

The Roles of Negative Career Thinking & Sense of Coherence
in Predicting Career Decision Status

R. Kirk Austin
A. Dennis Dahl
Bruce D. Wagner

September 2006

Abstract

Lustig and Strauser (2002) conducted a preliminary investigation into the relationship between sense of coherence and negative career thinking among college students. Researchers sought to follow the line of inquiry of Lustig and Strauser with a non-student population. Authors went further by considering the predictive value of sense of coherence and negative career thinking toward elements of career decision status. Participants completed the Orientation to Life Questionnaire - OLQ (Antonovsky, 1987), the Career Thoughts Inventory - CTI (Sampson, Peterson, Lenz, Reardon & Saunders, 1996a) and the Career Decision Profile - CDP (Jones, 1989). Results indicated strong inverse relationships between sense of coherence and negative career thinking confirming earlier research. Regression analysis indicated that sense of coherence and negative career thoughts together accounted for 15% of the variance of career decidedness but 38% of the variance of decisiveness.

Introduction

Sifting through and integrating the myriad of personal and contextual factors within career decision making can be a stressful situation for most individuals. One's ability to mediate this stress may assist in the career choice process. This thesis was central to a recent study conducted by Lustig and Strauser (2002). Their research represented a preliminary study into the relationship between stress buffering factors and career-oriented cognitions. In particular, they focused on the relationship between sense of coherence and negative career thoughts with a student population. Results of their investigation confirmed that sense of coherence maintained significant statistical predictive relationships of negative career thinking. They found sense of coherence to account for 14% of the variance of the dependant variables. The nature of sense of coherence makes it valuable for research within career development literature.

Sense of coherence (SOC) has recently entered the domain of career development research (Höge, & Büssing, 2004; Lustig & Strauser, 2002) having demonstrated a robust literature pertaining to its health related value. Described as an active and dynamic general health resource (Pallant & Lae, 2002; Vuori, 1994), SOC expresses the “extent to which one has pervasive, enduring and dynamic feeling of confidence that one’s internal and external environments are predictable and that there is a high probability that things will work out as well as can be reasonably expected” (Antonovsky, 1979, p.123). According to Antonovsky (1993), the SOC serves as a perceptual filter. In his view an individual can appraise stressors as negative, neutral or salutary. Individuals with strong SOC invariably believe that all will work out well (Antonovsky, 1979). Conversely, individuals with weak SOC become fixated on the stressors and potential negative outcomes by appraising them as burdens (Korotkov, 1998).

Sense of coherence is comprised of three theoretically and empirically interwoven dimensions: comprehensibility, manageability and meaningfulness. Comprehensibility refers to the degree that the individual perceives stimuli as predictable, ordered and making cognitive sense. Manageability refers to the individual’s appraisal that he has internal and external resources to manage the stressor. Meaningfulness pertains to the individual’s appraisal that life makes sense and that demands are worthy of energy and commitment (Korotkov, 1998).

Empirical research has found that SOC significantly mediates stress (Albertsen, Nielsen & Borg, 2001; Cilliers, 2002; 2003; Diraz, Ortlepp & Greyling, 2003; Feldt, Kinnunen & Mauno, 2000; Hedov, Annernen & Wikblad, 2002; Hintermair, 2004; Höge, & Büssing, 2004; Kalimo, Pahkin & Mutanen, 2002) and burnout (Cilliers, 2002; 2003). Stronger SOC empirically relates to greater well being (Chamberlain, Petrie & Azriah, 1992; Nasermodeli, Sekine, Hamanishi & Kagamimori, 2003; Pallant & Lae, 2002; Ryland & Greenfield, 1991; Wissing & van Eeden, 2002), self esteem (Soderberg, Lundman & Norberg, 1997) and life

satisfaction (Diraz, Ortlepp & Greyling, 2003; Lustig, Rosenthal, Strauser & Haynes, 2000). Moreover, individuals indicating stronger sense of coherence also uphold greater emotional stability (Mlonzi & Strümpfer, 1998; Sullivan, 2002), and emotional calm and contentment (Johnson, 2004). Individuals with stronger sense of coherence also display less psychological difficulties such as neuroticism (Larssen & Kallenberg, 1999; Strümpfer, Gouws & Viviers, 1998), anxiety (Edwards & Besseling, 2001; Geyer, 1997), psychopathology (Bengston & Hansson, 2001; Petri & Brook, 1992), dysfunctional thinking (Karlson, Seger, Osterberg, Gunnel, & Orbaek, 2000; Lustig & Strauser, 2002) and depression (Carstens & Spangenberg, 1997; Edwards & Besseling, 2001; Geyer, 1997) – all factors that influence the career choice process.

The nature of the sense of coherence concept is of value to the present study. Unemployment causes stress (Hanish, 1999; Hammarström & Janlert, 1997; Sulsky & Smith, 2005; Vinokur & Schul, 2002). How an individual copes with the stress of unemployment influences career decision-making (Amundson & Borgan, 1996). Since SOC assists in both the mediation of stress to perceived stressors, SOC may shed light on the career choice with unemployed adults.

