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A Structural Equation Model of Hope, Life Satisfaction, and Emotional Well-Being as Antecedents of Health Related Quality of Life among Homeless Individuals

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Emotional Wellbeing (Affect)

- ▶ “Broaden and build” theory of emotions – hold that positive emotional wellbeing can serve as drivers of personal physical, intellectual, and social resources including coping with adversity (Fredrickson, 2005).
- ▶ The SPANE is a 12-item questionnaire that asks respondents to think about his/her experiences during the past four weeks to determine the frequency of which he/she has experienced positive (e.g., “good” and “pleasant”) or negative (e.g., “bad” and “angry”) emotions (Diener et al., 2009).

Goals and Wellbeing

- ▶ Purposeful human action is goal directed (Snyder et al., 2000).
- ▶ Obtaining one's goals produces increases in positive emotions, while failure to obtain goals generates negative emotions (Snyder et al., 2000).

Goal Related Cognitive Appraisals

- **Life satisfaction** – *Retrospective* appraisal that involves assessing the extent that an individual has realized personal values and obtained desired goals (Pavot, Diener, Colvin, & Sandvik, 1991; Emmons, 1986).
 - SWLS item “So far, I have gotten the things I wanted in life.” (Diener et al., 1985).
- **Hope** – *Prospective* appraisal involving the assessment of the likelihood of future goal attainment, based on assessment of agency (“I am capable”) coupled with appraisals of the suitability of the routes one has to those goals, known as pathways (“I see a way.”)
 - Adult Hope Scale Item: “I can think of many ways to get the things in life that are important to me.” (Snyder et al, 1991).

