Published in final edited form as:
J Community Psychol. 2012 April ; 40(3): 292–300. doi:10.1002/jcop.20509.

HOPE, SELF-ESTEEM, AND SELF-REGULATION: POSITIVE CHARACTERISTICS AMONG MEN AND WOMEN IN RECOVERY

Joseph R. Ferrari, **Edward B. Stevens**, **Raymond Legler**, and **Leonard A. Jason**
DePaul University

Abstract

Hopefulness remains unclear in relation to aspects of self-control and self-esteem among adults in substance abuse recovery. The present study explored the relationship between dispositional hope (agency and pathway) with self-esteem (self-liking, self-competency, and self-confidence) and self-regulation (impulse control and self-discipline), using a latent variable measurement model and structural equation modeling among adults (n = 601) residing in a communal living setting for persons in substance abuse recovery. Results showed that multiple dimensions of these constructs were significant as individual predictors. With persons in recovery, self-regulation included impulsivity control and self-discipline, while self-esteem reflected self-liking, competence, and a sense of self-confidence. Furthermore, both hope-pathways and hope-agency significantly related to self-control/impulse control but not self-control/discipline, and self-esteem/competency was associated with hope-pathways but not hope-agency.

As a psychological, cognitive construct, *hope* represents the realistically possible. Research and scale development efforts in the early 1990's led to the design of a dispositional hope scale (Snyder et al., 1991) that deconstructed hope into two separate but related constructs. One concept concerned *hope-agency*, the ability of an individual to formulate or envision goals that motivated the individual to plan a course of behavior. The second construct concerned *hope-pathways*, the ability to see a plan or process by which the goals might be accomplished. Snyder et al.'s (1991) Hope Scale has been utilized in prior research establishing the scale's confirmatory factor structure (Babyak, Snyder, & Yoshinobu, 1993) and suggestive of its predictive abilities in assessing academic and sports achievement (cf., Curry, Snyder, Cook, Ruby, & Rehm, 1997). In the present study, we examined the positive personality construct of hope among men and women recovering from substance abuse.

Self-esteem also has been a well-researched psychological construct, beginning in the 1960's when Rosenberg developed a short unidimensional self-esteem scale (SES; Crocker & Park, 2004; Rosenberg, et al., 1965). More recently, researchers proposed that self-esteem might be capturing multiple dimensions on a person's affective self-reflection (Tafarodi & Swann, 1995). This dimensionality has sometimes been interpreted as more characteristic of positive and negative orientations. In addition, self-esteem was characterized as differences between

Correspondence to: Dr. Joseph R. Ferrari, Dept. of Psychology, DePaul University, 2219 North Kenmore Ave., Chicago, Illinois 60614. jferrari@depaul.edu.

self-liking and *self-competency* (Surgenor, Maguire, Russell, & Touyz, 2007; Tafarodi & Milne, 2002). To further test the constructs of self-liking and self-competency, a two dimensional scale was developed, tested, and later revised (Tafarodi & Milne, 1995; Tafarodi & Swann, 1995). The present study utilized factor analysis to assess the revised instrument's structure with a large sample of adult individuals currently in substance abuse recovery. We also examined whether self-liking and self-competency as dimensions of self-esteem were predictors of hope components among adults in recovery. The theoretical mapping of self-esteem dimensions to agency and pathway components of hope allowed the comparison of plan development and execution concepts inherent to both measures.

Finally, *self-control* as a facilitating resource for goal pursuit and achievement has been researched across a variety of domains from academics to impression management (Ferrari, Stevens, & Jason, 2009). The Brief Self-Control scale developed by Tangney, Baumeister, and Boone (2004) was derived from a larger 35-item self-control scale. This scale has been utilized in prior research both as a unidimensional scale and with two subscales (e.g., Ferrari et al., 2009, 2010).As a two -subscale measure, dimensions represent a general *self-discipline* construct as well as a *resistance to impulsivity* construct. In the present research, both subscales were utilized as predictors of hope components among men and women in substance abuse recovery. The potential for differential relationships between hope constructs and self-control predictors served as a primary research question.

Our overarching goal compared several models to develop a parsimonious description of the strength of association between hope and the predictors of self-esteem and self-control among women and men in communal-living settings for addiction recovery. From a community psychology perspective, we wondered how the sense of community atmosphere for persons in recovery might enhance the positive personality constructs of hope, self-esteem, and self-regulation. We did not, in the present study, focus on sense of community (see Jason & Ferrari, 2010 for a review of those assessments). Instead, we examined social-personality constructs within the communal-living setting. More specifically, our a priori questions on the measures' structures and previous research included: Would self-liking map generally to the agency construct of hope? Would resistance to impulsivity be associated with the pathways construct of hope? Would self-competency and self-confidence have differential associations to hope agency and pathways, thereby strengthening the evidence for their empirical separation into two components for self-esteem? Would self-discipline be more strongly associated with agency over pathway?

