

The intersection of career and mental health from the lens of Cognitive Information Processing Theory

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Anxiety and depression have increased exponentially and can be exacerbated by the ongoing individual and combined effects of the pandemic, ongoing unemployment, and systemic racism. Across the globe, career counsellors see the impact of these mental health concerns on individuals as they engage in career-decision making and problem-solving. Cognitive Information Processing theory (CIP; Sampson et al., 2020) can provide a useful framework for supporting diverse individuals experiencing heightened mental health and career concerns. In this article, we review key components of CIP theory, provide specific case examples that highlight the integration of career and mental health, and offer CIP-based conceptualizations and interventions.

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Career counsellors and practitioners acknowledge the connection between career and mental health concerns. Psychological distress (Constantine & Flores, 2006), depression (Cardoso, 2016; Rottinghaus et al., 2009; Saunders et al., 2000), and anxiety (Pisarik et al., 2017; Xiao et al., 2014) have all been demonstrated to negatively affect career-decision making. Cognitive information processing theory (CIP) (Sampson et al., 2004; Sampson et al., 2020) offers a framework for career decision making and problem-solving in a way that integrates mental health and career development

concerns. Four models comprise the theory. The first, the pyramid of information processing domains identifies four components for effective career decision making: self-knowledge, options knowledge, decision making skills, and executive processing that includes an ability to manage the career decision making process, as well as the awareness and control of self-talk. The four elements are independent but related (Osborn et al., 2020; Osborn et al., 2021). Mental health is imbedded in and impacts each of these components. For example, depression integrated with career might be expressed as, “I’m no good at anything,” or “there are no options out there for me.”

The second model is a decision-making process called the CASVE Cycle, comprised of six phases (i.e., communication, analysis, synthesis, valuing, evaluation, and a re-visiting communication). Communication involves identification and exploration of a gap between the client’s current situation (e.g., a need to make a decision) and ideal situation (e.g., making a satisfactory choice). A counsellor will examine internal and external pressures that are contributing to the perceived need to make a career decision. Worry is one emotion that should be examined at this point, as Hayden and Osborn (2020) found it to be significantly related to all aspects of CIP-related dimensions (self-knowledge, options knowledge, decision making skills, executive processing) and negative thinking. Analysis includes exploration of self and options knowledge, leading to identification of viable options in Synthesis. Tasks associated with these phases become more complicated and may result in biased outcomes, when impacted by depressive or anxious thinking. For example, a person who indicates on a career inventory they are not interested in nor capable of a large number of task descriptions will receive limited results reflecting their input. Valuing involves prioritization of the options resulting from Synthesis and includes consideration

of what is important to the individual, their significant others, and their community. Someone who feels they do not matter may not fully engage in exploration, whereas someone who places others' values and opinions over their own might ignore their personal values completely. Anxiety may increase if conflicting voices of important people and self are present related to the career decision. During Execution, an individual experiments with their prioritized choice through activities such as job shadowing, taking a course that might be of interest, volunteering in a certain area of interest, or engaging in paid work in a related field. Finally, they revisit Communication to explore whether the initial gap has closed and re-examine the internal and external cues about their career concern.

CIP theory's third model is the Career Decision Making Readiness Model (Sampson et al., 2004; Sampson et al., 2020), aimed at identifying how ready a person is to engage in the process. Capability and complexity intersect to create four types of readiness: low capability/low complexity (moderate readiness); low capability/high complexity (low readiness); high capability/high complexity (another type of moderate readiness); and high capability/low complexity (high readiness). Capability includes internal characteristics including mental health, willingness to honestly engage in the process, etc., whereas complexity involves external pressures such as those created by family, or societal issues such as discrimination, and financial issues.