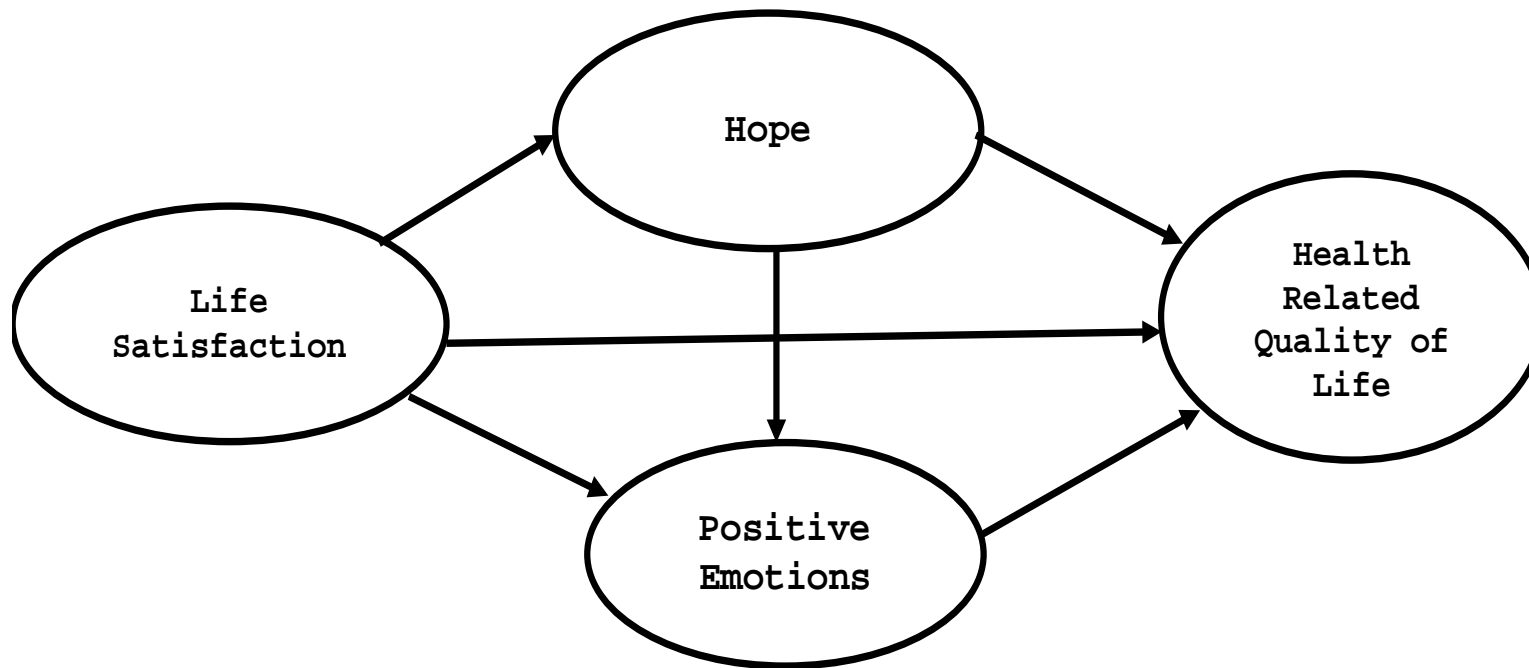
Health Related Quality of Life

HRQoL is a multi-dimensional psychological construct that goes beyond direct measures of health, such as clinical diagnoses, life expectancy, causes of illness, etc. to capture subjective perceptions of one's quality of life related to physical, mental, emotional, and social functioning (Ahmed et al., 2012).

SF-36 - a self-administered scale that captures perceptions of health across eight dimensions. For this study, to keep the survey brief, we selected the SF-36 dimensions of general health, physical limitations, and pain (Kopjar, 1996)

Theoretical Model

Figure 1: Theorized Directional Associations Between Variables ($N' = 275$)

