Investigating the Association between Psychological Well-being and Hope among the IDPs in Erbil

(Izaddin Ahmad Aziz, Sumaya Sami Hassan)

Department of Educational and Psychological - College of Education / Salahaddin University-Erbil
izaddin.aziz@su.edu.krd

https://doi.org/10.21271/zjh.s23.s3.36

Abstract

There is a growing body of research investigating the relationships between well-being and hope. This study outlines and details work conducted to understand the relationship between the components of psychological well-being and hope among the Internally Displaced People (IDPs) who live under stressful conditions. Ryff’s eudaimonic model of well-being across six components was profiled with the Adult Dispositional Hope Scale (ADHS) (Snyder et al, 1991) measure. Three hundred and fifty individuals were selected from the refugee camps in Erbil from both genders (184 male, 166 female) aged between (18-64 years). For collecting the data, self-reported questionnaires. The results of the research sample show significantly high levels of hope and psychological well-being. Importantly, these findings reveal the significant role played by positive relationships between hope components and psychological well-being dimensions, all components show a large effect size. Linear multiple regression analysis suggests that agency and pathway with others predict unique variance in four components of psychological wellbeing, that are Personal Growth, Positive Relations with Others, Purpose in life, and Self-Acceptance after controlling for some demographic variables. To identify the differences between hope components, the results show that females recorded a higher level of hope agency components than males. Also, results show that females recorded higher levels of two psychological well-being components that are Autonomy, and Personal Growth than males. In light of the findings, this study illustrates the importance of agency and pathway components of hope to improve greater psychological well-being in predicting mental health states.

Keywords: Well-Being, Psychological Well-Being, Hope, Internally Displaced People (IDPs).

Introduction

As a concept, psychological well-being originally is linked to healthy human function and self-adjustment (Keyes, Shmotkin, & Ryff, 2002) and associated with a person’s growth and their existential challenges of life measuring well-being for long-term life engagement (Chen, Jing, Hayes, & Lee, 2013; Lindfors & Lundberg, 2002). Ryff (2014) suggested that psychological well-being could regulate life cycle changes, demonstrating that psychological well-being can measure long-term life engagement from a positive perspective. Ryff’s module of psychological well-being could be best presented with six different but related components. Each of the domains is presented as follows. First, Positive relations with others signify to improve strong, warm and trustful relationships with other people. Second, Self-acceptance is referred to seeking a joyful and pleasant life achievement, despite any potential life restrictions. Third, Autonomy, associated with seeking to protect individuality and social conditions where people tend to have personal authority and self-determination. Fourth, Environmental mastery involves the ability to reformat the environment in favour of personal needs. The fifth one is, Purpose in life is presented as the discovery of meaning in life and being active to identify and cope with life challenges. Finally, Personal growth characterizes individual’s lasting development in their capacities and talents (Ryff, Carol D., 1989a; Ryff, Carol D., 1989b; Ryff, Carol D. et al., 2006). Furthermore, Ryff (2014) proposed
that these components have distinguished differences to indicate the extent of the positive feeling of the individuals.

Referring to Ryff’s work, well-being has been thought of as the absence of mental disorder, rather than knowing a positive function. The work on well-being has placed focus on anxiety and depression (Ryff, Carol D. & Keyes, 1995). Two paths of research, namely those looking at subjective and psychological well-being, have tried to understand well-being in terms of positive perspective. These two ways of understanding well-being result from the fact that there are two distinct philosophical interpretations of well-being. Subjective well-being has its roots in a hedonic approach, which focuses on current states of happiness, the achievement of pleasure and avoidance of hurt, and includes constructs like positive affect, life satisfaction, happiness, and quality of life (Ryan & Deci, 2001). On the other hand, psychological well-being has its origins in the eudaimonic approach, which promotes striving for excellence, finding meaning, and reaching one’s true potential. This approach encompasses characteristics such as purpose in life, self-acceptance, personal growth, environmental mastery, positive relations with others, and autonomy (Ryan & Deci, 2001).

