an objective of therapy, it is possible that the observed changes are due to short-term elevations brought on by what lead people into therapy to begin with, the onset of a depressive episode, for example. In other words, therapy may merely bring people back to a baseline levels of traits rather than meaningfully alter personality.

Much like therapy, eating disorders and substance use disorder (SUD) treatment can be seen as an intervention to change personality, though with a more explicit focus to modify health behaviors. In their meta-analysis, Roberts et al. (2017) found that treatment for both eating disorders and substance use was modestly effective for changing personality, but that, in general, these effects were smaller compared to other types of treatment. Moreover, when accounting for small study effects, they found no changes in personality for eating disorder treatment.

For SUDs, changes in impulsivity are thought to be an important mechanism toward effective SUD treatment, as substance use behaviors are strongly linked to impulsivity-related constructs (Littlefield & Sher, 2014) such as conscientiousness, neuroticism, and extraversion. Consistent with this idea, participation in Alcoholics Anonymous (AA), is associated with decreases in impulsivity across a 16-year time period, with longer participation associated with greater declines in impulsivity (Bloningen, Timko, Moos, & Moos, 2009). Similarly, impulsivity facets assessed via behavioral measures and traditional questionnaires showed changes in response to SUD treatment over a 4-week time span (Littlefield et al., 2015). Passive longitudinal designs also draw a link between decreases in alcohol use and decreases in impulsivity (Littlefield, Sher, & Wood, 2009**[AU: Add this to the references list]**).

Interventions for SUDs may end up changing personality by creating a positive psychosocial support network, coping skills, increased structure, and a framework for tackling negative patterns of thoughts and behaviors (Bloningen, Timko, & Moos, 2013). Consistent with this, decreases in impulsivity following AA predict fewer legal problems, fewer drinking problems, more social support, and more frequent use of adaptive coping skills (Bloningen et al., 2013).

[b]Psychopharmacological Interventions

[bodyni]Therapeutic interventions can also take the form of a pill rather than, or in addition to, therapy. Little work has systematically examined whether psychopharmacological interventions need to be paired with therapy or which drugs are effective, but meta-analytic findings suggest that psychopharmacological interventions are associated with changes in personality (Roberts et al., 2017). For example,DeFruyt, Van Leeuwen, Bagby, Rolland, and Rouillon (2006) found that individuals treated with a combination of either tianeptine or fluoxetine, along with therapy, showed greater extraversion, openness to experience, agreeableness, and conscientiousness following treatment. Similarly, in a sample of depressed individuals, use of cognitive therapy and medication (selective serotonin reuptake inhibitors [SSRIs]) were associated with changes in neuroticism and extraversion compared to a control group (Tang et al., 2009). Most interestingly, changes in depression were shown to be the result of changes in neuroticism, and long-term relapse in depression was explained by changes in neuroticism, such that people who decreased the most on neuroticism were the least likely to experience a relapse. In a similar study, both pharmacological intervention (antidepressant) and therapy (cognitive-behavioral) were associated with declines in neuroticism and increases in conscientiousness in a large sample of depressed patients (Spittlehouse et al., 2010).

The existing literature points to changes mainly in neuroticism due to pharmacological intervention, most likely a result of the effectiveness of drugs to treat depression and anxiety, which are facets of neuroticism. Yet there is a rich oral history on the effect of lysergic acid diethylamide (LSD), mescaline, and psilocybin (magic mushrooms), affecting one in a deep spiritual and transcendent level, potentially altering the personality (Unger, 1963). Most of the reported changes were retrospective, and without any systematic assessment of personality, mirroring the take-it-with-a-grain-of-salt statements some may make after seeing a “life-altering” concert or when someone finds religion. An exception is a nearly 60-year-old study on the effects of a large single dose of LSD. Changes in Minnesota Multiphasic Personality Inventory (MMPI)-assessed personality were found after 2 months for most participants. However, these changes tended to not persist, as only some participants evidenced change at a 6-month follow-up. A more recent, small sample study also found evidence of short-term change in a group that took LSD displayed increased openness over 2 weeks compared to a control group (Lebedev et al., 2016). Some evidence suggest changes are not just short term. A study in which participants took a high dose of psilocybin found increases in openness after a 1-year follow-up, with no changes for the any of the remaining Big Five traits. These changes were mainly driven by those who had greater mystical experiences during their mushroom trip (MacLean, Johnson, & Griffiths, 2011). Another study found changes in all Big Five traits except for agreeableness after 3 months (Erritzoe et al., 2018**[AU: Year verified online]**). The potential for meaningful change and shifting attitudes about psychedelics have prompted more researchers to study the effects of psychedelics on changing thoughts, feelings, and behaviors (Pollan, 2019**[AU: Add this to the references list]**).