METHOD

Participants

A total of 601 adult participants (199 women, 402 men; mean [*M*] age = 38.5 years old, standard deviation [*SD*] = 9.4) completed all measures. Most participants were either Caucasian (59.7%) or African American (31.4%) adults recovering from substance abuse and living in one of 156 Oxford Houses across the United States. The mission of Oxford Houses is to provide communal living accommodations for same sex adults recovering from substance and alcohol abuse in affordable, safe, sober, and mutually supportive housing. Each House functions on an economically self-sufficient basis with no professional staff,

and decision making is democratic. On average, an Oxford House has 6 to 10 residents (Jason et al., 2007), with approximately 1,400 Oxford Houses throughout the United States. They had an average length of stay of 12.0 months (*SD* = 15.6) in an Oxford House.

Procedure

Recruitment was accomplished by advertising and personal solicitation to Oxford House presidents in five major U.S. geographic areas. Participants were fully informed, signed consent forms prior to any data collection, and were compensated a modest amount (receiving $40 for completing the present and other scales during a testing session). Information was collected in person and over the telephone, with scales in counterbalanced order. Participants took approximately 15–20 minutes to complete all scales used in this study.

Psychometric Measures

Snyder et al.'s (1991) Dispositional Hope Scale, comprising 12 items of which four items were diversionary fillers, was administered to all participants. These items were measured on an 8-point Likert type scale, ranging from 1 *(definitely false*) to 8 *(definitely true*). Four questions were targeted to agency (sample item: I meet the goals that I set for myself.) and four questions targeted pathway (sample item: I can think of many ways to get out of a jam) (see also Roesch & Vaughn, 2006). Mathis, Ferrari, Groh, and Jason (2009) found that hope as assessed by this scale is predictive of optimism and long-term sobriety among substance abusers. In the initial study across six samples, Snyder et al. (1991) reported Cronbach's α for agency scores ranged from .0.71 to 0.74, and for pathways ranged from 0.63 to 0.67. With the present sample, Cronbach's α was 0.75 for agency and 0.68 for pathways.

Participants also completed Tangney et al.'s (2004) Self-Regulation Scale, containing 13 statements scored on a 5-point Likert scale, ranging from 1(not at all) to 5 (very much), assessing a tendency toward impulsivity (sample item: I do certain things that are bad for me, if they are fun) and self-discipline (sample item: I am able to work effectively toward long-term goals) as components of self-control. Tangney et al. reported that this measure had good internal consistency for each subscale (α=0.83 and 0.85, respectively). Ferrari and colleagues (2009, 2010; Stevens, Jason, Ferrari, & Hunter, 2010) found that this measure of self-regulation maintains reliability and validity for assessing self-control tendencies among adults recovering from alcohol and substance abuse. With the present sample, Cronbach's α was 0.82 for impulsivity and 0.83 for self-discipline.

We also administered to participants the Self-Liking/Self-Competence Self-Esteem Scale, developed and then revised by Tafarodi and Swann (2001), a multidimensional assessment of self-esteem (see Aidman, 1998). This revised scale has 16-item instrument rated each question along a 5-point scale, ranging from 1 (*strongly disagree*) to 5 (*strongly disagree*) with two subscales of eight questions each. A *self-liking* subscale assessed the level of self-worth and comfortableness a person has about himself (sample items: I feel great about who I am and I am very comfortable with myself). A *self-competency* subscale examined a person's belief they are skills with abilities to handle varied situations (sample items: I perform very well at many things and I am very talented). Tafarodi and Swann (2001)

reported good internal consistency for both subscales across a large number of participants with varied backgrounds, such that the self-liking subscale had a Cronbach's α of 0.90, and the self-competency subscale had a Cronbach's α of 0.83. With the present sample Cronbach's α was assessed after an exploratory factor analysis of scores on this measure.