That Lustig and Strauser's (2002) research paired SOC with negative career thinking is important. Negative career thoughts are unhelpful cognitions that are pessimistically biased, distorted and idiosyncratic (Lam & Cheng, 2001; Young, 1999). Within career development literature these thoughts have been referred to as poor career beliefs (Enright, 1996), faulty self-efficacy beliefs (Brown & Lent, 1996), faulty generalizations (Stead, Graham, Watson & Foxcroft, 1993), career myths (Dorn & Welch, 1985), dysfunctional cognitions (Corbishley & Yost, 1989), self defeating assumptions (Dryden, 1979), dysfunctional career beliefs (Krumboltz, 1990), self defeating beliefs (Sweeney & Shill, 1998), and negative career thoughts (Sampson, Peterson, Lenz, Reardon & Saunders, 1996b).

Negative career thoughts invariably manifest in emotional, verbal and behavioral responses (Corbishley & Yost, 1989; Lam & Gale, 2004) and can impede the career decision process (Strauser, Lustig, Keim, Ketz & Malesky, 2002; Van Haveren, 2000). Scientific research has found that negative career thoughts significantly contribute to anxiety (Gordon, 1998; Sampson, Reardon, Peterson & Lenz, 2004; Stead, Graham, Watson & Foxcroft, 1993) and this anxiety limits career development behavior (Carr, 2004). Similarly, negative career thoughts have been empirically linked to low job satisfaction (Judge & Locke, 1993), and low skill confidence (Wright, 2001), academic undecidedness (Kilk, 1997), low employment seeking status (Keim, Strauser & Ketz, 2002), job avoidance behavior (Judge & Locke, 1993), career undecidedness (Wright, 2001), perfectionism and career indecision (Osborn, 1998), depression and career indecision (Saunders, Peterson, Sampson & Reardon, 2000), career indecision (Kleiman, Gati, Peterson, Sampson, Reardon & Lenz, 2004), and indecisiveness (Austin, Wagner & Dahl, 2004). Research considering SOC and negative career thoughts established a link between a global cognitive appraisal mechanism (SOC) and a task specific career choice framework (negative career thinking). The establishment of the relationship between these constructs and career decision status was an empirical and theoretical imperative.

The current study followed the line of research and recommendations of Lustig and Strauser (2002) by sampling a non-college based population enrolled in a career decision-making intervention. With this research as a backdrop the present research focused on three questions:

1. What are the relationships between sense of coherence and negative career thinking in a sample of adults who are engaged in the process of career-decision making?
2. What are the relative contributions of sense of coherence and negative career thinking in predicting career decidedness?

3. What are the relative contributions of sense of coherence and negative career thinking in predicting decisiveness?

Method

Participants

The sample was 87 (40 male & 47 female) adults enrolled in a community based career decision-making program funded by the Government of Canada. All participants were unemployed and non-student adults at the time of research. Research participants ranged in age from 18 to 64 with a mean age of 36 years (SD=12).

Instruments

Orientation to Life Scale (OLQ) (Antonovsky, 1987). The OLQ is a general measure of one's sense of coherence. As such, it measures the degree to which an individual has a pervasive enduring and dynamic feeling of confidence that: (1) stimuli are structured, predictable and explicable; (2) one has the resources to meet the demands posed by the stimuli and (3) these encounters are worthy of investment and confrontation (Antonovsky, 1987). The 29 item assessment asks the individual to select responses to questionnaire items ranging from "1" (never have this feeling) through "7" (always have this feeling). The summative value for the OLQ ranges from 29-203. Higher scores indicate more robust sense of coherence. The total score represents a global sense of coherence entity.

Reliability and validity research pertaining to the OLQ has demonstrated its value. Internal consistency for the OLQ has averaged .91 for published articles, .85 for theses and dissertations and .88 for unpublished studies (Antonovsky,

1993). Lustig and Strauser (2002) noted that the alpha coefficient of the OLQ was .91 within their research. Test-retest reliability has also been satisfactory with reports of .93 at a thirty day interval (Frenz, Carey & Jorgensen, 1993). Validity has been established with other measures of sense of coherence.

Career Thoughts Inventory (Sampson, Peterson, Lenz, Reardon & Saunders, 1996a). The CTI measures dysfunctional thinking, related to assumptions, attitudes, behaviors, beliefs, feelings, plans or strategies related to career choice, that inhibits effective career decision-making. The 48 item CTI total score measures a global factor of dysfunctional thinking pertaining to career problem solving and decision-making. Three subscales measure decision-making confusion (dmc), commitment anxiety (ca) and external conflict (ec). Decision-Making Confusion refers to the “inability to initiate or sustain decision-making as a result of disabling emotions and/or a lack of understanding about decision-making itself “(Sampson et al.,1996b, p.28). The Commitment Anxiety scale reflects the “inability to make a commitment to a specific career choice, accompanied by generalized anxiety about the outcome of decision-making. This anxiety perpetuates indecision” (Sampson et al.,1996b, p.28). The External Conflict scale reflects the “inability to balance the importance of one's own self-perceptions with the importance of input from significant others, resulting in a reluctance to assume responsibility for decision-making” (Sampson et al.,1996b, p.28). All factors negatively impact career decision-making. Respondents select one of four item responses ranging from 0 (strongly disagree) to 3 (strongly agree).