[b]Strengthening Self-Control

[bodyni]Low levels of self-control are blamed for a number of societal ills, from eating an extra piece of cake to missing important work meetings (Baumeister & Tierney, 2011**[AU: As meant?]**). The ego control model of self-control states the self-control can be conceived as a muscle, and much like a muscle, self-control can be strengthened through sustained practice. Numerous researchers have attempted to intervene and train self-control (e.g., Gailliot et al. 2007; Muraven, 2010; Oaten & Cheng, 2007). In each of these studies, participants are asked to do various activities that typically deplete self-control, such as regulating speech or diet, using one’s nondominant hand, or practicing with a handgrip for periods ranging from 2 weeks to 4 months. Gains in self-control were found in a recent meta-analysis of self-control training interventions in which people were randomly assigned to practice at activities thought to deplete self-control (Friese, Frankenbach, Job, & Loschelder, 2017). However, there are concerns of small-study bias driving these results, calling into question the efficacy of these types of interventions. Furthermore, a replication study using traditional ego depletion, as well as standard questionnaires as measures of self-control that used a larger sample size and completed training and follow-up assessments over a longer period of time, found no evidence for the effectiveness of these interventions (Jackson, Kube, & Mike, 2018).

[b]Health Interventions

[bodyni]One difficulty in parsing the health intervention literature (e.g., Glanz & Bishop, 2010) is that many health interventions focus on changing health behaviors (e.g., exercise, diet) that conceptually overlap with assessment of personality traits such as extraversion and conscientiousness (Jackson, Weston, & Schultz, 2017). Outside of the measurement overlap issues, the few interventions that assess personality pre- and postintervention find limited change. For example, a meta-analysis of interventions to improve the health of those with coronary heart disease (behavior modification and health education) found no subsequent changes in anxiety or depression, the only personality variables assessed (Dusseldorp, van Elderen, Maes, Meulman, & Kraaij, 1999). In contrast, a 2-month hostility intervention led to changes in both hostility and blood pressure compared to a control group (Gidron, Davidson, & Bata, 1999).

Exercise interventions are some of the most frequent and effective health interventions. In terms of psychological benefits, exercise impacts phenomena related to personality, including positive and negative affect (Trost, Owen, Bauman, Sallis, & Brown, 2002; Reed & Ones, 2006), depression (Carek, Laibstain, & Carek, 2011), anxiety (De Moor, Beem, Stubbe, Boomsma, & De Geus, 2006), and psychological well-being (Netz, Wu, Becker, & Tenenbaum, 2005). Several meta-analyses and reviews have concluded that exercise reduces the symptoms of depression at levels comparable to those achieved by antidepressant medications (Bridle, Spanjers, Patel, Atherton, & Lamb, 2012). Together these findings indicate that extraversion and neuroticism could be impacted by an exercise intervention.

Exercise also affects cognitive functioning. Compared to older adults who are sedentary, active older adults exhibit better executive control (Colcombe & Kramer, 2003), processing speed (Smith et al., 2010), and memory (Hindin & Zelinski, 2012; P. Smith et al., 2010**[AU: Year verified online]**). Cognitive control has been linked to conscientiousness (Bogg & Finn, 2010), while processing speed (Bates & Shieles, 2003) and memory (Kaufman, 2013) have been linked to openness, suggesting that cognitive improvements may be associated with concomitant personality changes.

