"BECOMING A VALUES-DRIVEN SELF-CARE USER": DEVELOPMENT OF A GROUNDED THEORY MODEL AND GROUP INTERVENTION FOR HEALTH STUDENTS

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ABSTRACT

Self-care is generally understood as a multi-dimensional construct that involves using self-selected strategies in order to achieve a balance between personal and professional life, and to support and promote mental/emotional, physical, spiritual, and professional functioning (Jordan, 2010; Lee & Miller, 2013). Self-care is imperative for health students, as they are at a greater risk for burnout and given their collective responsibility for caring for others (Cecil et al., 2014; Duarte et al., 2016; Salyers et al., 2015). However, there is insufficient focus on self-care in training programs and students' uptake of self-care is low (Bettney, 2017; El-Ghoroury et al., 2012; Furr & Brown-Rice, 2017). My dissertation aimed to understand this gap between knowledge and action by theorizing how health students who are in undergraduate and graduate programs naturalistically create and maintain self-care, and then by developing a theory-based intervention.

In Study 1, I used grounded theory methodology to develop a theory delineating the process of a successful self-care user from the perspective of health students ($N = 17$). My grounded theory, *Becoming a Values-Driven Self-Care User*, comprised four phases that participants moved through iteratively: 1) Having a Wake-Up Call, 2) Building Skills, 3) Gaining Confidence, and 4) Building an Identity. In addition, my grounded theory explained why some students were unsuccessful at developing self-care practices and this helped to address the barriers of self-care reported by students. My theory showed that self-care skills are solidified into students' identities in the context of a values disconnect along with practice and support. This is the first comprehensive theory to explain how health students develop effective self-care habits, and it informs the development of self-care interventions for this population.

In Study 2, I used my grounded theory model, as well as previous theoretical work, to develop and evaluate a group self-care intervention, *Values-Based Self-Care* (VBSC), which comprised of six, 90-minute weekly sessions. I randomly assigned a heterogenous sample of health students ($N = 61$) into an intervention (VBSC) or waitlist control group. Pre- and post-group data was collected before and after the intervention/wait period and then analyzed for group differences. I also examined within-person changes before and after the intervention using the total sample. My hypotheses were partially supported. There were significant within-person pre-post intervention changes in self-care, emotional distress, valued living, and self-esteem. However, when comparing the intervention and waitlist control groups, meaningful differences were only found for self-care, valued living, and depression.

My dissertation shows that values are essential for building and maintaining self-care. In addition, consolidating self-care behaviours into health students' identities requires support, time, and practice. My dissertation encourages new avenues for future researchers to develop tailored self-care interventions that afford students with social support and feedback, which are necessary for skill mastery. My findings also have implications for how we operationalize self-care and measure it within research studies.

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To my family, where would I be without your endless love and support? To my parents, you have shaped me into the hard working and resilient person who I am today. You have taught me how to handle adversity with grace, challenges with perseverance, and to "never give up." To my dearest twin sister who is my "other half": You were instrumental in keeping my spirits high, and I will always cherish our library sessions together and encouragement to "hussle and just get it done." To my little sissy, your composure during stressful times always inspired me to do the same. To my grandparents who are no longer here; I felt your presence and love throughout this journey, and I miss you dearly. To my closest friends, Jessica and Taryn, thank you for the "dance parties," laughs, surprise flowers, and for believing in me when I did not always believe in myself. Finally, to my fur babies: Sugars and Little Boy. Thank you for showing me unconditional love.

DEDICATION

I dedicate this to all the health care students and professionals who are navigating a tricky work-life balance. There is wisdom within this document, but if I can offer one piece of advice, it is this: Never forget who you are as a person (who you are, what you stand for, and who/what matters). Your personhood is your greatest gift to yourself, and to others. Nourish, protect, and take care of the things/people that make *your* life worthwhile and meaningful.

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Chapter 1: General Introduction

Overview

Self-care is an ethical imperative and professional necessity that helps to manage stress, prevent burnout, and generally promote and maintain health (e.g., Barnett, 2008; Carter & Barnett, 2014). Developing effective self-care practices is especially important for health professionals, who have an ethical and clinical responsibility for the welfare and lives of others. In the past 20 years, there has been an increase in research and focus on the importance of self-care for health professionals (e.g., Lee & Miller, 2013). Poor use of self-care can lead to burnout, which compromises ethical judgement, quality of care, and increases medical errors (APA, 2011; Salyers et al., 2015; West et al., 2006).

Health students are a particularly vulnerable population due to the demands of the training environment. Professional training programs involve multiple sources of stress that, if left unmanaged, can negatively affect students' health and professional functioning early in their careers. Students across multiple health programs (e.g., psychology, medicine, nursing, dentistry) report mental and physical health concerns that exceed rates found among age- and gender-matched peers (e.g., Crary, 2013; Cushway, 1992; El-Ghoroury et al., 2012; Rahimi et al., 2014; Stafford-Brown & Pakenham, 2012). The effective use of self-care can buffer students from the negative effects of stress on health and professional functioning (Yusufov et al., 2018; Zahniser et al., 2017). However, students report dissatisfaction with the amount and type of self-care emphasis within their programs (Bamonti et al., 2014; Campoli & Cummings, 2019; Munsey, 2006; Slavin, 2016; Zahniser et al., 2017), and they often do not use self-care effectively (Dearing et al., 2005; El-Ghoroury et al., 2012; Shen-Miller et al., 2011). Some recent research suggests that students are able to identify self-care

strategies, but that they require support in implementing them in light of program and life demands (Diebold et al., 2018; Vincenzes et al., 2018).

The unsatisfactory approach to self-care used by health training programs is well documented. Foremost, health programs approach self-care reactively, as discussions about self-care often happen after negative consequences have occurred. For example, students who are perceived to be performing below expectations are isolated and advised to engage in self-care as a remediation strategy, instead of recommended self-care for all students regardless of individual performance. Moreover, when self-care is referenced, a prescriptive, one-size-fits-all approach is used. A checklist strategy fails to teach students how to modify self-care application so that it is feasible and sustainable for them (Campoli & Cummings, 2019). Given these limitations, research suggests that programs move towards preventative, individualized, and assertive self-care solutions (Campoli & Cummings, 2019). It is imperative that programs implement effective solutions before foundational career habits are set as they impact self-care practices during training and across one's career.

While there are ample studies describing barriers to self-care, some of which are cited here in this overview, there is no research, to my knowledge, that explores *how* health students enact successful self-care plans. Thus, one important goal of my dissertation work was to examine the process by which health students (both undergraduate and graduate students) naturalistically develop successful self-care skills, plans, and identities. Furthermore, there is little empirical attention to self-care interventions, particularly when compared to interventions for mental health concerns. That is, interventions lack theoretical basis and methodological rigor (i.e., a randomized controlled approach) that are expected of other forms of intervention or psychotherapy. Thus, another important goal of my

dissertation was to use my grounded theory to inform an intervention, and then evaluate the intervention in a methodologically sound manner.

In my Study 1, I developed a comprehensive theory, *Becoming a Values-Driven Self-Care User,* that delineates how health students develop effective self-care practices, and in what areas they struggle to do so. Establishing a theory of how self-care practices develop is an important first step in informing interventions for self-care. In Study 2, I combined the resulting theory from Study 1 with earlier theoretical work by my advisor (Cummings, 2015), research on the efficacy of Acceptance & Commitment Therapy (Hayes et al., 2012), and similar pilot work by Pakenham et al. (Pakenham, 2015a; Viskovich & Pakenham, 2019) with clinical psychology students (Pakenham, 2015b; Pakenham, 2015c; Pakenham & Stafford-Brown, 2013; Stafford-Brown & Pakenham, 2012) to develop and evaluate a self-care intervention. I evaluated the effectiveness of this 6-week group intervention, *Values-Based Self-Care* (VBSC), examining a number of outcome variables: self-care behaviours, self-care efficacy, valued living/committed action, emotional distress, and self-esteem. I hypothesized that participants in the VBSC group, as compared to the waitlist control group, would have greater self-care utilization and efficacy, less emotional distress, and higher self-esteem.

In this general introduction to my dissertation, I provide the reader with a broader literature review relevant to my dissertation, whereas my Study 1 and Study 2 introductions review literature more relevant to those specific studies. I begin my general introduction with a description of self-care and the various ways in which it has been contextualized. I then outline the importance of self-care in the context of training in a health program. This is then followed by a discussion of consequences of unmanaged stress on personal and professional

functioning, and how self-care can mitigate these negative effects. I conclude with a discussion of literature gaps and how my dissertation aimed to address them.

Self-Care

Self-care is generally understood as the engagement in behaviours that people self-select to maintain and/or promote their mental and/or physical health and wellness, personal and/or professional functioning, and to create a balance between personal and professional life (Baker, 2003; Bickley, 1998; Brucato & Neimeyer, 2009; Coster & Schwebel, 1997; Jordan, 2010; Lee & Miller, 2013). By this definition, self-care involves multiple domains of health and wellness, such as physical, psychological, emotional, spiritual, social, and professional balance (Lee & Miller, 2013; Myers et al., 2012). As such, there are a seemingly endless array of activities (e.g., nutrition, exercise, meditation, journaling, prayer, socializing with others) that constitute self-care (Bamonti et al., 2014; Myers et al., 2012). Moreover, a person can utilize self-care activity for themselves, or include helping behaviours that feature others (e.g., volunteering, providing emotional support to others), especially given the buffering effects of helping behaviours on health (Grossman & Gruenewald, 2017; Krause, 2016; Poulin, 2014).

Despite scholars reaching broad agreements in how to define self-care, there are clear definitional complexities as self-care is operationalized differently across research studies. Some studies define self-care by relying on its implicit meaning (i.e., caring for the self) (Lee & Miller, 2013). For example, Pincus (2006) defines self-care as "something" that promotes a "…sense of subjective well-being" (p. 1, as cited in Richards et al., 2010). Similarly, Richards et al. (2010) define self-care as "any activity that one does to feel good" (p. 252). In contrast, some studies utilize specific definitions of self-care in one of two ways:

by the types of activities that it encompasses (i.e., behavioural-based definitional approach), in which researchers pre-select self-care strategies for participants to improve on (e.g., sleep, exercise), or by the type of functioning that it supports (i.e., goal-based definitional approach). In this latter approach, self-care is conceptualized along a continuum. Starting at its most basic level, self-care can involve behaviours that serve basic needs (e.g., dressing and bathing, eating, oral hygiene) (Orem, 1991). In this sense, self-care is a learned behaviour that is used to promote or maintain health and development (Orem, 1991). Self-care can also involve more developed habits (i.e., activities that are learned later in life) that are used to maintain and promote health in specific contexts, for example to prevent conditions such as burnout as a health care provider (Bistricky et al., 2016; Di Benedetto & Swadling, 2014).

Since the concept of self-care can vary according to the population and context, for the purposes of my dissertation, I chose to define self-care by combining pieces of various existing definitions to formulate a more comprehensive definition. I define self-care as a multi-dimensional, idiographic process that involves the self-selection of any strategy that is used to maintain and support a balance between personal and professional work. Using this definition, self-care includes any activity that is used to support and promote mental/emotional, physical, spiritual, professional functioning, or any other area(s) identified by a person as being important for their wellness. This definition is context-specific for a student professional sample, the focus of my dissertation, and aligns with current understanding of self-care involving the interaction between personal and professional wellness. This definition also acknowledges that self-care is an idiosyncratic process that must be flexibly used depending on the person, setting, situation, and context.

To promote self-care for health students, it is crucial to have proper measurement tools to assess self-care. Often, self-care measures include components of self-care that are broad-based and provide respondents with behaviours that are believed to reflect that domain. Self-care domains have ranged in measures (e.g., physical, professional, emotional, spiritual, mindfulness, self-compassion, cognitive-emotional-relational) (Bloomquist et al., 2015; Cook-Cottone & Guyker, 2017; Dorociak et al., 2017; Goncher et al., 2013; O'Neill et al., 2019). There are several challenges in this approach that limit the progression of empirical research and intervention development in this area. First, there lacks a measure of self-care that captures the breadth and variations of this construct (Jiang et al., 2020). Second, providing respondents with self-care domains that the researchers believe are important for self-care negates individual preferences and values. It is possible, for example, for a student to score "low" on a self-care measure if the domains of self-care do not align with the researcher's view. This is limiting and may provide a biased estimate of self-care behaviours. Self-care consists of a wide range of activities that must be appropriate to the individual. This is, by nature, difficult to define conceptually and to operationalize.

The Importance of Self-Care for Health Professionals

My dissertation focused on the experience of implementing self-care from the perspective of health students. Broadly speaking, the World Health Organization (WHO) defines health professionals as highly skilled workers who assist others in maintaining their health by use of evidence-based medicine and caring (2013). Furthermore, health professionals conduct research that informs theory and practice (WHO, 2013). Health professionals include physicians, dentists, registered nurses, pharmacists, and psychologists, among others (WHO, 2010). Using the WHO's definition of a health professional, I defined

a health program as formal education at a college or university that leads to the attainment of a diploma or degree in a health profession. A student in this context is defined as a person who is undertaking training for a health profession.

I included perspectives from a broad range of health programs, including both undergraduate and graduate students, as they report the same experiences as stressful irrespective of the health profession that they are entering. They also present with high rates of elevated stress levels and health concerns (e.g., Robins et al., 2015), which is troubling given their societal responsibility to take care of others, either directly (i.e., through direct service provision) and/or indirectly (i.e., via their research). Therefore, I believe that the commonalities between health students in training environments, their collective impact on patient/client care, and the high levels of stress and burnout suggest that students across health programs share significant similarities. I also believe that discerning self-care practices that apply across professions can assist with mitigating the hierarchies and opening the silos that often exist across these areas.

Over the past two decades, there has been an increased focus on self-care in the context of health professions (Lee & Miller, 2013). Two aspects of self-care have received particular attention. First, there is a greater recognition of the interplay between personal and professional functioning, and the ways in which self-care can support how people thrive in both areas (Lee & Miller, 2013; Skovholt et al., 2001). Second, self-care is increasingly being regarded as a preventative activity to mitigate the negative effects of stress (Brucato & Neimeyer, 2009). This emphasis on prevention differentiates self-care from coping; whereas self-care can help prevent stress or mitigate the negative effects of stress on health, coping is a person's response to stress once it *already* occurs (Brucato & Neimeyer, 2009). Moreover,

ongoing self-care is an ethical imperative aimed at preventing harm to clients/patients and to preserve the integrity of professional practice (Barnett, 2008; Barnett, 2007; Carter & Barnett, 2014; Norcross & Guy, 2007).

Multiple health professions' ethics codes explicitly discuss self-care, including marriage and family therapy (American Association for Marriage and Family Therapy, 2001), psychology and counselling (American Psychological Association [APA], 2002; Canadian Counselling and Psychotherapy Association, 2007; Canadian Psychological Association [CPA], 2001], medicine (Canadian Medical Association, 2004), and nursing (Canadian Nurses Association, 2008). For example, CPA (2001) states that psychologists should adhere to the Principle of Responsible Caring (II) by engaging in "…self-care activities that help to avoid conditions…that could result in impaired judgment and interfere with their ability to benefit and not harm others" (standard II.12, p. 17). The explicit identification of self-care as an ethical imperative suggests that the benefits to client welfare and professional/personal wellness must be substantial. In addition, the inclusion of self-care across professional ethics codes highlights the ethical imperative of *ongoing* self-care; it is not an indulgence or leisure activity, but rather should be an essential part of their professional identity (Barnett et al., 2006) and a regular activity.

Since self-care is formally recognized as an ethical imperative, this makes it an important form of professional development and a necessary competency domain that is integral for professional functioning (Barnett & Cooper, 2009; Maranzan et al., 2018; Wise et al., 2010). Some professional colleges have begun to identify self-care as a required competency or standard that must be met for professional licensure. For example, the CanMEDS Physician Competency Framework used by the Royal College of Physicians and

Surgeons of Canada (2015) states that physicians must "demonstrate a commitment to physician health and well-being to foster optimal patient care" (Frank et al., 2015, p. 27). In psychology, the Mutual Recognition Agreement (MRA) of the Regulatory Bodies for Professional Psychologists in Canada (MRA, 2004) does not directly include self-care as a competency, but rather acknowledges the importance of self-awareness of personal factors that may influence professional relationships. Overall, there has been positive movement in translating the ethical requirement of self-care into professional practice competencies and standards; however, this varies in scope and specificity across professions.

Self-care, because of its implications for ethical and competent practice, is especially important given the responsibility that health professionals have for caring for others (Dattilio, 2015). A clinician's mental well-being can influence the process and outcomes of their clinical work. When therapists interact with clients while they are experiencing positive affect (e.g., calm, empathetic, engaged), clients tend to evaluate therapy sessions more positively; they report higher satisfaction with therapy and rate the strength of the working alliance as greater (Chui et al., 2016). On the other hand, therapists who do not use self-care appropriately can reduce the effectiveness of their clinical work since they are at a greater risk of experiencing higher levels of negative affect (e.g., frustration, depression, fatigue), which negatively impacts client/patient outcomes (Alkema et al., 2008; APA, 2011; Salyers et al., 2015; West et al., 2006). Furthermore, burnout negatively impacts the quality of care and ethical judgement, and it increases the likelihood of medical errors (Alkema et al., 2008; APA, 2011; Barnett & Cooper, 2009; Duarte et al., 2016; Salyers et al., 2015; Shanafelt et al., 2002; West et al., 2006). Burnout also predicts less empathy and perspective taking, which further compromises quality of care (Duarte et al., 2016). Caring for others is a

relational and reciprocal process (Kleinman, 2015), and since self-care affects the quality of this exchange, it is vital to maintaining the integrity of professional practice.

The Stress Continuum and Impacts on Health and Professional Functioning

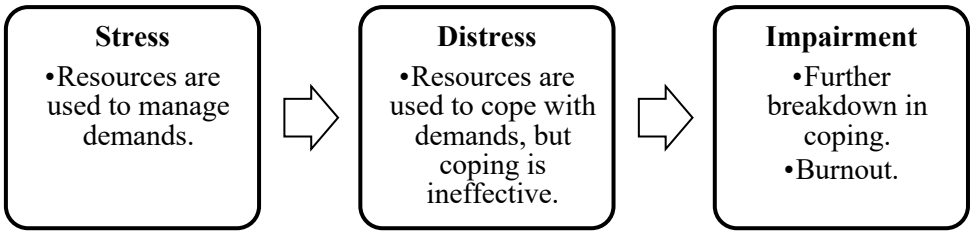
Stress is a natural and inevitable part of life. Stress is defined as the body's reaction to demands that are placed on it (ACCA, n.d.; Lazarus & Folkman, 1984; Vlasceanu, 2013). People can experience and respond to the same stressor differently depending on internal factors (e.g., health vulnerabilities) and external resources (e.g., supports). As such, stress is a highly subjective experience. The degree to which a person feels stressed depends on both their perception of the demand(s) (i.e., cognitive appraisal of the stressor) and their perceived resources for coping. Moreover, there are positive and negative aspects to stress. Some stress can be positive (e.g., having a child) and motivational (Yerkes & Dodson, 1908). In these situations, the person has the resources to manage the stressor. However, if the demands begin to overwhelm the resources of the person, then the effects of stress become harmful for health and functioning. Therefore, managing stress is a balance between resources and demands. If appropriately balanced, stress is manageable; however, as demands begin to overwhelm resources, stress begins to move along the continuum where coping resources become increasingly ineffective and stress begins to negatively impact the individual.

The stress-distress-impairment continuum is a model that helps us to understand the process by which stress can develop into distress, and further into impairment, if left unmanaged (Figure 1) (Advisory Committee on Colleague Assistance; ACCA). It conceptualizes the effects of unmanaged stress on professional competence as a progressive, downward spiral. If stress is left unmonitored and unmanaged, a person begins to experience distress. This refers to an experience of intense stress that is difficult to manage, as the

demands exceed the available resources for coping (Barnett et al., 2006). As such, the person's coping strategies become ineffective (e.g., they might sleep to avoid demands). In the absence of effective coping resources, distress can have multiple effects on a person, including physiological/physical (e.g., gastrointestinal disturbances), psychological (e.g., mood changes), and behavioural (e.g., substance abuse) (Amirkhan et al., 2018; APA, 2016; Dyrbye et al., 2005; Kim et al., 2011; Lupien et al., 2009; O'Suilleabhain, 2017; Shields & Slavich, 2017; Vlasceanu, 2013).