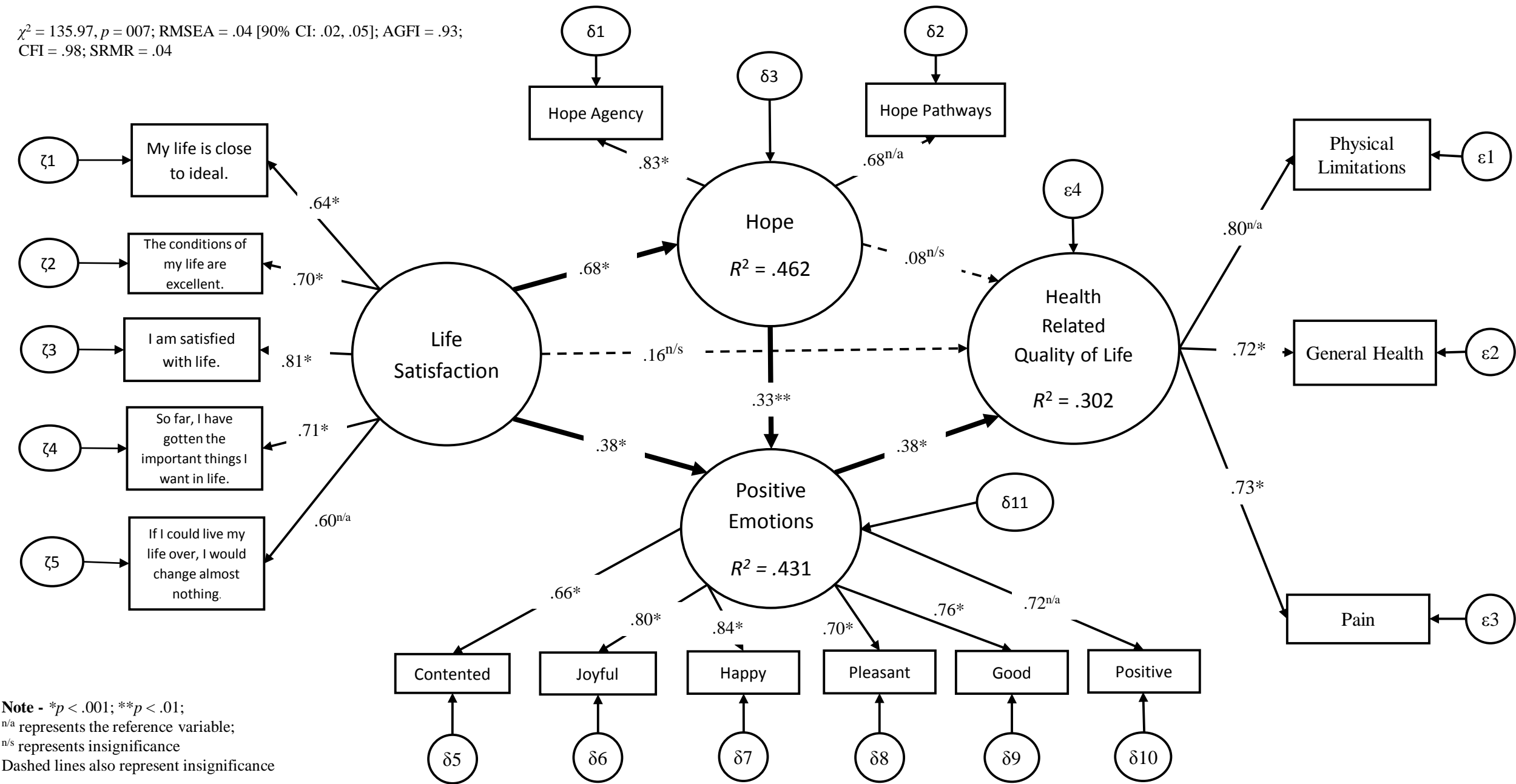


Sample

- ▶ Cross sectional survey of individuals receiving services at a outreach shelter for individuals self-reporting as homeless.
- ▶ The mean age of the sample was 46.6 years of age ($SD = 11.0$) and consisted of 65% males and 35% females. Regarding ethnicity, 61% reported being white while 39% reported minority status.
- ▶ Paper and pencil survey that contained demographics, the Satisfaction with Life Scale (Diener et al, 1985; the Adult Hope Scale (Snyder et al., 1991), SPANE (Diener et al., 2009), and SF-36 (Kopjar, 1996).
- ▶ A total of 275 surveys were distributed with 185 returned with responses on all items of interest. All respective variables were missing $\leq 20\%$ of responses, so to cope with missing responses, full information maximum likelihood (FIML) analysis was performed to estimate values for the missing data (Graham, 2009). The resulting sample included an $N' = 275$.

Figure 1: Standardized Values of a Structural Equation Model of Life Satisfaction as An Antecedents of HRQL with Hope and Positive Emotions as Mediators Among a Sample of Individuals Reporting Homelessness (N' = 275)

$\chi^2 = 135.97, p = .007$; RMSEA = .04 [90% CI: .02, .05]; AGFI = .93;
CFI = .98; SRMR = .04



Note - $*p < .001$; $**p < .01$;
 n/a represents the reference variable;
 n/s represents insignificance
Dashed lines also represent insignificance

Bootstrapped Parameter Values

- ▶ Bootstrapping (N = 5000) indicated The indirect of life satisfaction on HRQoL was significant, $\beta = .282$, $p = .003$; BCa 95% CI [.463, .115], as was the indirect effect of hope on HRQoL through positive emotions, $\beta = .125$, $p = .002$; BCa 95% CI [.264, .004].
- ▶ Bootstrapping also indicated that the direct effect from life satisfaction to HRQoL was insignificant, $\beta = .16$, $p = .114$; BCa 95% CI [.401, -.042], while the direct effect from hope to HRQoL was also insignificant, $\beta = .08$, $p = .557$; BCa 95% CI [.308, -.180].
- ▶ The results of the bootstrapping analysis indicated 2 indirect effect only mediations, which are considered the most straightforward type of mediation in terms of providing empirical support of the proposed directional associations between the variables (Zhao, Lynch, & Chen, 2010).

Implications/Limitations

- ▶ Cross sectional research has limitations as to the strength of the conclusions that can be drawn as to "causality."
- ▶ Frisch's Quality of Life Therapy (1998) – operates by centering on the importance of revising goals, standards, and priorities as a means of treating illness and disease.
- ▶ Hope theory based interventions may be particularly salient in the context of illness and disease because such interventions involve cognitive appraisals of pathways to actionable goals, such as seeking assistance from others, creating a more stable living environment, and developing strategies to work around physical limitations (Berendes, Keefe, Somers, Kothadia, Porter, & Cheavens, 2010).



