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Review Article

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Applying the Sense of Coherence Model to Understanding the Psychological Strength of People with Disabilities: A Systematic Literature Review

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ABSTRACT

People with disabilities are more likely to experience maladaptive or negative psychological outcomes such as depression, anger, isolation, etc. due to disability status or disability stigma. Individuals with disabilities who possess a high sense of coherence may show the ability to anticipate stressors, mobilize available resources, and eventually appropriately manage stressors a sense of coherence is a personal psychological assumption, belief, or perspectives that the world is perceived as orderly, manageable and meaningful. This literature review provides an overview of the literature of how individuals with disabilities use a sense of coherence to adapt to chronic illness and disability.

Keywords: disability, sense of coherence, adjustment to disability

INTRODUCTION

In the past decades, the Americans with Disabilities Act (ADA) of 1990 and the Rehabilitation Act of 1973 have given people with disabilities improved supports in order to pursue and achieve their educational and vocational goals (Leuchovius, 2004). ADA regulations have strived to protect people with disabilities against employment discrimination and have promoted equal access to academic opportunities and services in educational settings (ADA, 1990). However, during the past 20 years in spite of this legislation, people with disabilities are less likely to complete college-level education or to be employed than their counterparts without disabilities (ADA, 1990).

Additionally, people with disabilities are more likely to experience maladaptive or negative psychological outcomes such as depression, anger, isolation, etc., due to disability-related experiences or disability stigma. Certain disability characteristics such as severity of disability, course of disability (e.g., stable or progressive), time of onset (e.g., congenital or acquired) can influence psychosocial or emotional aspects of people with disabilities (Livneh, 2001). Furthermore, the psychosocial aspects of people with disabilities also can be impacted by environmental factors such as societal attitudes towards disability, accessibility of the community environment. Typically, negative environmental characteristics increase maladaptation or emotional distress of people with disabilities (Smart, 2008). In order to mitigate these negative outcomes and overcome these barriers, it is important for people with disabilities to possess effective coping strategies to navigate disability-related stressors.

In order to enhance quality of life and facilitate successful psychosocial adaptation todisability, understandingindividuals' psychological attributions or traits is necessary. Based on the notion that people with higher levels of positive psychological states may indicate better approaches to disability-related stressful life situations, it is important to increasethe number of psychological resources ofpeople with disabilities. The purpose of this literature review is to provide an overview of literature of how individuals with disabilities use a sense of coherence to adapt to chronic illness and disability.

Sense of Coherence Model: Comprehensibility, Manageability, and Meaningfulness

Antonovsky's salutogenic model emphasizes the importance of personal characteristics in navigating health, stress, and coping. A sense of coherence is a personal psychological assumption, belief, or perspective that the world is perceived as orderly, manageable and meaningful. Sense of coherence is considered as a strong determinant of moving toward the healthier end of the health and disease continuum. Individuals with a high sense of coherence may show the ability to anticipate stressors, mobilize available resources, and eventually appropriately manage stressors (Antonovsky, 1987). Numerous

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research findings have shown strong conceptual and empirical links between sense of coherence and positive salutogenic outcomes (Cohen & Kanter, 2004; Forsberg & Björvell, 1996; Heiman, 2004; McSherry & Holm, 1994; Motzer & Stewart, 1996).Antonovsky (1987) stated that the ability to manage life difficulties or stressors might be determined by a set of beliefs about the life that form one's sense of coherence.

Findings Pertaining to the Relationships between Sense of Coherence and Other Variables

Previous studies investigating the influence of sense of coherence (SOC) on personal behavioral, or psychological variables will be reviewed. The salutogenic outcomes and levels of sense of coherence have been examined in relation to different personal attributes, such as physical and mental stability among patients (Milberg & Strang, 2004), coping abilities among people with disabilities (Flannery & Flannery, 1990; Morrison & Clift, 2006; Renck & Rahm, 2005), psychological adjustment among refugees (Ying & Akutsu, 1997), stress management among elderly individuals (Elovainio & Kivimaki, 2000), financial support among employees (Lundberg, 1997), and management of job-related stressors among college students (Lustig & Strauser, 2002). The following is a review of pertinent studies in the existing body of research that explore SOC in people with disabilities.