The internal consistency (alpha) coefficients for the CTI Total score for an adult group was 0.97 in norming research. Alpha coefficients for the construct scales ranged from .94 (dmc), .91(ca) and .81 (ec) for the adult group (Sampson, Peterson, Lenz, Reardon & Saunders, 1996b). Convergent validity of the CTI was determined against other career development instruments such as My

Vocational Situation, Career Decision Scale, Career Decision Profile and Revised NEO Personality Inventory.

Career Decision Profile (CDP) (Jones, 1989)

The CDP is a 16-item inventory designed to assess an individual's career decision status. Responses are based on a Likert scale from 1 (strongly disagree) to 8 (strongly agree). Among other subscales, CDP provides values for two career decision states - decidedness and decisiveness. Decidedness as defined by Jones (1998) is the degree of certainty about a choice. Decisiveness, on the other hand, measures the ability to decide independently and resolutely. It considers the individual's belief of his capability to make decisions without avoidable delay, difficulty, or dependence on others. It was noted that individuals demonstrating greater indecisiveness often require more involved and complex career counselling. The decisiveness and decidedness subscales of the CDP were used in the present study. Alpha coefficients for the CDP range from .68 to .85 (Heppner & Hendricks, 1995).

Procedure

Subjects were attending a community-based career decision-making intervention. At the onset of the program each participant received an informed consent, and assessments ascertaining sense of coherence, negative career thoughts and elements of career decision status, vis-à-vis decidedness and decisiveness. Involvement in the study was voluntary.

Data Analysis

Data analysis was performed using Pearson product-moment coefficients on all possible pairings. Regression analyses were performed with sense of coherence and negative career thoughts (predictor variables) and decidedness and

decisiveness (dependent variables). A statistical power analysis using a medium to large effect size of .20 and alpha level of .05 indicated the sample size of 87 was more than sufficient to ensure adequate power of 0.8 for the decisiveness analysis (Cohen, 1992). However, this sample size was insufficient to ensure a 0.8 power level for the very small effect size (.01) found for the decidedness dependent variable, thus increasing the chance of a type II error. SPSS (version 13 for Windows) was used for analyzing data.

Results

Preliminary analysis of the data found statistically significant relationships between the sense of coherence and negative career thoughts. Sense of coherence demonstrated robust correlations with all factors. In particular, SOC maintained values of $r = -.61$, $p < .001$ with the CTI global scale and of $r = -.54$, $p < .001$, $r = -.43$, $p < .001$; $r = -.38$, $p < .001$ with decision-making confusion, commitment anxiety and external conflict respectively. These findings were higher than those found in Lustig and Strauser's (2002) research. In behavioral terms, individuals demonstrating greater sense of coherence would maintain lower levels of dysfunctional career thinking. Moreover, persons with greater sense of coherence would maintain less confusion regarding career choices, less career related anxiety and less conflict related to external sources.

Sense of coherence also maintained significant statistical relationships with career decidedness and decisiveness respectively ($r = .38$, $p < .001$, $r = .50$, $p < .001$). In behavioral terms, individuals demonstrating greater sense of coherence manifest stronger career decidedness and greater decisiveness.

Table 1.

Means, standard deviations, and correlation coefficients among SOC, CTI (global and subscales), CDP (decidedness and decisiveness) ($n = 87$)

Variable	mean	st. dev.	2	3	4	5	6	7
1. SOC	136.7	23.9	-.61**	-.54**	-.43**	-.38**	.38**	.50**
2. CTI global	56.8	8.8	-	.92**	.83**	.63**	-.31*	-.59**
3. DMC	56.2	9.9		-	.72**	.48**	-.46**	-.62**
4. CA	58.2	8.4			-	.42**	-.30*	-.48**
5. EC	57.3	12.6				-	-.04	-.16
6. Decidedness	10.1	4.6					-	.41**
7. Decisiveness	15.9	6.2						-

* $p < .01$; ** $p < .001$

Noteworthy relationships were also established between the CTI subscales and elements of career decision status. Values of $r = -.31$, $p < .01$ were established between the CTI global scale and decidedness. Decision-making confusion demonstrated an $r = -.46$, $p < .001$ and commitment anxiety maintained an $r = -.30$, $p < .01$ with decidedness. External conflict did not demonstrate significant relationships with career decidedness. In behavioral terms, individuals demonstrating greater career decidedness maintained less dysfunctional career thinking overall. Further, career decided persons were less likely to demonstrate confusion regarding career decisions, and anxiety regarding their commitment to career choices.

