International Journal of Early Childhood Special Education (INT-JECSE)
DOI:10.9756/INTJECSE/V14I5.440 ISSN: 1308-5581 Vol 14, Issue 05 2022

Effect of Sense of Coherence on Resilience, Hardiness, Intuitive Decision, Rumination and Counterfactual Thinking

Hena Dembla
PhD Scholar
Amity University, Noida
henadembla27@gmail.com

Dr. Priyanka Tiwari
Head of the Department
Manav Rachna University
priyankatiwari0208@gmail.com

Dr. Zuby Hasan
Assistant Professor
Amity University, Noida
zhasan@amity.edu

Abstarct:
The present study aimed at exploring the relationship between Sense of Coherence and Resilience, Hardiness, Intuitive Decision Making, Rumination and Counterfactual Thinking. Correlation and regression was used to assess the relationship. A direct positive relation was found between Sense of Coherence and all of the variables and the correlation co-efficients came out for Resilience (r= .32), Hardiness (r= .19), Intuitive Decision (r= .26), Rumination (r= .52) and Counterfactual Thinking (r= .46) which indicate that if some individual have high Sense of Coherence then he/she might have high degree in all taken variables. Researches also suggest and prove the same for the relationship between Sense of Coherence and other variables. Regression analysis between Sense of Coherence and the variables- Resilience, Hardiness, Decision Making, Counterfactual Thinking and Rumination were assessed to understand how well these variables can predict Sense of Coherence or vice versa. The results of the regression analysis showed that Intuitive decision making and Hardiness variables were the best predictor of Sense of Coherence.

Introduction:

Sense of coherence:

According to Antonovsky's definition (Antonovsky 1987) SOC is:

"a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that 1) the stimuli, deriving from ones internal and external environment in the course of living are structured, predictable and explicable; 2) the resources are available for one to meet the demands posed by these stimuli; 3) these demands are challenges, worthy of investment and engagement".

"SOC thus has three main components: comprehensibility, manageability and meaningfulness" (Antonovsky 1979, Antonovsky 1987).

Sense of coherence (SOC) can also be defined as it reflects a coping capacity of people to deal with everyday life stressors. It can be said that SOC is often considered to be a stable entity that is developed in young adulthood and stabilizes around the age of 30.

According to Antonovsky, sense of coherence is a life orientation. Koltko-Rivera (2004) defines life orientation as follows:

"… a way of describing the universe and life within it, both in terms of what is and what ought to be. A given worldview is a set of beliefs that includes limiting statements and assumptions regarding what exists and what does not. … A worldview defines what can be known or done in the world, and how it can be known or done. … What goals can be sought in life … defines what goals should be pursued".

It is also about one's own ability to identify one's internal and external resources and use them in a way that promotes health and well-being (Eriksson & Lindström, 2006). Further, it is a way of thinking in terms of peoples' resources, and even a way to work, to meet and treat other people. It is also important to understand why and how resources work. This has been further examined in a Norwegian qualitative study using a grounded theory approach (Maass et al., 2017). They investigated how neighbourhood resources may contribute to the development of a strong SOC. They found that a strong SOC can be described as a deeper understanding of how and why resources work, which allows for more flexible use of resources.

Many researches done on Sense of Coherence with relation to Resilience, Hardiness, Intuitive Thinking, Rumination and Counterfactual Thinking. The present research also made an attempt to explain the relationship between Sense of Coherence and these variables in a way that how they all are related to Sense of Coherence and who among them be the best predictor of it.

One of the research explained the teacher's Sense of Conference that aim to explain determination of the level of strength of the sense of coherence (SOC) of teachers and possible differences in the dispositional feature of personality according to important socio-demographic characteristics. This is why we used data form the wide research which included 129 teachers from the two neighbouring Belgrade primary schools. The given approximate value is of a high level (M = 148, 33; SD = 20, 33), and the scope (89-184) suggests that none of the examined teachers has very strong (or maybe rigid!), or a very weak SOC. Younger teachers (up to the age of 40) do not have a strong SOC than the older ones, and there are some differences according to the gender, marital status and some other characteristics (Bozin, 2011).