Figure 1

The Stress-Distress-Impairment Continuum



The use of ineffective coping strategies further predisposes the person to moving along the stress continuum into impairment, compromising their ability to function competently and ethically, and wreaking havoc on their health (ACCA, n.d.; Cecil et al., 2014; Ishak et al., 2013). When a person has reached impairment, burnout is evident. Freudenberger (1975) originally identified the concept of burnout among health service workers, and described it as involving a constellation of symptoms, including loss of motivation, exhaustion, compromised immune system, psychosomatic reactions, decline in mental health, and negative impact on behavioural and interpersonal functioning (e.g., increased use of substances, irritability). Burnout is characterized by three distinct, yet interrelated, components: 1) emotional exhaustion (i.e., feelings of being emotionally overextended, depletion of emotional resources), 2) depersonalization (i.e., feelings of

detachment, cynical, and negative thoughts about one's clients), and 3) decreased sense of personal accomplishment (i.e., feelings of competence in one's work) (Maslach & Jackson, 1981). Burnout has significant impacts on professional functioning as it increases the risk for poor clinical decision-making, such as blurring or violating ethical boundaries, and/or unprofessional or negligent practice (e.g., inappropriate self-disclosure and/or relationships with clients; Carter & Barnett, 2014; Cecil et al., 2014; Dyrbye et al., 2006; Dyrbye et al., 2010a), and it also predicts lower job satisfaction (Maslach, 2007).

While the stress-distressed-impaired continuum was initially developed for psychologists, it is a useful framework that allows us to differentiate between stress and distress, and by doing so, speaks to the importance of intervening before stress progresses into distress or impairment. It also moves us away from viewing stress as inherently "bad" and a dichotomous concept that one either experiences or does not; rather, it is the degree to which our coping mechanisms are effective that determines the negative impact of stress on health and professional functioning. All health training programs, as I will discuss, involve stress; as such, it is not an abnormal or perhaps even a dysfunctional experience for students.

Stress & Self-Care in Health Students

To develop a sustainable self-care plan, it is important to recognize the organizational and systemic pressures of the culture in which a person works (Norcross & Guy, 2007). Health professions students experience numerous stressors, ranging from the academic and evaluative aspects of training, to the personal and interpersonal characteristics of the student and the training environment. Training in professional health programs is replete with academic pressures, such as obtaining scholarships, defending theses and dissertations, and publishing research (Badali & Habra, 2003; Murphy et al., 2009; Rogers et al., 2016;

Rummell, 2015). Pressure to perform well academically becomes even more challenging when students simultaneously learn a novel clinical skillset (Badali & Habra, 2003; Bernard & Goodyear, 2009; Pakenham & Stafford-Brown, 2012; Satterfield & Becerra, 2010; Skovholt & Trotter-Mathison, 2011; Skovholt & Trotter-Mathison, 2016; Toews et al., 1997). Furthermore, as health professionals are often faced with difficult or traumatic client/patient experiences, they are exposed to fatigue in care (compassion fatigue) and vicarious trauma (Pirelli et al., 2020). There are "costs of caring" (as cited in Beck, 2011, p. 2; Figley, 1995) inherent in clinical work that necessitate sufficient resources.

Moreover, the training environment can also foster interpersonal conflicts between fellow students, within supervisor-supervisee relationships, and with co-workers/faculty (Badali & Habra, 2003; Bhat & Basson, 2013; Karim & Duchcherer, 2014). Peer support can be crucial for coping with professional issues and demands, such as personal reactions to clients (Coster & Schwebel, 1997). Unfortunately, students across health professions, such as medicine (Shapiro et al., 2000) and nursing (Brown et al., 2003), report that the training environment is a competitive one that lacks social support. Furthermore, while healthy student-supervisor relationships can buffer stress levels (Hyun et al., 2007) and are crucial for professional development (El-Ghoroury et al., 2012; Taylor & Neimeyer, 2009), students frequently report supervisory conflict (Bhat & Basson, 2013; Murphy et al., 2009; Rummell, 2015). In addition, students must balance these training demands with financial and personal life stress (e.g., major illness, divorce, moving) (Chernomas & Shapiro, 2013; Dyrbye et al., 2010b; Hyun et al., 2006; Murphy et al., 2009; Rummell, 2015). Students experience the same personal stressors as the general population, and this exacerbates their overall stress.

The (Alarming) Prevalence of Stress and Health Concerns. Unfortunately, being in a health profession does not indicate that these students are any better at managing stress than the general population. Health students across professions (e.g., psychology, medicine, nursing, dentistry) report stress levels that exceed those found among age- and gender-matched peers (Crary, 2013; Cushway, 1992; El-Ghoroury et al., 2012; Heinen et al., 2017; Stafford-Brown & Pakenham, 2012). For example, Rahimi et al. (2014) examined stress and coping among Canadian medical students ($N = 155$) using the Perceived Stress Scale (PSS), a measure for college students that assesses the extent to which a person perceives life to be uncontrollable, unpredictable, and taxing, as well as the Canadian Community Health Survey, an annual survey administered by Statistics Canada that measures the frequency of various coping strategies. They found that, compared with age- and gender matched peers in the general population, medical students reported higher perceived stress and greater use of negative coping strategies (Rahimi et al., 2014).

Moreover, the risk for burnout/impairment is high among health students (Dyrbye et al., 2010a; Ishak et al., 2013; Ripp et al., 2010; Robins et al., 2015; Shanafelt et al., 2002; Swords & Ellis, 2017). Cecil et al. (2014) examined the prevalence of burnout among medical students ($N = 356$). Using the Maslach Burnout Inventory (MBI), a commonly used measure of burnout with good psychometric properties, the researchers found that 26.7% of participants met the criteria for burnout, with feelings of depersonalization and low personal accomplishment increasing with each year of study (Cecil et al., 2014). In another study on student impairment in clinical and counselling psychology programs ($N = 939$), Furr and Brown-Rice (2017) found that 78% of students reported that they had seen at least one peer

who they believed to show signs of professional impairment. These findings collectively show that students are not managing stress well.

Researchers have also found that health students report high levels of clinical mental health concerns (Robins et al., 2015). In a large survey conducted at the University of California, Berkeley, 790 graduate students across a range of professions (both health- and non-health) were surveyed. The researchers found that approximately 28% to 64% of graduate students reported clinical levels of depression (The Graduate Assembly UC Berkeley, 2014). Similarly, the prevalence rates of depression and anxiety are high in pharmacy, medical, and graduate students (Ibrahim & Abdelreheem, 2015; Peluso et al., 2011; Rummell, 2015). Students in health programs also experience suicidal thoughts and behaviours (Drum et al., 2009; Galán et al., 2014; Garcia-Williams et al., 2014; Rotenstein et al., 2016). In addition to mental health concerns, students also report physical health issues at concerning rates. For example, one study found that more than half of students in clinical and counselling psychology programs reported physical health symptoms (e.g., headaches, back pain) at least biweekly, a rate that is more than double the prevalence in the general population (Rummell, 2015).

There is a direct relationship between program stress and the progressive development of health concerns. Robins et al. (2015) examined burnout in a diverse sample of 260 health students (i.e., nursing, social work, occupational therapy, and psychology). The researchers found that exhaustion was significantly higher for students in their final year versus those in earlier years of study. Program-related factors such as greater peer competitiveness, more time spent in training, and high workloads predict more mental and physical health concerns among students (De Oliva Costa et al., 2012; Hyun, et al., 2006;

Rummell, 2015). Furthermore, having colleagues in the training and/or work environment who are burned out and/or who do not model self-care contribute to higher levels of burnout (Rutherford & Oda, 2016).

Broadly speaking, there is a mental health crisis within Canadian universities (Lunau, 2012). In a large study of undergraduate (n = 15,010) and graduate (n = 11,441) students at 70 colleges and universities, 4% of graduate students reported that they seriously considered suicide in the past 12 months, 90% of which had a specific plan (Drum et al., 2009). In another survey of 1,600 students at the University of Alberta, approximately 51% of students reported that, over the past 12 months, they felt hopeless, 7% reported that they had seriously considered suicide, and over half reported overwhelming levels of anxiety (Lunau, 2012). Similarly, in a survey conducted at McMaster University, approximately 50% reported feeling overwhelmed with anxiety, and about 34% indicated feeling depressed (Craggs, 2012). In response to these alarming rates of mental health concerns, various Canadian organizations have advocated for students' needs (e.g., Mental Health Commission of Canada, Canadian Federation of Medical Students).

Benefits of Self-Care on Professional Functioning and Health

The ongoing use of self-care can reduce student stress and the risk for burnout, which supports students' abilities to be competent and ethical in their work (Ghannam et al., 2019; Myers et al., 2012). The reduction in stress levels likely contributes to students' abilities to respond more adaptively to stress in the future, given the impact of positive emotions on coping. As per the Broaden-and-Build theory, positive emotions have a broadening effect on people's awareness, and they encourage creative and flexible ways of thinking and acting. Over time, this broadened behavioural repertoire builds psychological, social, and physical

skills (Frederickson, 2003). For example, positive peer interactions result in a stronger support network, which can be used to manage stress later on. In addition to professional functioning, the regular use of self-care can maintain and promote both mental (e.g., more positive affect) and physical (e.g., better immune system functioning) health (Cheli et al., 2019; Greeson et al., 2015; Manotas et al., 2014; Myers et al., 2012; Pakenham, 2015a; Phang et al., 2016; Yusoff, 2011; Yusufov et al., 2018; Zahniser et al., 2017).

Importantly, the benefits of self-care for health are not activity-specific; they can be obtained using many different self-care strategies (Colman et al., 2016). In a meta-analysis of 17 studies on self-care in graduate psychology students, Colman et al. (2016) found that approximately 80% of psychology graduate students who engaged in self-care experienced positive outcomes, compared with students who did not engage in self-care. Interestingly, the extent of these benefits was found to be similar across self-care activities. This highlights the importance of encouraging students to find strategies that are tailored to their needs.

The Gap Between Knowledge and Action. Despite the benefits of consistent self-care, in addition to students' knowledge about self-care strategies (Ayala & Almond, 2018; Ghannam et al., 2019; Kjeldstadli et al., 2006), health students often do not use self-care effectively. This is evidenced by the high rates of stress, health concerns, and burnout/impairment discussed earlier, as well as the barriers to self-care reported by students, which occur on personal, professional, and systemic levels. The most frequently reported barrier to self-care is a perceived lack of time (Bettney, 2017; El-Ghoroury et al., 2012; Givens & Tjia, 2002; Pakenham & Stafford-Brown, 2012). Time as a barrier to self-care must be contextualized to the helping professions. People who are in a helping role can neglect their own needs to help others, prioritizing their caregiving over their self-care

(Bettney, 2017; Dattilio, 2015; Irving et al., 2014; Skovholt & Trotter-Mathison, 2016). This over-identification with the helping role may contribute to health students' perception of not having enough time. However, program requirements are also competing demands that, in turn, may give lower priority to self-care. It seems likely that individual (e.g., perceived lack of time) and systemic (e.g., a culture that does not support self-care) barriers interact to increase the discrepancy between intentions and behaviour. Moreover, other barriers to self-care include concerns with confidentiality (e.g., fear of faculty/peers finding out about their involvement in therapy), stigma associated with seeking help, and financial constraints (Bettney, 2017; Dearing et al., 2005; El-Ghoroury et al., 2012; Givens & Tjia, 2002; Hyun et al., 2006).

There is some research that shows there are some students who attempt to use self-care in a personalized fashion by tailoring strategies to their needs; however, they report finding it difficult to actually implement these strategies due to other demands (Diebold et al., 2018; Vincenzes et al., 2018). It is imperative to support students during training so that a lack of self-care does not continue throughout their career. Health professionals, such as nurses and therapists, can ignore early warning signs of stress, and underutilize self-care when they believe that they need it (Bearse et al., 2013; Laverdiere et al., 2018; Sperry, 2007; Walsh, 2011). The failure to effectively manage stress during training can pave the way for further emotional and professional deterioration (Laverdiere et al., 2018). Instead of waiting for stress to pose a problem, emphasis should be placed on prevention and the ability to thrive during times of high stress (rather than to mitigate the consequences of impairment and burnout) (Wish et al., 2012). Professional programs are primarily responsible for training students to become competent, ethical professionals who are equipped with the knowledge

and skills to thrive in their respective professions. Unfortunately, the culture of self-care tends to be sub-par.

Culture of Self-Care (or Lack Thereof) in Health Programs. Rather than programs assuming responsibility for ensuring that their students are effectively engaging in self-care (e.g., by educational opportunities, fostering a culture of self-care, removing program barriers), there is often an individualistic approach that, in the face of several program- and system-level barriers, fails to teach them how to use self-care effectively. A lack of modelling and education in self-care can lead students to feel unsupported in their use of self-care (Rogers et al., 2016). Students are wanting more support in improving their self-care, and they are highly receptive to receiving support through formal educational opportunities within their programs (e.g., McGrady et al., 2019).

In a large survey of self-care in graduate programs (77% of which were health services programs), over 60% of graduate students reported that their training program did not promote self-care, either through written material, experiential learning, or fostering an environment that encouraged self-care (Munsey, 2006). More recent findings show that approximately 41% (out of 136) of clinical psychology doctoral programs made at least one written reference to self-care (Bamonti et al., 2014). Direct discussion of self-care, however, occurred infrequently. Rather, there were ambiguous statements about self-care, which often referred to mental health services for students already experiencing concerns (Bamonti et al., 2014). Another study of clinical psychology programs found that students moderately agreed that their programs regarded self-care as important, as they did not believe that their programs made a systematic effort to model and incorporate learning opportunities about self-care (Zahniser et al., 2017). In addition to psychology programs, the poor self-care

culture has been cited within medical programs, including issues related to the curriculum, indifference toward student mental health, and the lack of self-care through formal education and opportunities to practice strategies (D'Eon, 2013; D'Eon, 2014; Slavin, 2016).

Facilitating a culture that is supportive of self-care has a positive impact on self-care utilization. In a study of 358 doctoral students from APA-accredited clinical psychology programs, the researchers found that programs that facilitated a self-care culture were significantly associated with greater engagement in all five aspects of personal and professional self-care as measured by the Professional Self-Care for Psychologists: professional support, professional development, cognitive awareness, life balance, and daily balance (Zahniser et al., 2017). In addition to formal education, faculty attitudes about self-care influences students' behaviours. For example, positive attitudes about personal therapy has been found to relate to greater help-seeking behaviours (Dearing et al., 2005). If done in a supportive environment, self-care is a teachable skill (Ball & Bax, 2002; Bistricky et al., 2016; Christopher et al., 2006).

Dissertation Focus

The current approach to self-care in health programs is problematic; it is a one-size-fits-all, reactive approach that does not teach students how to preventatively and regularly integrate self-care in ways that are adapted to their needs and preferences as individuals. As was summarized earlier, self-care positively impacts stress, mental health, and satisfaction with clinical training (Colman et al., 2016; Myers et al., 2012; O'Neill, Yoder Slater, & Batt, 2019; Pakenham, 2015a; Pakenham & Stafford-Brown, 2013; Shen-Miller et al., 2011; Stafford-Brown & Pakenham, 2012), suggesting some students use self-care effectively. In addition, some students attempt to individualize their self-care, but struggle to actually

implement it (Diebold et al., 2018; Vincenzes et al., 2018). Studying students who use self-care successfully, in addition to those who do not, are both needed to fully understand student experiences.

Given these gaps, I sought to understand the process by which health students develop effective self-care habits, and where they might struggle to do so, by employing a bottom-up approach. My research moved beyond categorizing barriers to self-care (the focus of much empirical work on self-care among this population) to understanding the process that unfolds when students must decide whether or not to engage in self-care and how to enact that choice. In my Study 1, I developed a grounded theory on the process of self-care utilization from the perspective of health students. In Study 2, I used this theory to develop a self-care intervention that addresses the limitations of previous work.

Chapter 2: Study 1

Literature Review

While there are studies that categorize self-care strategies used by students, and ample studies that describe barriers to self-care, I found no research exploring students' actual lived experiences in developing and sustaining a self-care plan. That is, there is no research on the *process* of self-care, including the factors that affect the decision to use (or not use) self-care. Thus, the first purpose of Study 1 was to address the research question, "How do health students become successful in using self-care?"

A theory that explains how students become successful self-care users, and why they might fail to do so, is important for several reasons. First, generating a theory that is informed by self-care users helps us to understand their lived experiences. Second, a theory based on student experiences provides a framework for understanding the process of how and why individuals develop a successful self-care plan. Third, by creating a theory, we can then test it through intervention development. Fourth, the evidence base may then inform the theory to further validate or refine it as needed. Having a substantive theory provides a comprehensive understanding on which we can base our interventions or recommendations.

Grounded Theory

Grounded theory is a qualitative research method that aims to develop theory by "grounding" it in the existing dataset (Willig, 2008, p. 34). There were several reasons why I decided to use grounded theory. First, grounded theory uses a bottom-up (i.e., inductive) approach on the basis of empirical observations to inform theory development (i.e., "going from the particular to the general") (Fritz, 1960, p. 132). Given the lack of previous research on the process of using self-care (i.e., lack of available deductive knowledge), grounded

theory was most appropriate as it uses an inductive method (i.e., "grounded in the data") to develop theory, rather than a deductive approach (i.e., applying already known results and theories to a set of data). However, grounded theory is not entirely free from a priori principles, nor do I believe that pure induction is possible. For example, although there are techniques used to establish a level of objectivity (e.g., constant comparison, which I described below), it is difficult to code the data without imparting some level of prior knowledge and ideas onto the interpretation.

Second, in contrast to other qualitative methods, grounded theory is a process-oriented approach that explains a basic social process. The goal in grounded theory is to generate a theory that accounts for a pattern of behaviour (i.e., basic social process) and how it may be resolved through participant actions. Gerunds are used as the basic unit of meaning, and these delineate actions and processes (i.e., strategies, change, and growth) over time, as reported retrospectively by participants. Gerunds are identified and/or clarified during the interview process, as well as while reading transcripts of data. As such, grounded theory is suited to understanding how a process unfolds over time. Finally, grounded theory is a middle-range theory in that it defines concepts and processes that are specific enough to undergo empirical testing (Annells, 2003; Merton, 1957).

Grounded theory shares many similarities with thematic analysis since both approaches identify, analyze, and report patterns (themes) within the data; however, there are several features that differentiate grounded theory from other qualitative approaches. First, grounded theory takes the analytic strategies of thematic coding one step further: to integrate and understand the conceptual relations between themes (Braun & Clarke, 2006). In other words, the analysis in grounded theory is geared toward theory development; while it uses

principles of thematic analysis (e.g., creating categories), grounded theory seeks to understand the relationships and order among themes to develop an explanatory theory of human experience. By generating theory, grounded theory provides researchers with an explanatory framework, and it is this drive towards explanatory power that differentiates grounded theory from other qualitative approaches (Birks & Mills, 2015; Willig, 2008).

Second, data collection and analysis are an iterative process. That is, grounded theorists analyze their data, via coding of concepts, as they are collecting it. Further, this early coding is used to suggest ideas for further data collection. This iterative process in which a researcher collects further data in light of the categories that have already been constructed is called *theoretical sampling* (Willig, 2008). Researchers then validate the theory by sampling incidents that may challenge or build on the existing categories (Birks & Mills, 2015; Willig, 2008). Multiple methods of data generation can be used in theoretical sampling, such as changing the data generation process, altering interview questions, recruiting new participants, and/or asking previous participants for additional information.

Third, grounded theorists use *constant comparison*, which checks for similarities and differences within and between categories to identify potential subcategories (Willig, 2008). This might include searching for similarities and differences across participant data. For example, the researcher might create subcategories of emotions, such as emotions that require an object (e.g., hate and jealously) and those that do not (e.g., joy and anxiety) (example from Willig, 2008, p. 36). Constant comparative analysis helps the researcher to break down categories into smaller units of meaning to avoid grouping together units of meaning that have differences within them.

Finally, there is an iterative process between coding, constant comparison, and

theoretical sampling continues until no new categories or variations of existing categories are generated (i.e., *theoretical saturation*) (Willig, 2008). Some researchers argue that true theoretical saturation is difficult to achieve, as new perspectives and alternatives are always possible; whereas others assert that saturation is possible and not merely an idealistic goal (Morse, 2015; Willig, 2008). Ultimately, the goal of grounded theory is to "…link and integrate categories in such a way that all instances of variation are captured by the emerging theory" (Willig, 2008, p. 36). This allows researchers to produce theories that are generalizable, yet account for individual variance across participants. Moreover, although the emphasis in grounded theory is on the generation of theories rather than verification, Glaser and Strauss argue that both are necessary (1967). Therefore, my Study 2 aimed to test (verify) the theory generated in my Study 1 by evaluating a clinical intervention.

Throughout the research process, grounded theorists keep a written record of their thought processes, including definitions of categories and the rationale for the use of specific labels, the emerging relation between categories, and reflections on the research questions (Birks & Mills, 2015; Willig, 2008). This is referred to as *memo writing.* Although there is no particular length required, and memos can include both words and diagrams, it is important for memos to be dated, to have a title, and to stipulate which part(s) of the research they were created from (Willig, 2008). Memos play an important role in theoretical sampling and theory by allowing researchers to brainstorm ideas while also creating a trail of their decision-making process (Birks & Mills, 2015).