The correlation between the CTI global scale and decisiveness was $r = -.59$, $p < .001$. CTI subscale correlations of $r = -.62$, $p < .001$ for decision-making confusion and $r = -.48$, $p < .001$ for commitment anxiety were found. As with career decidedness, external conflict did not demonstrate significant relationships with decisiveness. In behavioral terms, individuals demonstrating greater decisiveness maintained less dysfunctional career thinking overall. Further, persons with greater decisiveness were less likely to demonstrate confusion regarding career decisions, and anxiety regarding their commitment to career choices.

Table 2.

CDP decidedness regressed on SOC, CTI global and CTI subscales (n = 87)

Variables	r	β	t	R	R ²	ΔR^2	p
SOC	.38	.06	2.34	.38	.14	.14	.02
CTI global	-.31	-.07	-1.04	.39	.15	.01	n.s.

Table 3.

CDP decisiveness regressed on SOC and CTI global (n = 87)

Variables	r	β	t	R	R ²	ΔR^2	p
SOC	.50	.06	2.14	.50	.25	.25	.03
CTI global	-.59	-.32	-4.11	.62	.38	.13	<.001

When combined, sense of coherence and negative career thinking account for 15 percent of career decidedness variance. Sense of coherence uniquely predicts approximately 5.5 percent of career decidedness while negative career thinking appears to uniquely account for a non-significant 1 percent. The shared contribution of sense of coherence and CTI amounts to 8.5 percent of the variance.

When combined, sense of coherence and negative career thinking account for 38 percent of the variance of decisiveness. Sense of coherence uniquely predicts 3 percent of decisiveness while negative career thinking appears to uniquely account for 13 percent. The shared contribution of sense of coherence and CTI amounts to 22 percent of the variance.

Discussion

Question 1: Sense of coherence is a global, appraisal driven construct that applies to all domains of individual functioning. Career thinking is domain specific. With this in mind researchers sought to clarify the relationships between these factors with adults' career decision-making. Findings were significant but

not surprising. Individuals demonstrating stronger sense of coherence demonstrated lower levels of dysfunctional career thinking across all scales of the CTI. In essence, the greater comprehensibility, manageability and meaning individuals held, the less overall dysfunction they had regarding career choice. Further, greater SOC meant that individuals had less confusion regarding career choice, less anxiety regarding that choice and less conflict with significant others.

That correlations between SOC and CTI were lower in the Lustig and Strauser (2002) research could be attributed to the nature of sample surveyed. Lustig and Strauser assessed students, compared to non-student adults assessed in the present study. It is recognized that career choice is mediated by developmental factors (Hall, 1992, Patton & Creed, 2001, Super, Savickas & Super, 1996). As such, it is hypothesized that older adults would have greater familiarity with themselves and the world of work. More maturity may naturally increase comprehensibility (more life experience allowing for understanding), manageability (greater skill acquisition and resources), and meaning (more opportunity for insight and reflection).

Question 2:

That sense of coherence significantly predicts career decidedness is new to the literature. Where the present study confirms an empirical relationship between sense of coherence and negative career thoughts (Lustig & Strauser, 2002), it goes further by establishing the predictive value of SOC within adult career choice. This finding is consistent with other SOC literature that finds that higher levels of sense of coherence correspond to greater job satisfaction (Rothman & Agathagelou, 2000), effective stress mediation during unemployment (Litt, 1988; Waters & Moore, 2002), and less avoidant coping and greater personal agency (Skinner, 1996; Thompson, 2002; Wanberg, 1997). These findings might be due to the nature of SOC where an individual perceives career choice as making

sense (comprehensibility), believes that they have internal and external resources to navigate the choice (manageability) and appraises that the demands of the choice are worthy of commitment (Korotkov, 1998).

The relationship between negative career thoughts and career decidedness has provided paradoxical findings. In particular, the strong empirical correlations in the present research confirm earlier literature and research that suggests lower levels of negative career thinking correspond to greater levels of career decidedness (Gordon, 1998; Sampson, Reardon, Peterson, & Lenz, 2004; Saunders, Peterson, Sampson & Reardon, 2000). However, that negative career thoughts did not empirically predict career decidedness is inconsistent with this same research (Saunders, Peterson, Sampson & Reardon, 2000). Further research is needed to clarify these findings.

Question 3:

The empirical findings pertaining to sense of coherence and decisiveness are new to career development literature. In particular, that greater sense of coherence corresponds to and predicts decisiveness is consistent with health related literature. Moreover, decisiveness relates to one's ability to decide 'independently and resolutely'. Within health related literature, sense of coherence has demonstrated a mediating effect regarding inter-role conflict and life satisfaction (Diraz, Ortlepp & Greyling, 2003) as well as promotion of personal agency behaviors (Berg & Hallberg, 1999). These findings might be due to the nature of SOC whereby greater levels of comprehensibility, manageability and meaningfulness could increase the resoluteness and independence of the individuals' choice.

The significant empirical findings between negative career thinking and decisiveness are consistent with the career development literature. In particular,

career decision-making theorists have postulated that the 'indecisive' career decision state could entail greater levels of dysfunctional career thoughts. The current research corroborates these suppositions (Gordon, 1998; Sampson, Reardon, Peterson, & Lenz, 2004) and confirms findings from earlier research (Austin, Wagner & Dahl, 2004).