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Locus of Hope: A Structural Equation Model of External Hope in Parents/Guardians as an Antecedent of Life Satisfaction Mediated by Internal Hope

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Hope

- ▶ A defining characteristic of measures of hope developed by Snyder et al (1991) is that hope consists primarily, if not entirely, of a respondent's perceptions of personal agency to bring about desired ends.
- ▶ For instance, Adult Dispositional Hope Scale (ADHS) items (e.g., "I can think of many ways to get out of a jam"; and "I energetically pursue my goals").

External locus of hope

- ▶ Despite the importance of personal agency to hope as noted by Snyder et al. (1991), others have noted that hope does not always appear to depend on personal agency (Bernardo, 2010; Aspinwall & Leaf, 2002).
- ▶ In response to such research suggesting external dimensions of hope, Bernado (2010) developed the Locus of Hope Scale (LOHS) to psychometrically measure hope across external dimensions.
- ▶ Bernardo (2010) modified the ADHS in such a manner to capture 3 theorized external dimensions of hope: external-parents, external-peers, and external-spiritual, while retaining the original ADHS items as the "internal" dimension of hope.
 - ▶ An example of a Bernardo modification of the ADHS to capture external hope-family is the alteration of the item "I can think of many ways to get out of a problem" to "My parents find many ways to help me solve my problems."

Snyder and the origins of hope

- ▶ Snyder states that one's hope arises in a context of others who "teach" hope (Snyder, 2000).
- ▶ For Snyder, hope development is heavily influenced by childhood experiences, with a supportive environment being helpful to hope development.

Sample

- ▶ The sample of adolescent females $N = 501$ with a mean age of 15.6 years ($SD = 1.16$).
- ▶ The ethnic breakdown of the sample (rounded) was 53% White, 28% American Indian/Alaskan Native, 7% Hispanic, 1% African American, 1% Asian, and 9% other.

Scales

- ▶ **External Locus-of-Hope Scale.** External hope – P/G was measured using Bernardo's (2010) LOHS. The LOHS scale uses a Likert format with higher scores indicating stronger perceptions of parents as external agents of hope. The external hope – parents (or family) dimension has shown good internal consistency ($\alpha = .82$) and has correlated in the expected directions with both a sense of individualism and collectivism (Bernardo, 2010). For this study, the external hope – parents dimension of the LOHS was slightly modified to capture external locus of hope in parents *and guardians* (P/G) to measure the perceptions of children that may be cared for by a guardian rather than a parent.
- ▶ **Children's Hope Scale.** The Children's Hope Scale (CHS; Snyder et al., 1996) scores were used to measure internal hope consistent with Bernardo's (2010) locus of hope theory. The CHS uses a Likert scale with higher scores indicating greater internal hope. The CHS has demonstrated good internal consistency with alphas ranging from .72 to .86 (Snyder et al., 1996). The CHS has also demonstrated validity as a measure of internal hope, with CHS scores correlating positively with children's perceptions of their own competency (Snyder et al., 1996). CHS scores also negatively correlate with reports of depression (Snyder et al., 1996).
- ▶ **Satisfaction with Life Scale.** The Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffen, 1985) was used to capture individual differences in the appraisal of life satisfaction. The SWLS also utilizes a Likert scale with higher scores indicating greater life satisfaction. The SWLS has been used in hundreds of studies and has demonstrated good internal consistency (Diener, Emmons, Larsen, & Griffen, 1985).

Analysis

- ▶ Step 1: Exploratory Factor Analysis (n = 247)
- ▶ Step 2: Structural Equation Model of the Relationships Between Variables (n = 254)