Resilience:

Resilience is the phenomena which serves and help individuals during hard times like stress, family issues, and pressure from work, trauma, etc., as they affect an individual in many terms so it helps to cope better with these situations. It is defined as the "incidence of factors that are protective such as individualistic, societal, family related, and organisational safety nets which enable the individual in defying major stressors" (Kaplan et al., 1996).

Resilience can link to Sense of Coherence is proved by many researches done in past years. One of the research done by Markus et al., (2013) which explained the relationship between these two variables and they conducted a cross-sectional study investigated SOC, resilience and PTSD in paramedics (N = 668). PTSD was assessed with the Posttraumatic Stress Diagnostic Scale (PDS); resilience and SOC were measured with the Resilience Scale (RS-11) and the Sense of Coherence Scale (SOC-L9). Further measures included preparation of dealing with traumatic events and availability of psychological help. As expected, both resilience and SOC were negatively correlated with PTSD symptoms. The regression analysis showed that 19.2% of the total variance in symptom severity was explained by these variables.

Hardiness:

Hardiness can be defined as the personality trait of an individual actually seem to thrive on stress instead of letting the stress wear them down. Such persons are called hardy personality, a term first coined by Kobasa (1979). It can be said that the higher level of hardiness will reduce the negative effects of stressful events which can also explained by different researches carried by Kobasa (1979; 1982a; 1982b; 1984). Kobasa, et. al., (1982) explored the concept of "Personality Hardiness" as a resistance resource that mediates the negative consequences of high level stress.

As a personality trait predictive of health, performance, and conduct outcomes, hardiness consists of three dimensions termed the three Cs of commitment (rather than alienation), control (rather than powerlessness), and challenge (rather than threat) (Santrock, 2006).

The research explain the relationship between hardiness and SOC that The model's central concept, the sense of coherence, is described and analysed The sense of coherence, with its three components (meaningfulness, comprehensibility and manageability), is then compared and contrasted with similar concepts The convergent theoretical notions which are distinguished from Antonovsky's coherence are will to meaning, locus of control, learned helplessness and hardiness It is hoped that this analysis will provide greater conceptual clarity for nurses who study and use these concepts in education, practice or research. (Grace et al., 1993)

Decision making:

"Decision making is a process of recognising and selecting a possible different course of action demanded by the situtation. (Kreitner, 1966).

There are two main style of decision making decribed below:

Rational Decision Making: Individuals who adopt rational decision making style anticipate the need for decision making and gathers necessary information about themselves and their environment.

Intuitive Decision Making: Intuitive decision making is "a subconscious process created out of a person's experiences" (Robbins & Judge, 2012). Irrespective of the availability of limited information, an intuitive decision maker can make quick decisions. Soukhanov (1999) defined that "intuition is known as something instinctively without having to discover or perceive it".

A study done by Laura & Joshua (2009) explained the prediction that individual differences in intuition would interact with positive affect (PA) to predict referential thinking, in a nonclinical sample. Participants (N = 146) completed questionnaires measuring PA, intuition, referential thinking, personality traits, depression, anxiety, and meaning in life. Controlling for anxiety and depression and traits, the interaction of PA and intuition predicted referential thinking. Exploratory analyses demonstrated that at high levels of PA, referential thinking was positively associated with meaning in life.

Rumination:

Rumination is a type of extended thinking, the nature, causes, and consequences of which have been widely evaluated. Rumination is a form of preservative cognition that focuses on negative content, generally past and present, and results in emotional distress.