Generalized Resistance Resources

According to Antonovsky (1987, p.19), "Generalized Resistance Resources (GRRs) provide individuals with set of life experiences characterized by consistency, participation in shaping outcome, and an underload-overload balance." GRRs such as money, employment status, religious faith, and social support (e.g., support from family, friends, or community) may provide individuals with life experiences that can lead an individual to derive order and meaningout of chaos. Such kinds of life experiences may create a sense of coherence.In studies about the relationship between level of SOC, social support, and coping styles, SOC was positively correlated with family support (Heiman, 2004) and with social support (Engelhard, Van Den Hout, & Vlacyen, 2003; Skärsäter, Langius, Ågren, Häggström, & Dencker, 2005; Soderfeldt, Soderfeldt, Ohlson, Theorell, & Jones, 2000).

The informal caregivers of cancer patients in advanced palliative home care were investigated for twoelements of Antonovsky's components of sense of coherence: comprehensibility and manageability (Milberg & Strang, 2004). Primary factors enhancing comprehensibility included open information, symbolic information, basic life assumptions, and previous knowledge. Resources to facilitate manageability contributed to enhanced abilities to deal with power, support, competence, and accessibility from social togetherness. Even in the stressful and burdening environment for the informal caregiver, positive psychological state and strength (e.g., comprehensibility and manageability) were retained through open information, previous knowledge, power, support, competence, and accessibility.

In a study on evaluation of programs of supported education for 148 students with long-term mental health problems (Morrison & Clift, 2006), students with lower SOC indicated statistically significant positive gains after being involved in supported education and peer support programs. Learning effects (e.g., feeling of regular academic achievement) based on supported education can reduce symptoms of mental health problems and increase positive learning effects (Morrison & Clift, 2006).

A study examining the relationships of stress, physical and emotional reactions to stress, quality of life, and prediction of SOC among 596 male and female college students indicated that the level of SOC of males was most affected by family relationships and that of females was most affected by emotional health (Darling, McWey, Howard, & Olmstead, 2007). For males, SOC was positively associated with emotional health and quality of life, whereas SOC was negatively related to stress from parental relationships and friendships. For females, the positive relationships of SOC were associated with emotional and physical health and quality of life and indicated a negative relationship with stress from friendships (Darling et al., 2007).

Renck and Rahm (2005) examined the relationships between levels of SOC and support from fellow colleagues among 81 women with a history of early childhood sexual abuse. Women who had a positive relationship to fellow workers reported a significant predictor of SOC and a supportive network of fellow workers appeared to significantly contribute to the development of SOC level.

Ying and Akutsu (1997) investigated the relationships of sense of coherence and resistance deficits and resources to the psychological adjustment of five Southeast Asian refugee groups (713 Vietnamese, 492 Cambodians, 551 Laotians, 231 Hmong, 245 Chinese-Vietnamese). By measuring levels of happiness and demoralization of the Southeast Asian refugees, the direct and indirect contribution of SOC, resistance deficits, and resistance resources to predictors of psychological adjustment were investigated. Sense of coherence was found to be the most significant predictor of psychological adjustment and happiness. Overall, higher education, mastery of the English language, and employment were significant predictors of high levels of happiness and SOC. Vietnamese and Cambodian refugees who arrived in the United States during early adolescence indicated a significant level of happiness. On the contrary, Southeast refugees who experienced resistance resource deficits such as a greater loss of social status due to immigration into the United States, rejection from the mainstream American culture, or trauma due to separation from family reported a lower level of happiness and SOC.