The previous studies which examined well-being from the perspective of positive psychological perspective, rather than the absence of psychiatric diagnosis, made use of constructs that can be considered part of the hedonic traditions and considered well-being to be the reflection of one’s current state of positive feelings. Thus, these studies have only focused on those constructs that are concerned with subjective and hedonic wellness, such as happiness, life satisfaction, or positive affect. Diener and Suh (1997) identify well-being in terms of (positive and negative affect), also they define it as the cognitive evaluation of satisfaction with life. Similarly, other proponents of subjective well-being considered well-being to be an individual’s current state of positive feelings, like happiness (Pollard & Lee, 2003), and life satisfaction (Seligman, 2004).

As explained earlier, psychological well-being, with all of its aspects, is a trait-like construct and related to each aspect of human life. Consequently, it is likely to also have an association with hope. In the literature, the relationship between hope and well-being has been reported through assessing distress and depression (Rawdin, Evans, & Rabow, 2013). Others studies that investigate the connection between hope and life satisfaction (Marques, Lopez, & Mitchell, 2013) and positive affect (Rego, Sousa, Marques, & Cunha, 2012). These studies show the importance of positive feelings for hopeful thinking and there is a strong relationship between hope and an individual’s ability to reach his/her full potential. Unexpectedly, there is only one study which attempted to investigate the link between hope and psychological well-being (Hasnain, Wazid, & Hasan, 2014).

The current study documents the unique contribution of specific hope components in psychological well-being by controlling covariate variables that are strongly related to hope, such as age, gender, educational status and marital state from this perspective it could be useful to understand the unique contribution that trait agency and trait pathways make to eudaimonic well-being traits.

Fundamentally, the association between hope dimensions and components of psychological well-being is necessary to address two reasons. First, psychological well-being and hope establish comparative stability. Keyes, Myers, & Kendler(2010) suggest that there are genetic variations in psychological well-being. Similarly, Valle, Huebner, and Suldo, (2006) pointed out that the components of hope are considered to be stable and recognizable through traits. Therefore, identifying the relationship between these constructs might improve our understanding of hope in terms of traits exhibited.

Secondly, considering the theoretical similarity of the components of hope and psychological well-being, further research is required in order to understand the potential link between hope and psychological well-being. For example, a key aspect of Snyder’s theory (2000) suggested that the first requirement for an individual to be considered as hopeful is to possess
a life goal. As such, dimensions of psychological well-being, namely purpose in life and personality growth, reflect the importance of setting goals, having purposes in life. These eudaimonic well-being traits might associate to hope as they are related to setting a significant life goal.

**Method**

**Participants**

Three hundred and fifty internally displaced people’s adults were recruited for this study. In the sample, 52.6% were males and 47.4% were females. The participants ranged in ages between 18 and 53 years. The mean age of participants was 28.85 years ($SD = 6.42$). Concerning participants’ education levels, 12.3% were illiterate, 34.4% were primary school graduate, 24.6% were secondary and high school graduate, and 12.7% were university graduate. A large proportion of the sample reported they are married (60.7%), with 38% of the participants identified as being single, and fewer of them reported as being divorced (1.3%). Only volunteer participants took part in the study. The research sample was selected from the internally displaced persons who live in Erbil Governorate, some of the participants have been living outside the camps such as, housing complex or private house. To obtain a sample for the study, we have selected participants from outside the camps. The participants were selected from Three different areas including three different districts that are, Zaiton, Ozal and Ainkawa. Approximately, 116 to 117 individuals were selected from each area. Since most of the participants were illiterate, the researchers read the research questions and recorded their answers.

**Measures**

- **Psychological well-being**

  While reviewing Ryff’s scale formulation, the researchers noticed that all versions of the psychological well-being measures included the six dimensions. The measurement domains comprised of autonomy, positive relations with others, environmental mastery, personal growth, purpose in life and self-acceptance (Ryff, Carol D., 1989a; Ryff, Carol D., 1989b). The original measure of psychological well-being included 120 items. Nonetheless, Ryff scale has three different versions that are 84, 54 and 42 items. The shortest version of the scale consisted of 18 items over 6 domains that were used for cross-cultural surveys. Previous studies have suggested that the larger scales do a poor job of recording internal consistencies compared with the shorter versions (Burns & Machin, 2009; Ryff, Carol D. & Keyes, 1995; Springer & Hauser, 2006). Therefore, the current study used the short version of the Ryff scale across six subscales, including 18 items as follows: Autonomy with three items (e.g., “I have confidence in my opinions, even if they are contrary to the general consensus”). Environmental mastery with three items (e.g., “In general, I feel I am in charge of the situation in which I live”). Personal growth with three items (e.g., “For me, life has been a continuous process of learning, changing and growth”). Positive relations with others with three items (e.g., “People would describe me as a giving person, willing to share my time with others”). Purpose in life with three items (e.g., “Some people wander aimlessly through life, but I am not one of them”). Self-acceptance with three items (e.g., “I like most aspects of my personality”) (Springer & Hauser, 2006).