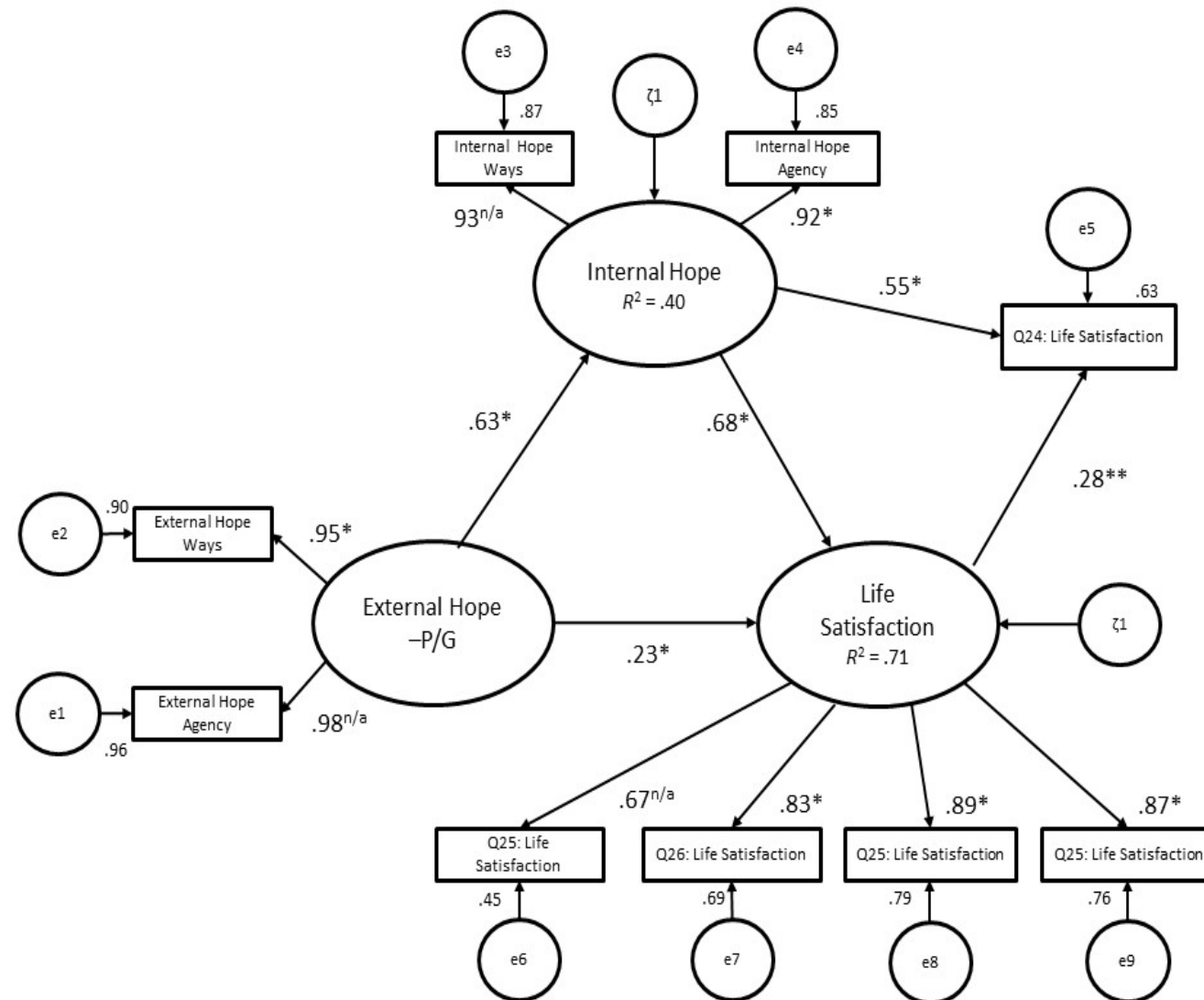
EFA Results (n = 247)

Table 1: An Exploratory Factor Analysis (EFA) Using Maximum Likelihood Factoring and Varimax Rotation (n = 254)