[b]Cognitive Training

[bodyni]There are many attempts at interventions to thwart the seemingly inevitable decline in cognitive ability as one ages. These interventions usually involve training in one particular cognitive domain or task, usually for a period of weeks or months. Training interventions are found to be effective inasmuch as people are able to increase the cognitive domain for which they have trained, but there is little evidence for widespread transfer to other domains (Hertzog et al., 2008). While cognitive training does not have widespread effects for all cognitive abilities, there are some indications that the changes within a domain are associated with changes in personality. Jackson, Hill, Payne, Roberts, and Stine-Morrow (2012) found that older adults who performed inductive reasoning training over 16 sessions, along with crossword and Sudoku puzzles in which difficulty level matched with skill level, increased in openness to experiences compared to an active control group. Presumably, participants valued the accomplishment of working through the puzzles week after week, thus feeling more capable and comfortable with cognitively challenging tasks. It is unclear however, whether these self-reported changes lead to observable behavior changes.

Following up on this work, Sander, Schmiedek, Brose, Wagner, and Specht (2017) conducted an extensive cognitive training intervention (memory and perceptual speed) over the course of 100 days with more than 1 hour per day devoted to cognitive training. In contrast to Jackson et al. (2012), no changes in openness due to cognitive training were found. It is unclear whether changes in openness did occur but only changed temporarily, as personality was only assessed at a 2-year follow-up. While the intervention was not associated with openness, it was associated with increases in memory and perceptual speed and decreases in conscientiousness.

[b]Coaching

[bodyni]A response to the success of clinical interventions, paired with overwhelming desire for many people to change nonclinical features, is the development of coaching programs to change personality. Coaching programs identify aspects of personality that a person wants to change, then guides them through the change process based on principles of therapy (Allemand & Flückiger, 2017). Some success has been achieved using short-term interventions. For example, over 15 weeks, people changed their personality via weekly challenges, in which participants were coached to act in accordance with the trait pole they wanted to change (Hudson, Briley, Chopik, & Derringer, 2019). Similarly, a 10-week coaching program extended the idea of behaving in accordance with trait manifestations by working with a coach to identify roadblocks of behaving in a trait-consistent manner, as well as developing a more elaborate strategy that targeted specific traits (Allan, Leeson, De Fruyt, & Martin, 2018). Such targeted strategies that are specific to the individual can be easily delivered via instant messages or through apps. For example, the recently developed PEACH (PErsonality coACH) app assists with coaching via an artificial intelligence (AI)-assisted chat-bot to increase motivation and involvement (Stieger et al., 2018).

[a]Unanswered Questions and Future Directions

[bodyni]The studies we have reviewed cover many different approaches to change personality. From early childhood-based home interventions to ingesting mushrooms, the strategies used to impart change range from changing the surrounding environment to changing behavior directly or indirectly related to personality, to changing thought processes, all the way to changing neurotransmitters. A sober conclusion relative to the reviewed studies suggests no clear way to change one’s personality. Of those interventions that found evidence of change, each has limitations. For example, most studies lacked a representative sample or were selected because of some characteristic (e.g., disadvantaged or experiencing anxiety). Beyond selection bias, few studies looked systematically at how intervention length and follow-up period influenced findings, or whether personality assessed via different modalities also evidenced change. As a result, it is difficult to say there is a known method to change personality. The lack of progress in identifying how to intervene on personality should not be too surprising, as few studies have explicitly attempted to change personality. Moreover, intervening on any aspect of one’s psychology is difficult, as seen in related literatures (e.g., Kreplin, Farias, & Brazil, 2018; Sisk, Burgoyne, Sun, Butler, & Macnamara., 2018). Below we highlight three important questions that should guide future work.

[b]Which Experiences Are Needed to Change Personality?

[bodyni]One difficulty in identifying which interventions are effective is knowing the processes involved in personality change. It would be easier to create an effective intervention if one knew the reasons that drive personality change. Current thought is that changes in personality come via an environment stimulus, which directly impacts state-level manifestations of personality, not trait levels (Roberts & Jackson, 2008; Wrusz & Roberts, 2017). Thus, for the environment to engender lasting changes in personality, shifts in states beyond what is typical in everyday life are necessary (Chapman et al., 2014; Magidson, Roberts, Collado-Rodriguez, & Lejuez, 2014). Shifts in personality states then work through a “bottom-up” process that eventually leads to lasting changes in the trait, in which the shifts in states feel natural and occur automatically. Shifts in states can come from expectations and contingencies in the environment, either through naturally occurring environments such as one’s workplace or one that is purposely imposed, such as an intervention. This “fake it until to you make it” view in which personality states are shifted beyond typical levels can be seen as the motivating theory behind the self-control, cognitive, and coaching training interventions.