Many researches done on Sense of Coherence and rumination to explain their relation. The COVID-19 pandemic is a major chronic stressor affecting all societies and almost all individuals. Consequently, research demonstrated a negative impact of COVID-19 on mental health in parts of the general population. However, not all people are affected equally thus making the identification of resilience factors modulating the pandemic's impact on mental health an important research agenda. One of these factors is sense of coherence (SOC), the key component of the salutogenesis framework. The current study aimed at investigating the long-term relationship between SOC and psychopathological symptoms, and the impact of COVID-19-related rumination as its moderator. The prospective observational study assessed psychopathological symptoms and SOC before the COVID-19 outbreak in Germany (February 2020) and at six critical time points during the pandemic in an online panel (n = 1,479). Bivariate latent change score models and latent growth mixture modeling were used to analyze changes in psychopathological symptoms and SOC along with their interaction and to differentiate trajectories of COVID-19-related rumination. A model allowing for unidirectional coupling from SOC to psychopathological symptoms demonstrated best fit. In the total sample, psychopathological symptoms increased significantly over time. Previous SOC predicted later changes in psychopathological symptoms, whereby a stronger SOC was associated with a decrease in symptoms over time. The same pattern of results was evident in the high-

rumination (17.2%) but not in the low-rumination group (82.8%). Our findings demonstrate that SOC is an important predictor and modulator of psychopathological symptoms during the COVID-19 pandemic, particularly in those respondents that ruminate about the pandemic. (Sarah et. Al., 2022)

The present study investigated the influence of contextual (i.e., being in college vs. being employed) and psychological (i.e., sense of coherence) processes on achieving a sense of adulthood in a sample of 317 emerging adults. Identity formation, conceptualized as multiple dimensions of exploration and of commitment, was conceived of as a mediator of these relationships. Individuals who perceive themselves as adults scored higher on commitment and lower on ruminative exploration than those who do not perceive themselves as full-fledged adults. Structural equation modeling demonstrated that the relationships of sense of coherence and attending college versus being employed to sense of adulthood were partially mediated by identity formation—and by the dimension of commitment making in particular. Being employed and scoring high on sense of coherence are directly and indirectly (through making stronger identity commitments) related to a greater sense of adulthood. Implications and suggestions for future research are outlined. (Koen et al., 2008)

Counterfactual Thinking:

Counterfactual thinking is thinking about a past that did not happen. This often happens in 'if only...' situations, where we wish something had or had not happened. It focuses on how the past might have been, or the present could be, different.

By definition, "*counterfactual thinking is a concept in psychology that compromises individual's tendency to generate possible alternatives to life events which are opposing to what have happened in the past. It fundamentally means 'counter to the facts'"* (Roese, 1997, p. 48).

This effect is increased by:

- *Replication*: if we can easily reconstruct events as happened or as wished for.
- *Closeness*: if the unwanted event is close, such as just missing winning the lottery by one number or just missing a taxi.
- *Exception*: if the event occurred because of a non-routine action that might well not have happened ('if only...').
- *Controllability*: if something could have been done to avoid the event.
- *Action*: in the short term, we regret actions that cause problems more than inaction that might have the same effect (although in the longer term, this effect is reversed).

Sense of Coherence is also associated with counterfactual thinking which further explained that how counterfactual thoughts contribute to the outlook of the negative situations faced by individuals. There are some researches done on sense of coherence and counterfactual thinking which expained the link between two. This study focuses on selected characteristics of counterfactual thinking related to coping (represented by sense of coherence SOC and self efficacy GSES) and proactive coping. Among personality characteristics related to proactive coping and counterfactual thinking, they focuses on anxiety. The results shows a higher level of proactive and preventive coping, as well as higher SOC and GSES, related to positive opinion of the helpfulness of counterfactual thinking in solving possible future problems and to lower anxiety (Zdena & Alexandra,2010).

Methodology:

Research Problem: To study the effect of Sense of Coherence on Resilience, Hardiness, Rumination, Intuitive Decision and Counterfactual Thinking.

Objectives:

- To explore the relationship between Sense of Coherence and Resilience among young adults.
- To explore the relationship between Sense of Coherence and Hardiness among young adults.
- To explore the relationship between Sense of Coherence and Intuitive Decision among young adults.
- To explore the relationship between Sense of Coherence and Rumination among young adults.
- To explore the relationship between Sense of Coherence and Counterfactual Thinking among young adults.
- To explore the impact of Sense of Coherence on taken variables among young adults.

