



A Brief Primer on Self-Esteem

By Richard W. Robins, Ph.D., Kali H. Trzesniewski, Ph.D., and M. Brent Donnellan, Ph.D.

Self-esteem is one of the most widely studied variables in the social and behavioral sciences. A vast literature spanning many disciplines has shown that high self-esteem is associated with the behaviors, goals, and coping processes that facilitate success in school, work, and relationships. Conversely, low self-esteem is a known risk factor for mental health problems (especially depression), antisocial behavior, and substance abuse. In light of these findings, the promotion of high self-esteem and the prevention of low self-esteem is an important societal goal. In this article, we provide a primer on the construct of self-esteem and review the literature on self-esteem interventions.

WHAT IS SELF-ESTEEM?

Self-esteem can be defined as *an individual's subjective evaluation of her or his worth as a person*. This definition builds on William James' (1885/1892) seminal conceptualization of self-esteem as the degree to which people perceive their accomplishments as consistent with their goals and aspirations. Morris Rosenberg (1965), creator of the most widely used self-esteem scale, added that self-esteem involves feelings of self-respect, self-liking, and self-acceptance. These definitions have been applied to both global and domain-specific self-esteem. Global self-esteem refers to an individual's overall evaluation of herself or himself, whereas domain-specific self-esteem concerns specific facets of the self, such as physical appearance or academic competence. Although domain-specific self-perceptions are often thought of as the building blocks of global self-esteem, they are not always perfectly

aligned. For example, an adolescent girl may have a generally positive view of herself, yet see herself as physically unattractive. Given the voluminous literature on self-esteem, we focus on global self-esteem in this article.

Some authors suggest that self-esteem should accurately reflect a person's true worth (Baumeister et al., 2003). This conceptualization requires an "external yardstick" to evaluate a person's actual traits, skills, and abilities. For classic writers like James and Rosenberg, the notion of judging the accuracy of one's self-esteem by reference to objective criteria is at odds with the phenomenological nature of the construct. The phenomenological definition of self-esteem also bypasses thorny questions about the values used to evaluate a person's worth. As Tangney and Leary (2003) noted, it does not seem appropriate to suggest that people who are unattractive, disabled, socially awkward, and who otherwise lack socially desirable attributes should not take a positive attitude toward themselves.

When defining self-esteem, one critical issue concerns the distinction between global self-esteem and narcissism. Researchers, practitioners, journalists, and others often equate high self-esteem with narcissism in debates about the costs and benefits of high self-esteem and the value of self-esteem enhancement programs. The idea that high self-esteem and narcissism are interchangeable has generated concern that "the societal pursuit of high self-esteem for everyone may literally end up doing considerable harm" (Baumeister, Boden, & Smart, 1996, p. 29). However, this concern may not be warranted because healthy self-regard and narcissistic self-views are quite different psychological characteristics. Individuals with high self-esteem like and accept themselves, but they do not show the grandiosity, entitlement, and exploitative

behavior of highly narcissistic individuals. Rosenberg (1965) recognized the importance of this distinction when he wrote that “when we deal with self-esteem, we are asking whether the individual considers himself adequate—a person of worth—not whether he considers himself superior to others” (p. 62).

A large body of empirical research supports the theoretical distinction between self-esteem and narcissism. If high self-esteem and narcissism reflect the same psychological tendencies, then measures of these two constructs should show uniformly strong positive correlations. However, studies have shown that self-esteem and narcissism are only moderately correlated, and these correlations are even negative for the more maladaptive features of narcissism, such as entitlement or the belief that one deserves special privileges at the expense of others (Ackerman et al., 2011; Rosenthal et al., 2011); in other words, low (not high) self-esteem is associated with feelings of narcissistic entitlement. To the extent that narcissists sometimes express highly positive views about themselves, these inflated self-views are believed to be attempts by the narcissist to cover up or block out their more deep-seated feelings of worthlessness. In addition to evidence that self-esteem and narcissism are only moderately correlated, numerous studies have shown that they predict different behaviors and outcomes. For example, a high self-esteem person tends to be less aggressive than a low self-esteem person, whereas narcissistic individuals tend to be more aggressive than non-narcissistic individuals (Donnellan et al., 2005; Rosenthal et al., 2011). Indeed, a growing body of research suggests that high self-esteem, when properly distinguished from narcissism, is associated with a wide range of positive life outcomes, including enhanced health, wealth, and well-being (see “Association with Life Outcomes” below). Finally, we know of no studies that have examined whether programs aimed at increasing self-esteem actually lead to narcissism. This is an important gap in the literature that needs to be addressed. Nonetheless, the emerging body of research linking narcissism with societal problems should not be uncritically applied to self-esteem, given the theoretical and empirical differences between the two constructs.