Further, it makes intuitive sense that external conflict did not significantly relate to either decidedness or decisiveness given the mean age of the sample. It is reasonable to assume that non-student adults would be less influenced by parents or teachers regarding their career choice. On the other hand, the findings do not account for the influence of other important individuals (including life partners, children, friends, and colleagues) with regards to career decision status.

Limitations

Researchers sampled non-student adults from a community based career decision making intervention. This was in keeping with suggestions from the literature (Austin, Dahl, & Wagner, 2003, Gati & Saka, 2001, Weinstein, Healy & Ender, 2002). This feature ensured that sample characteristics would reflect older adults. One limitation of this strategy is that research did not discriminate age related stages. For example, 25 % of the sample was within the exploration or beginning stage of career development. Young adults in this stage are focusing on specifying and implementing career choice with a seminal knowledge of occupational choice. This factor may have influenced research outcomes. An AVOVA comparing the means of adults in the exploration, establishment, maintenance or disengagement stages (Super, 1990) was computed showing no significant differences in the SOC and CTI means of each group, but the small numbers in each category prevented this from being a robust aspect of the study. Research using a greater sample may elicit unique findings.

Conclusion

Researchers sought to follow the line of inquiry conducted by Lustig & Strauser (2002) and confirmed some of their findings. In particular, negative career thoughts and sense of coherence maintained significant inverse relationships among all factor scales. Moreover, research found that negative career thinking and sense of coherence both predicted indecisiveness. However, only sense of coherence predicted career decidedness. While these findings are new to the career development literature they should be viewed as seminal and tentative. For example, negative career thinking did not significantly predict career indecision which is inconsistent with prior research (Saunders, Peterson, Sampson & Reardon, 2000). Further research is needed to clarify this issue.

The introduction of sense of coherence to career development literature is relatively new (Höge & Büssing, 2004; Lustig & Strauser, 2002), but holds promise for its inclusion in further research. Recall that sense of coherence has a significant literature pertaining to its stress mediating capacity. That career decision making is stressful for non students is documented (Hanish 1999; Vinokur & Schul, 2002). The role of sense of coherence in mediating the stress of unemployment and career choice is a potential arena for further research.

Further, the nature of sense of coherence may contribute to its value in research with the non-student career-deciding adults. SOC is developmentally set by adulthood (Fiorentino & Pomazal, 1998; Ryland & Greenfeld, 1998) and is believed to be stable through life issues such as unemployment (Antonovsky, 1998). This feature makes the sense of coherence a stable construct through the establishment, maintenance and disengagement stages of career development. As such, sense of coherence may enhance understanding of the nature of career choice of non-student adults. Further research with non-student adults is recommended with the sense of coherence. In addition, research

following Super's taxonomy would provide insight into the unique nature of each career stage. Research to this end is recommended.

References

- Albertsen, K., Nielsen, M.L. & Borg, V. (2001). The Danish psychosocial work environment and symptoms of stress: The main, mediating, and moderating role of sense of coherence. *Work and Stress*, 15, 241-253.
- Amundson, N. & Borgan, W. (1996). *At the controls: Charting your course through unemployment*. Scarborough: Nelson Canada.
- Antonovsky, A. (1979). *Health stress and coping*. San Francisco: Jossey Bass.
- Antonovsky, A. (1987). *Unravelling the mystery of health: How people manage stress and stay well*. San Francisco: Jossey Bass.
- Antonovsky, A. (1993). The structure and properties of the Sense of Coherence scale. *Social Science and Medicine*, 36 (6): 725-733.
- Antonovsky, A. (1998). The sense of coherence: An historical and future perspective. In H.I. McCubbin, E.A. Thompson, A.I. Thompson & J.E. Fromer (Eds.), *Stress, Coping, and Health in Families* (pp. 3-21). Thousand Oaks: Sage Publishing.
- Austin, R.K., Dahl, D., & Wagner, B. (2003). Reducing negative career thoughts in adults, *International Journal of Disability Community and Rehabilitation*, 2(2). Retrieved from http://www.ijdcr.ca/VOL02_02_CAN/articles/austin.shtml.
- Austin, R.K., Wagner, B. & Dahl, D. (2004). Reducing career indecisiveness in adults. *International Journal of Disability Community and Rehabilitation*, 3(2). Retrieved from http://www.ijdcr.ca/VOL03_02_CAN/articles/austin.shtml.
- Bengston, T.A. & Hansson, L. (2001). The validity of Antonovsky's sense of coherence measure in a sample of schizophrenic patients living in community. *Journal of Advanced Nursing*, 33, 432-438.
- Berg, A. & Hallberg, I.R. (1999). Effects of systematic clinical supervision on psychiatric nurses' sense of coherence, creativity, work-related strain, job satisfaction and view of the effects from clinical supervision: a pre-post test design. *Journal of Psychiatric and Mental Health Nursing*, 6(5), 371-382.
- Brown, S.D. & Lent, R.W. (1996). A social cognitive framework for career choice counselling. *The Career Development Quarterly*, 44, 354-366.
- Carr, D. (2004). *The effect of a workbook intervention on college student's reframes of dysfunctional career thoughts: technical report 37*. Retrieved from Florida State University, Center for the Study of Technology in Counseling and Career Development web site: <http://career.fsu.edu/>

documents/Technical%20reports/Technical%20Report%2037/Technical%20Report%2037.htm