  To assess the study, the participants provided their responses on a six-point scale; one was the lowest score for each item, signifying that the respondents totally disagreed, while six was the highest score, inferring total agreement. To score the negative items, the scores were reversed, and the highest marks indicate greater well-being on the overall scale for each domain. Furthermore, due to the Arabic scale was not available for the psychological well-being scale. The researcher translated the scale from the English language into the Arabic
language. Accordingly, with the intention of determining the reliability of the translation, some translation experts were asked to review the scale and evaluate the reliability of the translation from English to Arabic.

- **Hope scale**

Adult Dispositional Hope Scale (Snyder, Charles R. et al., 1991). The Adult Dispositional Hope Scale (ADHS) developed for adults aged 15 and older that included 12 items. Items number 3, 5, 7, 11 are considered as distractors in the test. Four items measure the agency component of hope (e.g. “I energetically pursue my goals”) and four items measure the pathway thinking component of hope (e.g. “I can think of many ways to get out of a jam”). The items score through 8 points as follow; 1=Definitely false to 8=Definitely true. The sum of agency and pathways thinking subscales gives a total hope score for which the Cronbach alpha score for the study was .84.

**The results**

**Descriptive Statistics**

the score of the Hope scale is analyzed and compared with six subscales of psychological well-being. In addition, the demographic variables are calculated. The results related to hope and the six subscales in psychological well-being are measured. Descriptive statistics of the research sample has analysed. Table 1 illustrates the descriptive statistics of the study variables, including the Cronbach’s alpha score, mean, median, standard deviation, Skewness and kurtosis. Cronbach alpha coefficients for the internal consistency reliabilities for all scales above the conventional criteria of α .70. Table 1 also indicates that skewness and kurtosis statistics ranged between the widely used criteria of ±1 (George & Mallery, 2016) suggesting that the data are roughly normally distributed.

Table 1: Cronbach’s alpha score obtained in the domains of psychological quality of life and psychological well-being

|                | Alpha α | Mean    | SD      | Skewness Statistic | SE | Kurtosis Statistic | SE |
|----------------|---------|---------|---------|--------------------|----|--------------------|----|
| Agency         | 0.78    | 22.32   | 6.540   | -.372              | .13| -.371              | .26|
| Pathways thinking | 0.75 | 22.52   | 5.893   | -.452              | .13| -.364              | .26|
| Hope           | 0.81    | 66.43   | 14.068  | -.095              | .13| -.430              | .26|
| Autonomy       | 0.73    | 12.04   | 3.832   | -.237              | .13| -.760              | .26|
| Environmental mastery | 0.79 | 12.56   | 3.176   | -.112              | .13| -.694              | .26|
| Personal Growth | 0.71 | 12.35   | 3.515   | -.125              | .13| -.737              | .26|
| Positive Relation | 0.80 | 11.40   | 3.504   | .096               | .13| -.798              | .26|
| Purpose in life | 0.80  | 11.09   | 3.646   | .030               | .13| -.812              | .26|
| Self-Acceptance | 0.74  | 11.75   | 2.894   | .190               | .13| -.502              | .26|
| PWB            | 0.80    | 71.18   | 14.413  | .439               | .13| .160               | .26|

**Correlation Analysis**

Product moment coefficient is used to identify the relationship between the Hope components and psychological well-being domains. A Pearson correlation assessed the relationship between the six dimensions of psychological well-being and Hope components (agency and pathways thinking).