Given the lack of success in many of these training interventions, shifting states may be necessary but not sufficient to alter personality. Will any shift in a state related to a trait over a period of time lead to change, or does some form of active participation need to occur? For how long does this need to occur? Factors such as being motivated to change, conscious awareness of shifting states, valuing the potential change, and having a set of skills to continue enacting state changes may also be necessary. An example of taking some of these considerations into account can be seen in behavioral activation therapy (see Magidson et al., 2014, to see what this would look like in the context of a personality intervention). The focus of behavioral activation therapy is to identify which behaviors are consistent with one’s values or goals, identify the daily activities consistent with those values, and create a plan to engage in those activities (Lejuez, Hopko, & Hopko, 2001). The goal of behavioral activation therapy is similar to the proposed mechanisms of personality change in which the immediate aim is to alter personality states, but importantly, these states are made explicit and necessitate acknowledging the value in changing states, going so far as creating a plan to continue the shifts in states.

[b]How Long Should Interventions Be?

[bodyni]Most dominant personality theories do little to explain continuity and change in personality during the time course typically found in interventions, as these theories are framed in terms of years and decades rather than the weeks to months time frame typical of interventions. Just how fast can personality change? Short-term interventions are likely to be more effective for prompting effortful processes such as cognitive reframing or situation manipulation, but perhaps not lasting personality change. Personality interventions attempt to provide the means or skills for people to change their behavior, thoughts, and feelings, but the changes most likely are not natural and effortless, instead taking energy and awareness to implement. As a result, prolonged behavioral changes are likely to take time. Similar to learning a second language but not practicing it for years, it is also likely that interventions need follow-up or booster interventions to keep learned skills sharp. Ideally, an intervention should provide a skill such riding a bike, so that once that skill is acquired, it is always there, with no additional training or booster sessions necessary. But it currently is not clear what length of intervention would accomplish this goal, as dose effects have not been systematically examined.

Contrasting the notion of lengthy interventions is the effectiveness of short therapeutic interventions (Roberts et al., 2017). Notably, there was a nonlinear relationship between the length of intervention and its impact on personality, with intervention effectiveness leveling off at approximately 2 months (Roberts et al., 2017). However, there is a possibility that the effectiveness of a short-term intervention is due to pathoplastic effects, whereby elevated levels of the trait are due to the circumstances that lead someone to enter into therapy in the first place (Noordhof, Kamphuis, Sellbom, Eigenhuis, & Bagby, 2018). Reverting back to one’s “set point” or ridding oneself of external factors that led to temporary changes in personality would not constitute a successful personality intervention.

[b]What Age Is Most Effective for Interventions?

[bodyni]Early interventions are often priorities, because children are thought to be more malleable (due to fewer environmental constraints and other factors), and because their life paths have not yet congealed toward a particular direction, which tends to happen after education, occupation, and family choices are made. As a result, many advocate that early childhood interventions should be prioritized (Heckman, 2006). Overall, early school, family, and antisocial interventions suggest that interventions could be effective for personality-related outcomes. However, a number of the processes thought to drive personality trait change rely on changes to the self-concept, and an ability to be motivated towards an end goal. These proposed prerequisites may be difficult to accomplish for children, especially preschool-age children. In contrast, adults and older adults have a more set identity and a lifestyle that is entrenched by decades of familiarity.

[a]Conclusion

[bodyni]If a person is unhappy with his or her personality, it is currently not possible to provide a solution with a well-validated intervention. Although there is promise across a diverse range of interventions, lacking is any preregistered randomized controlled trial (RCT) that adheres to Consolidated Standards of Reporting Trials (CONSORT) guidelines, which currently serve as the “gold standard” for intervention evaluation. The multiple types of interventions we have reviewed indicate that future editions of this handbook will likely provide clearer guidelines for the person who is unhappy with his or her personality. To make this a reality, more research attempting to change personality is needed. Despite the obvious benefits for the individual and society, there are few direct efforts outside of therapy that attempt to change general aspects of one’s personality.

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