- Carstens, J. & Spangenberg, J. (1997). Major depression: A breakdown in sense of coherence? *Psychological Reports, 80*, 1211-1220.
- Chamberlain, K., Petrie, K. & Azriah, R. (1992). The role of optimism and sense of coherence in predicting recovery following surgery. *Psychology and Health, 7*, 301-310.
- Cilliers, F. (2002). Salutogenic coping with burnout among nurses: A qualitative study. *South African Journal of Labour Relations, 26*(4), 61-85.
- Cilliers, F. (2003). Burnout and salutogenic functioning of nurses. *Curationis, 26*(1), 62-74.
- Cohen, J. (1992). A power primer, *Psychological Bulletin, 112*(1), pp. 155-159.
- Corbishley, M.A. & Yost, E.B. (1989). Assessing the treatment of dysfunctional cognitions in career counseling. *Career Planning and Adult Development Journal, 5*, 20-26.
- Diraz, T., Ortlepp, K. & Greyling, M. (2003). The relationship between inter-role conflict, life satisfaction and sense of coherence in a sample of working mothers. *South African Journal of Psychology, 33*(3), 191-194.
- Dorn, F.J. & Welch, N. (1985). Assessing career mythology: A profile of high school students. *The School Counsellor, 33*, 136-142.
- Dryden, W. (1979). Rational emotive therapy and its contribution to career counseling. *British Journal of Guidance and Counseling, 7*, 181-187.
- Edwards, D. & Besseling, E. (2001). Relationship between depression, anxiety, sense of coherence, social support and religious involvement in a small rural community affected by industrial relations conflict. *South African Journal of Psychology, 31*(4), 62-71.
- Enright, M.S. (1996). The relationship between disability status, career beliefs, and career indecision. *Rehabilitation Counseling Bulletin, 40*(2). 134-153.
- Feldt, T., Kinnunen, U. & Mauno, S. (2000). A mediational model of sense of coherence in the work context: A one-year follow up study. *Journal of Organisational Behavior, 21*, 461-476.
- Fiorentino, L.M. & Pomazal, R.J. (1998). Sense of coherence and the stress-illness relationship among employees. In H.I. McCubbin, E.A. Thompson,

- A.I. Thompson & J.E. Fromer (Eds.), *Stress, coping, and health in families* (pp. 3-21). Thousand Oaks: Sage Publications.
- Frenz, A.W, Carey, M.P. & Jorgensen, R.S. (1990). *Measuring Antonovsky's sense of coherence construct: A psychometric study*. Paper presented at the Convention of Eastern Psychological Association, Philadelphia, PA.
- Gati, I. & Saka, N. (2001). High school students career related decision-making difficulties. *Journal of Counseling and Development, 79*(3), 331-341.
- Geyer, S. (1997). Some conceptual considerations of the sense of coherence. *Social Science in Medicine, 44*, 1771-1778.
- Gordon, V. N. (1998). Career decidedness types: A literature review. *The Career Development Quarterly, 46*(4), 386-403.
- Hall, D.T. (1992). Career indecision research: Conceptual and methodological problems. *Journal of Vocational Behavior, 41*, 245-250.
- Hammarström, A. & Janlert, U. (1997). Nervous and depressive symptoms in a longitudinal study of youth unemployment: Selection or exposure? *Journal of Adolescence, 20*, 293-305.
- Hanish, K.A. (1999). Job loss and unemployment research from 1994 to 1998: A review and recommendations for research and intervention. *Journal of Vocational Behavior, 55*, 188-220.
- Hedov, G., Annernén, G. & Wikblad, K. (2002). Swedish parents of children with Down's syndrome: Parental stress and sense of coherence in relation to employment rate and time spent in child care. *Scandinavian Journal of Caring Sciences, 16*(4), 424-430.
- Heppner, M.J. & Hendricks, F. (1995). A process and outcome study examining career indecision and indecisiveness. *Journal of Counseling and Development, 73*(4), 426-438.
- Hintermair, M. (2004). Sense of coherence: A relevant resource in the coping process of mothers of deaf and hard of hearing children? *Journal of Deaf Studies & Deaf Education, 9*(1), 15-26.
- Höge, T. & Büßing, A. (2004). The impact sense of coherence and negative affectivity on the work stressor-strain relationship. *Journal of Occupational Health Psychology, 9*(3), 195-205.