MEASURING SELF-ESTEEM

The definition of self-esteem is inextricably linked to its measurement. The longstanding view that self-esteem reflects a person’s *subjective experience* implies that if Jane sees herself as a competent, likable, and valued person, then she necessarily has high self-esteem, regardless of her actual abilities, traits, and social status. Given this conceptualization, it is not surprising that global self-esteem is almost always measured via self-report scales (see Byrne, 1996, for an overview and evaluation of different scales). By far the most frequently used self-report measure is the Rosenberg Self-Esteem Scale (Rosenberg, 1965), which contains items such as “I take a positive attitude toward myself” and “On the whole, I am satisfied with myself.” Other popular measures include the Self-Esteem Inventory (Coopersmith, 1967), the Harter Self-Perception Profile (Harter & Pike, 1984), and the Marsh Self-Descriptive Questionnaire (Marsh, Ellis, Parada, Richards, & Heubeck, 2005). The Harter and Marsh measures include different forms for children, adolescents, and adults, as well as developmentally appropriate global and domain-specific self-esteem scales.

In general, these scales tend to produce similar results—a person who scores high (or low) on one self-esteem scale is likely to score high (or low) on another scale. The scales also tend to produce very stable scores—a person who scores high (or low) at one point in time is likely to score high (or low) months or even years later. Thus, self-esteem scores do not just reflect a person’s current mood, but rather a more stable aspect of how they see themselves.

Interestingly, self-esteem scales are only moderately related to parent, peer, and teacher reports of self-esteem; in other words, people who score high on self-esteem scales are not always perceived as having high self-esteem by their parents, peers, and teachers. This lack of correspondence may reflect the fact that others do not have access to a person’s private thoughts and feelings (e.g., parents do not always know what their adolescent children are thinking about themselves), or that some people are either unable or unwilling to provide accurate reports about their self-worth (e.g., an individual may try to convince himself that he is an attractive, talented, and worthy person yet this thin veneer masks insecurities that are all too apparent to others). Despite this latter possibility, we believe that the empirical evidence clearly demonstrates that self-report measures of self-esteem are the most reliable and valid way to assess self-esteem.

©Steve Debenport/Stockphoto.com



Domain-specific self-esteem concerns specific facets of the self, such as physical appearance or academic competence.

HOW DOES SELF-ESTEEM CHANGE ACROSS THE LIFESPAN?

One way to understand the development of self-esteem is to chart how people, on average, change as they go from one stage of life to the next. Research examining at what point in life people tend to have low self-esteem provides useful information about when to implement interventions aimed at boosting self-esteem. Over the past few decades, a number of studies have provided a fairly consistent picture of the way self-esteem levels wax and wane over the life course. Although individuals differ substantially in the particular trajectory they follow, on average, self-esteem tends to be high in childhood, drop during adolescence (more so for girls than boys), increase gradually throughout adulthood, and then decline again in old age. A vast array of psychological theories have been marshaled to account for each of these developmental changes (for a review, see Robins & Trzesniewski, 2005).