Hypotheses:

- There will be a significant relationship between Sense of Coherence and Resilience among young adults.
- There will be a significant relationship between Sense of Coherence and Hardiness among young adults.
- There will be a significant relationship between Sense of Coherence and Intuitive Decision among young adults.
- There will be a significant relationship between Sense of Coherence and Rumination among young adults.
- There will be a significant relationship between Sense of Coherence and Counterfactual Thinking among young adults.
- There will be a significant impact of Sense of Coherence on taken variables among young adults.

Participants:

The sample of the present study includes 450 participants (males and females) residing in Delhi, NCR. Participants were randomly selected ranged in the age from 18-35 years including both working and non-working individuals. All of them belong to high socio-economic strata. There were no signs of psychological disorders.

Research design:

It is a layout of research objectives, respondent's categorization to analyse the information on which the research will be further carried out. In the present research, an endeavour is constructed to realize the relationship of Sense of Coherence and Resilience, Rumination, Hardiness, Intuitive Decision and Counterfactual Thinking, thus following a correlational research design. Also to analyse the impact of Sense of Coherence on the taken variables, linear regression will be applied using SPSS Software.

Measures:

The Brief Resilience Scale (BRS):

The Brief Resilience Scale was developed by Smith et. al. (2008) purely to assess the concept of resilience under its original etymology or measure of ability. The Brief-Resilience Scale intends to measure one's ability to bounce back or recover from stress.The Brief Resilience Scale is a 6-item scale and Scoring is measured on a 5-point scale, adding the responses on all six questions with possible ranges from 6-30. Scores range from: Strongly disagree to strongly agree.

The internal consistency of the BRS was good, calculated with four different samples. Samples 1 and 2 were young and primarily female. Sample 3 was relatively old and primarily male. Sample 4 was middle aged and all female. The results came with Cronbach's alpha ranging from .80–.91. The BRS was given twice in two samples with a test-retest reliability (ICC) of .69 for one month. The validity of the scale was described by calculating convergent and discriminant predictive validity with scores ranging from 0.70 to 0.85.

Sense of Coherence Scale(SoC):

A shorter version of 13 questions of the original form was developed by Antonovsky, where the score ranges between 13 and 91 points and ithems were answered on a 7-point likert scale. The scale comprises three components: comprehensibility (to which 5 items contribute), manageability (4 items), and meaningfulness (4 items). SOC questionnaires from a sample of 623 healthy adults were analysed using Rasch analysis.

Rating scale analysis showed that the seven scale steps were not utilized in the intended manner and that a shortening to five categories would be beneficial. Twelve out of the 13 items showed acceptable goodness-of-fit and 43 % of the variance was explained by the SOC dimension in the principal components analysis. There was no DIF between subgroups in the sample. The items were well targeted to the sample SOC level with no ceiling or floor effects. Item and person reliability were good and the person separation index was 2.05 indicating that the scale can separate three different levels of SOC, which corresponds well to its theoretical base. The item and person reliability coefficients were 0.99 and 0.81, respectively, for the 7-category scale and 0.99 and 0.82 for the 5-category scale.

The face validity of these scales was assessed and explained that the sense of coherence scales have been empirically tested in different cultures, both Western and cultures in Africa and Asia.

A short hardiness scale:

This scale was developed by Bartone & Paul in 1995. A short, 15-item hardiness measure (DRS-15) was derived from a longer (30-item) version and has shown good internal consistency (a = 22) and criterion-related validity across multiple samples (Bartone, 1995, 1999). Scores on the DRS-15 version correlate .84 with the 30-item version (N= 1193 Army males).

The DRS-15 was completed by 104 undergraduate freshmen at the U.S. Military Academy, West Point as part of a larger study. The sample was 86.5% male, and 13.5% female, with a mean age of 18.9 yr. Three weeks later, the same group completed the version again. Pearson correlation coefficients were computed for total hardiness scores and for the hardiness sub- scales of Commitment, Control, and Challenge, over the 3-wk. interval. The 3-wk. test-retest reliability coefficient for the DRS-15 was .78. Corresponding test-retest coefficients for the three hardiness subscales, with five items each, were Commitment = .75, Control = .58, and Challenge = .81.