Table 2 shows the relationship between the Hope components and psychological well-being domains.
As noticed in Table 2, significant positive associations were found for agency and pathway components of hope with all dimensions of psychological well-being. To interpret the correlation coefficient to represent the effect size between components psychological well-being, agency and pathway have addressed. The criteria of point-biserial correlation coefficient considered the effect size criteria, small = .1, medium = .24 and large = .37 (McGrath & Meyer, 2006). From the results, it is clear that the relationship between both variables ranged from medium to large effect.

**One sample t-test**

As shown in table 3 the means scores and the value of the comparison of both Hope and psychological well-being are considerably different. To address, these differences are statistically significant, one sample t-test is conducted from 350 participants of internally displaced people (IDPs). The result shows that the participants show a statistically significant high level of hope, at the.00 level of significance, from the normed value of 54. (M = 66.43, SD=14.07) compared with general population, t(349) = 16.53, p <.00. Also, the research sample shows a statistically significant high level of psychological well-being, at the.00 level of significance, from the normed value of 63. (M = 71.18, SD=14.41) compared with general population, t(349) = 7.51, p <.00.

|   | Mean | SD  | Comparison Value | T    | df  | Sig. (2-tailed) | Mean Difference |
|---|------|-----|------------------|------|-----|-----------------|----------------|
| 1 | Agency | 66.43 | 14.07 | 54 | 16.53 | 349 | 0.00 | 12.43 |
| 2 | Pathways Thinking | 22.32 | 6.54 | 18 | 12.36 | 349 | 0.00 | 4.32 |
| 3 | Well-Being | 71.18 | 14.41 | 63 | 7.51 | 349 | 0.00 | 1.54 |
| 4 | Autonomy | 12.04 | 3.83 | 10.5 | 12.14 | 349 | 0.00 | 2.06 |

**. p< 0.01. *. p< 0.05**
Independent sample T.test

An independent sample t-test was used, to identify the significance of the differences between male and female hope components and psychological well-being dimensions. Table 4 shows the differences between both genders in hope components and psychological well-being dimensions.

| The variables       | Gender   | N    | Mean | SD  | t     | df  | Sig  |
|---------------------|----------|------|------|-----|-------|-----|------|
| Agency              | Male     | 184  | 21.39| 6.40| 2.84  | 348 | 0.01 |
|                     | Female   | 166  | 23.36| 6.56| 1.82  | 348 | 0.06 |
| path ways thinking  | Male     | 184  | 21.96| 5.44| 1.82  | 348 | 0.06 |
|                     | Female   | 166  | 23.14| 6.32| 1.82  | 348 | 0.06 |
| Autonomy            | Male     | 184  | 11.58| 3.59| 2.39  | 348 | 0.02 |
|                     | Female   | 166  | 12.55| 4.03| 1.01  | 348 | 0.31 |
| Environmental mastery| Male    | 184  | 12.40| 2.87| 1.01  | 348 | 0.31 |
|                     | Female   | 166  | 12.74| 3.48| 1.01  | 348 | 0.31 |
| Personal Growth     | Male     | 184  | 11.74| 3.38| 3.45  | 348 | 0.01 |
|                     | Female   | 166  | 13.02| 3.55| 3.45  | 348 | 0.01 |
| Positive Relation   | Male     | 184  | 11.24| 3.31| 0.92  | 348 | 0.36 |
|                     | Female   | 166  | 11.58| 3.71| 0.92  | 348 | 0.36 |
| Purpose in life     | Male     | 184  | 11.32| 3.34| 1.27  | 348 | 0.21 |
|                     | Female   | 166  | 10.83| 3.95| 1.27  | 348 | 0.21 |
| Self-Acceptance     | Male     | 184  | 11.65| 2.70| 0.67  | 348 | 0.50 |
|                     | Female   | 166  | 11.86| 3.10| 0.67  | 348 | 0.50 |

The results show that females ($M = 21.39, SD=6.40$) shows significant higher level of agency compared with males ($M = 32.36, SD=6.40$) , $t(349) = 2.84, p <.01$. With regrads to psychological well-being, females ($M = 12.55, SD=4.03$) shows significant higher levels of autonomy component compared with males ($M = 11.58, SD=3.59$) , $t(349) = 2.39, p <.02$. In addition, in presonal growth component females ($M = 13.02, SD=3.55$) recorded significantly higher levels compared with males ($M = 11.74, SD=3.38$) , $t(349) = 3.45, p <.01$.