Depending on their readiness, CIP's fourth model, the Differentiated Service Delivery model (Sampson, 2008, Sampson et al., 2020) suggests services and counsellor support for meeting clients' needs. High readiness individuals need the least amount of support and are most appropriate for self-help delivery. Moderate readiness clients will likely benefit from brief-staff assisted delivery, meeting with a counsellor on a drop-in basis to create and work through an individualized plan. Low readiness clients need the most support and will benefit most from longer-term counselling. Research (e.g., Kronholz, 2015; Osborn et al., 2016; Whiston et al., 2017) has supported the efficaciousness of each of these approaches.

The efficacy of the differentiated service delivery model depends on the accurate initial assessment of readiness for career decision making to determine the amount

and type of practitioner assistance needed. For example, if an initial brief screening indicates a potential for low decision-making readiness, a readiness measure such as the Career Thoughts Inventory (CTI) (Sampson et al., 1996) can be used to identify the nature of the mental health concerns that are making decision making difficult (Sampson, 2008; Sampson et al., 2020). Given this understanding, the practitioner and the client can make an initial estimate of the number of sessions needed and start with individual counseling that integrates career and mental health. Additional assessment for anxiety or depression may be needed to better understand the nature and extent of mental health concerns impacting career choices. The efficacy of the differentiated model also depends on a response to intervention model where progress in using career resources is monitored and changes made to the intervention if the client is experiencing difficulty (Sampson et al., 2020). This approach requires that practitioners are trained in both career development and mental health concerns (Sampson et al., 2004).

Research has demonstrated the efficacy of using CIP to conceptualize a diverse range of clients who may present for career counseling in different career-based settings. In this paper we will use CIP to conceptualize individuals experiencing both heightened mental health and career concerns. We provide specific case examples that highlight the integration of career and mental health and offer CIP-based interventions for counsellors working with a diverse clientele.

Case scenarios

Below we present a series of case scenarios with clients who presented with both career development and mental health needs. CIP guides work in each case. The first illustrates the unique circumstances related to career and mental health that military service members and veterans face. The second demonstrates how racial discrimination can influence mental health and career concerns. The third shows an example of a client who presented with both trauma symptoms and concerns about her college major. Finally, the last case portrays a client struggling with psychological distress and who is unemployed because of the coronavirus pandemic, which has had numerous mental health and career-related consequences for individuals across the globe.

The case of 'Najee'

Najee is a 25-year-old heterosexual Black man transitioning from military to civilian life. His job in the military involved explosive ordinance disposal and he is unsure of how his skill set might transfer to a profession in the civilian world. He is married with a young child, which is the impetus for transitioning out of the military as he desires less dangerous work and a more predictable schedule. He has had multiple combat deployments but has not indicated any mental health concerns related to his emotional and mental well-being. He did indicate anxiety about effectively transitioning to civilian work. Given the unique nature of his work in the military, he is uncertain of how to translate his military experience to civilian work and of ways to effectively communicate his transferable skills. He desires a position where he can use skills acquired in the military around engineering, logistics, and technology.

Using CIP to conceptualize Najee's needs, the CTI (Sampson et al., 1996) was administered to identify dysfunctional career thoughts, but no elevations were found. The counsellor assessed for readiness and determined that Najee appeared to have high capability as he seemed to be affectively and cognitively aware in relation to his career concern, and low complexity as he did not have significant external stressors associated with this decision. They explored his anxiety and it appeared manageable.

Najee's level of readiness provided an opportunity for engagement in self-help services related to the career concern. In pursuit of the goal of exploring options associated with his interests and skills developed in the military, the counsellor suggested Najee explore O*NET (National Center for O*NET Development, n.d.) and specifically the military crosswalk feature of the platform. O*NET is a free U.S.-based online resource that allows individuals to explore different career options. Individuals can search for careers by name or career clusters, and it provides information including job responsibilities, educational requirements, and salary for a diverse range of careers. The counsellor offered support to Najee if requested but he expressed confidence in his capacity for successfully utilizing this platform. O*NET directed Najee to various occupations such as emergency management director, occupation health and safety specialist, and detective and criminal investigator. The counsellor discussed the possibility of these options with Najee.

From a CIP lens, this exploration of occupational options from a self-help perspective is associated with options knowledge with limited counsellor involvement based on Najee's indicated readiness.