Method

Epistemological Assumptions

A research design can be described as a hierarchical decision-making process that the researcher follows. Each element of the research design informs the next step (i.e., the researcher's views about the nature of knowledge informs the method and tools that they select to address their research question) (Crotty, 1998). First, ontology is the study of being and is concerned with what constitutes reality, or *what is* (Crotty, 1998). I embraced a critical realist perspective, which assumes that an objective reality exists in a world of cause-and-effect. This view asserts that reality exists independent of the observer, but it cannot be accessed in its entirety (Guba & Lincoln, 1994). Second, epistemology provides a philosophical grounding for making sense of reality and asks questions about knowledge and how we know what exists. I was guided by post-positivism, which proposes that knowledge consists of non-falsified hypotheses that are *probable* laws or facts. Knowledge accumulates by understanding cause-and-effect relations, testing hypotheses, and replicating findings, which are regarded as probably true (but always open to falsification) (Guba & Lincoln, 1994). Post-positivism aims to explain, predict, and control phenomena. This fit with my goal to understand, predict, and influence self-care behaviours.

The actual research practices that I used (i.e., my methodology and methods) were in turn informed by my beliefs about the nature and reality of knowledge. Methodology is concerned with how data are collected, whereas methods are the specific techniques and procedures used to collect and analyze data. Post-positivism emphasizes "Critical Multipilism" as a means for falsifying hypotheses (Guba & Lincoln, 1994, p. 110). In keeping with this, I used multiple methods or triangulation (i.e., qualitative and quantitative

methods) to address my research questions. My method of data generation included interviews, followed by selective and focused coding as informed by Glaser (1992) to analyze these data. Furthermore, my method of data analysis inherently acknowledged and accounted for my own bias as a person via rigorous constant comparison of the data.

To align most with my beliefs about what constitutes knowledge and how we can study it, I employed a positivist version of grounded theory. To my knowledge, a post-positivist approach to grounded theory does not exist. I discuss grounded theory in greater detail in the next section. Broadly, there are three adaptations of grounded theory, each with a different philosophical stance (Bryant & Charmaz, 2007). Glaser and Strauss's (1967) classical grounded theory aligns with a positivist paradigm, the goal of which is to represent an external reality via theory construction as accurately as possible. Objectivist grounded theorists are most interested in generalizations that provide explanatory data for phenomena. In Study 1, I wanted to create a generalizable theory that explained how students become successful self-care practitioners and why they might fail to do so. Consistent with my post-positivist stance, I believe that there is a core process that health students go through to become successful in using self-care, but that there is also individual variation.

In contrast to positivist grounded theory, Charmaz's (2014) version embodies a constructionist paradigm, which moves away from the idea of a single truth to focusing on the co-construction of the data and capturing multiple participant perspectives rather than looking for one main category. This is not to say that positivist grounded theorists deny the presence of multiple perspectives; rather, it suggests that the methodology employed in grounded theory (e.g., constant comparison) allows it to create a theory that accounts for as much variation in the data as possible. Finally, Corbin and Strauss's (2008) version fits with

an interpretivist paradigm, which contends that knowledge is relative to its historical, temporal, cultural, and subjective context. Thus, according to the interpretivist tradition, reality exists in many forms and researchers cannot find a single objective reality. Given my desire to focus on creating an explanatory theory that helps us to understand the process of using self-care and how to predict and influence it, a positivist version of grounded theory was used as this most closely aligned with my ontological and epistemological beliefs.

Participants

The final sample included 17 health students from the University of Saskatchewan (U of S) (i.e., nursing, medicine, pharmacy, nutrition, health sciences, physical therapy, counselling psychology, public health). I decided to group health students across programs to form a heterogeneous sample. While using a heterogenous sample has limitations (e.g., it does not account for program subcultures), this decision fit with my Study 1 objective to create a comprehensive theory that is generalizable to health students as a whole. Additionally, I was fortunate to have the resources to easily access and recruit participants from a variety of health programs. Six students were in undergraduate programs and 11 students were in graduate programs (nine students were at the M.A. level and two students were at the Ph.D. level). On average, at the time of the interview, participants completed 2.6 years of their programs (*range* = 1 to 4 years). The sample predominantly self-identified as women (12 women, five men), ages ranged from 20 to 46 years old (M = 28.1, SD = 7.50), and 13 participants identified as Caucasian, two as South East Asian, one as an Indigenous Person, and one as African American.

Method of Data Generation

Participants met with the interviewer (i.e., a trained research assistant or me) in a

comfortable lab space. In a few cases where participants were unavailable in person, generally because they were residing out of town on practica, they were contacted on a secure telephone in the same lab space. In total, 17 interviews initial interviews were conducted (see Table 2.1). In addition, I conducted follow-up interviews with five (out of 17) participants to clarify or elaborate on their initial interview responses.

Table 2.1

Summary of Completed Interviews

Participant	Initial Interview	Follow-Up Interview
1	✓	✓
2	✓	
3	✓	
4	✓	
5	✓ (*T* [a])	✓ (*T*)
6	✓	
7	✓	✓ (*T*)*[b]
8	✓	
9	✓	✓ (*T*)*
10	✓	
11	✓ (*T*)	
12	✓ (*T*)*	✓ (*T*)*
13	✓ (*T*)	
14	✓*	
15	✓*	
16	✓	
17	✓ (*T*)*	

[a] *T* = telephone interview; all other interviews occurred face-to-face.

[b]*Interviews conducted by a research assistant. I conducted all other interviews.

To begin the initial interviews, participants were provided with an open-ended question: "Tell me about your self-care, starting anywhere you are comfortable with." Open-ended questions maximize the depth of the data generated and minimize interviewer bias (Homewood et al., 2009), as well as expedite saturation in grounded theory (Morse, 2015).

Using open-ended interview questions allows for a diverse and unconstrained description of participant's experience (Morse, 2015). After participants shared their experiences with self-care using this open-ended format, I asked, "How do you make the decision to use self-care" and "Tell me about a time when you decided to use (or not use) self-care" (Appendix A.1). This interview guide was used for all subsequent initial interviews.

Consistent with theoretical sampling, after the first four interviews, I created additional interview questions to explore the codes and categories that arose in the previous interviews. For this intermediate phase of the interview process (i.e., interviews five to 11), in addition to the already existing open-ended questions, the following questions were used: 1) "How do you persist in using self-care during challenges?" 2) "How does knowledge influence your self-care choices?" 3) "How does social support influence your self-care choices?" and 4) "How do you know when you've arrived at successful self-care?" (Appendix A.2). Overall, these data were used to verify, clarify, and/or modify existing codes and categories that resulted from the initial grounded theory, and to better understand the relations and boundaries between categories (e.g., indicators that a person has fully completed a category in the model). In subsequent interviews (i.e., 12 to 17), in addition to the previous questions, I asked what it is like to make changes to self-care and what most influences the choice to follow through with self-care (Appendix A.3). Finally, I shared the emerging model with these six participants and used this data to confirm and/or modify existing codes, categories, and the ordering of phases. Additionally, five participants completed follow-up interviews (Appendix A.4).

Procedure

I obtained approval from the U of S Research Ethics Board (REB) to conduct my research study (Beh 16-477) on January 9, 2017. As per theoretical sampling, I submitted amendments to the REB as needed. The primary method of recruitment was through online advertisements on the U of S website (PAWS) web environment for students, staff, faculty, alumni, and other members of the university community. Participants were also recruited using snowball sampling, distribution emails to program directors, and social media. To inquire and/or sign up for the study, potential participants sent an email to a secure, U of S email account. Participants completed the study (or were contacted by telephone) in the VideoTherapy Analysis Lab (ViTAL) in the Arts building at the U of S.

Written or verbal informed consent was provided by all participants, depending on method of interview (i.e., in person or via telephone[1]) (see Appendix B for consent forms). All interviews were audio-recorded. On average, initial interviews lasted 60 minutes (*range* = 45 to 95 minutes). Furthermore, the length of initial face-to-face (*M* = 61 minutes, *range* = 45 to 95 minutes) versus initial telephone interviews (*M* = 62 minutes, *range* = 55 to 75 minutes) were comparable. Follow-up interviews lased approximately 46 minutes (*range* = 33 to 63 minutes). After the initial interviews, I then asked participants demographic questions to describe my overall sample. Participants were then debriefed and thanked for their time (Appendix C). Participants were provided with a $20 honorarium after completing the initial interview. All participants except one (due to relocation) consented to be contacted

[1] For interviews conducted over the telephone, participants explicitly provided verbal consent to continue the interview.

for future interviews if needed. These forms were stored separately from the research data. Finally, participants were asked if they knew of potential participants, and were provided with two copies of my recruitment poster.

Transcription

Interviews were transcribed by either me or a research assistant who was trained in the transcription process. The research assistant was informed about the nature and purpose of the research, including the importance of verbatim accounts in developing a theory that is "grounded" in the data. Each transcript was reviewed for errors and omissions by reading them while listening to the audio-recording. Consistent with Poland's (1995) recommendations, I aimed to transcribe the audio recording in such a way that was true to the intonation and wording used by participants. For example, rather than tidying up the transcripts according to conventional standards of writing, we attempted to capture the utterances as closely as possible (e.g., using "guna" where used rather than "going to" and capturing held sounds such as "Riggghhht?"). Similarly, nuances such as 'hmm," sighs, pauses, crying, laughter, coughing/sneezing/clearing throat, and where possible, nonverbal cues (e.g., if a participant reached for a Kleenex) were captured. To ensure that there was consistency between the research assistant and myself, I reviewed the initial two transcripts produced by the research assistant, to clear up misunderstandings and/or discrepancies between transcribers early in the transcription process.

Grounded Theory Analysis

My Study 1 utilized grounded theory as outlined by Glaser and Straus (1967).

Initial (Open) Coding

In this first stage of the analysis, I read the transcripts from the open-ended interviews and then highlighted any word, phrase, sentence, or paragraph that was relevant to

my research question. After this initial reading, I then scrutinized each segment of the highlighted transcript line by line to identify and label words or phrases that shared central characteristics (i.e., I created a list of codes) (Birks & Mills, 2015; Willig, 2008). In grounded theory, codes are the basic unit of analysis; in this initial analytic phase, line by line coding helps to break down the story by forcing the researcher to focus only on the words in each line and interpreting the transcript in new and unfamiliar ways. The labeling of codes often took the form of gerunds, which are words that describe actions and that end in "-ing" (e.g., building, finding). As much as possible, to avoid imparting researcher bias onto the data, I used *in vivo* labels for these: that is, wording used by participants (Willig, 2008). I also used memo writing during all stages of the analysis.

Focused (Selective) Coding

In this second stage of the analysis, I used the most frequently appearing initial codes to establish linkages between categories. That is, this analytic step went beyond line-by-line coding by labeling codes using a greater level of abstraction and conceptual depth (Birks & Mills, 2015). I used focused codes to develop an initial grounded theory, and further, to code interviews from the second phase of sampling (i.e., subsequent interviews and follow-up interviews). To minimize researcher bias (i.e., inflicting my own assumptions about what is occurring in the data and rather to confirm this with all data), I checked for consistency in codes and categories within and between transcripts. This process, called constant comparison, was used throughout the analysis.

Theoretical Coding

The final stage of the analysis moved from an analytic to a theoretical model that established relationships between the focused codes (Glaser & Strauss, 1967). Specifically, I

clarified the relationships and boundaries between categories by reviewing the data and memos. In addition, I used negative cases and constant comparison to identify "exit points" (i.e., instances where participants did not go through the full model). Similar to previous analytic phases, to check my emerging hypotheses and/or to challenge or elaborate the existing theoretical framework, I used constant comparative analysis by "checking" the emerging categories and subcategories, as well as the emerging theory, with participants. Thus, data analysis (e.g., refinement of categories) and data generation (e.g., interviews) were carried out side-by-side (Birks & Mills, 2015).

Theoretical Saturation. Data generation and analysis were carried out until theoretical saturation was reached, such that no new categories and/or variations of existing categories emerged (Willig, 2008). Theoretical saturation is a criterion on which qualitative rigor is based as it ensures that the resulting theory is comprehensive in breadth and depth for each category (Morse, 2015). Saturated data are complete; the resulting theory makes sense and does not have gaps (Morse, 1995). Since the data are complete, they are replicated (i.e., seen) across transcripts (Morse, 2015).

Data were generated in approximately three iterative phases. First, initial interviews were conducted with four participants. Initial (open) coding utilizing gerunds was conducted. Next, the interview questions were modified as per theoretical sampling and an additional seven interviews were conducted using focused (selective) coding. To help me clarify codes and the boundaries between categories, five follow-up interviews were conducted. Next, theoretical coding was used for the remaining six interviews and the grounded theory was shared and discussed with these participants. Throughout each phase, constant comparison, as well as memo writing and discussion amongst the authors, were used. This process of data

generation and analysis was carried out until saturation was reached (Morse, 2015; Willig, 2008), which was confirmed by conducting a saturation check of each participants' data for the focused and theoretical codes (see Table 2.2).

Reliability and Validity. There are several strategies built into qualitative analyses that maintain its rigor and help to reduce confirmatory bias when researchers have *a priori* hypotheses (Morse et al., 2002). The following strategies were used: 1) methodological coherence and sample appropriateness for the research question, 2) concurrent data collection and analysis, 3) thinking theoretically by reconfirming ideas with new data, and 4) developing the theory by reviewing it with existing knowledge about the topic (Morse et al., 2002). First, I ensured that methodological rigor was maintained by selecting an inductive methodology (given the lack of research on the process of self-care, i.e., methodological coherence) and by interviewing health students to learn about self-care from their perspectives, including sampling negative cases to refine and delineate the boundaries of categories within my emerging theory. Second, concurrent data collection and analysis allowed me to refine my theory by comparing it to new data. Third, constant comparison allowed me to remain theoretically grounded by reconfirming and verifying the emerging theory in the data. This built-in verification strategy allowed me to stay grounded with the data (i.e., thinking theoretically), and in turn it resulted in a rigorous process and a saturated theory that was built from the ground up. Finally, after I developed a saturated theory, I then compared my findings with previous theories about health behaviour change.

Table 2.2

Theoretical Saturation Check

	Participant																
Phase 1: Having a Wake-Up Call	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**
Experiencing a Triggering Event	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Realizing Values Disconnect	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓
Prioritizing Self-Care Value(s)	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓	✓		✓
Phase 2: Building Skills																	
Using Knowledge	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Seeking Out Knowledge	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓		
Using Values	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓	✓		✓
Selecting/Tailoring Strategies	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓	✓		✓
Setting Manageable Goals	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓		✓
Scheduling Self-Care	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Trial-and-Error	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓

	Participant																
Phase 3: Gaining Confidence	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**
Using Internal Motivators	✓		✓	✓	✓	✓	✓	✓	✓			✓		✓			✓
Using External Motivators	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Building Efficacy	✓		✓	✓	✓	✓	✓	✓	✓			✓		✓			✓
Phase 4: Building an Identity																	
Using Self-Awareness to Persist	✓				✓	✓	✓	✓	✓			✓					✓
Being Assertive					✓	✓	✓	✓				✓					✓
Reflecting on Values Disconnect	✓		✓	✓	✓	✓	✓	✓	✓			✓		✓			✓
Saying No	✓		✓	✓	✓	✓	✓	✓	✓			✓					
Using Supports to Persist	✓		✓	✓	✓	✓	✓	✓	✓			✓		✓			
Revising Plan	✓		✓	✓	✓	✓	✓	✓	✓			✓					✓
Consolidating Self-Care Value(s)	✓		✓	✓	✓	✓	✓	✓	✓					✓			✓
Successful Self-Care Indicators																	
Live Closer to Values	✓		✓	✓	✓	✓	✓	✓	✓			✓	✓	✓	✓		✓
Ingrained into Routine	✓		✓	✓	✓	✓	✓	✓	✓					✓	✓		✓
Using Self-Care Flexibly	✓		✓	✓	✓	✓	✓	✓	✓					✓	✓		✓

Results

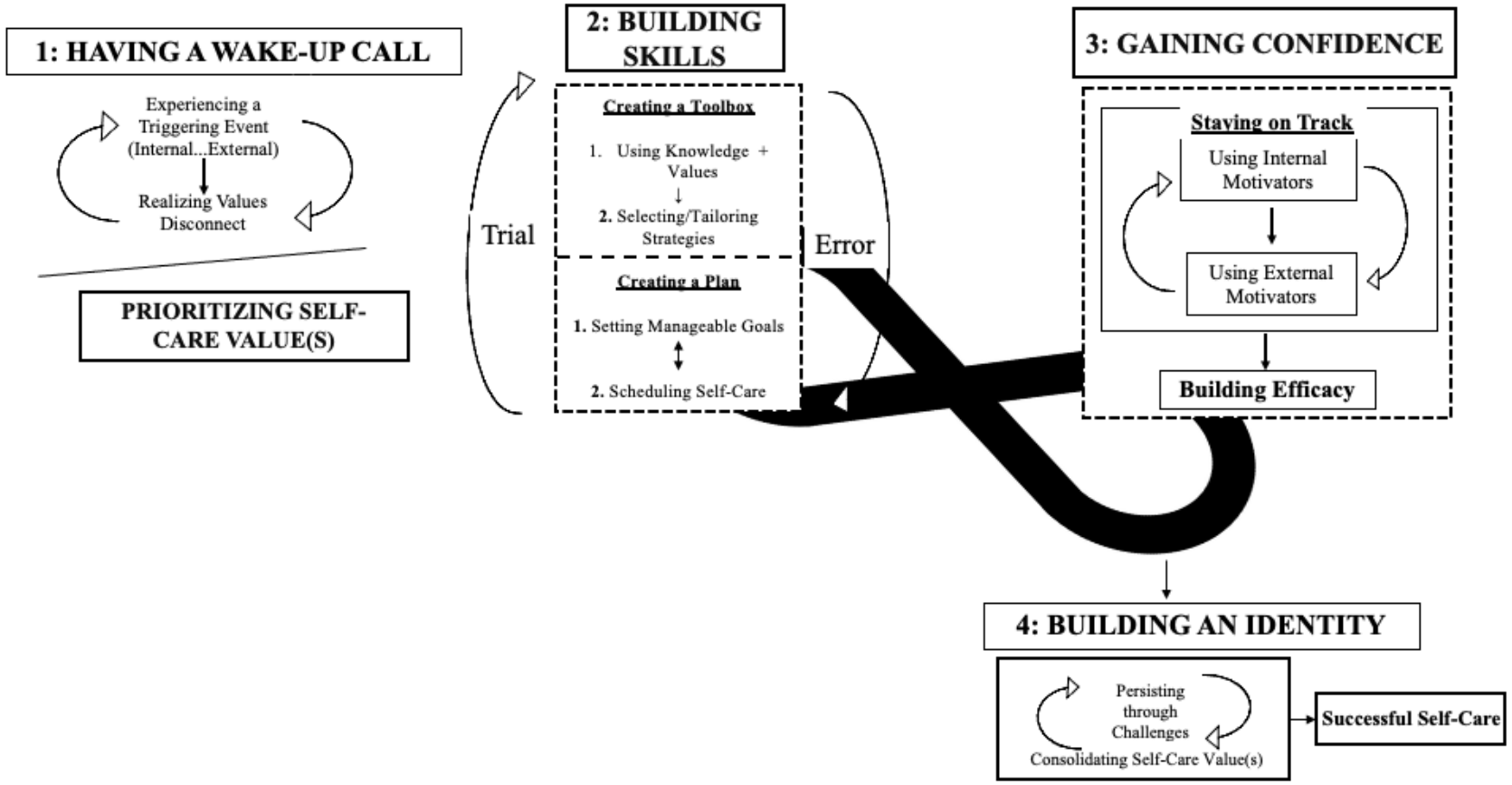
Overview of Results

The resulting grounded theory, which I called *Becoming a Values-Driven Self-Care User*, explains a social process that is idiosyncratic, iterative, and infinite. *Valued Living* emerged from the data as the core category. The overall process (see Figure 2.1) is made up of four phases that people moved through iteratively: 1) Having a Wake-Up Call, 2) Building Skills, 3) Gaining Confidence, and 4) Building an Identity

In Phase 1, Having a Wake-Up Call, participants first experienced a Triggering Event that led them to identify a disconnect between their current life and the value(s) they held about self-care. In turn, this disconnect was an internal factor that drove participants to decide to prioritize these self-care value(s). Phase 2, Building Skills, involved two related subprocesses: 1) Creating a Toolbox, and 2) Creating a Plan. First, participants created a toolbox of self-care strategies by using knowledge and their values to select and/or tailor the way in which this knowledge was applied. Second, once participants individually selected self-care strategies that were value-consistent, they 1) Set Manageable Goals, and 2) Scheduled Self-Care. Throughout Phase 2, participants used Trial-and-Error to discern what worked for them. Once participants had a workable self-care plan, they began to embark on Phase 3, Gaining Confidence, in which they used Internal and External Motivators to maintain their self-care and to develop a sense of self-efficacy in the ability to do so. In Phase 4, Building an Identity, participants began to develop their ability to persist in using self-care when challenges arose. In turn, they began to consolidate their self-care value(s) into their perceptions of self.