- Johnson, M. (2004). Approaching the salutogenesis of sense of coherence: The role of 'active' self esteem and coping. *British Journal of Health Psychology*, 9, 419-432.
- Jones, L.K. (1989). Measuring a three-dimensional construct of career indecision among college students: A revision of the vocational decision scale- The Career Decision Profile. *Journal of Counselling Psychology*, 36, 477-486.
- Judge, T.A. & Locke, E.A. (1993). Effect of dysfunctional thought processes on subjective well being and job satisfaction. *Journal of Applied Psychology*, 78, 475-490.
- Kalimo, R., Pahkin, K. & Mutanen, P. (2002). Work and personal resources as long-term predictors of well-being. *Stress & health: Journal of the international society for the investigation of stress*, 18(5), 227-234.
- Karlson, B., Seger, L., Osterberg, K., Gunnel, A. & Orbaek, P. (2000). Stress management in men with solvent-induced chronic toxic encephalopathy. *Journal of Occupational and Environmental Medicine*, 42(6), 670-675.
- Keim, J., Strauser, D.R. & Ketz, K. (2002). Examining the differences in career thoughts of women in three low socioeconomic status groups. *Journal of Employment Counseling*, 39(1), 31-42.
- Kilk, K. L. (1997). The relationship between dysfunctional career thoughts and choosing an academic major (Doctoral dissertation, Colorado State University, 1997). *Dissertation Abstracts International*, 58 (08A), 3038.
- Kleiman, T., Gati, I., Peterson, G., Sampson, J., Reardon, J & Lenz, J. (2004). Dysfunctional thinking and difficulties in career decision making. *Journal of Career Assessment*, 12(3), 312-331.
- Korotkov, D. (1998). Sense of coherence: making sense out of chaos. In T.P. Wong & P.S. Fry (Eds.), *The human quest for meaning* (pp. 51-70). Mahwah: Lawrence Erlbaum Associates.
- Krumboltz, J.D. (1990, March). *Helping clients change dysfunctional career beliefs*. Paper presented at the annual meeting of the American Association of Counseling and Development, Cincinnati, OH
- Lam, D. & Cheng, L. (2001). Cognitive behaviour therapy approach to assessing dysfunctional thoughts. *Counselling Psychology Quarterly*, 14(3), 255-265.

- Lam, D. & Gale, J. (2004). Cognitive behaviour therapy: An evidence based clinical framework for working with dysfunctional thoughts. *Counselling Psychology Quarterly*, 17(1), 53-67.
- Larsson, G. & Kallenberg, K.O. (1996). Sense of coherence, socioeconomic conditions and health: Interrelationships in a nation wide Swedish sample. *European Journal of Public Health*, 6, 175-180.
- Litt, M.D. (1988). Self-efficacy and perceived control: Cognitive mediators of pain tolerance. *Journal of Personality and Social Psychology*, 4, 149-160.
- Lustig, D.C. & Strauser, D.R. (2002). The relationship between sense of coherence and career thoughts. *Career Development Quarterly*, 51, 2-11.
- Lustig, D., Rosenthal, D., Strauser, D. & Haynes, K. (2000). The relationship of sense of coherence to life satisfaction for students with disabilities. *Rehabilitation Counselling Bulletin*, 43, 134-141.
- Mlonzi, E.N. & Strümpfer, D.J.W. (1998). Antonovsky's sense of coherence scale and 16PF second order factors, *Social Behaviour and Personality*, 26, 39-50.
- Nasermoadeli, A., Sekine, M., Hamanishi, S. & Kagamimori, S. (2003). Associations between sense of coherence and psychological work characteristics, with changes in quality of life, in Japanese civil servants: A 1-year follow up study. *Industrial Health*, 41, 236-241.
- Osborn, D. S. (1998). The relationships among perfectionism, dysfunctional career thoughts, and career indecision. (Doctoral dissertation, Florida State University, 1998). *Dissertation Abstracts International*, 59(10), 3746A.
- Pallant, J.F. & Lae, L. (2002). Sense of coherence, well being, coping and personality factors: Further evaluation of the sense of coherence scale. *Personality & Individual Differences*, 33(1), 39-48.
- Patton, W. & Creed, P.A. (2001). Developmental issues in career maturity and career decision status. *Career Development Quarterly*, 49, 336-351.
- Petri, E.K. & Brook, R. (1992). Sense of coherence, self esteem, depression, and hopelessness as correlates of reattempting suicide. *British Journal of Clinical Psychology*, 31, 293-300.
- Rothman, S. & Agathagelou, A.M. (2000). Die verband tussen lokus van beheer en werkstevredenheid by senior polisiepersoneel. *Tydskrif vir Bedryfsielkunde*, 26(2), 20-26.