The case of 'Shavonne'

Shavonne is a 29-year-old Black heterosexual cis-gendered woman attending law school. Shavonne is the first in her family to attend college. After being unable to find a summer internship at a law firm, she decides to accept a position working as a teacher at a local daycare. She has experience babysitting and she completed an undergraduate college minor in child development. She is an "only-child" with a mother who works as a daycare worker and a father who works as a mechanic. During her time in law school, Shavonne experienced discrimination from her instructors, her peers, and during internship interviews. Comments such as, "You are one of the good ones" and "I bet there's a story on how you ended up in law school" are frequent. Racial microaggressions or subtle forms of discrimination such as these have been linked to poorer mental health (Sue et al., 2007) and negative career outcomes (Marks et al., 2020). Shavonne often wonders if her race and sex are part of the reason that she has been unable to secure an internship position. She is concerned about her future ability to secure a job as an attorney. She finds herself blaming her identities for her inability to secure an internship, which makes her feel depressed. It has always been her dream to work in real estate law, but she now worries that may never become a reality. She has been crying daily, having difficulty sleeping, and decreased appetite.

Shavonne presents to the career center to strengthen her resume and identify other internship opportunities. Using CIP, the counsellor assessed readiness and determined that Shavonne appeared to have high capability as she appears to be affectively and cognitively engaged in decision making and high complexity as she has significant external stressors associated with her decision (e.g., racial discrimination and systemic barriers). In line with a brief-assisted approach, Shavonne is seen for two sessions of brief career assistance. During these sessions she is often tearful. Her career counsellor recognizes that Shavonne needs more than career counseling and feedback on her resume. On the day of her second session, she reviews Shavonne's revised resume, which seems highly reflective of her skills. She

provides Shavonne with brochures on the Counseling Center and circles their number and discusses how mental health often does not exist in a vacuum outside of career concerns and encourages Shavonne to engage in personal counseling. She sets a time to call and follow-up with Shavonne to encourage accountability with contacting the Counseling Center.

The case of 'Jane'

Jane, a 26-year-old Latinx female, is seeking career counseling after experiencing a sexual assault one month prior. She reports coming in because her grades were falling due to skipping classes as she could not sit next to male students in her classes. She wanted to change her major, as her major is a very male dominated field, and she did not believe she would be able to maintain focus or be successful in the remainder of classes/studies or her future career. The career counsellor that worked with Jane has training with sexual assault work. Thus, she is assessed for depression, anxiety and suicidality. Jane met Post Traumatic Stress Disorder (PTSD) criteria, reporting daily crying spells, panic attacks, hyper-vigilance, startled reflexes, nightmares and sleeping less than three hours per night. She denied suicidal thoughts. After ensuring Jane was not suicidal and was able to list ongoing supports for herself, reasons to live, and completed a contract for safety, the career counselor then ascertained more about the career decision processes of Jane before the sexual assault and provided a safe space for her. The counsellor asked Jane to explain her passion for her major. She actively listens and provides the space for Jane to work through pros and cons of staying in her current major or leaving.

Using CIP, the counsellor assesses that Jane had poor readiness, high commitment anxiety and high external conflict as her decision to seek out career counseling were reactionary and secondary to her trauma. Her first session focuses mainly on assessing mental health, safety, wellness and providing resources for the Rape, Abuse & Incest National Network (RAINN; a U.S.-based hotline and online resource for survivors of sexual violence), a local sexual assault center, a suicide hotline, and resources to local counsellors that specialize in sexual trauma). The second session provided Jane with an opportunity to examine her decision-making related to her major. Jane spoke of how from high school, she wanted to work in computer science. The third session explored her motivations for changing majors and introduced the

possibility of taking medical leave for a semester to heal some and seek counseling for her sexual assault. During the fourth session, the counsellor asked Jane to consider other possible careers that would make her happy and explored knowledge of options and skills. She challenged her to think about if taking some time off to heal is worth it if it allows her to remain in the field she loves. During the last session, Jane asked for help with the medical leave process, setting up an appointment with a long-term counsellor, and stated she didn't want to immediately change her major or her future plans.