Scale	Item	Factor		
		I	II	III
External Hope – P/G	Even when I am discouraged, I know my parents/guardians have ways to help me solve my problems.	.897	.198	.160
External Hope – P/G	My parents/guardians find many ways to help me solve my problems.	.889	.227	.208
External Hope – P/G	My parents/guardians have lots of ways of helping me attain my goals.	.855	.264	.223
External Hope – P/G	My parents/guardians have helped me meet the goals that I have set for myself.	.842	.283	.250
External Hope – P/G	I am confident that my parents/guardians will support me in the goals that are important to me.	.802	.144	.133
External Hope – P/G	My parents/guardians usually help me in different ways when I get into difficult situations.	.757	.244	.324
External Hope – P/G	My parents/guardians work with me in pursuing my goals.	.726	.276	.342
External Hope – P/G	I have been successful in life so far because of the support of my parents/guardians.	.659	.284	.348
Internal Hope	When I have a problem, I can come up with lots of ways to solve it.	.169	.808	.254
Internal Hope	Even when others want to quit, I know I can find ways to solve the problem.	.264	.783	.297
Internal Hope	I am doing just as well as other kids my age.	.230	.716	.276
Internal Hope	I can think of many ways to get the things in life that are most important to me.	.341	.707	.245
Internal Hope	I think I am doing pretty well.	.308	.666	.370
Internal Hope	I think the things I have done in the past will help me in the future.	.207	.638	.462
Life Satisfaction	I am satisfied with life.	.309	.344	.770
Life Satisfaction	The conditions of my life are excellent.	.319	.340	.760
Life Satisfaction	In most ways my life is close to my ideal.	.280	.494	.683
Life Satisfaction	So far I have gotten the important things I want in life.	.361	.408	.651
Life Satisfaction	If I could live my life over, I would change almost nothing.	.178	.256	.632
Percentage of Variance Explained		59.4	12.8	5.9

Note: Items in bold cross loaded, identified by < .20 difference between an item's loading on one factor compared to the same item's loading on a second factor (Nunnally & Bernstein, 1994).

SEM Path Model (n = 254)



Goodness of fit indices

Table 2: Goodness of Fit Indices for the Alternative Models for the Latent Variable Path Analysis (n = 247)

	χ^2	df	<i>p</i>	χ^2/df	CFI	TLI	RMSEA (90% CI)
<u>Model 1 (Theorized Model)</u>							.055
External Hope – P/G > Internal Hope > Life Satisfaction	40.25	23	.014	1.75	.991	.986	(.025 - .083)
<u>Model 2 (Alternative Model)</u>							.144
Internal Hope > External Hope (P/G) > Life Satisfaction	146.5	24	.000	6.11	.938	.907	(.122 - .167)

Note: CFI: Confirmatory Fit Index; TLI: Tucker-Lewis Index; RMSEA: Root Mean Square Error of Approximation.

Bootstrapping

- ▶ The results of a Bollen-Stine bootstrap analysis indicated that the mediation model was not significantly different ($p = .17$) from a mathematically transformed model that perfectly fit the data, further suggesting the theorized directional model explained the data well.
- ▶ Results of the bootstrapped test ($N = 5000$) indicted the indirect effect of external hope – P/G on life satisfaction via internal hope was “large” ($\kappa^2 = .40$) according to the heuristics of Preacher & Kelly (2011).

Limitations/Implications

- ▶ Study is only “suggestive” considering it is cross sectional.
- ▶ Specifically, the data developed in this study indicate a need for further investigation into the importance of parents/guardians as sources of internal hope and life satisfaction among adolescents.
- ▶ Although research indicates that children spend less time with parents/guardians as the children age (Larson & Verma, 1999), results of the current study suggest professionals working with parents/guardians should communicate their continued importance to their children’s hope and life satisfaction into adolescence.

Exploring Life Satisfaction as an Antecedent of Hope: Results of a Two Wave Cross Lagged Panel Analysis

Ricky T. Munoz, JD, MSW, Chan Hellman, PhD, & Kathleen Quinton, MSW, MPA



Goal Related Cognitive Appraisals

- **Life satisfaction** – *Retrospective* appraisal that involves assessing the extent that an individual has realized personal values and obtained desired goals (Pavot, Diener, Colvin, & Sandvik, 1991; Emmons, 1986).
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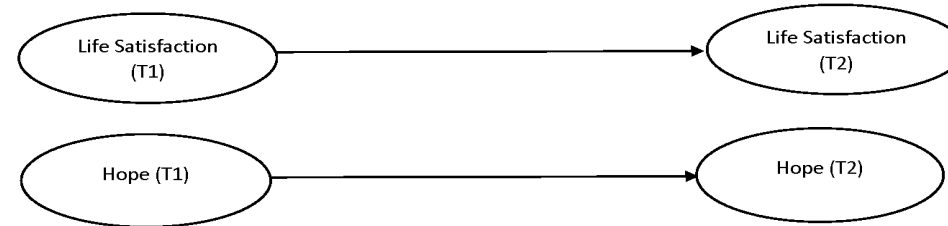
Sample

- ▶ A total of 556 participants met the criteria and are included in the study. The mean age of the sample was 15.6 years ($SD = 1.16$).
- ▶ The ethnic breakdown of the sample (rounded) was 53% White, 28% American Indian/Alaskan Native, 7% Hispanic, 1% African American, 1% Asian, and 9% other.