This scale was demonstrated appropriately criterion-related validity and predictive validity in several samples, with respect to both health and performance under high-stress conditions.

Decision Making Questionnaire(DMQ):

The Decision Making Questionnaire was developed by Antonio et. al. in 2009. The 'Decision-Making Questionnaire' (DMQ) was developed and validated in order to examine the factors that affect decision making. The reliability of this test was measured by test-retest reliability and came out to be high for both rational ($r=0.79$, $p<.01$) and intuitive ($r=0.79$, $p<.01$) dimensions.

The discriminant and convergent validity across the DSS rational and intuitive styles. As expected, age, gender, and cognitive ability were not significantly related to either DSS sub-scale. GPA had a small to moderate positive correlation with DSS rational style.

Rumination revised scale(RRS):

A short version of the Ruminative Response Scale (RRS) formed by (Treynor et al (2003), consists 10 items from the original list of 22 which was developed by Nolen-Hoeksema and Morrow (1991). The scale was obtained by selecting the items that had the highest item-total correlations with the total score. The short version is highly correlated to the full version of the scale (r = .90) and has a high level of internal reliability (Cronbach's a = .85). Each item is scored on a 4-point Likert scale, ranging from 1 ("almost never") to 4 (almost always"). The inter-item reliability of the Reflection subscale was .72 and the test-retest correlation was r = 60. For the Brooding subscale, coefficient alpha was .77 and the test-retest correlation was r =. 62 (Treynor et al., 2003).

Counterfactual Thought for Negative Events Scale (CTNES):

This scale was developed by Rye et. al. in 2008. To assess the psychometric properties of the newly created Counterfactual Thinking for Negative Events Scale (CTNES) was done in two studies involving university undergraduates done by Mark et. al., 2008. In Study 1 (N =634), factor analysis revealed four subscales that correspond with various types of counterfactual thinking: Nonreferent Downward, Other-Referent Upward, Self-Referent Upward, and Nonreferent Upward. The subscales were largely orthogonal and had adequate internal consistency and test–retest reliability ranging from 0.75 to 0.89. The CTNES subscales were positively correlated with a traditional method of assessing counterfactual thinking and were related as expected to contextual aspects of the negative event, negative affect, and cognitive style. In Study 2 (N = 208), it further examined the validity of the

scale and demonstrated that the subscales were sensitive to an experimental manipulation concerning the type of negative event participants recalled.

Procedure:

All the individuals were given a pile of questionnaires which were: The Brief Resilience Scale; Sense of Coherence Scale; A Short Hardiness Scale; Decision Making Questionnaire and Rumination Revised Scale. It took 15 to 20 minutes to complete the questionnaires. The scoring was done as per the guidelines given in their manuals. Inferential Statistics, that is, correlations were used to examine the relationship between Sense of Coherence and taken variables (Resilience, Hardiness, Intuitive Decision Making, Counterfactual Thinking and Rumination) in the overall population and regression was used to study whether these variables were the predictors of Sense of Coherence or not.

Statistical techniques:

The descriptive, explanatory and reasoned statistics will be used. The information will be analysed and scrutinized using SPSS software. Correlation and linear regression will be used to look over the data and further figure out the inspection of the research.

Results:

Table 1 reports a significant correlations between all the variables taken in the study (Resilience, Hardiness, Intuitive Decision, Rumination & Counterfactual Thinking) and Sense of Coherence. . A direct positive relation was found between Sense of Coherence and all of the variables and the correlation co-efficients came out for Resilience (r= .32), Hardiness (r= .19), Intuitive Decision (r= .26), Rumination (r= .52) and Counterfactual Thinking (r= .46).

Table 1: Correlation co-efficients (r) between Sense of Coherence and Resilience, Hardiness, Intuitive Decision, Rumination and Counterfactual Thinking.