The case of 'Naomi'

Naomi is a 33-year-old, single, heterosexual White woman experiencing worry, financial concerns, self-doubt, and low mood. Her work experience had been in the hospitality industry until the coronavirus pandemic when she was furloughed from her job. Naomi reported that she didn't like the late nights, fluctuating sleep schedule due to evening shifts, low pay, lack of advancement and limited social connection. She stated that she wanted to find a "real job" and had felt this way for several years, however, had not acted nor figured out what that would be. Naomi shared having questions of confidence regarding her abilities as she had been in the restaurant industry since graduating college eight years earlier. Naomi presented for assistance dealing with job loss stress, help identifying a career path, and clarifying her skills and qualifications.

The counsellor met with Naomi for an initial intake and assessment. In addition to career concerns, the counsellor learned that Naomi's mother had a terminal illness and recently experienced a decline in her own health. She reported she often found herself tearful and became anxious at the thought of focusing on her future. Since Naomi was unemployed, she spent her days helping where needed at home, providing care to her mother, running errands for the family, and preparing meals.

Given the high complexity (job loss, caregiving responsibilities, family illness, and financial concerns) and low capability (self-doubt, perceived limited experience and skills, low mood, and worry) for readiness to engage in the process, it was decided that an individual case managed approach would be helpful (Sampson, 2008; Sampson et al., 2020). Naomi completed the CTI (Sampson et al., 1996) to further assess career decision making readiness. The CTI revealed high scores

on the Commitment Anxiety and External Conflict Scales suggesting that she experienced worry about committing to a career choice and was influenced by the thoughts and beliefs of others when considering options. Naomi and the counsellor reviewed the CIP Pyramid of Information Processing and CASVE Cycle to provide a framework for the career decision-making process. Naomi identified all areas of the pyramid (Self-Knowledge, Options Knowledge, Decision Making Skills, and Executive Processing) as possible areas of focus.

After a few sessions, Naomi shared she had been thinking about finding another job for several years but found herself doubting she was qualified or that an appropriate fit existed (Executive Processing). The counsellor and Naomi explored her negative career thoughts and began to challenge and reframe those that were limiting exploration of options and ability to accurately view self-knowledge. They determined that addressing negative thinking impacting mood and readiness for career decision making was an appropriate next step.

As the sessions progressed, Naomi clarified her self-knowledge, exploring her interests and values with greater comfort. Discussion of values revealed the importance of her faith and the need for meaning and purpose in her work. Although Naomi had begun to feel more optimistic, months of providing care to her mother led to feelings of resentment and self-criticism as well as avoidance of occupational exploration. She experienced feelings of fatigue, sadness, frustration, and ongoing worry about her future. These emotions (metacognitions) kept her from exploring options or synthesizing information as a part of the CASVE Cycle. Allowing time to explore and integrate her roles and identities became an important component of the career counselling experience, especially in light of her caregiving role in the family (Richardson, 2011; Richardson & Schaffer, 2013).

Eventually, Naomi decided to delay her search for employment or commitment to an occupational path. Her priority was to provide care/support for her mother and the rest of her family (Valuing). Unemployment benefits and support from her family made this financially feasible. Naomi enrolled in an online course to develop additional computer skills, an acceptable compromise to her, given all the commitments she had. Taking action (Execution) offered her the ability to remain connected to her family during a difficult time and created an

opportunity for her to continue moving toward her career goals.

Summary

Internationally, career counsellors and practitioners can use CIP to conceptualize and provide services to individuals experiencing mental health and career concerns. In this article, we reviewed important components of CIP theory and provided four diverse case examples that emphasize the combination of career and mental health. Career and mental health do not exist in their own vacuums, and both need to be considered when counselling clients. These case examples can be used as a resource by career counsellors around the globe as they work with clients who present with both mental health and career concerns.



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