RESULTS

Preliminary Analysis: Factor Analysis of Self-esteem

Previous published studies demonstrated the factor structure for the hope and self-regulation scales with adults in recovery from substance abuse (see Ferrari et al., 2009, 2010; Mathas et al., 2009). In fact, these measures were included in evaluations of Oxford House residents who reside in self-governed, safe, and sober settings. However, we know of no study that used Tafarodi and Swann's (2001) multidimensional self-esteem scale with persons in recovery. Therefore, our first analysis was to ascertain whether the self-esteem scale maintained its two-factor structure with our sample of abstinent adults.

Factor analysis, using principal axis factoring, examined the structure of Tafarodi and Wann's (2001) two-factor self-esteem scale for persons in recovery. Oblique procedure (Oblimin) was selected for rotation of the initial factor matrix into the structure and pattern matrices, based on previous findings between these factors (see Tafarodi & Swann) claiming a conceptual, theoretical overlap between the constructs. The residual matrices were reviewed to assess the presence of nonredundant residuals with an absolute value greater than 0.05. Restricting to an original two-factor model, the proportion of nonredundant residuals was 27%. For the three-factor model, only seven items or 5% were over the threshold of 0.05. Consequently, for our sample of abstinent adults, a three-factor model for self-esteem using the Tafarodi and Swann measure had better variance explanation and residual performance. Factor 1 related to Factor 2 (0.46) and Factor 3 (0.57), and Factor 2 related to Factor 3 (0.300).

Three factors emerged with eigenvalues greater than 1.00 explaining greater than 50% of the common variance, and two factors were similar to Tafarodi and Swann's (2001) two-factor self-esteem scale. Specifically, one subscale (Factor 1) was *self-liking* (eight items: Cronbach's α = 0.90), comprising the same eight items from the revised scale, and the second subscale (Factor 2) was *self-competency* (four items: Cronbach's α = 0.75), using four of the eight items reported in Tafarodi and Swann's self-competency subscale. A new subscale (Factor 3) emerged, however, and we labeled it low *self-confidence* (four items: Cronbach's α = 0.67) with items such as I deal poorly with challenges and I sometimes fail to fulfill my goals. Therefore, given our sample of men and women in substance abuse recovery, we used the three-factor subscale structure of the self-esteem scale in all further analyses.

Measurement Models

Our analysis involved using a two-step procedure for structural equation modeling. In the first step, a measurement model was tested to establish the robustness and relationships of the latent variables. In this procedure, the measurement model treated the latent variables as

exogenous variables that were allowed to co-vary with each other. This step also established the adequacy of the indicators as endogenous measured variables linked unidimensionally to a latent factor.

Modifications to the measurement model for analysis included the dropping of two of the nine indicators for self-regulation/discipline and two indicators for self-competency. These indicators were dropped because of low loadings and/or cross loading effects. In addition, four items within the self-regulation/discipline subscale were allowed to have their errors co-vary. These modifications were theoretically justified on the basis of either prior knowledge/experience with factor loadings or the differential pattern of reverse scored items on the general self-discipline subscale.

Overall, the measurement model fit was adequate. Results suggested rejection of the null hypothesis with the χ^2 test of model fit; this was likely because of our large sample size. The comparative fit index and Tucker-Lewis Index both exceeded 0.90 and the root mean square error of approximation was below 0.05 as both a point estimate and at the 95% confidence interval. In addition, the standardized root mean square residual was below 0.05. Because an adequate measurement model was established, the second step of analysis was performed as a structural equation model.

Structural Equation Model: Predicting Hope

The original structural model tested included all five latent independent variables regressed on hope-agency and hope-pathways. Although the theoretical model suggested that the strength of relationships would vary according to research questions, the overall test for a first model was consistent with direct relationships from the independent latent variables (LV) to the hope dependent LV's. As with the measurement model, the overall fit statistics were adequate; the χ^2 test of model fit was significant, probably the result of our sample size.

This initial model broadly tested the possible independent LV's regressed on both hope constructs: agency and pathways. Results suggested a more parsimonious model might better describe the relationships between the constructs of self-esteem, self-regulation, and hope. Interestingly, the latent variables with the greatest number of indicators demonstrated the lesser amounts of power in the model, namely, the self-liking factor of self-esteem with eight indicators and the discipline factor of self-regulation/control with seven indicators. More importantly, the self-confidence and self-competency factors did not regress equivalently on either hope components, further supporting these as two distinct factors rather than as a single factor.

A second structural equation model was run that dropped the nonsignificant independent latent variables. The comparison of χ^2 test of model fit difference between the models suggested that the second structural regression with greater degrees of freedom better described the relationships being modeled. The fit statistics for the second structural model are shown in Table 1. For model 1, $\chi^2 = 936.90$ and for model 2, $\chi^2 = 940.26$ with degree of freedom $[df]_1 = 465$ and $df_2 = 468$, respectively. Therefore, with $\Delta\chi^2$ was 3.36 and Δ *df* was

3, $p = 0.34$, the more parsimonious model is preferred. The standardized regression coefficients for the second model are shown in Table 2.