Elovainio and Kivimaki (2000) studied the relationship between psychological and social resources and prediction of subjective well-being among 348 participants in Finland that were over 75 years of age. Participants reported that a high level of SOC and quality social relationships were strongly associated with subjective well-being.A similar study on the SOC of 385

adults with cerebral palsy (CP) revealed that the most important predictive factors in relation to the level of SOC were educational level, marital status, and life satisfaction. Individuals with CP who had competitive employment demonstrated a stronger SOC and experienced more meaningful life (Johnsen, Villien, Slraghelle, & Holm, 2002).

Cohen (1997) examined the relationship between sociodemographic factors and GRRs such as religion, age, economic situation,education, and level of SOC. Among 74 participants (47 of them divorced women and 27 women from two-parent families), affiliation with a high-status social group, higher education, and marriage contributed to the level of SOC. However, there was no relationship between religiosity/ spirituality and level of SOC.

People in higher socioeconomic status have a stronger SOC (Fok, Chair, & Lopez, 2005; Lundberg & Nyström Peck, 1994). As income levels increased, participants' SOC increased, and other psychosomatic symptoms such as depression decreased (Konttinen, Haukkala, & Uutela. 2008). In a cross-sectional study of about 10,000 children in five Nordic countries, factors associated with parental SOC in relation to child chronic health conditions were investigated. Parents with lower SOC were common in lower socioeconomic classes compared to higher socioeconomic classes. Parents who worked as unskilled workers showed about 60% higher odds of having poor SOC compared to higher salaried parents. Low-income parents showed poor SOC compared to high-income counterparts. Parents with low education indicated poorer SOC compared to highly educated parents (Groholt, Stigum, Nordhagen, & Kohler, 2003). In relation to social class, individuals who worked in unskilled positions indicated the lowest SOC whereas senior whitecollar workers showed the highest SOC (Lundberg, 1997).

Personal Backgrounds

Personal backgrounds such as age, gender, early experiences, and sociodemographic characteristicsmay have a different influence on the level of SOC. Antonovsky (1987) stated that SOC will develop and be stable until about 30 years of age. Middle-aged individuals showed the strongest SOC, and individuals who were over 65 showed the weakest SOC (Harri, 1998; Lundberg, 1997; Lundberg & Nyström Peck, 1994). However, Larsson and Kallenberg (1996) found that individuals between 30-40-years-old showed lower SOC than individuals 50-years-old or older, and the level of SOC has increased as the age of individuals has increased.

In Renck and Rahm's (2005) study of 81 women with a history of childhood sexual abuse, the women between the ages of 20-29 reported the lowest SOC compared to the groups of women of ages between 30-39, 40-49, and 50-59 years. The women between the ages of 50-59 years reported the highest level of SOC compared to the other women.

Among 4,305 participants in a studyof school-aged adolescents with alcohol-related behavioral problems, 16-year-old boys reported the highest SOC, compared to 19-year-old boys, and both the 16- and 19-year-old girls (Nilsson, Starrin, Simonsson, & Leppert, 2007).

Harri (1998) found that the level of SOC was significantly increased among 477 nurse educators in Finland when they had more freedom to choose their teaching field. Nurse educators' opinions about their work and other background were positively related to SOC, such as interaction in the working community, joy of work, workload, negative stress, symptoms of diseases, evaluation of own competence, balance between work and leisure time, own health, and use of drugs.

In relation to childhood background and the level of SOC, the level of SOC of 4,390 adults aged 25-75 was moderately related to dissension in the childhood family. However, childhood family size (a large number of siblings such as four or more), and the experience of a broken home (e.g., the loss of one or both biological parents due to divorce or death) were not related to SOC later in life. This finding suggested that the relationships between childhood conditions and the level of SOC were not associated in later life (Lundberg, 1997).

Physical and mental disability status

Researchers found that SOC has been positively related to physical and psychological health indicators (Antonovsky, 1993; Flannery & Flannery, 1990; Larsson & Kallenberg, 1996; Lundberg, 1997; Pallant & Lae, 2002). Following a critical illness, patients with a higher SOC may be more likely to actively formulate their own health outcomes and demonstrate a significant positive correlation between the level of SOC and quality of life (Fok et al., 2005).