Despite age-related changes in the average level of self-esteem, individuals who have relatively high (or low) self-esteem at one point in time tend to have relatively high (or low) self-esteem years later (Trzesniewski, Donnellan, & Robins, 2003). Although generally high across the lifespan, this kind of consistency is somewhat lower during adolescence and old age than during adulthood. One explanation for this pattern is that adolescence and old age are both transition points, during which individuals are faced with substantial social, cognitive, and biological changes. For example, during adolescence, individuals often experience rapid physical changes attributable to puberty, along with changes in their educational settings and peer relations. Similarly, the later phases of life often involve health-related declines, cognitive declines, changes in work roles due to retirement, and the loss of spouses and friends due to mortality. These changes in major domains of life may impact individuals in different ways, thereby shifting the relative ordering of individual differences in self-esteem during adolescence and old age more so than during other age periods.

THE ROLE OF NATURE AND NURTURE IN SHAPING SELF-ESTEEM

Many classic developmental accounts emphasize the role of factors such as relationships with parents and peers as important contributors to self-esteem (e.g., Harter, 2006). However, there is also a biological component to self-esteem that is being increasingly recognized. Research on twins suggests that genetic factors account for about 40% of the variability in self-esteem, a finding that has been replicated in several independent studies (e.g., Kamakura, Ando, & Ono, 2007; Kendler, Gardner, & Prescott, 1998; Neiss, Sedikides, & Stevenson, 2002). The heritability of self-esteem, which approaches that found for basic personality traits, is consistent with theories and research that suggest that a person's traits are a product of both their genes and their environment. That is, self-esteem emerges from complex transactions between a person's genetic make-up and his or her family, social, and cultural context. For example, genetically influenced differences in temperament, intelligence, physical attractiveness, health, and so on will shape which social contexts individuals seek out; the reactions they elicit from parents, peers, relationship partners, and other important figures in their lives; and their capacity to attain success in work and relationship contexts. Collectively these interpersonal processes and environmental influences may in turn shape the individual's level of self-esteem.

It is important to emphasize that no one claims there is a single gene that codes for high (or low) self-esteem; it is much more likely that a vast number of genes contribute to self-esteem. However, researchers are beginning to develop a list of which genetic factors are most relevant. For example, recent research suggests that self-esteem is influenced by the oxytocin receptor gene (Saphire-Bernstein, Way, Kim, Sherman, & Taylor, 2011). Past research has linked this oxytocin receptor gene to how individuals deal with stress and their social skills. Likewise, no one who conducts research on the heritability of self-esteem believes that environmental factors are unimportant. The value of twin studies, and other genetically-informed research designs, is that they highlight the importance of both nature and nurture, and the way they work together to shape self-esteem development. In some ways, evidence that self-esteem has a genetic component should not be surprising as it is hard to find categories of human behavior that are not influenced at some level by genetic factors. The issue for the future is to understand how biological and social factors work together to influence self-esteem. It is exciting that the pathways from genes to environment to self-esteem are beginning to be studied.

ASSOCIATION WITH LIFE OUTCOMES

High self-esteem is generally viewed as an important component of psychological health and well-being. One of the most contentious debates in the self-esteem literature, however, concerns whether self-esteem exerts any *causal influence* on life outcomes (Baumeister, Campbell, Krueger, & Vohs, 2003; Trzesniewski et al., 2006). In other words, does having high self-esteem cause a person to be happier and more successful in life or does being happier and more successful lead to higher self-esteem (or does some other developmental factor such as good parenting lead to both high self-esteem and positive life outcomes)? This is a difficult question to test because the most accepted way to establish causality is by conducting experiments and changing the variable of interest, in this case self-esteem, in a controlled, lab setting. However, it is difficult—both ethically and practically—to produce meaningful changes in a person's self-esteem in a laboratory setting (e.g., by telling people that they have been rejected by their peers or did poorly on an intelligence test), and even more difficult to evaluate the causal impact of these manipulations on long-term, real-world outcomes (e.g., career success). Moreover, until recently, most of the research examining real-world outcomes has simply demonstrated

an association between self-esteem and the outcome of interest (people with high self-esteem tend to have successful careers), leaving open the question of what is causing what (perhaps people with successful careers tend to develop high self-esteem).