In summary, this model's regression weights provided answers to the research questions posed in the introduction. The first research question involved speculation that the concept of self-liking would be more strongly associated with agency, which it was. The second research question concerned whether resistance to impulsivity would be more strongly related to pathways. In fact, impulse resistance was significantly predictive of both pathways and agency. The third research question asked whether self-confidence and self-competency would be differentially associated with the hope constructs. This was discussed earlier as an indication that the factors were distinct. Finally, the fourth question involved the relationship between general self-discipline and agency. The results suggested that self-regulation/discipline was not a significant predictor of either agency or pathways. The difference in strength of relationships between resistance to impulsivity and general self-discipline with hope was somewhat surprising. The final model with significant paths and standardized regression coefficients is shown in Figure 1.

DISCUSSION

The present investigation used structural regression to assess the relationship of self-regulation/control and self-esteem factors with hope among men and women recovering from substance abuse. We noted several constructs developed through a fully latent measurement model and, in turn, entered these constructs in structural regression models. Overall, significant relationships were found between self-regulation, self-esteem, and hope. Results included strong relationships of self-competency and resistance to impulsivity with hope factors of agency and pathways. In addition, the constructs of self-liking and self-confidence were significantly associated with agency. Several differences between the relationships hope agency and hope pathways, however, were suggested in the final equation model, consistent with our expectations. For example, self-liking was significantly associated with goal formulation and motivation (agency) but not with confidence in execution (pathways). Taken together, our results extend an understanding of the role of positive characteristics among persons in recovery living in communal settings (see Jason, Ferrari, Davis, & Olson, 2006; Jason & Ferrari, 2010) and, moreover, to the relationship of hope, self-regulation, and self-esteem within Oxford House settings (see Ferrari et al., 2009, 2010; Steven et al., 2009).

Resistance to impulsivity was a strong predictor for both agency and pathways. Prior research found this construct to be significantly related to time abstinent (Ferrari et al., 2009, 2010). Continued investigation of impulsivity and its nature would appear to be a sensible research path for evaluating cognitive and behavioral characteristics of goal formation and pursuit. For those in substance abuse recovery, understanding the environmental contexts interaction with an individual's impulsivity would warrant continued exploration. In addition, continued work on the multidimensional nature of self-esteem emerged as a potentially useful assignment. This use of the self-liking/self-competency scale on an adult population suggested that perhaps, accumulated experiences influence a person's self-evaluation in a manner that should be more precisely captured.

Of course, the present study was cross-sectional and correlational, inhibiting our ability to make causal statements about the relationship among hope, self-regulation, and self-esteem. The suggestion of a third factor (self-confidence) within the theoretical structure of Tafarodi and Swann's (2001) two-factor self-esteem scale should be tempered. Participants in the present study were adults currently residing in an Oxford House and were recovering for substance abuse, that is, our participants were not a random sample. Future studies with samples of adults with different societal challenges will evaluate the utility of a three-factor measure of self-esteem. Also, participants were nested within specific Oxford Houses. Although previous research stated that such factors do not impact on data analysis, this issue is inherent in assessing this area of recovery (Jason et al., 2006; Jason & Ferrari, 2010). Regardless of study limitations, the present study demonstrated several robustly significant relationships between the psychological constructs of self-esteem, self-regulation, and hope for persons in recovery. We utilized a methodology that minimized measurement error in the exploratory investigation of relationships of self-esteem and self-regulation with hope. Nevertheless, several clear paths for future research were indicated.

The strength of the relationship between perceived competency with both the agency and pathways components of hope suggests that self-evaluation of skills might be strongly related to developing future goals. This relationship may be predictive of the probability of formulating and initiating goal behavior as well as the development and execution of plans for achievement. Further research into the current three constructive, positive characteristics assessed in this study and the acquisition of skills might provide some insight on how individuals set and better achieve their goals.

Acknowledgments

Funding for this study made possible in part through the National Institute on Drug Abuse (NIDA) grants DA16037 and DA13231.

We express gratitude to the women and men of Oxford House who agreed to participate.

REFERENCES

Aidman EV. Analyzing global dimensions of self-esteem: Factorial structure and reliability of the self-liking/self-competence scale. Personality and Individual Differences. 1998; 24(5):735–737.