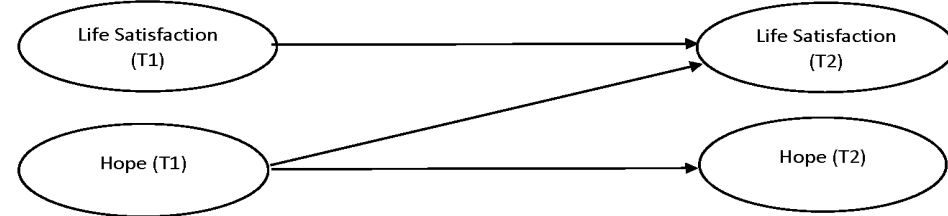
Figure 1

Figure 1: The Multiple “Cross Lagged” Panels Models Tested to Evaluate Life Satisfaction as an Antecedent of Hope ($N = 557$)

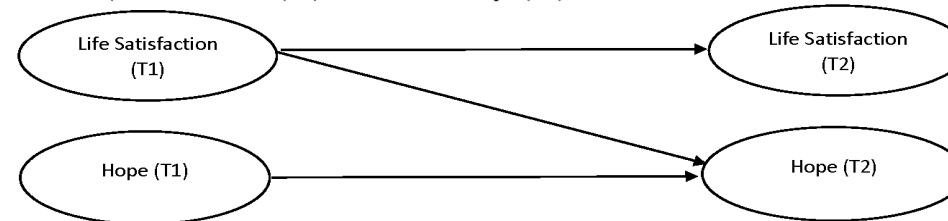
Model 1 (Autoregressive Model)



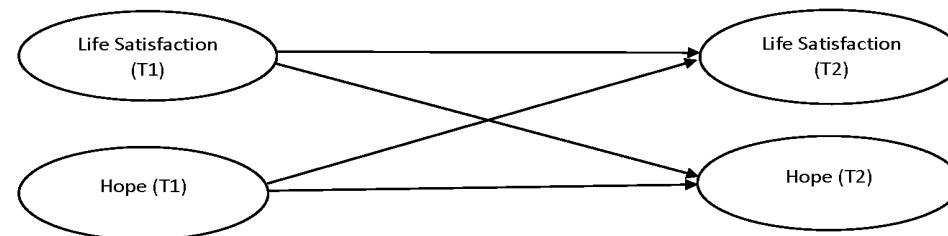
Model 2 (Hope (T1) as a Driver of Life Satisfaction (T2))



Model 3 (Life Satisfaction (T1) as a Driver of Hope (T2))