As a result of these limitations, Baumeister and colleagues (2003) published an extensive critique of self-esteem, and concluded that there is no evidence that it actually causes anything of importance in a person's life. However, research published in the wake of this review suggests that this conclusion was premature. A number of recent, well-designed longitudinal studies have shown that global self-esteem predicts a wide range of life outcomes. For example, Trzesniewski and colleagues (2006) found that adolescents with higher self-esteem had better mental and physical health, better economic prospects (e.g., better graduation rates), and lower levels of criminal behavior (according to criminal records) during adulthood, compared to adolescents with low self-esteem. Statistical analyses showed that these long-term consequences of self-esteem were not due to overlap between adolescent self-esteem and adolescent depression, gender, socioeconomic status, and other potential confounding variables. In addition, Orth and colleagues (in press) have conducted a number of well-designed, longitudinal studies and found that self-esteem is a consistent predictor of important life outcomes, such as depression (even after removing any questions related to low self-esteem on the depression measures). It is important to note that in these studies the life outcomes did not generally predict self-esteem. This helps strengthen the conclusion that self-esteem is a cause, not a consequence, of life outcomes. An important agenda for future research is to fully explore the various biological, cognitive, affective, interpersonal, and social-contextual processes that account for the widespread effects of self-esteem.

DO SELF-ESTEEM INTERVENTION PROGRAMS WORK?

The possibility that global self-esteem is causally related to better life outcomes naturally raises questions about interventions. Although some have expressed pessimism about the efficacy of self-esteem interventions and even suggested they have created legions of narcissistic boys and girls, the existing evidence is actually more promising. Meta-analytic reviews of self-esteem intervention programs for children and adolescents indicate that it is possible to "significantly improve" levels of self-esteem and to obtain positive changes in other areas of adjustment (Haney & Durlak, 1998, p. 429).



Average levels of self-esteem tend to decline from childhood to adolescence, increase from adolescence through adulthood, and then decline in old age.

More recently, O’Mara and colleagues (2006) found that programs designed to enhance global and domain-specific self-esteem produced positive benefits for children and adolescents. Interestingly, programs targeting domain-specific self-evaluation tended to have larger effect sizes for relevant outcomes than programs targeting global self-esteem. For example, programs designed to increase academic self-worth led to larger improvements in grades than programs that increased global self-esteem. Thus, although they found that global intervention efforts produced positive effects across a wide range of outcomes, they concluded that an ideal intervention should focus on “enhancing self-concept in specific areas relevant to the goals of the intervention” (p. 198). On the other hand, it might be most effective to attempt to do both—enhance domain-specific and global self-worth—given that global interventions may have more pervasive effects on youth development, leading to cumulative, cascading benefits; however, more research is needed to test this hypothesis. O’Mara and colleagues also recommend combining self-esteem enhancement with interventions that directly target the outcome of interest. For example, if the goal is to improve academic achievement, then a combined intervention program might attempt to improve students’ beliefs about their academic ability and promote skills and strategies that contribute to good grades. A combined intervention would provide the individual with the resources needed to maintain both high self-esteem and high performance over longer periods of time.

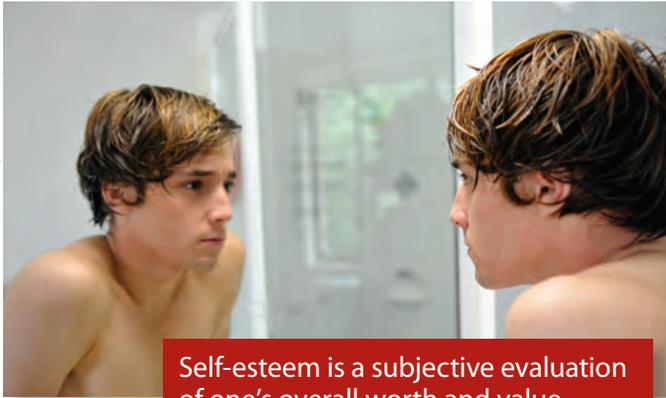
In addition to testing the impact of various interventions, O’Mara and colleagues also identified the characteristics of the most successful interventions (see O’Mara et al., 2006, for details on specific characteristics). This information is helpful for designing new programs and improving existing ones. They found that the most common type of intervention was one that

focused on practice or training for a specific task. This strategy yielded a positive result, but was not nearly as powerful for increasing self-esteem as interventions that used praise and/or feedback. Specifically, interventions that used attributional feedback (e.g., helping individuals attribute outcomes to effort), goal feedback (e.g., promoting realistic and attainable goals), and contingent praise (e.g., praising individuals for effort and improvements in performance) had the most powerful effect. The use of noncontingent praise was not effective (e.g., just providing positive feedback unrelated to actual performance). That is, it is not effective to tell people they are great in the absence of real accomplishments and/or mastery experiences.