Among 67 individuals with diabetes (35 of them with type 1 diabetes and 32 with type 2diabetes), those with a stronger SOC demonstrated better adherence to self-care behaviors and had lower psychological distress (Cohen & Kanter, 2004). Similarly, Hong Kong Chinese individuals with higher SOC who received insulin treatment reported the lower level of fear of hypoglycemia. However, the relationships between the use of insulin as a treatment and the level of SOC were not significantly correlated. Seventy-two individuals with lower or higher SOC showed no significant difference in difficulties in managing diabetes (Shiu, 2004).

A study involving 149 people with chronic coronary heart disease who survived cardiac arrest reported that SOC explained additional variance in quality of life after controlling personal factors, such as poor health vulnerability, perceived social support, or self-esteem. Level of SOC appeared to additionally enhance estimation of quality of life and showed a direct effect on life satisfaction of individuals with coronary heart disease (Motzer & Stewart, 1996).

Soderberg, Lundman, and Norberg (1997) studied the influence of SOC on subjective perception about physical and mental stability. Thirty women with fibromyalgia (FM), a chronic pain syndrome that has a considerable impact on an individual's daily life, reported many symptoms. However, they perceived themselves as feeling quite well and experiencing an SOC in life, despite severe physical and mental problems. Although women with FM might experience problems with

intimate relationships, participation in recreational activities, and performing household duties, the FM women with a stronger SOC perceived greater well-being than those with a weaker SOC. Further, the FM women with a strong SOC indicated more hopeful, free, and valuable perspectives than the women with a weak SOC.

In Forsberg and Björvell's (1996) study, the perception of psychological well-being and the level of SOC in a group of patients with gastro-intestinal cancer were examined. Among 69 patients with gastro-intestinal cancer one year after surgery, the cancer patients with a higher SOC perceived their well-being better than patients with a lower SOC.

Carstens and Spangenberg (1997) examined the relationship between severe depression and SOC. Fifty patients with depressive disorder completed the Sense of Coherence scale and the Beck Depression Inventory. The results revealed significant negative correlations between scores on the Beck Depression Inventory and scores on the Sense of Coherence scale, suggesting an inverse relationship between depression and SOC.

In a study about the level of SOC in early pregnancy, crisis support, symptom severity of posttraumatic stress disorder (PTSD), and depression after pregnancy loss, pregnant women with a stronger SOC showed more psychological resilience to symptoms of PTSD and depression after pregnancy loss. Among 1,372 pregnant women, SOC in early pregnancy was negatively related to PTSD after pregnancy loss and SOC was linked negatively to depressive symptoms both before and after pregnancy loss (Engelhard et al., 2003).

For individuals with obsessive-compulsive disorder (OCD), they appeared to strengthen the extent and durability of positive outcomes to treatment by reducing vulnerability to life stress and chronic symptoms. Individuals with OCD might maximize the level of SOC and facilitate positive psychological outcomes by participating in SOC-inducing cognitive behavioral therapy (Joachim, Lyon, & Farrell, 2003).

In a cross-sectional study about parental SOC of 10,000 children in five Nordic countries, parents of children with chronic health conditions such as diabetes, epilepsy or psychiatric/nervous problems had approximately two to five times higher odds of having poor SOC compared to parents of children without a specific diagnosis (Groholt et al., 2003).

A study was conducted on three school-aged groups of children: children with very few somatic complaints, children with many somatic complaints, and children with functional abdominal complaints who received clinical outpatient services. In this study both the second and third groups of children indicated more negative emotional functions such as negative moods, symptoms of depression, difficulty in emotion differentiation and communication problems. They also showed lower levels of SOC compared to their counterparts with few somatic complaints. Moreover, children with many somatic complaints demonstrated a higher sense of negative emotion (e.g., sadness, anger, or fear; Jellesma, Rieffe, Terwogt, & Kneepkens, 2006).