- Ryland, E. & Greenfeld, S. (1991). Work stress and well being: An investigation of Antonovsky's sense of coherence model. *Journal of Behavior and Personality, 6*(7), 39-54.
- Sampson, J. P., Jr., Peterson, G. W., Lenz, J. G., Reardon, R. C., & Saunders, D. E. (1996a). *Career Thoughts Inventory*. Odessa, FL: Psychological Assessment Resources, Inc.
- Sampson, J. P., Jr., Peterson, G. W., Lenz, J. G., Reardon, R. C., & Saunders, D. E. (1996b). *Career Thoughts Inventory: Professional manual*. Odessa, FL: Psychological Assessment Resources, Inc.
- Sampson, J. P., Reardon, R. C., Jr., Peterson, G. W. & Lenz, J. G. (2004). *Career Counseling & Services*. Toronto, Canada: Brooks/Cole.
- Saunders, D.E., Peterson, G.W., Sampson, J.P. & Reardon, R.C. (2000). The contribution of depression and dysfunctional career thinking to career indecision. *Journal of Vocational Behavior, 56*, 288-298.
- Skinner, E.A. (1996). A guide to constructs of control. *Journal of Personality and Social Psychology, 71*(3). 549-570.
- Soderberg, S., Lundman, B. & Norberg, A. (1997). Living with fibromyalgia: Sense of coherence, perception of well being and stress in daily life. *Research in Nursing and Health, 20*, 495-503.
- Stead, G.B., Graham, Watson, M.B. & Foxcroft, C. (1993). The relationship between career indecision and irrational beliefs among university students. *Journal of Vocational Behavior, 42*(2), 155-169.
- Strauser, D.R., Lustig, D.C., Keim, J., Ketz, K. & Malesky, A. (2002). Analyzing the differences in career thoughts based on disability status - Differences in Career Thoughts. *Journal of Rehabilitation, 68*(1), 27-32.
- Strümpfer, D.J.W., Gouws, J.F. & Viviers, M.R. (1998). Antonovsky's Sense of Coherence Scale related to negative and positive affectivity. *European Journal of Personality, 12*, 457-480.
- Sullivan, S. (2002). Emotional stability, self esteem and sense of coherence. *Journal of Psychology and the Behavioral Sciences, 16*. Retrieved from: <http://alpha.fdu.edu/psychweb/JPBS2003-Vol.16-17.html#Sullivan>.
- Sulsky, L. & Smith, C. (2005). *Work stress*. Belmont: Thompson Wadsworth.

- Super, D.E. (1983). Assessment in career guidance: Toward a truly developmental counselling. *The Personnel and Guidance Journal*, May, 555-562.
- Super, D.E. (1990). A life span, life space approach to career development. In D. Brown & L. Brooks (Eds.), *Career choice and development: Applying contemporary theories to practice* (pp. 197-261). San Francisco: Jossey Bass.
- Super, D.E., Savickas, M. L. & Super, C.M. (1996). The life span, life-space approach to careers. In D. Brown & L. Brooks, & Associates (Eds.), *Career choice and development* (3rd ed., pp. 121-178). San Francisco: Jossey Bass.
- Sweeney, M.L. & Schill, T.R. (1998). The association between self defeating personality characteristics, career indecision and vocational identity. *Journal of Career Assessment*, 6(1), 69-81.
- Thompson, S. (2002). The role of personal control in adaptive functioning. In S. J. Lopez & C. R. Snyder (Eds.), *The handbook of positive psychological assessment* (pp. 202-213). Washington: American Psychological Association.
- Van Haveren, R.A. (2000). Levels of career decidedness and negative career thinking by athletic status. (Doctoral dissertation, Oklahoma State University, 2000). *Dissertation Abstracts International*, 61(3B), 1622.
- Vinokur, A.D. & Schul, Y. (2002). The web of coping resources and pathways to reemployment following a job loss. *Journal of Occupational Health Psychology*, 7(1), 68-83.
- Vuori, J. (1994). Preemployment antecedents of health resources, job function, and health risk behavior in men and women. *Work Stress*, 3, 263-277.
- Wanberg, C.R. (1997). Antecedents and outcomes of coping behaviors among unemployed and reemployed individuals. *Journal of Applied Psychology*, 82(5), 731-744.
- Waters, L. E. & Moore, K. A. (2002). Self-esteem, appraisal and coping: A comparison of unemployed and re-employed people. *Journal of Organisational Behavior*, 23(5), 593-604.
- Weinstein, F.M., Healy, C.C. & Ender, P.B. (2002). Career choice anxiety, coping and perceived control. *Career Development Quarterly*, 50(4), 339-350.

Wissing, M.P. & van Eeden, C. (1994). *Psychological well-being: Measurement and construct clarification*. Paper presented at the 23rd International Congress of Applied Psychology, Madrid.

Wright, L.K. (2001). The effects of self-efficacy, interest, and dysfunctional thoughts on level of career decidedness, and satisfaction with occupational choice. (Doctoral dissertation, Florida State University, 2001). *Dissertation Abstracts International*, 61(7B), 3889.

Young, J.E. (1999). *Cognitive therapy for personality disorders: A schema focused approach* (3rd ed.) Sarasota: Professional Resource Press.

Authors:

R. Kirk Austin, *D.Litt et Phil, RCC, RRP.*

Trinity Western University- ACTS

Dennis Dahl, *MEd., RCC.*

Kwantlen University College

Bruce Wagner, *MC, RCC, RRP.*

Trinity Western University- ACTS