Another type of intervention that was not covered in these two meta-analyses was developed by Mark Baldwin at McGill University (Dandeneau & Baldwin, 2004). The goal of this program of research is to change people’s automatic reactions to positive and negative experiences and information, such as feedback from other people. For example, people with low self-esteem are particularly attuned to signs of social rejection and more likely to interpret ambiguous social experiences as evidence of rejection. To alter these automatic reactions, Baldwin and colleagues developed a computer game that trains people with low self-esteem to ignore information about rejection. Their game, EyeSpy, displays a set of 16 faces, one of which is smiling and the others with negative, rejecting expressions. The player is instructed to find and select the smiling face as quickly as possible. Dandeneau and Baldwin (2004) found that playing this game made those with low self-esteem less sensitive to rejection. This research is promising; however, to our knowledge this method of helping people with low self-esteem has not been applied in individual counseling sessions.

Table 1.1
Core Conclusions from Research on Self-Esteem

Definition	Self-esteem is a subjective evaluation of one’s overall worth and value.
Self-Esteem and Narcissism	Self-esteem and narcissism are conceptually different. Individuals with high self-esteem like and accept themselves but they do not show the grandiosity, entitlement, lack of empathy, and exploitative behavior of narcissistic individuals.
Measurement	Global self-esteem can be measured with relatively short self-report scales. The 10-item Rosenberg Self-Esteem Scale (Rosenberg, 1965) is the most commonly used measure. A large literature provides evidence for the reliability and validity of this scale, as well as other self-report measures of self-esteem.
Development	Average levels of self-esteem tend to decline from childhood to adolescence, increase from adolescence through adulthood, and then decline in old age. Individual differences in self-esteem are moderately stable across the life span; that is, individuals with relatively high self-esteem tend to remain relatively high whereas those with relatively low self-esteem tend to remain relatively low. To the extent that individuals change in their relative standing, the most pronounced changes occur during adolescence and old age.
Nature and Nurture	Like almost all psychological characteristics, genetic factors play a role in explaining variation in self-esteem. About 40% of the observed variability in global self-esteem is due to genetic factors. This means that a substantial amount of variation is attributable to environmental factors. Researchers are currently investigating how biological and environmental factors work together to produce self-esteem.
Life Outcomes	High self-esteem is prospectively associated with better mental and physical health, better economic prospects, and lower levels of criminal behavior even after controlling for depression and other relevant variables. Emerging research suggests that low self-esteem is a vulnerability factor for the development of depression. However, a causal interpretation of these findings is controversial as is true of all research based on non-experimental designs.
Interventions	Self-esteem intervention programs can have beneficial effects, with the greatest benefit coming from programs that target the specific outcome of interest in conjunction with efforts to bolster general feelings of self-worth as well as self-conceptions in the specific areas targeted by the intervention. The most successful self-esteem interventions focus on providing contingent praise (emphasizing effort and improvements in performance), attributional feedback, and goal feedback.



Self-esteem is a subjective evaluation of one's overall worth and value.

It is important to emphasize that the umbrella term “self-esteem intervention” covers a broad range of programs and intervention strategies. Some programs are likely to be effective whereas others are likely to be ineffective. Like any psychological intervention, there is even the possibility that some self-esteem programs will have negative consequences (see Lilienfeld, 2007). Thus, it is important for researchers and practitioners to engage in rigorous program evaluation before implementing and continuing to provide any self-esteem intervention. Nonetheless, we believe there is sufficient evidence that self-esteem enhancement programs can be beneficial when properly conceptualized and implemented. In addition, it seems likely that these programs would be most useful if they occurred just prior to the developmental turning points of adolescence and old age, when many people tend to experience declines in their self-worth.