Renck and Rahm (2005) studied women with a history of childhood sexual abuse and the relationships between their personal resources and the level of their SOC. Eighty-one women experienced a range of difficulties due to childhood sexual abuse such as anxiety attacks, nightmares, or difficulty sleeping and they participated in self-help groups. Overall, women who experienced childhood sexual abuse showed extremely low levels of SOC, compared with normative data presented by Antonovsky, such as Czech cancer patients, American undergraduates, and young Israeli adults with cerebral palsy. Women who endured more than 10 years of sexual abuse indicated a weaker SOC. Women who experienced sexual abuse in early childhood reported a lower SOC than women with a later onset.

In a study by Nilsson et al. (2007), 4,305 adolescents were examined to find the relationship between SOC with alcohol-related behavioral problems. Adolescents with a strong SOC reported that they were protected, to a large degree, from alcohol-related behavioral issues despite frequent intoxication. Conversely, adolescents with a weaker SOC demonstrated the highest alcohol-related behavioral problems and more frequent alcohol intoxication. The odds ratio for experiencing alcohol-related problems was between 42 and 56 times higher among adolescents with a weaker SOC.

Ekblad and Wennstrom (1997) tested the relationships between the SOC subscale for meaningfulness and psychiatric symptoms in a multicultural immigrant and refugee sample of 33 volunteer patients at a psychiatric outpatient clinic. The SOC subscale for meaningfulness was positively correlated with the present and optimal level of function and was negatively associated with total trauma symptoms, anxiety, and depression. Also, participants with a low mean score on SOC subscale meaningfulness reported two times higher risk of having anxiety symptoms.

In a study about stability of SOC over time after trauma, 26 individuals with severe multiple traumas showed unstable SOC scores and some indicated large variations. However, individuals with multiple traumas who showed a strong level of SOC indicated higher levels of life satisfaction. Conversely, individuals with a weak SOC were related to psychological distress, anxiety, and depression (Snekkevik, Anke, Stanghelle, & Fugl-Meyer, 2003).

Coping behaviors. Although Antonovsky (1987) stated that sense of coherence is not a coping strategy in itself. He postulated that individuals with a high sense of coherence may be more likely to effectively choose appropriate coping behavior. Thus, individuals with a greater sense of coherence are more likely to respond to a stressor with adaptive strategies, thereby increasing a positive outcome and minimizing the chance of detrimental effects on health and well-being (Antonovsky, 1987; Pallant & Lae, 2002). Sense of coherence is understood as a global orientation that facilitates individuals' effective cognitive and behavioral reaction to various stressors encountered in life (Antonovsky, 1987).

Heiman (2004) investigated the relationships between levels of SOC and strategies to cope with stressors among 261 college students. SOC was negatively correlated with life stress such as academic stress, work stress, and daily life stress. SOC was positively correlated with task-oriented coping and negatively with emotional strategies and with avoidance coping. Similarly, for 5,026 school-aged adolescents from grades 6, 8, and 10, the effect of SOC on the relationships between academic stress and subjective health complaints (e.g., headache, backache, and abdominal pains) was investigated. Participating school-aged children consistently indicated that stress-preventive, stress-moderating, and health-enhancing routines had effects on SOC (Torsheim, Aaroe, & Wood, 2001).

McSherry and Holm (1994) examined the relationships between the level of SOC and individuals' psychological and/or physiological responses to a stressful situation. One thousand undergraduate students were assessed for SOC level and then completed a battery of questionnaires before and after a stressful situation. Among low, middle, and high SOC groups, participants with a low SOC exhibited significantly more stress, anxiety, and anger throughout the experiment than did either middle or high SOC counterparts. In addition, participants with low SOC were less likely to believe they possessed the personal resources necessary to cope with the stressful situations in comparison to participants with high SOC. Also, low SOC participants' coping behaviors were significantly less approach-oriented than those of either middle or high SOC counterparts.