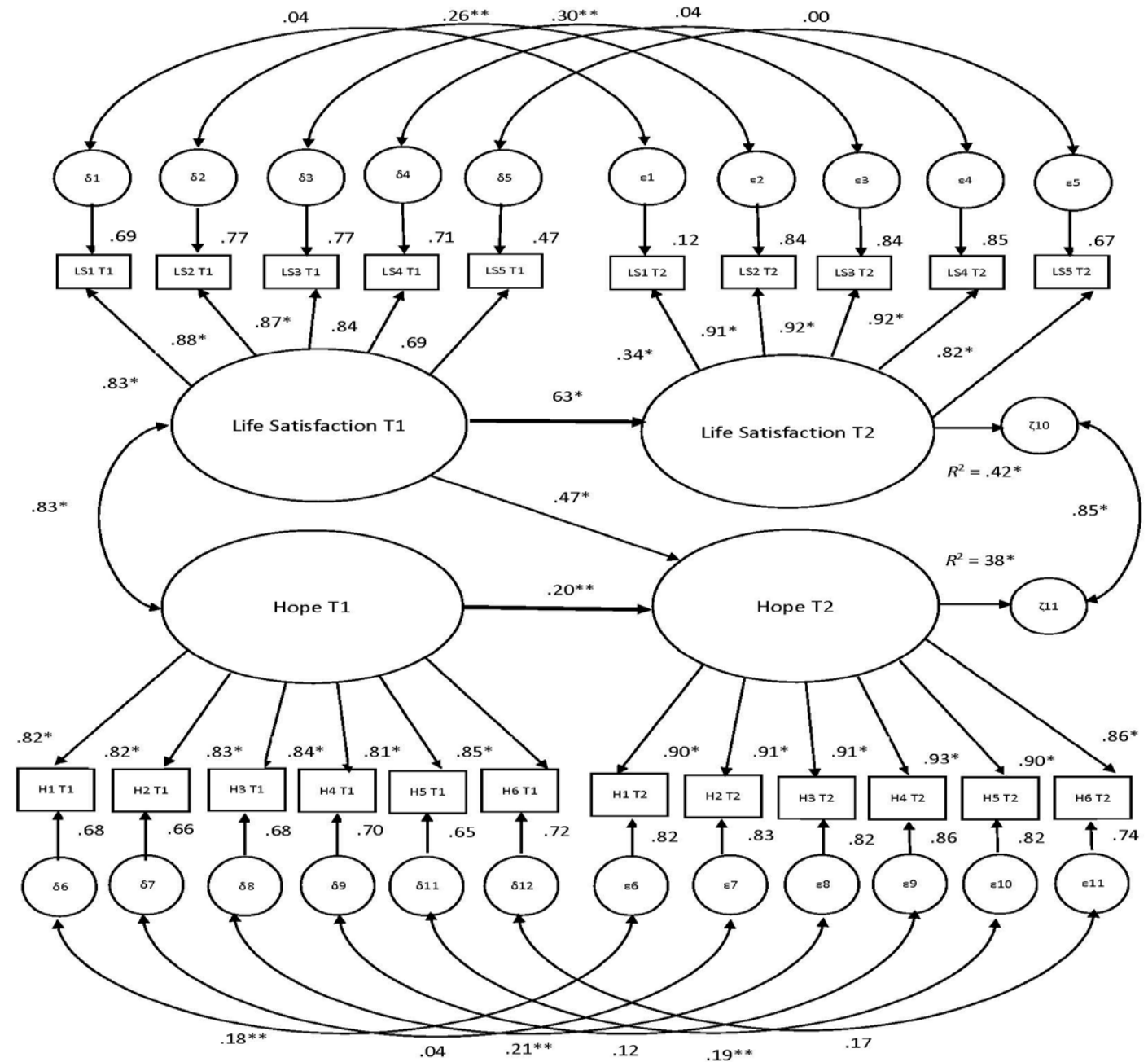
Model 4 (Fully Cross Lagged Model)



Goodness of Fit Indices

Table 1: Summary of Fit Indices for a Comparison of Panel Models of the Directional Relationship of Life Satisfaction and Hope (N = 556)

	χ^2	df	p	χ^2/df	CFI	TLI	RMSEA (90% CI)
Model 1 Baseline with Only Autoregressive Paths	549.50	194	.000	2.83	.95	.93	.06 (.05, .06)
Model 2 Autoregressive Paths and a Cross Path of Hope (T1) Predicting Life Satisfaction (T2)	542.01	193	.000	2.81	.95	.94	.06 (.05, .06)
$\Delta\chi^2$ form Model 1 to Model 2, df = 1	7.49	1	.000				
Model 3 Autoregressive Paths and a Cross Path of Life Satisfaction (T1) Predicting Hope (T2)	528.08	193	.000	2.74	.95	.94	.06 (.05, .06)
$\Delta\chi^2$ form Model 1 to Model 3, df = 1	21.42	1	.000				
Model 4 Fully Cross Lagged Model	527.67	192	.000	2.75	.95	.94	.06 (.05, .06)
$\Delta\chi^2$ form Model 3 to Model 4, df = 1	0.41	1	n.s.				



Implications

- ▶ From a clinical perspective, the results suggest that “success experiences” are important to generating hope (Cheavens, 2000)

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