CONCLUSIONS

The study of self-esteem has made considerable progress since William James first introduced the construct to psychology well over 100 years ago. A wealth of knowledge has accumulated, and we can now reach several conclusions about the nature of self-esteem that provide a foundation for future research and practice. These conclusions are summarized in Table 1.1. Several key points are

worth emphasizing. First, self-esteem is a subjective evaluation about the self, and it is conceptually and empirically distinct from narcissism. Indeed, it is important that the two constructs are not used interchangeably in discussions about the social problems associated with narcissism, which do not apply to more balanced feelings of acceptance and self-worth. Second, in light of the subjective nature of the construct, self-esteem can be measured with a high degree of reliability and validity using even very brief self-report scales. Third, self-esteem has a distinctive normative trajectory across the life span; it tends to be high in childhood, drop during adolescence, increase gradually throughout adulthood, and then decline again in old age. Fourth, differences in self-esteem are due to both genetic and environmental factors. However, evidence that self-esteem has a biological basis should not discourage intervention efforts, just as evidence that drug use has a biological basis should not discourage interventions to reduce addiction. Fifth, high self-esteem is prospectively associated with better mental health, physical health, and economic prospects, and lower levels of aggression and criminal behavior, even after controlling for other factors that could have potentially caused these positive outcomes. Finally, there are indications that well-designed interventions aimed at boosting self-esteem can be successful at raising people's reports of their self-esteem. Nonetheless, we readily acknowledge the controversies over the value of high self-esteem and the possibility that interventions may have unintended negative consequences. The existence of such debates makes it all the more important to conduct rigorous evaluations of theoretically-based self-esteem enhancement programs. Indeed, such efforts have the possibility to resolve ongoing controversies about self-esteem and can therefore contribute to the positive synergy between basic and applied psychological science. ↪

Richard W. Robins, Ph.D., (rwrobins@ucdavis.edu) is a professor of psychology at the University of California, Davis, and a member of the core faculty for the NIMH Training Program in Affective Science.

Kali H. Trzesniewski, Ph.D., (ktrz@ucdavis.edu) is Associate Director of Research for the Statewide 4-H Youth Development Program and Associate Specialist in Cooperative Extension at the University of California Davis.

Brent Donnellan, Ph.D., (donnel59@msu.edu) is an associate professor of psychology at Michigan State University.

Copyright © 2012, Integrated Research Services, Inc.