Multiple regression

The multiple linear regressions were conducted to assess the association between the agency and pathway components of hope and the six components of psychological well-being. A series of standard linear multiple regressions ran to indicate which aspects of the two domains of hope have a unique prediction with each component of psychological well-being. At the first stage (Model 1), demographic variables including sex, age, education level, and
marital status controlled. At the second level (Model 2), psychological well-being domains are added that are, Environmental Mastery, Autonomy, Positive Relations with Others, Self-acceptance, Personal Growth and Purpose in Life, see Table 5.

Table 5 Shows Regression analysis with two dimensions of hope measure as the dependent variable, and gender, age, education, and marital status, with six components of Psychological well-being used as predictor variables.

| Model-1             | Agency          | Pathway         |
|---------------------|-----------------|-----------------|
|                     | B               | Beta | t    | Sig. | B     | Beta | t    | Sig. |
| Gender              | 1.88            | 0.14 | 2.63 | 0.01 | 0.91  | 0.08 | 0.17 | 0.87 |
| Age                 | 0.31            | 0.06 | 1.16 | 0.25 | -0.04 | -0.01| -0.17| 0.87 |
| Educational level   | -0.32           | -0.05| -0.86| 0.39 | -0.65 | -0.11| -1.95| 0.05 |
| Marital status      | -0.06           | -0.01| -0.17| 0.87 | 0.22  | 0.04 | 0.78 | 0.44 |
| Model-2             | B               | Beta | t    | Sig. | B     | Beta | t    | Sig. |
| Gender              | 1.57            | 0.12 | 2.50 | 0.01 | 0.41  | 0.03 | 0.71 | 0.48 |
| Age                 | 0.10            | 0.02 | 0.44 | 0.66 | -0.19 | -0.04| -0.90| 0.37 |
| Educational level   | -0.12           | -0.02| -0.36| 0.72 | -0.54 | -0.09| -1.88| 0.05 |
| Marital status      | 0.33            | 0.06 | 1.16 | 0.25 | 0.12  | 0.02 | 0.47 | 0.64 |
| Autonomy            | -0.04           | -0.02| -0.39| 0.70 | 0.17  | 0.11 | 1.86 | 0.06 |
| Environmental mastery| 0.02           | 0.01 | 0.18 | 0.86 | 0.56  | 0.30 | 4.92 | 0.00 |
| Personal Growth     | 0.30            | 0.16 | 2.67 | 0.01 | 0.15  | 0.09 | 1.49 | 0.14 |
| Positive Relation   | 0.09            | 0.05 | 0.84 | 0.40 | 0.02  | 0.01 | 0.21 | 0.83 |
| Purpose in life     | 0.30            | 0.17 | 2.84 | 0.01 | 0.16  | 0.10 | 1.65 | 0.10 |
| Self-Acceptance     | 0.78            | 0.34 | 6.52 | 0.00 | 0.17  | 0.08 | 1.57 | 0.12 |

Form table 5 the results of the multiple regressions for hope components at the first stage (Model 1) of the regression analysis using control variables that include sex, age, education level and marital status showing different connotations of hope components as follows; (Agency, F [4] = 2.602, r= .17, r² = .03, adj r² = .02, p< .05. Pathway, F [4] = 1.88 r= .15, r² = .02, adj r² = .01, p> .05. Gender accounts. for unique variances in Agency component of hope. Significant predictions are recorded with the educational level pathway component of hope.

At the second stage (Model 2), after inserting the Psychological well-being components statistically significant changes are indicated in R² for hope aspects (Agency, ΔR² = .28, p< .00; Pathway, ΔR² = .26, p> .00. The personal growth, purpose in life, and self-acceptance component account show unique variance in Agency. As well as this, the environmental mastery component accounts for unique variance in the pathway. However, surprisingly, the pathway component does not record any unique variance with other psychological well-being domains.