Figure 2.1

Graphical representation of Becoming a Values-Driven Self-Care User Model



There was variation across participants in the length of time and number of re-iterations that they went through in each phase of the model. In addition, I describe several "exit points" that resulted in participants being unable to move onto the next phase in the model. These exit points lend support and validate the criteria that is needed to successfully complete a phase and they also help to explain why some people are able to move through a phase whereas others are not. In addition, in grounded theory, a basic social process (Valued Living) helps us to understand why some participants moved through the model whereas others did not. First, I describe each phase in the model, along with the subprocesses and steps subsumed within each, in chronological order (i.e., the order through which participants experienced them). Then, I describe the basic social process and the ways in which it is observed throughout each phase of the model.

Phase 1: Having a Wake-Up Call

All but two participants described beginning their self-care journey in response to experiencing an event that led them to realize that they were disconnected from their value(s).[2] That is, a common entry path into the model was 1) Experiencing a Triggering Event and, in turn, 2) Realizing a Values Disconnect between current behaviours and values. Together, these stages constitute Phase 1. A Triggering Event is a self-perceived adverse event that falls on a continuum from being internal (e.g., poor mental health, addiction) to external (e.g., death of a loved one, an abusive relationship) to the person, or anywhere in between (e.g., noticing the effect of not using self-care on one's relationships). Since

[2] Participants used the terms "values" and "priorities" interchangeably and generally referred to both as "things that matter," "what you couldn't live without," and what is "important."

Triggering Events threaten a person's value system and/or highlight an incongruence between values and current behaviours, it is often perceived as challenging and/or negative. Example Triggering Events include a decline in personal or professional functioning, death of a loved one, noticing the effects of an unhealthy lifestyle on others' health (e.g., patients, family, friends), and being in an abusive relationship. Since the decision to prioritize self-care was values-driven, the specific values underling their version of self-care ranged (sample values include mental and physical health, spirituality, relationships, balance).

To effect changes in self-care, Triggering Events jarred participants into the second stage of Phase I: Realizing a Values Disconnect between their current living and their values. For example, one participant, who reported that he struggled with substance abuse, experienced stealing money from his family as a Triggering Event. This participant reported that this event helped him to realize the extent to which he was severing his family relationships, which he reported are now a "priority" above alcohol. Thus, this disconnection between his value (family) and current living (substance above) drove him to seek treatment. Another participant reported that she was employed in a position that "…didn't align with [her] personal values [health]." Specifically, she indicated that the stress from this job exacerbated a pre-existing heart condition. She indicated that she reached a "turning point" and decided, "I'm not doing this, this is not what I want my life to be like, I don't want to feel this way, I want to find something that fits more to how I want to live my life and allows me to socialize and be healthy." By realizing a disconnect between her values (health, relationships) and current living (poor health due to her job), the participant quit her job and entered into a profession that allowed her to live closer to her value in terms of health along with a greater sense of fulfilment in her career choice.

Thus, in reaction to noticing "enough"[3] of a disconnect between self-care values and behaviours, participants decided to prioritize their self-care value(s). In addition to prioritizing value(s), Triggering Events also led participants to *reorganize* their values, and this includes movement away from older values. For example, one participant reported that, by noticing the negative effects of being inactive on other people's physical health, he decided to re-prioritize his own physical health. He stated that, while he "always knew" about the effects of a sedentary lifestyle, witnessing the "contrast" in health between active and sedentary people led him to refocus on his value on health (e.g., by engaging in physical activity, a nutritious diet, etc.). He indicated that, previously, he had prioritized his value on academic performance at the expense of his health. Overall, these examples illustrate that it is not the experience of a challenging event in isolation that initiates change, but rather it is an event that threatens a person's *own* value system. In other words, an event is not triggering if it goes against values that are *not* part of the person's value system (i.e., without a meaningful connection with that value, it does not hold personal significance).

Indicator Participants have Completed Phase 1: Prioritizing Self-Care Value(s)

The decision to prioritize self-care value(s) resulted from participants noticing enough of a disconnect between these value(s) and their current living. "Enough" should be considered a threshold and what is "enough" is highly idiosyncratic. That is, the person needs to realize *enough* of a disconnect between their values and current living that, to them,

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[3] "Enough" should be considered a threshold and what is "enough" is highly personal and idiosyncratic. That is, the person needs to realize *enough* of a disconnect between their values and current living that, to them, warrants the need for a change, but this "enough threshold" is not the same across participants.

warrants the need for change. Additionally, there was individual variation in the number of Triggering Events that were required to reach the "enough" threshold, with some participants requiring one major Triggering Event, whereas other participants required several. For example, one participant experienced a Triggering Event of having her 10-year-old son share that he was "feeling overwhelmed" from being over-involved in self-care activities. After receiving this feedback, the participant reported that this "prompted [her] to look at [her] own life at the time" and in turn she realized that she was overusing self-care to escape from her abusive marriage. She stated that "…that I had lost sight of it [her value on balance] was most disturbing." After realizing this value disconnect, she indicated that she began to "live" and "fight" for time to create balance in her life. Another participant abused substances for several years and required several smaller Triggering Events (e.g., interpersonal conflicts, financial concerns, health issues) before he decided to prioritize his value on family.

Passing the enough threshold and reaching the decision to Prioritize Self-Care Value(s) marked the end of Phase 1 of the model and movement into Phase 2. See Table 2.3 for a description and example quotations for Phase 1.

Table 2.3

Phase 1 Subprocesses, Description, and Exemplar Quotes

Phase/Subprocess	Description	Exemplar Quote
Phase 1: Having a Wake-Up Call	Experiencing an event(s) that led participants to realize that they were living disconnected from self-care value(s).	"…I was counseling a lady on um, self-care and how to balance… it hit me like a ton of bricks and then I thought, you know I'm not taking the time to sleep properly…And, I, you know, trying to tell my patients to do this and yet I'm not. And I felt very… two-faced [sighs] and I thought, no, if I'm gunna tell my patients that this is what they've got to do, then I've got to live it… So, that's, you know, I think being authentic is really important to me…"
Experiencing a Triggering Event	An adverse event that ranges from being internal to external to the person that threatens a person's value(s) and/or highlights a values disconnect.	"One weekend before we were going on a family holiday and I as trying on all of my clothes…they just kept sliding off of me. And my mom said, what's going on with you? And I think *then* I really had to take a step back and realize the kind of damage that I was doing to myself in this, the repercussions that I was creating in other areas of my life."
Realizing a Values Disconnect	Realizing a disconnect between current living and valued living.	"And then I think finally when it caught up to me that, really, I'd been doing all these things [extracurricular activities] because I was searching for some kind of satisfaction and fulfillment. I think then, to *me,* it really identified that there was this piece of my life that was missing, or something was out of balance…like, this is not a way that I want to live the rest of my life."
Prioritizing Self-Care Value(s)	Making the decision to prioritize self-care value(s).	"So, I fell downwards spiraling. And the only way to, to not have that continue was to completely change the way I did things. Which essentially amounted to not putting all of my eggs in the academic basket anymore. I had to redistribute them...Because that's very dangerous. Like, having one sense of importance or self-worth is suicidal…"

Phase 2: Building Skills

Phase 2, Building Skills, involved taking action-oriented steps to move closer to the value(s) that were identified as personally important in Phase 1. Building Skills is focused on selecting and tailoring self-care activities and then creating a plan to implement those strategies. It subsumed two subprocesses: 1) Creating a Toolbox, and 2) Creating a Plan, each with two steps. In Creating a Toolbox, participants used their values and knowledge to select/tailor self-care strategies. They then moved onto Creating a Plan, which involved Setting Manageable Goals and Scheduling Self-Care.

Creating a Toolbox

To create a toolbox of self-care strategies, participants used both knowledge (i.e., factual and subjective) and their values. Factual-based knowledge included the benefits of self-care on health and the risks of burnout if self-care is not used. For example, one participant said, "So, kind of putting it into perspective and thinking, wow, if I'm this overwhelmed right now, just with this imbalance in my life, um, I need to correct it before it has long-term effects on my physical health." The participant later commented on how learning about the negative effects of health during her professional training "…has influenced [her] ability to take this step [prioritize her health]" because "[your body] is the vessel you need to take care of in order to prevent these long-term damages that occur and put strain on the health-care system but also strain on your family and friends," who she identified as a "priority." In addition to using factual knowledge, participants used subjective information about self-care, particularly their previous experiences with self-care strategies and knowledge about their own needs and preferences. For example, one participant stated that, when selecting self-activities, "…part of it's based on experience. I think what I've

done before that's worked for me." Another participant used cultural knowledge to inform her selection of self-care strategies (e.g., connecting with the "land" to be closer to her "Creator"). As needed, some participants sought new knowledge about self-care from their formal (e.g., health professionals, community resources) and/or informal (e.g., friends, family, mentors) support systems.

Participants paired their application of self-care knowledge with their values. One participant stated that, for her, mental health and spirituality are "intertwined" and must be used together. She stated that "giving [her anxiety] back to God" helped her to manage her anxiety while remaining connected with God. Her spirituality and relationship with God were values-driven strategies, and without this connection with her values, other strategies were ineffective. For example, she stated, "…if I just spend an hour taking a bath, I will be just as stressed out as I was before." In contrast, for another participant, taking a bath allowed her to "…remove [herself] from any of the constant invasion of privacy" and to "take the time to say no and doing things that [she enjoys]."

If knowledge about self-care was not couched in the context of values, it was less likely to be used. One participant stated that, in his home country, there were "bad cultural practices" (i.e., alcohol was key to forming and maintaining relationships). He stated that, despite knowing that alcohol is a "detriment to your health" he continued to abuse alcohol in an effort to maintain his relationships. However, after he moved to Canada and experienced a Triggering Event (a family member's death due to alcohol), he decided to prioritize his value on health by "saying no" to alcohol. This demonstrates that knowledge, when placed in the context and service of values, gives meaning and applicability to the information.

Participants used their values and knowledge about self-care as it applied to them to then select and tailor strategies. Participants selected a range of strategies, which broadly fell into the domains of balance (e.g., taking breaks, extra-curricular activities), emotional health (e.g., meditation, personal therapy), physical health (e.g., physical activity, medication, eating right), spirituality (e.g., praying), and social connection. (e.g., time with friends). The heterogeneity in selected self-care activities illustrates the importance of students tailoring self-care to their own values, needs, and preferences. Of note, these domains are not mutually exclusive, as some participants used them in combination.

Given that self-care strategies were values-based, they were often enjoyable; however, this was not always the case. Some participants reported how, despite moving closer to their values via self-care, at times this was difficult. For example, one participant stated, "…I was doing this running program with my friend. It was hard, but it was really rewarding. At the end of the run we felt proud of ourselves…we had this goal we were working towards which was a mental health run, so it was like something that was meaningful to us…even though not every moment was enjoyable."

Creating a Plan

Once participants generated a toolbox of strategies that they could "pull from," they then created a plan. This again involved two steps: Setting Manageable Goals and Scheduling Self-Care. The former involved setting goals that were feasible in light of other demands. Setting Manageable Goals involved "finding a middle ground" between self-care needs and other responsibilities. For example, one participant reported that, while being an actor is part of his self-care plan, being involved in play productions is not feasible given that his program requires him to relocate for practica. As a result, he "[found] a middle ground"

by instead staying connecting with this value via reading and watching plays. Another participant reported that he "picks something that's do-able" by breaking down the goal of organizing his home by tackling one room at time. This way, the participant reported that he is able to accomplish the goal, albeit in smaller steps, and meet his academic demands with still attending to his self-care needs. As a final example, one participant stated that when she has time constraints, she reduces the amount of time spent in the gym to ensure that she gets *some* physical activity "even if in a small way."

Once participants set self-care goal(s), they then scheduled self-care. Planning the logistics of when self-care would be done helped to ensure that it would happen. Some participants employed tools to schedule self-care, such as phone planners or agendas, whereas others did not report using any aids. What was important is that the method used to schedule self-care was sufficient for the individual, such that self-care was not "pushed to the side" during busy times. Participants who did not schedule self-care reported that it was "forgotten" and did not occur. Moreover, the frequency with which self-care was scheduled varied across participants. For example, during busy time periods (e.g., examinations), some participants planned larger self-care activities (e.g., going on a vacation), whereas others preferred to take smaller, more frequent breaks (e.g., shorter visits to the gym).

Trial-and-Error

Phase 2 (Building Skills) was a cyclical experience such that participants moved back and forth between Creating a Toolbox and Creating a Plan, using Trial-and-Error to further individualize and fine-tune both (i.e., to find "what works" for them). For example, participants went through several iterations of revising their goals (e.g., to make them more manageable or rescheduling) given new demands or routines (e.g., changes in work

schedules, life events such as moving or having a child). Participants commonly tried several self-care activities and kept "…the ones that have been the most useful." Finally, participants also used the knowledge about themselves that they gained from using self-care to further revise their plans. For example, one participant said, "I know physical activity makes me feel good, um, but then I also know that I won't go at the end of the day to the gym…so I have to go in the morning." Once participants had a plan that they could implement, this marked movement into Phase 3. See Table 2.4 for a description and example quotations for Phase 2.

Table 2.4

Phase 2 Subprocesses/Steps, Description, and Exemplar Quotes

Phase/Subprocess	Description	Exemplar Quote
Phase 2: Building Skills	Selecting and tailoring self-care activities and then creating a plan.	"…there's some brainstorming, and maybe chatting with friends and family about a different strategy, or I've heard of something before … And then pursuing kind of the details around that… and then finally going ahead and doing that."
Creating a Toolbox	Building a repertoire of strategies that are individualized and values consistent.	"So, it's continually, like, collecting this basket of resources. And then whatever I need, I pull out of that basket. Whether it's something that I can give myself, something that I put into that basket, or something that I've gotten from someone."
Creating a Plan	Determining how self-care will be used.	"…to maintain work-life balance, um, I pick priorities like things that I enjoy and then I create my routine around those, to make sure I get those in daily…"
Trial-and-Error	Moving between creating a toolbox and plan, to find "what works."	"And then there's always the risk that it's not going to work…then it's a process of trial and error until I kind of find something that works with me and my schedule."

Phase 3: Gaining Confidence

Phase 3, Gaining Confidence, comprised of one subprocess: Staying on Track with self-care, the function of which was to Build Efficacy (the belief that participants could implement self-care). To stay on track, participants utilized Internal (i.e., drawing on one's

own personal resources, such as self-awareness of self-care moving them toward the "way they want to live life") and External (e.g., enlisting the motivating support of others, such as texting friends to play sports on a weekly basis) Motivators. Staying on Track with self-care helped to build students' self-efficacy in their ability to use it effectively.

Participants also built efficacy by moved back and forth between Phase 2 (Building Skills) and Phase 3 (Gaining Confidence). That is, as participants created a self-care plan via Trial-and-Error (Phase 2), they became more successful at staying on track with these plans and Gained Confidence in their self-care (Phase 3). Simultaneously, participants had to go back to Phase 2 to build new skills in order to further refine their self-care plan then move back to Phase 3 to work on implementation of this plan in a way that was manageable. Thus, even if participants temporarily reached Phase 3, they often went back to Phase 2 so that they could find the "missing piece" in their plan (e.g., revise the logistics of their plan).

Staying on Track

This subprocess involved Using Internal Motivators and External Motivators to stay on track with a self-care plan. As I describe below, while both types of motivators were important and served unique purposes, if participants did not have internal motivation to follow through, this became an exit point for the model.

Using Internal Motivators. To stay on track with their self-care plans, participants used self-awareness about how self-care moved them towards how they wanted to "live life" (i.e., noticing the impact of self-care on the self and other valued domains). One participant said, "I know that if I don't take that morning, my whole being, my mental, my physical, everything, just struggles throughout the day." Therefore, participants used awareness of how self-care impacts themselves and others as internal motivation to "keeping driving

[them] forward." As one participant said, "So that constant continuation of self-care plays a big role…the effects of it really drive me to take another hour at another time."

In addition to being self-aware about how self-care moved them towards what they wanted, participants also used awareness about the consequences of not using self-care and how this moved them away from their desires. For example, one participant reported that, to stay "committed" to his self-care plan, he identified "triggers" (e.g., low mood, how he is interacting with others) to "catch" himself before he falls back into a "maladaptive coping pattern." Another participant said, "…. I think it's just my own self-motivation…I don't want to be tired or don't want to feel like crap, so I'll make sure that I plan out what I'm going to do." Another participant reported giving herself "pep talks": "…I had a lot of times where I do give myself like set myself down and give myself the pep talks and be like, yeah like, you can't do this [disordered eating habits] because it's going to lead you where you don't want to be…" She further stated how having "realized" that poor self-care "leads to a dead end" and a "place that [she] didn't want to be" not only allowed her to prioritize her self-care values (Phase 1), but it also "maintains the changes" that she has made in her self-care (Phase 3). Therefore, participants used their own internal mechanisms to maintain their plan and to ensure that they did not "fall off track" from it.

Using External Motivators. Participants also used External Motivators to stay on track with their self-care plans. Some participants reached out to their social support networks to stay engaged in self-care activities (e.g., texting friends to play sports on a weekly basis). Other participants purposefully surrounded themselves with "positive self-care influencers" to reinforce their self-care plans by being influenced and accountable to others. One participant referenced how she used her mother as an External Motivator: "…I

think there's a feedback loop there that maintains my, my accountability to her…sometimes you just need someone close to you to reaffirm that [self-care] in order to actually kind of refocus your attention on it." In addition to serving as a form of accountability, external supports helped to remove the "fear aspect of self-care," or the perception that engaging in self-care is difficult or could compromise their academic performance. By seeing others doing self-care, this led to a "snowball effect" in that, by seeing others taking care of themselves, this strengthened the belief that *they* "could do" self-care.

Although both Internal and External Motivators were important for helping participants to stay on track with their plans, Using Internal Motivators was a prerequisite for External Motivators to have any utility. That is, external motivators reinforced participants' already existing awareness about the importance of self-care; however, the reverse was not true. One participant stated, "I don't think that you can really effect change or…obey someone's recommendations unless you yourself want them for yourself, right?" She further stated, "If you don't want it yourself, no amount of encouragement or external motivation is going to move you…The first step is being motivated and understanding the importance of wanting it yourself and why it's important to be that way or have that in your life." Another participant stated, "…it's *you* that will pick yourself up and motivate yourself to go on. If you do it for anything else *beyond* that, you're not gunna stick with it, so it has to be intrinsic, it has to be within *your* soul."

Indicator Participants have Completed Phase 3: Building Efficacy. As participants cycled through several iterations of Building Skills (Phase 2) and Gaining Confidence (Phase 3), they built a sense of self-care efficacy (i.e., belief that they could implement self-care according to their own needs and values). For example, participants reported feeling

"comfortable," "able," and "confident" in their ability to use self-care. In addition, participants believed that a balance between self-care and academic demands "was possible." Building self-care efficacy was the tipping point that marked the end of Phase 3 and moved participants into Phase 4. Similar to the "enough threshold" in Phase 1, reaching this tipping point was an individualized process, with a range in required iterations between Phase 2 and Phase 3 that differed by participant. This sense of efficacy was necessary for participants to persist through challenges in Phase 4. That is, participants did not persist in using self-care when challenges arose without having first maintained their self-care regularly. See table 2.5 for a description and example quotations for Phase 3.

Table 2.5

Phase 3 Subprocess, Description, and Exemplar Quotes

Phase/Subprocess	Description	Exemplar Quote
Phase 3: Gaining Confidence	Building confidence, or efficacy, in the ability to use self-care effectively.	"My partner's really supportive [with self-care], so this year has been a little better, but it still feels like I'm a kid who's learning to ride a bike."
Staying on Track	Using internal and external motivators to stay on track with self-care.	"I think that you need to want [self-care]. And then from there, you just need to either be encouraged…or be given some tools."
Using Internal Motivators	Internal resources (e.g., self-awareness) that facilitate staying on track with self-care.	"I start getting a headache when I'm at the computer too long or my eyes start going fuzzy, so then … maybe workout for an hour…and then go back to work."
Using External Motivators	External resources (e.g., supports, reminders) that facilitate staying on track with self-care.	"[Social support] motivates me back on track…they're kind of your cheering section. And they want to help you […] to give you a hand."
Building Efficacy	Building self-efficacy about self-care.	"… If she can do it, I can do it. If I can do it, then maybe somebody else can see that they can do it…it's kind of that snowball effect."

Phase 4: Building an Identity

In Phase 4, Building an Identity, participants began to use more advanced techniques to maintain self-care and to deeply incorporate self-care values into their identity. This incorporation of values into their identity helped to resolve the initial incongruence seen in Phase 1 between their values and current lifestyle. Phase 4 comprised of two subprocesses: Persisting through Challenges and 2) Consolidating Self-Care Value(s). Notably, participants may consolidate more than one self-care value into their identity at any given time.