Bishop (1993) investigated the role of SOC as a resource in dealing with life stress. A sample of 186 Singaporeans indicated that individuals with lower SOC showed more deleterious effects on the physical health than individuals with higher SOC. For individuals with lower SOC, the stresses and strains of daily life appeared to have a negative impact on health status. However, for individuals with higher SOC, no particular relationships between stress and strains of daily life were found. Individuals with higher SOC indicated the same health status regardless of reported stress.

In a study exploring the relationships of patients' SOC and coping abilities following a critical illness, a significant positive correlation between the level of SOC and patients' coping abilities was found. Patients with a stronger SOC coped more effectively and appropriately with life events and were more able to seek the best coping resources (Fok et al., 2005).

Shiu (2004) explored the relationships between SOC and coping behaviors to diabetes. For 72 patients under insulin treatments, participants with higher SOC perceived less fear of hypoglycemia than counterparts with lower SOC. SOC may be an indicator of better emotional adjustment, well-being, effective nursing intervention, and emotional coping modality for individuals with diabetes.

Rena, Moshe, and Abraham (1996) assessed the relationships of the adjustment to disability and the levels of SOC between two groups of participants: 80 individuals with disabilities and 72 of their spouses. In this study, individuals with disabilities experienced some form of paralysis. For both groups, SOC was significantly related to disability adjustment. Individuals with disabilities and spouses with strong SOC indicated better adjustment status by managing tension well. They also reported that the level of SOC was a different characteristic to cope with disability-related issues regardless of level of severity. In addition, for each group, the contribution of the three components of SOC was slightly different. Individuals with disabilities might contribute a meaningful and comprehensive perception and their spouses might contribute more manageability perception as their role of a care-giver. This finding suggested complementary interrelationships that lead to successful adjustments to disabilities as a team.

For people with schizophrenia, a psychoeducational approach based on the theoretical concepts of SOC was considered to be effective treatment interventions. By retaining the level of SOC through psychoeducational process, individuals with schizophrenia could enhance SOC and augment coping or adjustment capacities. They can effectively mediate stress and tension caused by stressful events. In the treatment of schizophrenia, psychoeducational approach may represent GRRs such as knowledge and strategies to prevent the negative effect between stressors and the resulting tension, thereby obtaining sufficient information to increase the three components of SOC (Landsverk & Kane, 1998).

Employment status

Antonovsky (1987) stated that the SOC is a global cognitive style used when individuals manage stressful situations. It may be also relevant to employment situations where individuals may experience job-related stressors or problems. In a job-related context, individuals with strong SOC may better deal with stressors than individuals with low SOC (Antonovsky, 1987).

A sample of 477 nurse educators in Finland indicated that favorable opinions about working status were positively associated with the SOC score, such as interpersonal relationships, joy of work, stress feelings, and workload (Harri, 1998). Finnish employees, who perceived their employment conditions as worsening, reported a decrease in SOC scores. Employees who perceived their organizational climate as good, with job security, reported higher SOC scores than counterparts who did not (Feldt, Kinnunen, & Mauno, 2000).

Soderfeldt et al. (2000) conducted a study to find out the relationships between the level of SOC and the working model of high job demand and low job control in employees of socialwelfare and socialinsurance agencies in Sweden. In assessment of negative job effects, individuals with higher SOC reported better management of job-related stressors than counterparts with lower SOC.

Economic support, such as financial support, was correlated to the level of SOC. Higher economic support and financial assets correlated to higher levels of SOC (Cohen, 1997). Larger monthly salaries correlated to stronger levels of SOC (Larsson & Kallenberg, 1996). In a representative sample of 6,790 Canadian labor workers, employees in unskilled occupational position and low household income showed a lower level of

SOC in both the males and females (Smith, Breslin, & Beaton, 2003). A Swedish sample of 3,949 persons who were 25-75 years old indicated that workers and farmers tended to show a greater risk of having lower SOC compared to white-collar workers and self-employed worker (Lundberg & Nyström Peck, 1994).