Discussion
The current study documents the strong association between hope components agency and pathways thinking with psychological well-being. The correlational analysis shows that all of the domains of psychological well-being are connected to both agency and pathways thinking. For the
Agency component, Self-acceptance is found to have the greatest effect, and for the pathway thinking component, environmental mastery shows the greatest effect. To identify the level of hope and psychological well-being components one sample t-test is used and from the results, it is noticed that although the participants are displaced from their city the research samples recorded high levels of hope and psychological well-being. This result can be attributed to the fact that displaced people are receiving good treatment from the host community, and that the new place has more stability compared to their city. As mentioned in the literature review that applied to the Syrian refugees. Aziz, Hutchinson, & Maltby, (2014) suggested that receiving support from the host community could help to increase well-being. To investigate the differences of hope and psychological well-being components independent sample t-test is used. The results show that females are more hopeful compared with males and had better well-being. This outcome is contrary to that of Burke and Weir (1978) study which show males are more hopeful and had better well-being in comparison to females.

The next section of the study is concerned with identifying the association between hope components and psychological well-being components. The important findings of the study are derived from the regression analyses, after using multiple regression analyses the results show that agency scores significantly predict personal growth, purpose in life and self-acceptance after controlling for age, gender, educational level, and marital status. A potential explanation for the findings might be that individuals’ perceptions of their own capabilities of attaining their goals (agency) may lead them to perceive themselves as being competent which increases self-acceptance and moving forward in their life. This feeling perhaps promotes wellbeing.

The results of the regression analysis presented that agency is a unique predictor for the self-personal growth, purpose in life, and self-acceptance dimensions of psychological well-being. Considering that agency referred to an individual’s belief in their ability to reach a demanded goal. Similarly, self-acceptance referred to individuals’ positive attitudes towards themselves, their acceptance of their strengths and weaknesses and their confidence and attitude towards their skills (Ryff, Carol D. & Keyes, 1995). Consequently, the possible explanation for the presence of the strong association between the constructs might be that persons with a high level of belief in their ability to achieve their aims, their strength and weaknesses and their previous knowledge.

With respect to the next part of the study's pathways thinking component of hope, it was found to be a valid predictor for environmental mastery. The results show that people who believed that they could achieve their goals by scheduling their paths to pass difficulties and be independent have a higher tendency to control their environment. These results corroborate the findings of a great deal of the previous work which points out that organizing of individuals thoughts and their actions to attain a specific goal is associated with increasing the individual's ability to control their environment (Weiss & Lang, 2009). This result may be explained by the fact that both of the concepts need similar characteristics in their traits, such as, ability to find alternative and unique ways to reach the goals that might come from the ability of dealing positively with person’s environment. As well, persons who show high personal growth probably would have a better realization of their potential with the possibility of engaging with and adapting to new experiences (Ryff, Carol D. & Keyes, 1995).

The findings also reveal that autonomy and positive relation are not predicted by any of the components of hope, even though a significant and positive association exists for both of the dimensions. Fundamentally, these results are unexpected due to both concepts of hope and positive relations relating to having a successful social network with others which helps the individuals move forward in their lives.

**Conclusion**

To sum up, the present research highlights how hope is positively correlated with psychological well-being. Our investigation includes predicting the unique variance of the argument between hope and psychological well-being. The second major finding shows that females excel over males in some aspects of hope and well-being. The results of the current study may have significant theoretical implications on understanding the unique contribution
of the hope component agency and pathways in specific psychological well-being.
References
Aziz, I. A., Hutchinson, C. V., & Maltby, J. (2014). Quality of life of syrian refugees living in camps in the kurdistan region of Iraq. PeerJ, 2, e670. doi:10.7717/peerj.670

Burke, R. J., & Weir, T. (1978). Sex differences in adolescent life stress, social support, and well-being. The Journal of Psychology, 98(2), 277-288.

Burns, R. A., & Machin, M. A. (2009). Investigating the structural validity of ryff’s psychological well-being scales across two samples. Social Indicators Research, 93(2), 359-375. doi:10.1007/s11205-008-9329-1

Chen, F. F., Jing, Y., Hayes, A., & Lee, J. M. (2013). Two concepts or two approaches? A bifactor analysis of psychological and subjective well-being. Journal of Happiness Studies, 14(3), 1033-1068. doi:10.1007/s10902-012-9367-x

Diener, E., & Suh, E. (1997). Measuring quality of life: Economic, social, and subjective indicators. Social Indicators Research, 40(1-2), 189-216.