Persisting through Challenges

In the first part of the subprocess, Persisting through Challenges, participants implemented strategies to follow through with their self-care plan when inevitable challenges arose (e.g., increases in workload, competing demands, life changes, interpersonal conflicts, illness). Numerous actions were taken to persist, and the use of these varied across participants. I categorize these strategies broadly as either intrapersonal (i.e., strategies 1 to 3) or interpersonal (i.e., strategies 4 to 6) actions.

1. Using Self-Awareness
2. Revising the Plan
3. Reflecting on Values and/or the Disconnect between Values
4. Using Supports
5. Saying No
6. Being Assertive with Others

Intrapersonal Strategies.

Using Self-Awareness. Participants used self-awareness to identify when they "[got] off track" from their self-care plans. For example, one participant stated, "…when I get off

track, I know it because I feel anxious and very negative…I'm kind of irritable…that's when I know I've become unbalanced again. So, I need to be very diligent about taking that time again and resetting and getting back on my own rhythm of self-care." By "listening to [their] bodies," this helped participants to identify their self-care needs and to evaluate how to best meet those needs individually.

Revising the Plan. This strategy involved taking actions to revise a self-care plan to develop a "better" plan that allowed for a "middle ground" or "balance" between self-care and competing priorities. Participants revised their self-care plans so that they were "realistic" with how much self-care they could do given other demands. Participants stated that it was important to be "okay" and "comfortable" with altering their self-care plans so that they could "maintain a healthy level" of self-care while attending to competing demands. By revising their self-care plans, participants were able to use self-care flexibly in such a way that accounted for the different "stages" of their professional and personal lives (e.g., new work demands, changing routines, relocating for clinical practica).

Reflecting on Values and/or the Disconnect between Values. Some participants persisted in following through with self-care in the face of challenges by reflecting on their self-care values. For example, one participant stated that when she is overwhelmed with academic stress, she takes "abrupt stops" to reflect on what is important to her (e.g., health, family). Similarly, another participant stated that when he has midterm examinations, he reflects on the importance of getting enough sleep for his health, which he reported as a highly important value. As a final example, another participant reported that when she "derails" from her plan, she reminds herself, "I had these standards and that this is where I

like to be, this is where I feel good about myself." By reflecting on self-care values, participants re-grounded themselves in why self-care is important for them.

Interpersonal Strategies.

Using Supports. To persist during challenges, some participants recruited their support systems. The function of using supports in Phase 4 was different from how supports were used in Phase 3. Rather than using supports to maintain their self-care plan (e.g., attending weekly mindfulness classes with a friend [Phase 3]), to persist through challenges, participants used supports to stay committed to self-care when *obstacles* arose. Specific strategies included using supports to stay connected with self-care values, brainstorming with supports how to revise their self-care plans, learning new tools from others that were more feasible, and receiving "external feedback" from supports about how they are doing with managing their stress. One participant said, "…when I'm going through times like this, my parents are always going to be there for me. [Speaking with them] helped to solidify that…they're high up on the values list, family, and friends, just because when you're going through tough times like that those are the people who, you know, they're going to be there and they're going to help you out." Irrespective of the type of support used, its basic purpose was to revise and reinforce their self-care when it was difficult to do so.

Saying No. Participants "said no" to competing demands (e.g., academic/work commitments, social obligations) that were a barrier to them meeting their self-care needs. This involved "letting some of those things drop out of your basket" in service of their self-care needs: "I kind of just had that breaking point where I realized that really, I have to come first and that sometimes I need to say no to things, just for my own health." For example, one participant reported that he informed his supervisor that he could not work on a project one

evening given his self-care needs. Another way in which participants said no was to self-care activities that went against their values. One participant recalled how she said no to her friend who asked her to join a type of physical activity. The participant reported saying no because she knew that doing so would "trigger" body image concerns and unhealthy exercise habits. Importantly, participants used this strategy despite not being "well perceived" by others. One participant reported that she persisted in following through with her self-care plan "by being stubbornly persistent in knowing that's what I need to do. And, regardless of what backlash I was getting at the time, I needed to do that." Participants said that it is important to "stand up for yourself" and "not give into peer pressure" in order to meet your own self-care needs. By Saying No, participants persisted in following through with self-care by living within a "reasonable boundary" (i.e., they could implement self-care while meeting other responsibilities) and in a way that was aligned with their values.

Being Assertive with Others. To follow through with using self-care when challenges arose, some participants used assertiveness with others to "advocate" for their self-care needs. This strategy overlapped with Saying No, since Being Assertive with Others sometimes involved Saying No to demands that made self-care difficult. Despite possible negative reactions from others, participants reported being "comfortable enough to say, this is me and this is how *I* chose to live my life." Therefore, participants who used this strategy firmly knew the importance of their self-care values and needs. By having this internal awareness, they were then better equipped to stand up for their self-care needs.

The above strategies were often used in combination and using one strategy often paved the way for others. For example, intrapersonal strategies often paved the way for participants to effectively use interpersonal strategies, which involved standing up for and

advocating for their self-care needs. One participant used three strategies together: Using Self-Awareness, Saying No, and Being Assertive with Others. She said, "…it's empowering for me to say, no this is what works for me…I'm the expert in my body….and having tact while doing it." First, this participant used self-awareness to identify which self-care strategies were effective for her. By Saying No when asked to engage in self-care strategies that moved her away from her self-care values, this participant was assertive with others in advocating for her own self-care needs. As such, self-awareness prepared the participant to be assertive, respectively, with others and to say no.

Consolidating Self-Care Value(s) into One's Identity. As a result of persisting through challenges, participants began to consolidate their self-care values into who they were as people. That is, by using self-care as a way to move towards their values in the face of challenges, this reinforced the importance of self-care for them as individuals and strengthened their ability to follow through with living close to their self-care values regularly in addition to during challenges. For example, one participant said that persisting in following through with her self-care plan while she was going through a divorce enabled her to build an identity of a person who takes the time for herself. There were four indicators that participants developed a consolidated identity surrounding self-care.

Living Closer to Self-Care Value(s). First, participants moved closer to their values, in general, via self-care. By using self-care to move closer to who they wanted to be and how they wanted to live, self-care became a way to express values (e.g., engaging in exercise because one values physical activity) rather than as an activity that is a means to an end (e.g., engaging in exercise to reduce stress). For example, when one participant was asked how she knows when she has arrived at successful self-care, she indicated that she is "moving

generally in a direction that makes [her] feel happy, that that spark in [her] soul is being lit, where [her] passions are." By using self-care strategies that were values-consistent, doing self-care felt "authentic" to who they perceived themselves to be and want in life.

Ingrained into Routine. By maintaining self-care on a regular basis – even when it was difficult to do so – it became ingrained into participants' lifestyle and thus it was "automatic" and a "natural" part of their routine. Participants reported that they either no longer needed to "think" about applying self-care or utilize as much effort to plan for it.

Preventative. Since self-care was used consistently, it also became preventative. Participants who consolidated their self-care value(s) were more equipped to handle future stressors because they "knew what [they stood] for." For example, one participant said that knowing "what really matters in life" or his "core values" (e.g., family, friends) gives him the ability to "not sweat the small stuff" when he is faced with stress. Rather than allowing program demands to interfere with his self-care, which he identified was the case prior to a Wake-Up Call, he "puts things into perspective" and "re-thinks" and reminds himself about his values. Another participant said that living closer to her value on self-love makes her "more comfortable" with being assertive with others when obstacles to self-care arise. She stated that "[living] within the boundary" where she is not overwhelming herself with work does not make her "inferior." Rather, she stated that, by doing so, she is honoring herself as an individual by "buffering others' expectations" on how she *should* be living her life. These positive experiences with self-care minimized the impact of future stress and increased the likelihood of using self-care in the future.

Using Self-Care Flexibly. Participants who reached Phase 4 repeatedly modified their plans as needed, often by considering how their self-care needs changed and interacted

with internal and external factors. For example, one participant who consolidated her value on physical health reported that she modified her self-care plan by considering how her needs changed given new health issues. She realized that cycling (rather than running) was more feasible, given changes in her mobility. In order to adaptively use self-care, participants required the confidence developed from Phase 3 to revise and implement a new self-care plan that was workable given their current life context and needs.

It is important to note that being consolidated in one value did not mean that participants were "finished" with self-care; rather, they continued to re-prioritize self-care values or realize new values as new Wake-Up Calls occurred. Therefore, they had to cycle back to Phase 1 and then move through the model to consolidate new values. In addition, participants could consolidate one self-care value while still being in previous phases for other values. This was evidenced by participants showing indicators of successful self-care outcomes in one self-care value, but not others. For example, one participant consolidated her self-care value on physical health (i.e., it was value-consistent, ingrained into her lifestyle), and she attributed this to her childhood upbringing. However, this participant was still engaging in Trial-and-Error (Phase 2) to discern which strategies help her to best move toward her value on mental health. Therefore, in keeping with a conceptualization of self-care as a multidimensional concept, participants can engage in several parallel process of working toward self-care values and thus be in different Phases of the model depending on the value. See Table 2.6 for a description and exemplar quotations for Phase 4.

Table 2.6

Phase 4 Subprocess, Description, and Exemplar Quotes

Phase/Subprocess	Description	Exemplar Quote
Phase 4: Building an Identity	Persisting through challenges, and in turn, integrating self-care into one's identity.	"I think that I've just done it [self-care] for so long, it's just a part of me. It's not something I've trended in and out of doing, …it's just part of who I am."
Persisting through Challenges Consolidating Self-Care Value(s)	Using self-care in the face of obstacles, in turn solidifying self-care into one's identity and making it easier to persist through future self-care challenges.	"Well, it um, it means just being stubbornly persistent in knowing what I need to do. And, regardless of what backlash I was getting at the time, I needed to do that. I need to, it's for me."

Core Category: Valued Living

To develop a theory that is comprehensive and explanatory, an important task in grounded theory is to identify a core category, which is a "high impact dependent variable" that seen throughout the data (Glaser, 2007, p. 14). The core category explains how the "main concern is continually resolved" and it accounts most for changes in behaviour (Glaser & Holton, 2004, para 54). I named the core category *Valued Living* as it was an integral thread of the fabric of stories of successful self-care. To practice self-care consistently and preventatively, people must understand the importance of it in their own lives. This intrinsic motivation to use self-care was built initially (Phase 1) and then it was used to maintain and persist in following through with self-care when challenges arose (Phases 2 to 4). Importantly, the title of the core category implies that self-care was not only used for stress management and reduction, but it also had a much larger purpose: to move towards "how [participants] wanted to live" and to live closer to "what mattered." For example, one participant expressed, "…coming to the realization that the connections and

friendships that I'll be making now are more important than getting 4% higher on that exam or assignment." By wanting to be a well-rounded person, he "put [training demands] into perspective" to stay connected with what "really mattered."

Basic Social Process: Identifying and Moving towards Values

A Basic Social Process occurs around the core category and it comprises of at least two stages (Birks & Mills, 2015). The basic social process, *Identifying and Moving Towards Values* (see Table 2.7 for exemplar quotations), comprised of three stages that overlapped with each Phase in my grounded theory model: 1) Identifying Values (Phase 1), 2) Building Skills to Move Towards Values (Phase 2) and Moving Towards Values (Phases 3 and 4).

Table 2.7

Basic Social Process Stages, Description, and Exemplar Quotes

Stage	Description	Exemplar Quote
Stage 1: Identifying Values	Identifying the value(s) that underline self-care	"I finally figured out what's important to me. Or what's more important. And if I kept going the way I was going, um, I was hurting [others]."
Stage 2: Building Skills to Move Towards Value	Learning and selecting skills that will move one closer to values.	"I kind of just had that breaking point where I realized, I have to come first and sometimes I need to say no to things, just for my own health… and doing [self-care] for myself."
Stage 3: Moving Towards Values	Using self-care to move closer to values.	"I'd rather be happy and like, allow myself, like evenings and weekends and other random days to have time off and live my life, because that's more important."

Stage 1: Identifying Values

Participants first had to identify the value(s) underlying why self-care mattered to them. In this stage, participants engaged in an "evaluation of [their] life" to identify "what mattered" or "what's important." As stated earlier, this learning largely occurred via Wake-Up Calls and was the initial entry point into the model. By touching base with the value(s)

that participants were disconnected from, this learning ignited an intrinsic (rather than extrinsic) reason to implement self-care. The importance of fostering an internal drive to use self-care was seen throughout the data when participants commented on how ineffective external pressures were in fostering and/or changing their self-care (e.g., being told to do self-care by others, receiving factual information about the impacts of stress on health). For example, one participant shared how he "always knew" the negative impact of alcohol abuse on his health. However, he stated that it was only when he realized the impact it had on his relationship with his wife and children (whom he previously identified as his "top priorities"), did he implement self-care changes. As such, this participant moved towards new, more desirable values (e.g., family) and away from old, less desirable values.

Stage 2: Building Skills to Move Towards Values

Identifying how self-care could move participants closer to their values set the foundation for building an individualized self-care plan. To begin moving towards their values, participants progressed to Stage 2: Building Skills to Move Towards Values (Phase 2). They selected self-care strategies that reflected and helped them to move towards their values. Strategies that were value-driven were more appealing to participants because they were tailored to their values, needs, and preferences. In contrast, participants who did not follow through with self-care strategies commented on how it was "difficult" to do so when the strategies were not tailored to their own values or life context.

Stage 3: Moving Towards Values

Once participants built the requisite skills that would move them closer to their values, they were motivated to follow through with implementing these strategies because they brought them closer to how *they* wanted to live. Participants were also in part motivated

to use these strategies because they did not want to deviate from their disconnected values. For example, one participant experienced a Wake-Up Call when he realized a disconnect between his (at the time) poor mental health and how he wanted to be (present and in a "good head space" for himself and his family). In sharing how he began to implement new self-care strategies, he indicated that he was motivated to maintain his value-driven self-care plan because he "…[knew] what low feels like, and [he] didn't want to go there again." Other participants shared that they wanted to implement self-care because they disliked how they felt (e.g., negative affect, "hating life," anxious, depressed, socially withdrawn) and/or how they treated others (e.g., increase in interpersonal conflicts and tension) when they did not take care of themselves.

Valued Living and Self-Esteem. Several participants reported that in order to implement self-care, they needed to believe that they were "worthy" of this care. For example, one participant reported that "There were a few versus, a few phrases that I just kept repeating over and over in my journal…it helped me to realize that, first of all, I have worth, I have strength, I have a purpose. The more I begin to love myself [via self-care] …the more I begin to realize that I *am* a lovely person, I have a lovely soul, I am worth love, no matter what." Further, participants commented on how engaging in self-care contributed to their feelings of self-esteem. For instance, one participant said, "…by being conscientious of your own personal needs, you automatically, you know, contribute to your self-esteem because you are caring for yourself directly." It is possible that, by building a greater awareness of one's self via values, people strengthen their sense of inherent worthiness and in turn are better able to care for themselves. In contrast, participants who expressed having low self-esteem (e.g., "feeling extremely crappy about myself," having "decimated self-

esteem") reported finding it difficult to utilize self-care as they were "overcome with negativity." Instead, they tended to soothe their negative affect using strategies that provided immediate short-term relief and that did not necessarily line up with their values (e.g., sleeping, watching television, overeating).

Negative Cases

Negative cases are instances that do not fit the model (e.g., participants who do not move through the model as expected or they *do* move through the model when it would be predicted that they should not) (Willig, 2008). Examining variations and exceptions in the data allowed me to scrutinize my model and to capture the full complexity of the data. There were two participants who did not move through the model as expected. The first case was a woman who consolidated her value on "wellness and happiness" but who did not experience a Wake-Up Call. Bypassing Phase 1, this participant attributed her self-care habits to "how [she] was brought up as a child," and described her parents as having instilled self-care into the family routine (e.g., by involving her in different self-care strategies, modeling the importance of self-care). She reported that learning different tools when she was a child allowed her to develop an identity surrounding self-care without beginning this process via a Triggering Event as an adult. Similarly, the second participant attributed her ability to use self-care to her childhood, where she learned and experimented with culturally informed strategies (e.g., "spending time on the land," "connecting with the Creator"). By helping people to integrate self-care into their identity, it appears that early socialization to self-care decreases the likelihood of requiring a Wake-Up Call to trigger subsequent change.

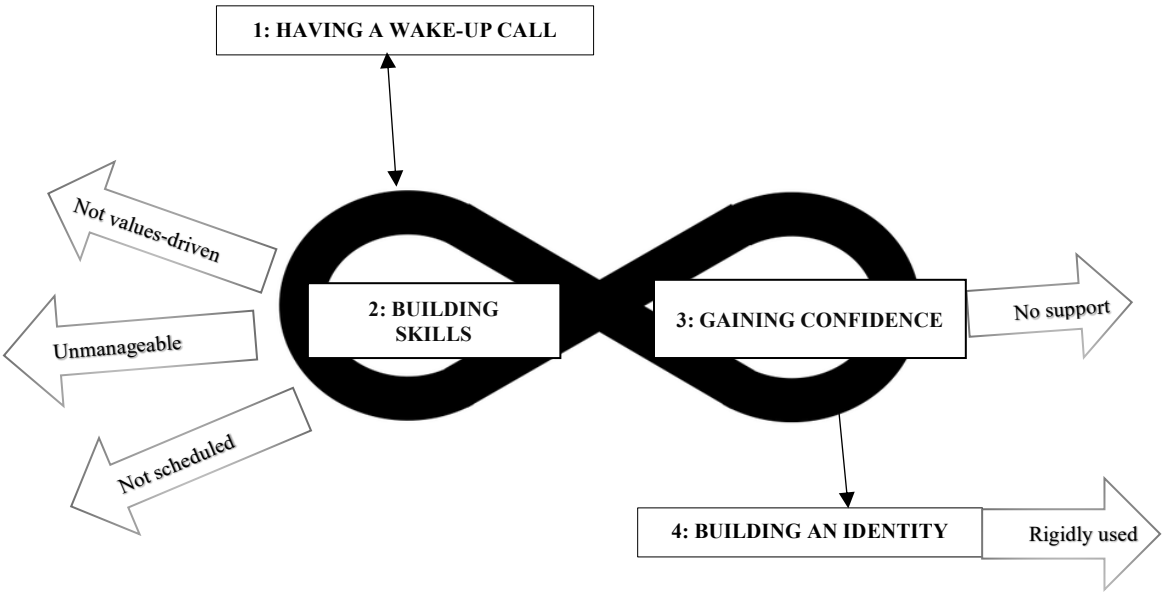
Model "Exit Points" or Inability to Consolidate Self-Care Value(s)/Build an Identity

Unfortunately, not all participants reached the final phase or outcome of the model;

several participants "exited" the model at various points (see Figure 2.2). These exit points lend support to and validate the importance of these phases and help to explain why some people are able to develop overall self-care practices whereas others still struggle.

Figure 2.2

Exit points in Becoming a Values-Driven Self-Care User Model



Disconnection from Values

Participants who did not use their values to inform their self-care did not select effective strategies, nor did they stay on track with using self-care. Participants in these cases did not recognize a values disconnect and they often required additional Wake-Up Calls in order to reach the "enough threshold" to identify and prioritize self-care value(s). Three examples illustrate this exit point. First, one participant, who reporting knowing the benefits of self-care on a cognitive level, reported being "too exhausted" from an "unpredictable" training schedule to implement self-care. Rather, she used self-care to soothe and "disengage" from stress (e.g., sleeping, watching Netflix, "rejecting the world"). Thus, although this participant used self-care, it was not effective as rather than being values-

informed, it was used to numb emotions. Second, one participant reported finding it difficult to engage in self-care because she was "driven by other people" (e.g., spending several days "recovering" from "being hungover, eating crappy, and being really tired because [she] stayed up late"). Similar to the previous example, rather than using self-care in connection with her values, she used it in response to stress and exhaustion.

Third, another participant said that he used self-care to improve his academic performance. While academic performance could be a self-care value, this was unlikely as he reported feeling "lost in how to manage [his] stress" from training and largely staked his worth into this external outcome (e.g., he reported feeling "worthless" when he did not do well and no longer felt "stupid" when he did well). Notably, for this participant, the bulk of the interview content centered on his desire to perform well academically, rather than using self-care to attend to his own wellness. Although these three participants were not using self-care effectively at the time of the interview, they were actively learning from their experiences (i.e., via Wake-Up Calls) and beginning to reflect on and identify their values.