Babyak MA, Snyder CR, Yoshinobu L. Psychometric properties of the Hope scale: A confirmatory factor analysis. Journal of Research in Personality. 1993; 27(2):154–169.

Crocker J, Park LE. The costly pursuit of self-esteem. Psychological Bulletin. 2004; 130:392–414. [PubMed: 15122925]

Curry LA, Snyder CR, Cook DL, Ruby BC, Rehm M. Role of hope in academic and sport achievement. Journal of Personality and Social Psychology. 1997; 73(6):1257–1267. [PubMed: 9418279]

Ferrari JR, Stevens EB, Jason LA. The relationship of self-control and abstinence maintenance: An exploratory analysis of self-regulation. Journal of Groups in Addiction & Recovery. 2009; 4:32–41. [PubMed: 20689650]

Ferrari JR, Stevens EB, Jason LA. An exploratory analysis of changes in self-regulation and social support among men and women in recovery. Journal of Groups in Addiction Recovery. 2010; 5:145–154. [PubMed: 23550115]

Jason LA, Davis MI, Ferrari JR, Anderson E. The need for substance abuse after-care: Longitudinal analysis of Oxford House. Addictive Behaviors. 2007; 32:803–818. [PubMed: 16843612]

Jason, LA.; Ferrari, JR., editors. Recovery from addiction in communal living settings: The Oxford House model. New York: Taylor & Francis Publication; 2010.

Jason, LA.; Ferrari, JR.; Davis, MI.; Olson, BD., editors. Creating communities for substance abuse recovery: The Oxford House model. Binghamton, NY: Haworth Press; 2006.

Mathis GM, Ferrari JR, Groh DR, Jason LA. Hope and substance abuse recovery: The impact of agency and pathways within an abstinent communal-living setting. Journal of Groups in Addiction Recovery. 2009; 4:42–50. [PubMed: 20689653]

Roesch SC, Vaughn AA. Evidence for the factorial validity of the dispositional hope scale: Cross-ethnic and cross-gender measurement equivalence. European Journal of Psychological Assessment. 2006; 22(2):78–84.

Snyder CR, Harris C, Anderson JR, Holleran SA, Irving LM, Sigmon ST. The will and the ways: Development and validation of an individual-differences measure of hope. Journal of Personality and Social Psychology. 1991; 60(4):570–585. [PubMed: 2037968]

Snyder CR, Shorey HS, Cheavens J, Pulvers KM, Adams VH III, Wiklund C. Hope and academic success in college. Journal of Educational Psychology. 2002; 94(4):820–826.

Stevens EB, Jason LA, Ferrari JR, Hunter BA. Self-efficacy and sense of community among adults recovering from substance abuse. North American Journal of Psychology. 2010; 12:255–264. [PubMed: 23505336]

Surgenor LJ, Maguire S, Russell J, Touyz S. Self-liking and self-competence relationship to symptoms of anorexia nervosa. European Eating Disorders Review. 2007; 15(2):139–145. [PubMed: 17676682]

Tafarodi RW, Milne AB. Decomposing global self-esteem. Journal of Personality. 2002; 70(4):443–483. [PubMed: 12095187]

Tafarodi RW, Swann WB Jr. Self-liking and self-competence as dimensions of global self-esteem: Initial validation of a measure. Journal of Personality Assessment. 1995; 65(2):322–342. [PubMed: 8656329]

Tafarodi RW, Swann WB. Two-dimensional self-esteem: Theory and measurement. Personality and Individual Differences. 2001; 31(5):653–673.

Tafarodi RW, Walters P. Individualism-collectivism, life events, and self esteem: A test of two trade-offs. European Journal of Social Psychology. 1999; 29(5):797–814.

Tangney JP, Baumeister RF, Boone AL. High self-control predicts good adjustment, less pathology, better grades, and interpersonal success. Journal of Personality. 2004; 72(2):271–322. [PubMed: 15016066]