Variables	Sense of Coherence
Resilience	.32**
Hardiness	.19**
Intuitive Decision	.26**
Rumination	.52**
Counterfactual Thinking	.46**

**p<0.01(two tailed)

*p<0.05 (two tailed)

A linear regression predicting Resilience, Sense of Coherence, Hardiness, Intuitive Decision Making, Rumination and Counterfactual Thinking was carried out. The value of regression .ie., the value of the sum ofR^2 for Resilience, Counterfactual Thinking, Hardiness, Intuitive Decision Making, Rumination lies at .11, .22, .36, .67 and .28 respectively.

Table 2: Linear regression (step wise) predicting Sense of Coherence and Resilience, Optimism, Hardiness, Intuitive Decision Making, Rumination and Counterfactual Thinking.

Variables	B	Beta	t	R^2	F-ratio
Resilience	6.92	.95	7.26	.11*	52.65
Hardiness	.35	.47	4.06	0.36*	16.51
Intuitive Decision	.78	.26	5.66	.67*	32.10
Rumination	1.38	.53	13.02	.28*	162.58
Counterfactual	.58	.47	11.11	.22*	123.34

*p<0.05 (two tailed)

Discussion:

The present study aimed at exploring the relationship between Sense of Coherence and Resilience, Hardiness, Intuitive Decision Making, Rumination and Counterfactual Thinking. Correlation and regression was used to assess the relationship. A direct positive relation was found between Sense of Coherence and all of the variables and the correlation co-efficients came out for Resilience (r= .32), Hardiness (r= .19), Intuitive Decision (r= .26), Rumination (r= .52) and Counterfactual Thinking (r= .46) which indicate that if some individual have high Sense of Coherence then he/she might have high degree in all taken variables. Researches also suggest and prove the same for the relationship between Sense of Coherence and other variables. A study done by Laura & Joshua (2009) explained the prediction that individual differences in intuition would interact with positive affect (PA) to predict referential thinking, in a nonclinical sample. Participants (*N* = 146) completed questionnaires measuring PA, intuition, referential thinking, personality traits, depression, anxiety, and meaning in life. Controlling for anxiety and depression and traits, the interaction of PA and intuition predicted referential thinking. Exploratory analyses demonstrated that at high levels of PA, referential thinking was positively associated with meaning in life.

Another research explained the direct relationship between Sense of coherence and Hardiness which was done by Grace et al., in 1993 and the research explain the relationship between hardiness and SOC that The model's central concept, the sense of coherence, is described and analysed The sense of coherence, with its three components (meaningfulness, comprehensibility and manageability), is then compared and contrasted with similar concepts The convergent theoretical notions which are distinguished from Antonovsky's coherence are will to meaning, locus of control, learned helplessness and hardiness It is hoped that this analysis will provide greater conceptual clarity for nurses who study and use these concepts in education, practice or research.

Many other researches done which explained the relationship of SOC with resilience. One of them was done by Markus et al., (2013) which explained the relationship between these two variables and they conducted a cross-sectional study investigated SOC,

resilience and PTSD in paramedics (N = 668). PTSD was assessed with the Posttraumatic Stress Diagnostic Scale (PDS); resilience and SOC were measured with the Resilience Scale (RS-11) and the Sense of Coherence Scale (SOC-L9). Further measures included preparation of dealing with traumatic events and availability of psychological help. As expected, both resilience and SOC were negatively correlated with PTSD symptoms. The regression analysis showed that 19.2% of the total variance in symptom severity was explained by these variables.

Regression analysis between Sense of Coherence and the variables- Resilience, Hardiness, Decision Making, Counterfactual Thinking and Rumination were assessed to understand how well these variables can predict Sense of Coherence or vice versa. The results of the regression analysis showed that Intuitive decision making and Hardiness variables were the best predictor of Sense of Coherence.