Unmanageable Goals and Plans

Failing to create manageable goals and/or scheduling self-care resulted in it being neglected, and thus this was another exit point in my model. Participants stated that when they did not set goals that were attainable, they felt defeated and instead engaged in soothing behaviours to mitigate their negative affect (e.g., substance use, emotional eating, sleeping). Although these behaviours served the purpose of reducing negative affect in the short term, they were not effective in the long-term (i.e., they did not move them closer to their values). Similarly, participants who did not schedule self-care reported forgetting about it when they became busy and thus "pushed it aside." These exit points suggest that creating feasible self-

care plans and "thinking ahead" by planning is important for overcoming the practical barriers that are commonly reported by students.

No External Support

Connecting with others helped participants to find, revise, and improve upon their self-care plans, while building confidence in using self-care flexibly (e.g., via seeing others do self-care, receiving support in modifying an existing plan). Notably, this exit point does not privilege social self-care strategies, but rather it speaks to the importance of recruiting supports to create and maintain a self-care plan. Participants who consolidated self-care values commented on the ineffectiveness of an "isolated" approach to self-care. Without using formal (e.g., therapist, physician, nutritionist) and informal (e.g., friends, family, mentors) supports to learn about new self-care strategies and/or to tailor and maintain their plans, self-care was much more difficult to sustain.

Rigid Self-Care

A final exit point relates to being rigid in the application of self-care. Given the temporality of values, developing and maintaining a values-driven self-care plan entails that people reprioritize, remove, and shift values as they move through life and experience new demands, enter new phases in life, and experience additional Wake-Up Calls. Participants had to revise their plans (e.g., create more feasible goals given new demands, revise or replace strategies) continuously. Self-care is an ongoing process that requires people to be active in evaluating if and how their self-care plans are meeting their values and needs.

Discussion

The purpose of Study 1 was to use inductive qualitative methods (i.e., grounded theory) to develop a theoretical model of how self-care practices develop for health students.

My study examined naturalistically occurring self-care practices and developed an explanatory and predictive theory about this developmental process. My resulting grounded theory consisted of six subprocesses that were represented by four Phases: 1) Having a Wake-Up Call, 2) Building Skills, 3) Gaining Confidence, and 4) Building an Identity. The basic social process driving participants through this model was *Identifying and Moving Towards Values*. Understanding how self-care practices develop without formal intervention for health students has implications for research, intervention development, and curricula/training. In this section, I compare my results with previous work (both empirical and theoretical), discuss the implications of my results, and conclude with a discussion of strengths and limitations of my Study 1.

Wake-Up Calls as a Precursor for Change

My grounded theory showed that experiencing a Wake-Up Call was an important experience for initiating changes in self-care. Hitting rock bottom is a type of wake-up call that has been discussed widely in the context of the treatment of alcohol abuse, when it was believed that people must hit rock bottom before they will decide to seek help (British Medical Journal Publishing Group, 1965; Gruszczynska et al., 2016; Roy & Worsham, 2017). However, researchers have found that hitting rock bottom can occur after any challenging life event (e.g., job loss) (Shepherd & Williams, 2018). Similar to the subjectivity and individual variation in Wake-Up Calls in my Study 1, hitting rock bottom is viewed as a "markedly heightened personal crisis" that facilitates the decision to seek help and recovery (Gruszczynska et al., 2016, p. 351 as cited from Brown, 1997; Kirouac & Witkiewitz, 2017; Roy & Worsham, 2017). Hitting rock bottom has also been described in existential terms as a crisis that leads to profound change and the birthing of a new sense of

self and relationship to others and the world (Kemp, 2013). Thorne (1963) has called this turning point of personal crisis a nadir experience, and he argued that these events core beliefs and offer the opportunity for reflection and profound personal transformation (Stagg, 2014). In my Study 1, self-care served an existential purpose: it was a way to move towards a meaningful life. It was the discomfort from being removed from values that initiated change. Also similar to my findings, Thorne's (1963) research found that nadir experiences often involve death, illness, tragedy, loss, or deflation of the self.

A substantial body of research supports the idea that positive growth can result from challenging life experiences. Post-traumatic growth[4] refers to changes that occur after a highly stressful or traumatic (i.e., it involves an actual trauma) event (Tedeschi & Calhoun, 2004). Post-traumatic growth does not occur as a direct result of the event, but rather it is the person's struggle with the new reality that promotes growth. Events that lead to post-traumatic growth do so because they are challenging enough to "[shatter] the individual's understanding of the world and his or her place in it" (Tedeschi & Calhoun, 2004, p. 12). However, Wake-Up Calls do not necessarily guarantee change (Stagg, 2014). The ability to use Wake-Up Calls for growth requires that the person perceive themselves as able to manage their initial distress and to disengage from their previously held assumptive worldviews (Kemp, 2013; Stagg, 2014). In my Study 1, there were participants who, despite realizing that unmanaged stress was interfering with their health, relationships, or other areas

[4] Researchers have used various terms to label growth that results from adversity, including stress related growth (Park et al., 1996), adversarial growth (Linley & Joseph, 2004), benefit finding (Affleck & Tennen, 1996), resilience (Bonanno, 2004), thriving (O'Leary & Ickovics, 1995).

of life, they seemed to vacillate between experiencing Wake-Up up Calls and contemplating change. As a result of re-orienting towards values, the corollary and necessary step was to also turn away from previous values. This required participants to learn a different way of approaching self-care, and to manage the distress associated with a values-disconnect.

There are several empirically supported predictors of post-traumatic growth (self-efficacy, social support) that map onto my grounded theory, and might highlight the utility of the model for promoting future post-traumatic growth. For example, socialization with others helps people to create new narratives and perspectives, which in turn predicts growth (Grad & Zeligman, 2017; Tedeschi & Calhoun, 2004; Dickinson, 2020). However, as will be discussed, much previous work has focused on teaching *skills* in self-care (Phase 2). No interventions, to my knowledge, have focused on Having a Wake-Up Call (Phase 1), Building Confidence (Phase 3), or Building an Identity (Phase 4).

Building Self-Care Skills

The second phase of my model required participants to build the skills necessary to prioritize their values, such as selecting and tailoring self-care activities and then creating a plan to implement those strategies. The vast majority of self-care research has focused[5] on providing education about self-care in a top-down fashion by using a pre-determined selection of strategies that are chosen by the researchers or providing self-care materials that are in written format or through a lecture/discussion (e.g., Ball & Bax, 2002; Greene et al., 2017; McGrady et al., 2019; Ward et al., 2018). What is unclear from previous research is if or how students created a plan or maintained self-care practices over time. My findings

[5] The other main focus of previous self-care work has been on identifying barriers to self-care.

highlight the importance of teaching strategies for realistic goal setting so that students can develop sustainable self-care plans, in addition to using trial-and-error to find what works. The lack of experiential learning about self-care has been cited as a limitation by students as they report being familiar with educational content but require support in applying self-care generally and in the context of barriers (e.g., Ward et al., 2018). Therefore, while students have a general sense about self-care knowledge, where they struggle most is how to implement and sustain these behaviours in their own lives.

My results show that possessing skills alone is necessary but not sufficient to become a regular self-care user. Health students need a value(s) disconnect so that they can *individualize* self-care to their own values. Values have long been recognized as a driving force for motivating people's behaviour and influencing lasting behavioural changes (Hayes, 2004; Hayes et al., 2006; Kinnunen et al., 2018; Páez-Blarrina et al., 2008). Since values are freely chosen, they are intrinsically motivating and can be leveraged to foster health habits (Chase et al., 2013; Hayes et al., 2012; McCracken, 2013; Trindade et al., 2016; Wilson et al., 2010). Values are discussed further in my Study 2 introduction.

Gaining Confidence & Building an Identify as Self-Care User

Little previous work has examined developing confidence or integrating self-care into one's identity. My findings show that skills are only solidified with repeated practice and in the context of a values disconnect. Health students who naturalistically develop into habitual users of self-care report engaging in repeated practice and problem-solving to build their skills. Research across several fields (music, sports, medicine) shows that people who are experts in their area of work more regularly engage in what is called "deliberate practice:" practicing skills in a safe environment, receiving feedback on these skills, and then

practicing in light of this feedback (Barrett-Naylor et al., 2020; Gillespie, 2018; Macnamara et al., 2018). This iterative process of practicing and then rehearsing skills based on feedback is crucial for consolidating and mastering a skillset; without it, time alone does not predict better outcomes. For example, in a large longitudinal study of 170 therapists who treated over 6,500 patients over a 5-year span, the researchers found that therapist effectiveness did not improve with more experience (time, number of cases) (Goldberg et al., 2016). Rather, therapists became slightly *less* effective over time. It is not the quantity of experience alone that predicts better outcomes, but also the quality whereby clinicians receive feedback on their skillset (Chow et al., 2015; Goodyear & Rousmaniere, 2017).

Deliberate practice is an effective and efficient use of time and resources. In a recent study, Barrett-Naylor et al. (2020) evaluated the effectiveness of a 1-day training program for building mental health staff working in a cancer centre confidence in providing brief assessment and interventions for patients. The core of the training was demonstrating and using skills, receiving feedback, and then practicing again after this feedback was received until skills improved (i.e., deliberate practice). As such, information giving in large groups was minimally used. The researchers found that the 1-day workshop significantly improved staff confidence in using the skills, with a large effect size ($d = 1.85$). Furthermore, the researchers compared these results with a 5-day training session that had similar content but did not use deliberate practice. They found that the 1-day workshop was superior to the 5-day training session in increasing staff confidence.

Deliberate practice builds self-efficacy towards using a skill, which is a predictor of post-traumatic growth, and it increases the likelihood that a person will continue to use the skill in the future (Bandura, 1998). Researchers also found that self-efficacy predicts more

consistent use of health behaviours among health populations (e.g., exercise, dietary changes, medication adherence, smoking cessation) (Bender & Ingram, 2018; Borhaninejad et al., 2017; Brouwer & Mosack, 2012; Fridberg & Gustavsson, 2019; Lepore et al., 2019; Pan et al., 2009). There are some studies that also show a similar pattern between self-efficacy and self-care in student samples (Callaghan, 2003; Greene et al., 2017), although research on non-health populations is scarce. In addition, self-efficacy has also been shown to predict better coping and less stress during difficult tasks (Kiekens et al., 2020; Sawatzky et al., 2012; Van Zyl & Dhurup, 2018). For example, Lannin et al. (2019) examined counselor self-efficacy and physiological markers of stress among students who were asked to discuss a personally relevant issue with a student "client" in a mock counselling session. The researchers found that students who had higher self-efficacy had lower blood pressure as the session approached compared to students who did not have self-efficacy in their skills (Lannin et al., 2019). Again, it is not enough to *know* self-care strategies; in order to master a skill, practice, feedback, and reflection are required.

Moreover, in my Study 1, the consistent use of self-care helped to integrate self-care values into students' identities as people. It is possible that identifying not only as a student, but also as a *person* with values, may make it easier for students to balance program stress with self-care, particularly when students experience difficult thoughts or feelings as they go through their programs.

The Process of Change

My grounded theory demonstrates that the process of change in self-care is discontinuous and non-linear. Participants moved forward and backward through phases in the model, attempted multiple phases multiple times, had to re-learn lessons of earlier stages,

and sometimes began the process all over again from the start with a new Wake-Up Call. None of these moves were "setbacks" or "failures," but rather part of the process of developing valued self-care identities. Research on health behaviour change recognizes that behaviour change is non-linear (e.g., Skalski & Hardy, 2013) and it often involves "quantum leaps" (Resnicow & Vaughan, 2006, p. 3) and epiphanies (Miller & C'de Baca, 2001). Identifying this nonlinear process of change is an important theoretical contribution to this research niche, as it indicates that future researchers must include expectations for nonlinearity in their methodology, analysis, and interpretation.

Moreover, as mentioned previously, the negative cases raise the possibility that early socialization may play a role in self-care utilization. This suggests that previous experiences with self-care are important for understanding more fully students' current self-care experiences. As such, rather than viewing self-care in a time-limited snapshot (e.g., by quantifying the amount of self-care that is currently used), future researchers should study how former life experiences impact current self-care decisions.

Study Limitations

My Study 1 was limited in several ways. First, the participants predominantly self-identified as women. Thus, the results underrepresent the perspectives of men and lack generalizability to men who are health students. Second, the majority of participants identified as Caucasian. This limits the generalizability of the findings to students who identify with other ethnic or cultural backgrounds or who experience additional stressors, such as structural racism. Third, I recruited participants only from the U of S; as such, the findings are confined to the experiences of students at this university. I discuss these limitations further in my general discussion as they apply to my dissertation as a whole.

Study Strengths

My Study 1 had several strengths. Grounded theory allowed me to generate a nuanced understanding of the process of using self-care from the lived experiences of health students. A rich understanding of this process would not be generated using quantitative methods, which dominate self-care research (e.g., clinical intervention studies, correlational studies that examine the relation between stress, health, and coping). In addition to the methodology employed, I was able to recruit a relatively homogenous sample in terms of age and profession. The ages of participants ranged from 20 to 46 years of age, which adds to the generalizability of my results across students of diverse age. This is important because, although values are fluid and change across the lifespan (e.g., Gouveia et al., 2015), this change generally slows down after age 30 (Costa & McCrae, 2006). However, there are age-related value trajectories. For example, existence values (e.g., health, stability, survival) increase across the lifespan (Gouveia et al., 2015). To cancel out age-related value differences across participants, gathering a diversity sample with respect to age was advantageous in generating a comprehensive and generalizable theory.

Another strength is my recruitment of participants from a diverse range of health programs. In contrast, much of the existing research studies niches of health students. Although clumping together students who are in different health programs can overlook program nuances, my creation of a saturated theory using a diverse sample of health students suggests that there are important similarities among students, and it suggests potential inter-disciplinary collaboration in fostering better self-care between health professions. Finally, as my theory is based on students' experiences, it is useful for developing a user-informed intervention, which is the focus of my Study 2.

Chapter 3: Study 2

Using My Study 1 Grounded Theory to Inform Study 2

My Study 1 grounded theory provided an empirically testable map for intervening in self-care practices among health students, many points of which are consistent with previous research and theory in this area of work (e.g., Cummings, 2015; Eyal et al., 2009; MacLean et al., 2017; Pakenham, 2015a; Pakenham, 2015b; Pakenham, & Stafford-Brown, 2013; Stafford-Brown & Pakenham, 2012). My Study 2 does exactly this, by quantifiably testing an intervention, *Values-Based Self Care* (VBSC), which I developed in collaboration with my advisor. The intervention was based on the teachable points from Study 1, previous theoretical work, and Acceptance & Commitment Therapy (ACT), a psychotherapeutic intervention that also uses values as a guiding principle. Values and committed action were targeted throughout the intervention by use of researched and commonly used tools from ACT (e.g., values bullseye). In the spirit of grounded theory's focus on being grounded in the data, in the intervention, I used in-vivo language when describing self-care strategies and, throughout the sessions, I differentiated between ACT-derived activities and the strategies that emerged from my grounded theory.

In this literature review, I begin by discussing previous literature on self-care interventions for health students and what they have found. Next, I provide the reader with an overview of ACT more broadly, and then focus on values and committed action, including how they have been used in self-care interventions. Based on my grounded theory findings, I then review an area of work that has yet to be explored in the context of self-care: self-esteem. In these sections, I review research supporting the relationship between these variables, self-care/health behaviours, and health outcomes.

Self-Care Interventions for Health Students

There are only a few researchers who have evaluated self-care interventions specifically for health students. Many of these interventions provide educational content about self-care, and they range from 1 to 15 sessions (Ball & Bax, 2002; Greene et al., 2017; Ward et al., 2018), with some being incorporated into the training curriculum as a course (McGrady et al., 2019). Education about self-care includes several topics such as the benefits of self-care and consequences if it is not used, how to identify burnout, stress management techniques, open discussion, and experiential learning. These studies have shown increases in self-care knowledge (Greene et al., 2017) and self-care practices (e.g., sleep, exercise); however, they have produced mixed results in reducing stress and burnout (Ball & Bax, 2002; Ghannam et al., 2019; Greene et al., 2017; McGrady et al., 2019).

Other researchers have evaluated mindfulness-based self-care interventions (Cheli et al., 2019; Christopher & Maris, 2010; Gockel et al., 2013; Napoli & Bonifas, 2011; Schure et al., 2008). These interventions have ranged from brief sessions lasting 10 minutes each week for 9 weeks to longer interventions (16 sessions/3-hours each) (Gockel et al., 2013; Phang et al., 2016; Napoli & Bonifas, 2011; Shapiro et al., 2007). Researchers have found that mindfulness-based interventions across at least four sessions produce significant reductions in stress and burnout, greater use of mindfulness and general self-care (e.g., sleep, social support), and better mental health (Cheli et al., 2019; Greeson et al., 2015; Napoli & Bonifas, 2011; Phang et al., 2016; Shapiro et al., 2007). Moreover, there are also ACT-based self-care interventions, which I discuss in the next section.

There are several methodological strengths of this body of research. First, researchers do emphasize evidence-based strategies for self-care that have been found to decrease stress

and promote health. Second, there are some longitudinal studies that examine outcomes before and after the intervention. This allows researchers to examine the effects of their interventions over time and in real-time in the context of program demands.

Despite some strengths, research on self-care interventions for health students has several limitations. First, researchers often measure outcomes that are either health-related (e.g., stress, anxiety) or other variables that likely affect self-care utilization (e.g., self-care knowledge) (Goudarzian et al., 2018; Greene et al., 2017). As such, they often do not measure actual behavioural changes, and this moves research away from evidence-based practice since we do not know the impact on actual self-care behaviour. Second, this research is limited in scope as we know that the benefits of self-care are not activity specific (Colman et al., 2016). Many researchers select self-care strategies in advance (e.g., meditation, sleep). Focusing on certain health behaviours excludes other self-care strategies that students are using, not captured in these studies. Third, some studies do not randomize participants into groups (Cheli, et al., 2019; Gockel et al., 2013). This makes it difficult to know whether there were any pre-group differences that might bias the findings. Fourth, some studies do not use a control group (Phang et al., 2016), and this makes it difficult to know if the changes were due to the intervention.

Acceptance and Commitment Therapy

Acceptance and Commitment Therapy (ACT) is a model of human functioning and adaptability that can be applied to a wide range of issues, both clinical and non-clinical (Hayes et al., 2012). According to ACT, pain is an inherent part of living that arises when people do not readily adapt to their internal and/or external environments (Hayes et al., 2012). As such, ACT aims to increase people's psychological flexibility, which refers to the

ability to be in the present moment, be open to all experiences, and to take actions that are consistent with values (Hayes et al., 2012). When people are psychologically *inflexible*, they attempt to avoid unwanted thoughts, feelings, and sensations (Flynn et al., 2016). The unwillingness to remain in contact with private experiences and the attempt to, consciously or unconsciously, alter them is called experiential avoidance (Hayes et al., 2012).

To increase psychological flexibility, ACT uses six core processes: present-moment awareness, defusion, acceptance, self-as-context, values, and committed action (Hayes et al., 2012). While each process is related to the other, there is also a more intimate relation between certain pairs of processes, which are conceptualized as three response styles: open response style (i.e., defusion and acceptance), centered response style (i.e., present-moment awareness and self-as-context), and engaged response style (i.e., values and committed action) (Hayes et al., 2012). I will briefly comment on the open and centered response styles, and then focus on an engaged response style given its emphasis on values.

An open response style is comprised of two core processes: defusion and acceptance (Hayes et al., 2012). Defusion entails stepping back and detaching oneself from thoughts, and allowing them to come and go (Harris, 2009). Defusion helps a person to let go of excessive contact with distressing and uncomfortable experiences, allowing for greater openness to them. A related process, acceptance, involves allowing difficult feelings, sensations, and emotions to surface without trying to control them (e.g., by resisting or escaping them) (Harris, 2009). Overall, an open response style helps people to adopt an attitude of curiosity and openness to the range of human experiences (Hayes et al., 2012).

It is not possible to be open and engaged in life without also being centered in the present moment (Hayes et al., 2012). This second response style, a centered response, is

comprised of two core processes: present-moment awareness and self-as-context (Hayes et al., 2012). Present-moment awareness involves conscious awareness and connection with the social, physical, and psychological aspects of life (Harris, 2009; Hayes et al., 2012). Self-as-context is the observing part of ourselves that is aware of what we are thinking, feeling, or doing (Hayes 2009; Hayes et al, 2012). A centered response style involves making contact with all aspects of the self as it occurs in the present moment (Harris, 2009).

To give meaning and purpose to one's experiences and actions, an engaged response style is imperative (i.e., values and committed action) (Hayes et al., 2012). Values provide meaning and purpose to behaviour; they are core components in ACT that make the other processes meaningful; acceptance, defusion, and so on are not ends in themselves, but are meant to ultimately clear the path for a valued living (Hayes et al., 2013). Values are what we want our lives to be about, what we stand for, and what matters to us (Harris, 2009). As such, values provide people with a sense of meaning and purpose in life (Hayes et al., 2013).