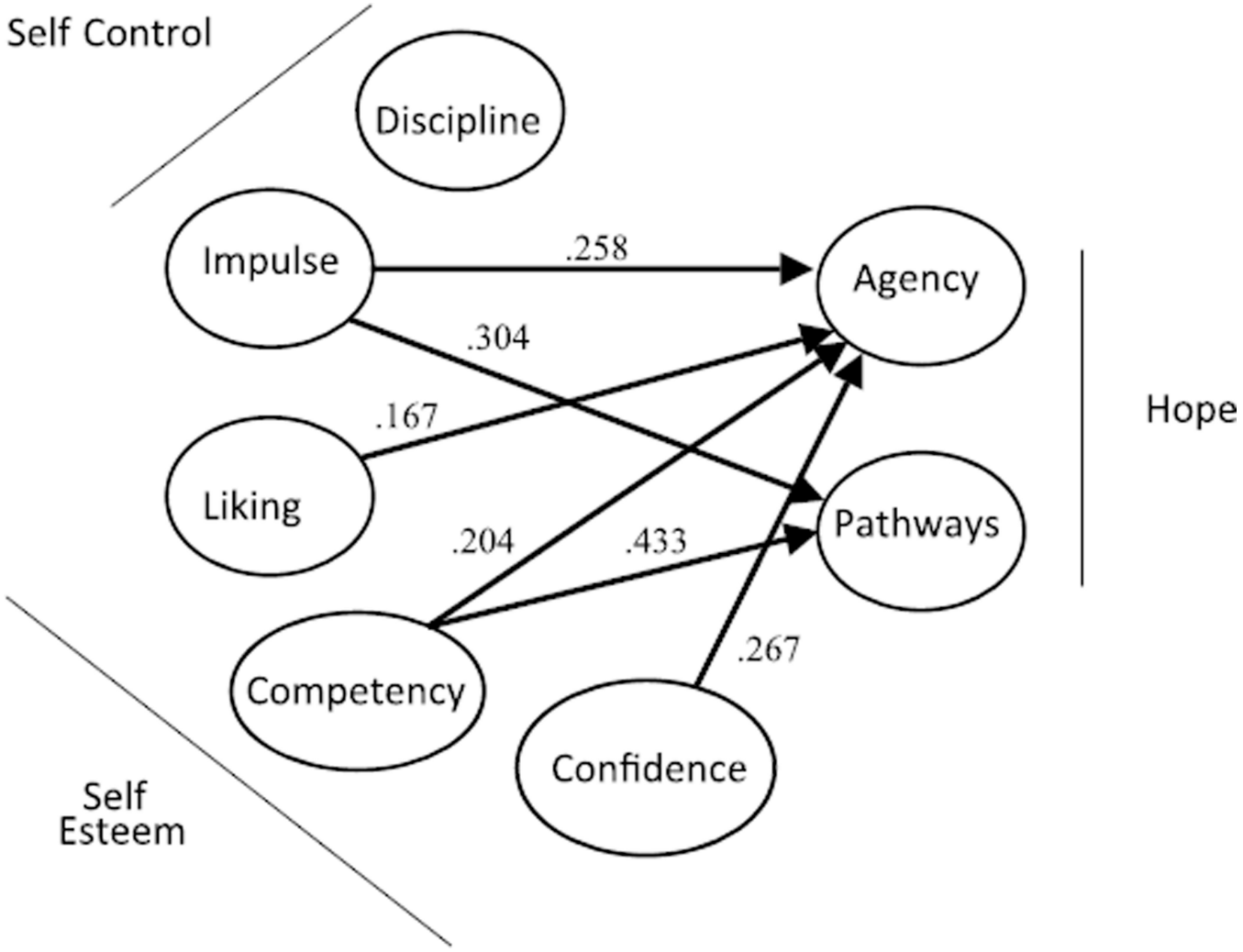

Figure 1.
Final path model.
n = 601

Table 1

Test of Model Fit – Structural Regression 2

Test	Value	Degrees of freedom	p-value
Chi-square test of model Fit	940.26	468	.000
Chi-square test of model fit – baseline	7119.32	528	.000
CFI	0.928		
TLI	0.919		
RMSEA	0.041		
90% CI	0.037–0.045		
Probability RMSEA ≤ .05	1.00		
SRMR	.046		

Note. CFI = ; TLI = ; RMSEA = ; CI = ; SRMR =

n = 601

Table 2

Standardized Regression Coefficients – Final Model

Loading	Estimate	Standard error	Estimate/standard error	2-tail p
Hope/agency on:				
SE/Competency	0.024	0.060	3.420	0.001
SE/Achievement	0.267	0.075	3.569	0.000
SE/Liking	0.167	0.074	2.248	0.025
SC/Impulse	0.258	0.054	4.785	0.000
Hope/pathways on:				
SE/Competency	0.433	0.056	7.675	0.000
SC/Discipline	−0.091	0.058	−1.563	0.118
SC/Impulse	0.304	0.070	4.351	0.000

Note. SE = self-esteem; SC = self-regulation/control.

n = 601.