During unemployment, the hardships and strains of finances and relationships had a significant negative impact on the level of SOC. Starrin, Jonsson, and Rantakeisu (2001) examined the relationship between levels of SOC and financial issues during unemployment. They found that individuals under financial or relational difficulties during unemployment indicated a substantially lower SOC among 1,249 participants. Further, individuals who were exposed to an economic problem reported more shaming experiences. This indicated that individuals during unemployment may experience not only economic worries, but also emotional distress.

Lustig and Strauser (2002) investigated the impact of SOC on the career thought process of a sample of 145 college students. Participants completed the Sense of Coherence Scale and the Career Thoughts Inventory (CTI). A negative medium of relationships between SOC and CTI Total and three subscale scores (Decision Making Confusion, Commitment Anxiety, and External Conflict) were found. They supported that college students with a stronger SOC indicated less dysfunctional thoughts while they decided career directions and selected occupations.

In Lustig and Strauser's (2008) other study exploring the relationships between SOC and career thought process, 52 individuals with disabilities who received assessment services at a university-based assessment center were examined. Participants with disabilities who showed a stronger SOC indicated that they were more likely to effectively cope with problems or difficulties while searching for a job and making career decisions. They were more likely to persevere in the career decision-making process and less likely to experience psychological distress during the process.

Strauser and Lustig (2003) investigated the moderating effect of SOC on work adjustment in a sample of 145 college students. Participants with higher SOC were more likely to have more developed work personalities and work habits, more likely to accept work assignments and work roles, and better able to respond appropriately to authority figures and get along with coworkers than participants with lower SOC.

CONCLUSION

Differing from the traditional pathogenic model of stress management, Antonovsky's salutogenic model presented a new paradigm of appraising and managing stressful life situations. Antonovsky's salutogenic view was developed from information indicating that stressors are ubiquitous and result in either positive or negative influence depending on how well individuals address stressful events. If individuals appropriately address stressors, they will move toward the health end on a health and disease continuum. Conversely, if individuals poorly manage stressors, they will experience negative consequences and move toward the disease end on a health and disease continuum. As a powerful determinant of maintaining and measuring individuals' position on a health and disease continuum, sense of coherence refers a global orientation to seeing life is predictable, manageable, and meaningful. Since Antonovsky (1991) proposed the salutogenic model and sense of coherence, numerous research have been conducted to measure the relationships between the level of SOC and other psychological or behavioral variables in the field of psychology, medicine, nursing, social work, and counseling. Plentiful studies have indicated positive relationships between the levels of SOC and healthy psychological and behavioral traits. This has proposed feasible intervention strategies for individuals who experience difficult life situations based on Antonovsky's salutogenic model.

In general, people with disabilities or life difficulties who showed a higher sense of coherence demonstrated lower levels of dysfunctional thoughts, psychosocial confusion, disability-related anxiety, or conflicts with others. Cognitivebehavioral counseling interventions may be a feasible approach for enhancing the level of sense of coherence and reducing dysfunctional thoughts and behaviors (Keller, Biggs, & Gysbers, 1982; Lustig & Strauser, 2008; Sampson et al., 1996). For example, rehabilitation professionals should initially increase comprehensibility during counseling sessions by introducing approaches to handle individuals' irrational or unrealistic beliefs. By lessening dysfunctional thoughts (e.g., I must find a well-paying job), people with disabilities can have realistic and practical predictions about their future directions (Peterson, Sampson, & Reardon, 1991). As an instrumental component, the enhancement of manageability can involve helping people with disabilities identify tangible and practical strategies for management of disability-related stressors and use specific skills to achieve and sustain emotional stability. By setting a practical, manageable, and explicit rehabilitation-related goal, people with disabilities can create ways to reach the goal throughout specific, sizable, and controllable sub goals (Peterson et al., 1991). Finally, rehabilitation professionals should encourage people with disabilities to better understand the meaning of rehabilitation processes by informing the clear rationale of rehabilitation and independence. In presenting the therapeutic rationale, the professionals should inform people with disabilities about the aim and meaning of the rehabilitation counseling models and processes.

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