First, it is important to differentiate values from goals. Values do not have a destination as goals do; rather, they *guide* the direction of actions (Trindade et al., 2016). That is, one never "arrives" at a value as one does a goal. For example, a person who values being a caring friend can express this value in a variety of ways; however, no matter how much it is shown, there are always additional opportunities to be a caring friend (Hayes et al., 2012). Values are an ongoing and continuous process, and rather than having an endpoint, they act like a compass that directs us to behave in a way that we want (Harris, 2009; Hayes et al., 2013). It is not unusual for people to refine, prioritize, or change their values as they experience life transitions (e.g., psychological maturation, parenthood, natural disasters) (Hayes et al., 2012; Lonnqvist et al., 2018; Milfont et al., 2016; Oishi et al., 2017).

Since people individually define their values according to what is important to them, values are freely chosen, and as such, they are intrinsically motivating and contribute towards a full, meaningful life (Hayes et al., 2012; Trindade et al., 2016; Wilson et al., 2010). When actions have inherent meaning to people, it becomes more likely for them to consistently engage in that pattern of behaviour due to the positive consequences of value-consistent living. Over time, the value-based actions become rewarding and they reinforce future behaviour (Dahl & Lundgren, 2006). In contrast, when a person is attempting to create behavioural changes that are not based on their own values (e.g., when behaviour is motivated by avoidance or social compliance), this does not reinforce the behaviour and therefore is unhelpful for establishing lasting behavioural change (Hayes et al., 2013).

Committed action is an extension of values, and it refers to the actions (behaviour) taken that are consistent with and help people to live closer to their values (Harris, 2009). Whereas values speak to where we want to go, committed action is the observable steps we take to move toward where we want to go (Stoddard & Afari, 2014). It is important to note that the process of engaging in committed action does not always feel pleasant; it can elicit a range of thoughts and feelings, both pleasant and unpleasant (Hayes et al., 2012). For example, being there emotionally for a child while he or she undergoes surgery is difficult and raises terrifying vulnerabilities; yet, the decision to act with love and support is an important and meaningful action that displays the parent's unconditional love for their child (Hayes et al., 2013). A metaphor that is often used in ACT to illustrate this idea is that committed action involves driving one's "life bus" no matter which "passengers" come on board (e.g., fear, anxiety, etc.) (Hayes et al., 2012, p. 250).

Philosophical and Theoretical Underpinnings of ACT

ACT is based on a pragmatic philosophy of science called functional contextualism, which aims to understand the function of behaviour in its context, along a continuum from external events that are observable (e.g., walking to the store) to those that are internal (e.g., thoughts, feelings, body sensations) (Boone et al., 2015; Hayes, 2004). Since behaviour must be understood within its contextual parameters, what constitutes as truth is not absolute, but changes depending on the situation (i.e., pragmatic truth criterion) (Boone et al., 2015; Polk & Schoendorff, 2014). Functional contextualists argue that, while no knowledge is undoubtedly true, it can be used for practical purposes to help people to move towards valued living (Boone et al., 2015; Hayes, 1993).

ACT is rooted in a type of functional contextual theory of language and cognition called relational frame theory (RFT) (Hayes et al., 2012). Broadly, RFT is interested in the function of language, specifically how it guides human behaviour, and in turn, how it impacts people's wellbeing (Hayes et al., 2012). Rather than focusing on the accuracy of language itself, RFT is more concerned with the degree to which language is helping people to move in the direction that they want to go in life (Polk & Schoendorff, 2014). Consistent with the overarching aim of functional contextualism to find behaviours that help people to move in a desired direction, RFT extends this idea by looking at the function of language in shaping behaviour (Hayes et al., 2013). If people become cognitively fused with language, it can begin to control their behaviour in ways that move them away from their values (Hayes et al., 2012). Consider a person who has had a frightening encounter with a dog. If this person becomes fused (stuck) with the thoughts and feelings associated with being around

dogs, they might avoid leaving the house in order to avoid encountering a dog. This emphasis on pragmatism and workability underpins ACT.

ACT and Health Outcomes

Given that ACT adopts a transdiagnostic approach, it is generalizable to a range of mental health concerns in both clinical and non-clinical contexts (Swain et al., 2015). The research base for ACT may be viewed as in its infancy, especially when compared with more established therapeutic orientations (e.g., CBT). However, since the initial publication of ACT in 1999, there has been a growing body of literature in support of ACT on a variety of health outcomes (Hayes et al., 2006; Öst, 2014). This research is reviewed below.

Mental Health. Researchers have explored the utility of ACT and mental health outcomes across a range of presenting problems, using different methodologies, as well as intervention modalities (e.g., individual and group, self-help, web-based; e.g., French et al., 2017; Kohtala et al., 2017; Levin et al., 2017; Levin et al., 2014). There is a small body of research exploring the impact of ACT on students' mental health, most of which examines online interventions (Dixon et al., 2016; Juncos & Markman, 2016; Levin et al., 2014). For example, Levin et al. (2017) examined the effectiveness of a six-session, computer-based ACT intervention for mental health concerns in college students ($N = 79$). Compared to the waitlist condition ($n = 39$), students who were randomized to the ACT intervention ($n = 40$) showed post-intervention improvements in distress, general and social anxiety, depression, and stress (effect sizes ranged from $d = .39$ to .69). Notably, most students participated for psychology course credit, rather than to receive psychological help. This might explain why there was a completion rate of only about 55%. It is possible that there are differences between people who are seeking psychological help versus participating in a clinical research

study to receive course credit. Furthermore, some researchers have found that ACT reduces stress and burnout among professional samples, including those reporting at least moderate stress (e.g., Abdollah et al., 2015; Ahtinen et al., 2013; Wersebe et al., 2018). In addition, researchers have documented the benefits of ACT on improving general mental health outcomes including life satisfaction and self-compassion (Lappalainen et al., 2014; Räsänen et al., 2016; Wersebe et al., 2018).

Researchers have found that ACT benefits mental health using relatively brief interventions (ranging from four to eight sessions). For example, Bohlmeijer et al. (2011) examined the efficacy of an eight two-hour weekly ACT intervention in a sample with mild to moderate depression. Compared to the waitlist control group, post-intervention, there was a medium effect size for depression (d = .60) and at a 3-month follow-up (d = .63) (Bohlmeijer et al., 2011). However, a limitation of this study is that the researchers relied on a self-report measure of depression and no clinician ratings. Additionally, the researchers did not account for the use of psychopharmacological interventions, which may be a confounding variable.

Using an even briefer intervention, Kohtala et al. (2015) examined a four session ACT intervention that was delivered by Masters level psychology student for self-reported depressive symptoms in adults. Compared to participants in the wait list group (n = 29), participants who received an ACT intervention (n = 28) showed decreases in symptoms of depression by 47%, as measured using the Beck Depression Inventory (BDI); in comparison, the wait list group's depression scores decreased by 4% across the wait period (Kohtala et al., 2015). These benefits were maintained at a 6-month follow-up. Moreover, in a later study, Kohtala et al. (2017) found that treatment gains from this four session ACT

intervention were maintained at a five-year follow-up, with 40% of participants reporting minimal to no depressive symptoms as rated by the BDI. While there are limitations of this research (e.g., the reliance on self-report measures, self-selection bias), these results speak to the cost-effectiveness of delivering brief ACT interventions.

Moreover, researchers have also found that ACT is effective for a number of clinical mental health concerns, when compared to placebo or control conditions. Hacker et al. (2016) conducted a meta-analysis on research conducted from 1989 to 2015 on depression and anxiety outcomes specifically. The literature search identified 28 and 39 randomized controlled trials on ACT for anxiety (n = 1,628) and depression (n = 1,987), respectively (Hacker et al., 2016). Results showed that the cumulative pooled effect sizes or ACT for anxiety ranged from d = .45 to d = .95, and d = .54 to d = .92 for depression (Hacker et al., 2016). These data suggest that ACT shows at least moderate group effects for anxiety and depression. Using the criteria initially developed by the APA Division 12 Task Force, Öst (2014) concluded that while ACT is not a well-established treatment for any disorder, it is *possibly* efficacious for concerns including depression, anxiety, and stress at work. Although ACT has not been demonstrated to be an established treatment from a strict research stance, this does not mean that it necessarily lacks clinical utility from an evidence-based practice perspective that is inclusive of client preferences.

Research on ACT has several methodological flaws. First, effect sizes vary according to the methodological rigor used by researchers. Hertenstein and Nissen (2015) examined the effect sizes found in the meta-analyses conducted by A-Tjak et al. (2015) and Öst (2014) and found several methodological reasons for the discrepancy in effect sizes. For example, A-Tjak and colleague used stricter exclusion criteria, and therefore their meta-analysis included

39 studies (versus 60 studies used in Öst's 2014 meta-analysis). In addition, since A-Tjak et al. (2015) excluded studies that had poorer methodological rigor, this likely contributed to their finding of medium (versus small) effect sizes. Finally, Hertenstein and Nissen (2015) suggest that using a conservative approach when calculating effect sizes may further account for differences in effect sizes across meta-analyses.

Second, meta-analyses and systematic reviews examine the efficacy of ACT across a range of presenting problems. This variability across studies in the types of problems that are explored makes it difficult to draw conclusions across such a heterogeneous body of literature. Third, many researchers combine ACT with other empirically supported treatments or components (Öst, 2014). In the meta-analysis conducted by Öst (2014), approximately 34% of the 60 examined studies used components or other treatments aside from ACT (e.g., combining ACT with habit reversal training or other behavioural techniques that are not ACT). If a dismantling design is not used, then it is difficult to establish that ACT is the primary cause of such effects. Additional methodological problems include the use of underpowered studies and inconsistencies in how participants are diagnosed (i.e., the gold standard being an established interview schedule and assessing inter-rater reliability; Öst, 2014). These methodological issues not only suggest that we interpret the results of these studies cautiously, but it also makes it difficult to draw conclusions across studies and other evidence-based intervention research.

Physical Health. In comparison with mental health, there is much less research on ACT and physical health outcomes. In this area of research, chronic pain has received the most attention (e.g., Ruiz, 2010; Vowles et al., 2011; Wicksell et al., 2008). Dahl et al. (2004) examined a brief ACT intervention comprising of four, 1-hour weekly sessions for

public health sector workers ($N = 19$) who had chronic pain and were at risk for taking sick leave. An additive research design was used that compared two groups: ACT with medical treatment as usual ($n = 11$) and medical treatment as usual ($n = 8$). Compared to treatment as usual, participants who received the ACT intervention showed a reduction of sick day usage by 91% and required fewer medical resources at post-intervention and at a 6-month follow-up. No significant differences were found in pain, stress, or quality of life. While this study used a small sample size that was drawn from one work context, it points to the utility of ACT for reducing long-term disability and thereby better management of chronic pain. Other research shows that brief ACT interventions also improve pain severity and pain tolerance (e.g., Nasiri & Kazemi-Zahrani, 2015; Vowles & McCracken, 2008; Vowles et al., 2009).

Outside of chronic pain, researchers have explored the utility of ACT for improving health behaviours and outcomes among people with diagnosed medical conditions and who are at risk for future health problems. Hawkes et al. (2013) examined a telephone ACT intervention delivered to people who were in remission for colorectal cancer ($N = 410$). The intervention consisted of 11 telephone sessions over 6 months that used ACT principles to target physical activity, weight management, dietary habits, and substance use. Results showed that, at 6 months, participants experienced a significant increase in physical activity, improved diet, and reduced body mass index. Furthermore, except for dietary improvements, these gains were maintained at 12 months (Hawkes et al., 2013). Smoking cessation is another area that demonstrates the effectiveness of ACT in improving lifestyle choices and health (Bricker et al., 2014; Hernandez-Lopez et al., 2009). Overall, although research is limited, it provides some evidence for the usefulness of ACT in improving the lifestyle and outcomes among people who are vulnerable to poor health.

Self-Care. ACT has been used to inform self-care interventions for health students. There is diversity in the length (ranging from 4 to 12 weeks) and content of these interventions, which have included didactic teaching, experiential learning, role-plays, group discussions, and online modules (e.g., Pakenham, 2015b; Pots et al., 2016). What is consistent across studies is that researchers incorporate all six core processes into self-care interventions, which I describe in detail below.

Stafford-Brown and Pakenham (2012) evaluated an ACT-based self-care group intervention among a sample of clinical psychology students ($N = 56$). The intervention comprised of four 3-hour weekly sessions, and each group comprised of five to 11 students. The intervention provided a broad overview of ACT, the six core processes involved in psychological flexibility, and how to use these processes to promote wellness. The aim of Session One was to provide an overview of ACT and its theoretical framework, and to introduce psychological flexibility and mindfulness as alternatives to experiential avoidance. Session Two introduced mindfulness, how to build acceptance by defusing thoughts, making contact the observing-self, and discussing problems with attachment to the conceptualized self. The aim of Session Three was to promote willingness to contact difficult internal experiences, clarify values, and discuss barriers to valued living. Session Four aimed to identify professional values, value-directed goals and barriers, and to introduce self-compassion (Stafford-Brown & Pakenham, 2012). Relative to the control group, post-intervention participants showed improvements on the ACT processes, less stress, greater counseling self-efficacy and ability to build report with clients, and self-compassion. These treatment effects were maintained at a 10-week follow-up.

In a follow-up study to these findings, Pakenham and Stafford (2013) evaluated the same sample of students' perceptions of this intervention ($N = 44$, approximately 79% of the original sample). When asked about the personal and professional usefulness of the program, the mean scores using a 5-point Likert scale (1 = not at all useful, 5 = very useful) showed that many participants found it useful personally ($M = 3.98$) and professionally ($M = 3.86$; Pakenham & Stafford, 2013). Moreover, the majority of participants (77 to 89%) reported substantial improvements on each ACT process (range = 3.45 to 3.59; 1 = no improvement, 5 = huge improvement). For example, one participant said, "Being in the present moment has helped me get through some stressful moments as a student" and, in relation to the importance of valued living, another participant said, "I feel this is significant both personally and professionally as I think my values are critical to my work as a therapist" (Pakenham & Stafford-Brown, 2013, pp. 60-61). The majority (81%) of participants reported that they would recommend the program to other students and that it should be offered to new clinical students in training (Pakenham & Stafford-Brown, 2013). Overall, students report personal and professional benefits from learning about ACT and they recognize how stress and personal functioning can impact their training and clinical work.

Pakenham (2015c) then modified this intervention to target self-care specifically. The intervention consisted of 12 weekly, 2-hour groups with clinical psychology students ($N = 66$) that included a discussion on stress and burnout, experiential learning about how to apply ACT strategies, modelling by the group facilitator on using ACT to promote self-care, and homework that provided an opportunity to practice the learned material. Students were also encouraged to create a self-care plan. Pakenham (2015c) found that participants found this training helpful in developing self-care habits and they reported greater efficacy in using

self-care, confidence in managing stress related to clinical training, and greater awareness into the importance of using self-care. In addition, approximately 74% of participants reported one or more positive behavioural changes in their self-care habits as a result of attending the course. The most frequently reported self-care changes were related to ACT's core processes, with present-moment awareness (42.9%), regular mindfulness meditation (40.5%), and regular use of defusion techniques (35.7%) being the top three self-care changes in students (Pakenham, 2015c). Other self-care changes included lifestyle modifications (e.g., increased exercise, socialization, and self-compassion) (Pakenham, 2015c). Pakenham (2015c), however, argued that stronger connection to values and committed action likely fostered many of the changes in lifestyle habits. This was evidenced by students' responses to open-ended questions. For example, when asked what was most helpful about the course, one participant replied, "The values work has been critical – many of my values align with my self-care activities so choosing to take valued action [was the most helpful aspect of the course]" (Pakenham, 2015c, p. 7).

When asked for feedback about modifications to the program, 28% of the sample suggested changes, with the most frequently reported change being to offer the course in the first semester of the first year of training (48%) and to have a greater focus on experiential learning (37.5%) (Pakenham, 2015c). Students agreed that this program should be part of clinical training ($M = 4.39$, $SD = .73$) and 94.4% reported that they would recommend the program to other students. Overall, the results from this study suggest that ACT can help to promote greater engagement with self-care and efficacy in using self-care among clinical psychology students, and that students are open to this form of self-care training.

In addition, ACT-based self-care interventions have been found to help students adjust to the demands of training (Pakenham, 2015a; Pakenham & Stafford-Brown, 2013; Stafford-Brown & Pakenham, 2012). Pakenham (2015b) explored the relation between ACT processes (i.e., mindfulness, acceptance, values, and defusion) and adjustment, which was operationalized as lower stress and greater life and clinical training satisfaction, in a sample of clinical psychology students (N = 116). Pakenham (2015b) found that ACT explained a significant amount of variance in all adjustment outcome variables, with thought suppression, values, and acceptance emerging as significant predictors of at least one outcome. While this correlational data cannot imply causation, it highlights the utility of ACT-based self-care training programs on helping students to adjust to training demands.

A more recent study examined an online ACT program for mental health in a large sample of undergraduate university students (N = 1,162) (Viskovich & Pakenham, 2018). The program, called *YOLO*, was a 4-week online course that targeted the six ACT processes. To increase engagement, *YOLO* began with a values and committed action module (Module One), and then discussed defusion (Module Two), acceptance (Module Three), and finally mindfulness and the observer self (Module Four). The researchers found that, compared with the waitlist group, participants who received the intervention showed significant post-intervention changes in depression, stress, anxiety, well-being, self-compassion, life satisfaction, and academic performance. These gains were maintained at a 12-week follow-up (Viskovich & Pakenham, 2018). This study shows that a brief, online ACT intervention can produce several lasting mental health benefits among university students.

Limitations of ACT Interventions for Self-Care. There are two main limitations of the research on ACT and self-care. First, ACT-based self-care interventions for health

students focus on clinical psychology students in Australia (Pakenham, 2015b; Pakenham, 2015c; Pakenham, & Stafford-Brown, 2013; Stafford-Brown & Pakenham, 2012; Viskovich & Pakenham, 2018). This is an understudied area because health students who are not in clinical psychology programs experience similarly high stress levels and health concerns. In addition, this narrow focus on clinical psychology students in Australia limits the generalizability of these findings to students in other geographical contexts. ACT has been a useful framework for reducing stress and improving health in several health and non-health occupations, including managerial and technical positions (e.g., Brinkborg et al., 2011; Bond & Bunce, 2000; Frogeli et al., 2018; Hosseinaei et al., 2013; Waters et al., 2018), suggesting that it likely has utility as a broad framework that is generalizable to students in different programs and across geographical locations. Second, interventions incorporate all six ACT processes, leading to longer programs that require multiple sessions (Pakenham, 2015b; Pakenham & Stafford-Brown, 2013). Such commitment might be difficult for busy health students who report time as the biggest barrier to self-care (Bettney, 2017; El-Ghoroury et al., 2012; Givens & Tjia, 2002; Pakenham & Stafford-Brown, 2012). Thus, it is imperative to study more brief, focused formats of such an intervention.

To create a shorter, more accessible training tool, it would be advantageous to evaluate the impact of a single ACT response style in isolation. Given the central role of values in formulating effective self-care plans across diverse health students in my Study 1, I suggest that values and committed action have utility beyond clinical psychology students and must be evaluated in a more heterogenous sample of health students. To my knowledge, there are no component studies that examine a single ACT response style on self-care. Doing so is important because if we find the same effect with only two processes of the

psychological flexibility model, this is a more effective strategy especially given the context of a demanding training environment and the barriers to self-care that are reported by students. The next section describes research on the impact of values on stress, health, and self-care. While some of the research studies reviewed below do not entirely adopt an ACT approach, it nonetheless speaks to the important role of values on health.

Values, Self-Care, and Stress. There are minimal studies that explore values and self-care. In studies that do, only pain and goal setting are explored. Nevertheless, since pain management and goal setting both require people to persist in using strategies in the face of challenges and/or discomfort, I argue that these findings have some applicability to self-care. Broadly speaking, this research shows that, when pain and/or goals are couched in the context of people's values, they are more likely to persist in tolerating pain and/or in reaching their goals, respectively (McCracken, 2013; Páez-Blarrina et al., 2008).

In an experimental study by Páez-Blarrina et al. (2008) on values and pain tolerance, the researchers randomly assigned undergraduate students ($N = 30$) to either one of three conditions: 1) an ACT-based values protocol wherein participants learned how to couch their pain in their values (e.g., tolerating pain to improve health) and to increase the willingness to contact pain in order to move towards valued directions, 2) a coping protocol wherein participants learned about different coping strategies for pain (e.g., acceptance, defusion, thought suppression), or 3) an untrained condition wherein participants did not receive any intervention (Páez-Blarrina et al., 2008). After receiving the respective intervention, if any, all participants went through a pain task, which involved a visual stimulus (nonsense syllables and a red asterisk) that was shown on a computer screen. Simultaneously, participants received administrations of electric shocks, after which time they were asked to

rate how painful the shock was using a visual analogue scale. They then had an opportunity to choose either to continue or finish the task (Páez-Blarrina et al., 2008).