References ↪

- Ackerman, R.A., Witt, E.A., Donnellan, M.B., Trzesniewski, K.H., Robins, R.W., & Kashy, D.A. (2011). What does the Narcissistic Personality Inventory really measure? *Assessment, 18*, 67–87.
- Baumeister, R.F., Boden, J.M., & Smart, L. (1996). Relation of threatened egotism to violence and aggression: The dark side of high self-esteem. *Psychological Review, 103*, 5–33.
- Baumeister, R.F., Campbell, F.A., Krueger, J.I., & Vohs, K.D. (2003). Does high self-esteem cause better performance, interpersonal success, happiness, or healthier lifestyles? *Psychological Science in Public Interest, 4*, 1–44.
- Byrne, B.M. (1996). *Measuring Self-concept Across the Life Span: Issues and Instrumentation*. Washington, D.C.: American Psychological Association.
- Coopersmith, S. (1967). *The Antecedents of Self-Esteem*. San Francisco: Freeman.
- Dandeneau, S.D., & Baldwin, M.W. (2004). The inhibition of socially rejecting information among people with high versus low self-esteem: The role of attentional bias and the effects of bias reduction training. *Journal of Social and Clinical Psychology, 23*(4), 584–602.
- Donnellan, M.B., Trzesniewski, K.H., Robins, R.W., Moffitt, T.E., & Caspi, A. (2005). Low self-esteem is related to aggression, antisocial behavior, and delinquency. *Psychological Science, 16*, 328–335.
- Haney, P., & Durlak, J.A. (1998). Changing self-esteem in children and adolescents: A meta-analytic review. *Journal of Clinical Child Psychology, 27*(4), 423–433.
- Harter, S. (2006). The Self. In W. Damon, & R.M. Lerner (Series Eds.) & N. Eisenberg (Vol. Ed.), *Handbook of Child Psychology: Vol. 3, Social, Emotional, and Personality Development* (6th ed.) (pp. 505–570). Hoboken, NJ: John Wiley & Sons Inc.
- Harter, S., & Pike, R. (1984). *The Pictorial Scale of Perceived Competence and Social Acceptance for Young Children* (Vol. 55). Malden, MA: Wiley-Blackwell.
- James, W. (1985). *Psychology: The briefer course* [1892]. Norte Dame: University of Notre Dame Press.
- Kamakura, T., Ando, J., & Ono, Y. (2007). Genetic and environmental effects of stability and change in self-esteem during adolescence. *Personality and Individual Differences, 42*, 181–190.
- Kendler, K.S., Gardner, C.O., & Prescott, C.A. (1998). A population-based twin study of self-esteem and gender. *Psychological Medicine, 28*, 1,403–1,409.
- Lilienfeld, S.O. (2007). Psychological treatments that cause harm. *Perspectives on Psychological Science, 2*, 53–70.
- Marsh, H.W., Ellis, L.A., Parada, R.H., Richards, G., & Heubeck, B.G. (2005). A short version of the Self-Description Questionnaire II: Operationalizing criteria for short-form evaluation with new applications of confirmatory factor analysis. *Psychological Assessment, 17*, 81–102.
- Neiss, M., Sedikides, C., & Stevension, J. (2002). Self-esteem: A behavioural genetic perspective. *European Journal of Personality, 16*(5), 351–367. doi: 10.1002/per.456
- O'Mara, A.J., Marsh, H.W., Craven, R., & Debus, R.L. (2006). Do self-concept interventions make a difference? A synergistic blend of construct validation and meta-analysis. *Educational Psychologist, 41*(3), 181–206.
- Orth, U., Robins, R.W., & Widaman, K.F. (in press). Life-span development of self-esteem and its effect on important life outcomes. *Journal of Personality and Social Psychology*.
- Robins, R.W., & Trzesniewski, K.H. (2005). Self-esteem development across the lifespan. *Current Directions in Psychological Science, 14*, 158–162.
- Rosenberg, M.R. (1965). *Society and Adolescent Self-Image*. Princeton, NJ: Princeton University.
- Rosenthal, S., Montoya, R.M., Ridings, L.E., Rieck, S.M., & Hooley, J.M. (2011). Further evidence of the Narcissistic Personality Inventory's validity problems: A meta-analytic investigation – Response to Miller, Maples, and Campbell (this issue). *Journal of Research in Personality, 45*, 408–416.
- Saphire-Bernstein, S., Way, B.M., Kim, H.S., Sherman, D.K., & Taylor, S.E. (2011). Oxytocin receptor gene (OXTR) is related to psychological resources. *PNAS Proceedings of the National Academy of Sciences of the United States of America, 108*(37), 15,118–15,122.
- Tangney, J.P., & Leary, M.R. (2003). The next generation of self research. In M.R. Leary & J.P. Tangney (Eds.), *Handbook of Self and Identity* (pp. 667–674). New York: Wiley.
- Trzesniewski, K.H., Donnellan, M.B., Moffitt, T., Robins, R.W., Poulton, R., & Caspi, A. (2006). Low self-esteem during adolescence predicts poor health, criminal behavior, and limited economic prospects during adulthood. *Developmental Psychology, 42*, 381–390.
- Trzesniewski, K.H., Donnellan, M.B., & Robins, R.W. (2003). Stability of self-esteem across the lifespan. *Journal of Personality and Social Psychology, 84*, 205–220.

Copyright of Prevention Researcher is the property of Prevention Researcher and its content may not be copied or emailed to multiple sites or posted to a listserv without the copyright holder's express written permission. However, users may print, download, or email articles for individual use.