George, D., & Mallery, P. (2016). IBM SPSS statistics 23 step by step: A simple guide and reference Routledge.

Hasnain, N., Wazid, S., & Hasan, Z. (2014). Optimism, hope, and happiness as correlates of psychological well-being among young adult assamese males and females. Journal of Humanities and Social Science, 19(2), 44-51.

Keyes, C. L., Myers, J. M., & Kendler, K. S. (2010). The structure of the genetic and environmental influences on mental well-being. American Journal of Public Health, 100(12), 2379-2384.

Keyes, C. L., Shmotkin, D., & Ryff, C. D. (2002). Optimizing well-being: The empirical encounter of two traditions. Journal of Personality and Social Psychology, 82(6), 1007. doi:10.1037//0022-3514.82.6.1007

Lindfors, P., & Lundberg, U. (2002). Is low cortisol release an indicator of positive health? Stress and Health, 18(4), 153-160. doi:10.1002/smi.942

Marques, S. C., Lopez, S. J., & Mitchell, J. (2013). The role of hope, spirituality and religious practice in adolescents’ life satisfaction: Longitudinal findings. Journal of Happiness Studies, 14(1), 251-261.

McGrath, R. E., & Meyer, G. J. (2006). When effect sizes disagree: The case of r and d. Psychological Methods, 11(4), 386. doi:10.1037/1082-989X.11.4.386

Pollard, E. L., & Lee, P. D. (2003). Child well-being: A systematic review of the literature. Social Indicators Research, 61(1), 59-78.

Rawdin, B., Evans, C., & Rabow, M. W. (2013). The relationships among hope, pain, psychological distress, and spiritual well-being in oncology outpatients. Journal of Palliative Medicine, 16(2), 167-172.
Rego, A., Sousa, F., Marques, C., & Cunha, M. P. E. (2012). Retail employees’ self-efficacy and hope predicting their positive affect and creativity. *European Journal of Work and Organizational Psychology, 21*(6), 923-945.

Ryan, R. M., & Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology, 52*(1), 141-166. doi:10.1146/annurev.psych.52.1.141

Ryff, C. D. (1989a). Beyond ponce de leon and life satisfaction: New directions in quest of successful ageing. *International Journal of Behavioral Development, 12*(1), 35-55. doi:10.1177/016502548901200102

Ryff, C. D. (1989b). Happiness is everything, or is it? explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology, 57*(6), 1069. doi:10.1037/0022-3514.57.6.1069

Ryff, C. D., & Keyes, C. L. M. (1995). The structure of psychological well-being revisited. *Journal of Personality and Social Psychology, 69*(4), 719. doi:http://dx.doi.org/10.1037/0022-3514.69.4.719

Ryff, C. D. (2014). Psychological well-being revisited: Advances in the science and practice of eudaimonia. *Psychotherapy and Psychosomatics, 83*(1), 10-28. doi:10.1159/000353263 [doi]

Ryff, C. D., Love, G. D., Urry, H. L., Muller, D., Rosenkranz, M. A., Friedman, E. M., . . . Singer, B. (2006). Psychological well-being and ill-being: Do they have distinct or mirrored biological correlates? *Psychotherapy and Psychosomatics, 75*(2), 85-95. doi:10.1159/000090892

Seligman, M. E. (2004). *Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfilment* Simon and Schuster.

Snyder, C. R. (2000). *Handbook of hope: Theory, measures, and applications* Academic press.

Snyder, C. R., Harris, C., Anderson, J. R., Holleran, S. A., Irving, L. M., Sigmon, S. T., . . . Harney, P. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology, 60*(4), 570.

Springer, K. W., & Hauser, R. M. (2006). An assessment of the construct validity of ryff’s scales of psychological well-being: Method, mode, and measurement effects. *Social Science Research, 35*(4), 1080-1102. doi:10.1016/j.ssresearch.2005.07.004

Valle, M. F., Huebner, E. S., & Suldo, S. M. (2006). An analysis of hope as a psychological strength. *Journal of School Psychology, 44*(5), 393-406.

Weiss, D., & Lang, F. R. (2009). Thinking about my generation: Adaptive effects of a dual age identity in later adulthood. *Psychology and Aging, 24*(3), 729.