The result of the study was also explained by the researches done in past and one of the research was done by Laura & Joshua (2009) explained the prediction that individual differences in intuition would interact with positive affect (PA) to predict referential thinking, in a nonclinical sample. Participants (N = 146) completed questionnaires measuring PA, intuition, referential thinking, personality traits, depression, anxiety, and meaning in life. Controlling for anxiety and depression and traits, the interaction of PA and intuition predicted referential thinking. Exploratory analyses demonstrated that at high levels of PA, referential thinking was positively associated with meaning in life.

References:

Boninger, D. S., Gleicher, F., & Strathman, A. (1994). Counterfactual thinking: From what might have been to what may be. *Journal of Personality and Social Psychology*, *67*(2), 297–307.

Božin, A. A., & Kitanović, S. (2011). Teachers sense of coherence. *Inovacije u nastavi-časopis za savremenu nastavu*, *24*(4), 35-44.

Byrne, R. M. (2017). Counterfactual thinking: From logic to morality. *Current Directions in Psychological Science*, *26*(4), 314-322.

Catellani, P., Alberici, A. I., & Milesi, P. (2004). Counterfactual thinking and stereotypes: The nonconformity effect. *European Journal of Social Psychology*, *34*(4), 421-436.

Dhanalakshmi, D. (2015). Perceived stress, cognitive distortion, sense of coherence and health among college students. *Indian Journal of Health and Wellbeing*, *6*(3), 287.

Epstude, K., & Roese, N. J. (2008). The functional theory of counterfactual thinking. *Personality and social psychology review*, *12*(2), 168-192.

Eriksson, M. (2022). The sense of coherence: the concept and its relationship to health. In *The handbook of salutogenesis* (pp. 61-68). Springer, Cham.

Foureur, M., Besley, K., Burton, G., Yu, N., & Crisp, J. (2013). Enhancing the resilience of nurses and midwives: Pilot of a mindfulnessbased program for increased health, sense of coherence and decreased depression, anxiety and stress. *Contemporary nurse*, *45*(1), 114-125.

Harris, P. (2000). The work of the imagination. Oxford, UK: Blackwell.

Kahneman, D. and Tversky, A. (1973). On the psychology of prediction, *Psychology Review*, 80, 237-251.

King, L. A., & Hicks, J. A. (2009). Positive affect, intuition and referential thinking. *Personality and Individual Differences*, *46*(7), 719-724.

Kravetz, S., Drory, Y., & Florian, V. (1993). Hardiness and sense of coherence and their relation to negative affect. *European journal of personality*, *7*(4), 233-244.

Luyckx, K., Schwartz, S. J., Goossens, L., & Pollock, S. (2008). Employment, sense of coherence, and identity formation: Contextual and psychological processes on the pathway to sense of adulthood. *Journal of adolescent research*, *23*(5), 566-591.

Sairanen, E., Tolvanen, A., Karhunen, L., Kolehmainen, M., Järvelä-Reijonen, E., Lindroos, S., ... & Lappalainen, R. (2017). Psychological flexibility mediates change in intuitive eating regulation in acceptance and commitment therapy interventions. *Public health nutrition*, *20*(9), 1681-1691.

Schäfer, S. K., Sopp, M. R., Koch, M., Göritz, A. S., & Michael, T. (2022). The long-term buffering effect of sense of coherence on psychopathological symptoms during the first year of the COVID-19 pandemic: A prospective observational study. *Journal of Psychiatric Research*.

Streb, M., Häller, P., & Michael, T. (2014). PTSD in paramedics: resilience and sense of coherence. *Behavioural and cognitive psychotherapy*, *42*(4), 452-463.

Sullivan, G. C. (1993). Towards clarification of convergent concepts: sense of coherence, will to meaning, locus of control, learned helplessness and hardiness. *Journal of Advanced Nursing*, *18*(11), 1772-1778.

Super, S., Wagemakers, M. A. E., Picavet, H. S. J., Verkooijen, K. T., & Koelen, M. A. (2016). Strengthening sense of coherence: opportunities for theory building in health promotion. *Health promotion international*, *31*(4), 869-878.

Williams, C., & Katirai, M. (2018). The Relationship Between Sense of Coherence and Rumination. *J Pub Health*.