The researchers found that the participants who received the ACT values condition tolerated a significantly greater number and magnitude of shocks compared to participants in the coping and untrained conditions. In addition, they found that compared to the untrained group, participants in the values and coping conditions reported significantly less pain; however, these conditions were equal in terms of self-reported pain. Finally, compared to the other conditions, participants in the ACT values condition were able to continue with the pain task despite reporting "very much pain" (Páez-Blarrina et al., 2008). These findings suggest that values are superior to coping strategies in helping people to disconnect from uncomfortable internal experiences in order to persist through difficult tasks.

Reflecting on values and the extent to which one is living in accordance with values can influence later behaviour and goal achievement. Chase et al. (2013) evaluated an online goal setting program, with and without a values component, on undergraduate psychology students' (N = 132) academic performance. The researchers found that when undergraduate students reflected on the values that underpinned their educational goals, they reported better academic success over the semester in comparison to students who were only taught how to set goals or who were in a waitlist condition (Chase et al., 2013). In another online study, Engle and Follette (2018) explored the impact of values on charitable donations. The researchers randomly assigned participants to one of three conditions. The *basic values identification* condition asked participants to write about a value and then rate the importance of charity-related values. The *values plus rating value consistent behaviour* condition involved writing about values, and then rating how closely their recent behaviour matched

these values. Finally, in the control condition, participants were asked to write about time management. The researchers found that, compared to the control condition, both values conditions increased the likelihood that participants would engage in valued action (i.e., donating to a charity) later on. Overall, this research highlights the importance of knowing how and why goals are important. This connection with values seems to increase the likelihood of reaching them.

Moreover, there is a small body of research that examines values-articulation exercises and student stress. Values-articulation (or affirming) exercises help people to identify and/or clarify their values by exploring areas in their lives where they obtain a sense of meaning and purpose (Grumet & Fitzpatrick, 2016). Typically, values-articulation exercises ask people to select their most important values from a list and then write about why these values are important to them (Miyake et al., 2010). Studies show that reflecting on and affirming values can reduce the stress response in students (Creswell et al., 2005; Sherman et al., 2009). For example, Creswell et al. (2005) used an experimental design to examine the impact of affirming values on the stress response among a sample of undergraduate students ($N = 85$). Participants were randomly assigned either to the value-affirmation condition or to a control condition. Both conditions were asked to complete the first part of the Values Questionnaire, which asks respondents to rank five values (i.e., religion, social issues, politics, theory, and aesthetics) according to their personal importance. In the second part of the Values Questionnaire, which asks respondents to reflect on one of the values they rated, the value-affirmation group wrote about their top value, whereas the control condition wrote about their fifth-ranked value (Creswell et al., 2005). After completing the Values Questionnaire, participants were asked to prepare a 5-minute

speech on why they were a competitive applicant for a University administrative position. Next, they rated how stressful they expected the speech to be along with their ability to cope. After delivering their speeches, participants were asked to count aloud backwards for five minutes, during which time they were asked to "go faster" at 1-minute intervals (Creswell et al., 2005., p. 847). Participants rested for 10 minutes, and then provided a saliva sample and rated how stressful, difficult, and threatening the task was. Finally, participants provided two saliva samples at 30 minutes and 45 minutes after the stress task (Creswell et al., 2005).

After controlling for basal cortisol, the researchers found that in comparison with the control condition, participants in the value-affirmation condition showed significantly lower cortisol levels up to 45 minutes after the stress task. In addition, participants in the control condition showed significant increases in cortisol up to 20 minutes after the stress task, whereas participants in the values-articulation group did not (Creswell et al., 2005). These findings suggest that increasing contact and familiarity with values can buffer the negative effects of stress on health by decreasing students' physiological stress response.

Other research converges with the findings of Creswell et al. (2005) by showing that values-affirmation exercises can provide a physiological buffer from academic stress. Sherman et al. (2009) examined the effect of a self-affirmation exercise on undergraduate students' ($N = 49$) stress response to academic stressors. In this study, participants identified their most stressful class for the academic term and then they selected their two most important and two least important values from a list of 11 values (i.e., artistic skills, athletics, business/earning money, creativity, independence, musical ability/appreciation, politics, relations with friends or family, religious values, sense of humor, spontaneity/living life in the moment). Participants were randomly assigned to either a self-affirmation condition or a

no-affirmation control condition. In the self-affirmation condition, participants completed two separate 10-minute writing exercises about why their top two values held personal significance. Participants in the no-affirmation condition wrote about the two values they ranked as least important and why these values might be important to others. To measure stress hormones (i.e., epinephrine and norepinephrine), urine samples were collected at baseline and two weeks prior to students' exam (Sherman et al., 2009).

The researchers found that participants in the no-affirmation condition showed significant increases in stress hormones from baseline to the midterm exam, whereas participants in the self-affirmation condition did not. Moreover, this buffering effect was most pronounced for students who self-reported a higher level of concern about their academic performance (i.e., one *SD* above the mean) (Sherman et al., 2009). These findings suggest that reflecting on highly ranked values provides a physiological buffer from academic stress, and especially so for students who are most psychologically vulnerable. Although this study examined undergraduate students, whose stressors may present differently than professional health students, exploring real-life stressors makes this study more generalizable to other student populations who experience academic sources of stress. In sum, despite these multiple lines of evidence from experimental, correlational, and conceptual research suggesting that values have an important relation to behaviour and stress, there are no component studies exploring an engaged response style on self-care. In the next section, I review research on self-esteem, given my Study 1 findings.

Self-Esteem

Self-esteem is a concept that generally refers to refers to how people think, believe, and feel about themselves (Brown, et al., 2001; Crocker & Wolfe, 2001; Kernis, 2003). Self-

esteem can be conceptualized as both a state and trait characteristic. In comparison to trait self-esteem, which is more stable across time and situations, state self-esteem is unstable and depends upon particular circumstances (Brown et al, 2001; Crocker & Wolfe, 2001). Researchers have described adaptive self-esteem as being both high and stable, and it is associated with better well-being, happiness, coping, and adjustment (Awan & Sitwat, 2014; Baumeister et al., 2003; Dumitrescu et al., 2012; Liu et al., 2014; Li et al., 2014; Makikangas & Kinnunen, 2003; Mann et al., 2004; Orth et al., 2016).

Research has shown that self-esteem plays an important role on health outcomes and behaviours over time. For example, Erol and Orth (2011) conducted a longitudinal study on self-esteem development using eight assessments across a 14-year period in a national sample (N = 7,100; age ranges = 14 to 30 years). At each age, the researchers found that higher self-esteem was related to emotional stability, less risk taking, and better health (Erol & Orth, 2011). Notably, a limitation of this work is that health was measured using a single item; this does not allow for a detailed examination of health (e.g., mental, physical) nor is one item a reliable indicator of health. Nevertheless, the large sample collected and lack of cohort differences in the trajectory of self-esteem strengthens the generalizability of these results. Other longitudinal research shows that, compared with people with high and stable self-esteem, people with low and unstable self-esteem tend to have poorer mental health outcomes, such including depression, anxiety, and negative affect, and they are more likely to use health compromising behaviours (e.g., unhealthy eating, substance use) (Crocker & Knight, 2005; Hill et al., 2011; Lee, Dickson, Conley, & Holmbeck, 2014; Mann et al., 2004; Nordstrom et al., 2014; Orth et al., 2016; Vonk & Smit, 2012).

When people experience fluctuations in their self-esteem, this negatively impacts their ability to effectively manage their thoughts, affect, and behaviour (Aldwin et al., 2011). For example, when self-esteem is variable, people are more likely to engage in impulsive behaviours (e.g., smoking, binge eating) in order to help them quickly soothe their internal discomfort (Crocker & Park, 2004). Moreover, self-esteem is an important internal resource for coping with stress. That is, people with higher self-esteem are more likely to use cognitive and emotion regulation strategies that help them to effectively manage and respond to stress (Mann et al., 2004; Smith & Petty, 1995). Despite the finding that self-esteem plays a role in health behaviours across different age groups and outcomes, to my knowledge there is no research examining self-esteem in the context of self-care utilization.

I now shift my focus to research that informed my decision-making about my Study 2 methodology.

Group Therapy

To reduce onerous participant recruitment and to maximize social support, which my grounded theory suggested is important for developing effective self-care plans, I decided to use a group format. Group therapy is effective for a range of presenting concerns (e.g., stress, coping, anxiety, depression) among university students, with effect sizes ranging from small to large (e.g., Bernhardsdottir et al., 2014; Thorisdottir et al., 2018; Uliaszek et al., 2016; Uliaszek et al., 2018). In order for group therapy to be effective, there must be a group alliance, which refers to the relationships between group members, between group members and therapist(s), and between each group member with the group as a whole (Burlingame et al., 2004; Yalom & Leszcz, 2005). The alliance captures the level of emotional relatedness between group members, a sense of belonging, and allegiance to the group (Barlow &

Burlingame, 2006; Leszcz & Kobos, 2008; Yalom & Leszcz, 2005). While some researchers use the terms alliance and cohesion interchangeably, alliance captures a broader array of interpersonal factors than cohesion, such as having a sharing focus and collaboration between members (Barlow & Burlingame, 2006).

The group alliance is a robust predictor of treatment outcomes (for a meta-review see Burlingame et al., 2018). A strong group alliance facilitates a safe space for group members to disclose meaningful material, in turn allowing for feedback to occur between group members and therapeutic change (Barlow & Burlingame, 2006). In the absence of a strong group alliance, therapy does not occur in a safe, constructive learning environment. This can result in unhealthy communication patterns, including defensiveness and withdrawal among group members (Leszcz & Kobos, 2008). Although evaluating the group process was beyond the scope of my dissertation, it is a vitally important aspect of group therapy.

Control and Comparison Groups in Psychotherapy Research Studies

In deciding how to examine group differences, there were several research design options that I considered: component, no-treatment, and waitlist control groups. I will briefly describe each and then conclude with a rationale for my chosen methodology. First, component studies isolate the effects of particular elements within a larger theoretical framework to understand their impact (Ahn & Wampold, 2001; Levin et al., 2012). To evaluate treatments, component studies often compare the full therapy with a therapy in which one component is left out (i.e., dismantling design) or in which a component is added to the full therapy (i.e., additive design) (Bell et al., 2013). Component studies are advantageous because they utilize strong experimental designs that evaluate the causative relations between therapeutic components (Borkovec & Costonguay, 1998). Although

component studies are considered the gold standard of evaluating whether specific treatment components contribute to outcomes (Ahn & Wampold, 2001), they are often statistically underpowered to capture even small effects sizes (Kazdin & Whitley, 2003). Thus, issues of cost, time, and feasibility are important considerations.

Another design strategy is to use variations of control groups that are then compared to an intervention group. A no-treatment control refers to a group of participants that receive no intervention (Kazdin, 2003). A variation of a no-treatment control group is a waitlist group, in which participants are randomly assigned to a waiting list and then receive the intervention after the wait period. The waitlist group serves as a control, but still receives the intervention; thereby, the waitlist group eventually serves as their own control comparison.

Compared to having no control group altogether, no-treatment and waitlist control groups both protect against threats to internal validity and allow researchers to draw more compelling arguments about treatment effects. However, there are important statistical differences that impact the type of conclusions that can be drawn. Whereas no-treatment control groups limit the researcher to between-group differences (control vs intervention), waitlist controls enable the researcher to examine both between- and within-group (intraindividual) differences. In addition, since participants cycle through both the waitlist and intervention, waitlist control groups enable the researcher to evaluate treatment effects at various times (i.e., beginning of the wait period to post-treatment).

Since participants who are randomized into the waitlist control group also receive the intervention, this makes participant recruitment less onerous (Kazdin, 2003). Furthermore, waitlist control groups are often more ethically sound; rather than withholding treatment altogether, it is delayed. Some researchers have found that participants who are assigned to

waitlist control groups tend to not show significant deterioration during the wait period (e.g., Elliott & Brown, 2002), and this is important for ensuring that any harm done does not exceed the potential benefits. A notable drawback of waitlist control groups, however, are maturity and history effects (Kazdin, 2003). Participants can experience improvements by the end of the wait period, even without intervention. This can muffle the researcher's understanding of true treatment effects.

Evidently, there are several issues that researchers must balance when deciding on group design depending on the type of statistical inferences one wishes to make, resources and time, clinical, and ethical issues. Kazdin (2003) outlines several guidelines for researchers to consider when they are determining group selection. He argues that group selection depends on 1) the interests of the researcher (i.e., the types of claims that could be made at the end of the experiment), 2) internal and construct validity, 3) previous research findings, 4) practical, and 5) ethical considerations. Given ethical and practical considerations, I decided to utilize a waitlist control group. By allowing participants to cycle through both the waitlist and intervention, ethically, this enabled for me to provide the intervention to students with high stress and mental health concerns. Moreover, since participants served as their own control, this design required fewer participants while still reducing threats to internal validity.

Methods

I obtained approval from the University of Saskatchewan (U of S) Behavioural Research Ethics Board to conduct this research study on July 25, 2017 (Beh 17-236).

Participants

Participants who were registered students in health programs were recruited at the University of Saskatchewan (U of S) through advertisements on the U of S website (PAWS), which is a web environment for students, staff, faculty, alumni, and other members of the university community. Participants were also recruited using emails to training administrators and/or directors of clinical programs at the U of S, word of mouth, snowball sampling, and by posting recruitment posters at the U of S and around the Saskatoon community (e.g., hospitals). Potential participants contacted the researcher through a secure U of S research email account (selfcare.research@usask.ca), which was provided within the study's advertisement poster.

Figure 3.2 diagrams the CONSORT flow of the study.[6] One hundred and ninety-one potential participants expressed interest in the study, were provided with information about the study, and were pre-screened for their program name and location. Participants had to be currently registered as a student in a health program and able to attend sessions in-person at the University of Saskatchewan. Of these 191 people, 40 were unreachable for a screening interview, 20 reported that they would be unable to participate due to time constraints, 18 resided outside of Saskatoon, eight were not registered as a student in a professional health program, and six were no longer interested in participating.

A total of 99 potential participants were assessed for eligibility. Participants were excluded from the study if they met screening criteria for current and severe major depressive episode, suicidality, manic/hypomanic episode, agoraphobia, general and social

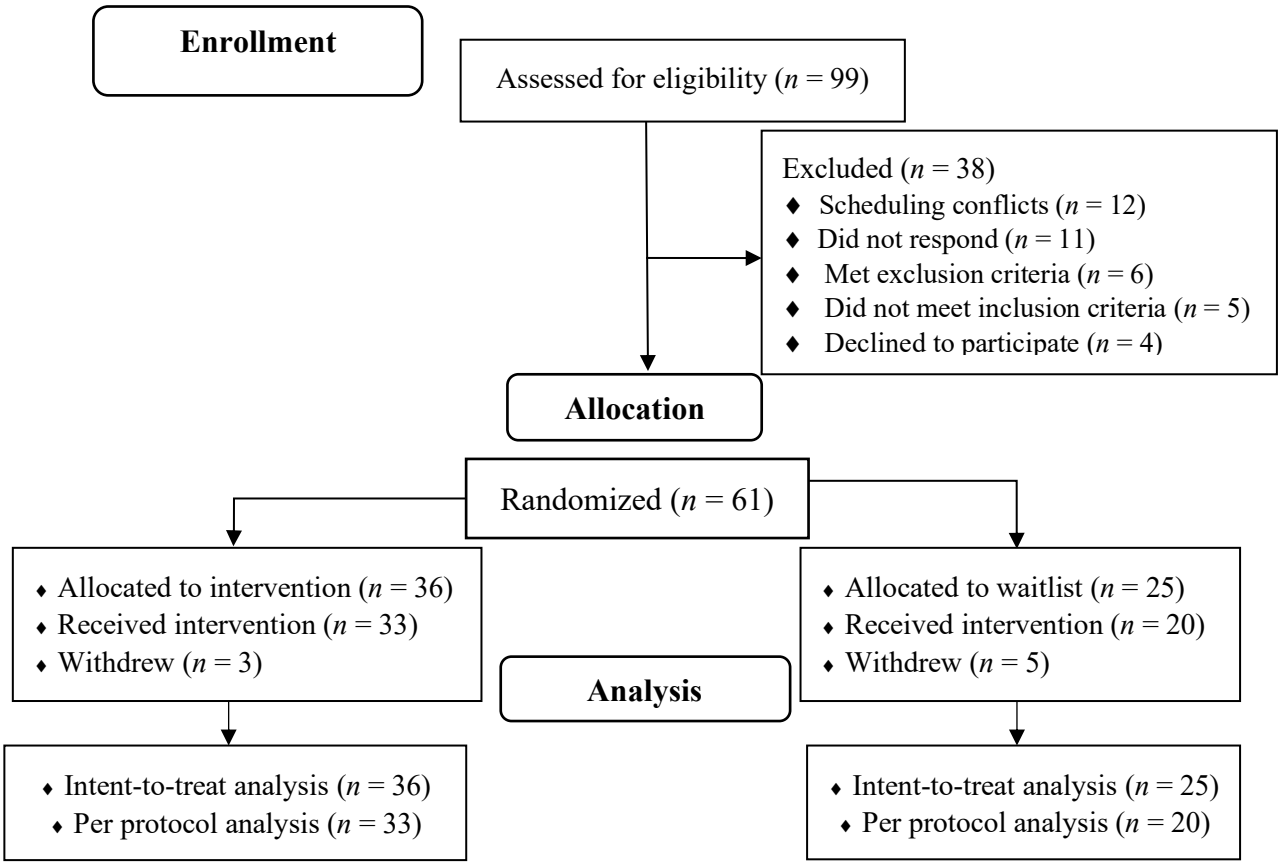
[6] The Consolidated Standards of Reporting Trials (CONSORT) is a standardized way of reporting participation in randomized control trails

anxiety, alcohol/substance dependence/abuse, or psychotic disorders, as assessed using the Mini-International Neuropsychiatric Interview (M.I.N.I.) English Version 5.0 for DSM-IV (Sheehan et al., 1998). Finally, to avoid dual relationships, particularly between Dr. Cummings and students via her role as an instructor and co-Director of Clinical Training for the program, students from the Clinical Psychology graduate program were ineligible.
Of the 99 students who were assessed for eligibility, 38 people were excluded: 12 had scheduling conflicts, 11 were unreachable, six met exclusion criteria (i.e., due to social anxiety, hypomania, and acute suicidality), five did not meet inclusion criteria (i.e., were not health students or residing in Saskatoon), and four declined to participate.

The final sample consisted of 61 participants. This sample included 54 students (89% of the total sample) from a broad range of professional clinical (e.g., medicine, nursing, counselling) and/or research (e.g., vaccinology, community health, animal sciences) health students (e.g., medicine, nursing, counselling). In addition, five students (8% of the total sample) who were in helping (but not health) professions (i.e., law and education) were included as they expressed interest in the group and met the inclusion criteria. This permission was also granted given that students who are in the helping professions experience high stress, mental health concerns, and competitive training environments (e.g., Bergin & Pakenham, 2015) similar to health students. Finally, two students (3% of the total sample) who were in non-health programs (i.e., engineering and linguistics) were allowed to participate as they too met inclusion criteria and expressed substantial interest.

Figure 3.1

CONSORT (2010) Flow Diagram of Study 2



Participant demographics and the complete list of programs and degrees of participants are shown in Tables 3.1 to 3.4.

Table 3.1

Study 2 Descriptive Statistics: Self-Reported Gender

Variable	Intervention	Waitlist	Total
Women	33	21	54
Men	1	4	5
Declined to Report	2	0	2

Table 3.2

Study 2 Descriptive Statistics: Self-Reported Age

Variable	Intervention	Waitlist	Total
Mean Age (*SD*)	28.31 (*9.40*)	32.12 (*10.80*)	29.90(*10*)
Min-Max	19-62	19-67	19-67

Table 3.3

Study 2 Descriptive Statistics: Self-Reported Ethnicity

Variable	Intervention	Waitlist	Total
Caucasian/European	25	15	40
Indigenous Persons	1	2	3
Asian	5	5	10
Hispanic/Latin	2	3	5
Middle Eastern	1	0	1
African American	1	0	1
Declined to Report	1	0	1

Table 3.4

Study 2: Program Characteristics of the Sample

Degree	*N*	Program	*N*
Masters	24	College of Medicine	14
Bachelor	14	Nursing	9
PhD	12	Veterinary Medicine	7
Medical Degree	4	Social Work	6
Post doctorate	2	Pharmacy	5
Doctor of Veterinary Medicine (DVM)	2	School and Counselling Psychology	4
Juris Doctor	2	Nutrition	4
Doctor of Dental Medicine	1	Education	3
		Law	2
		Dentistry	1
		Community Health & Epidemiology	1
		Linguistics	1
		Public Health	1
		Women & Gender Studies	1
		Engineering	1
		Kinesiology	1

Treatment completion was defined as attendance at all group sessions. Fifty-one participants (approximately 84%) attended all group sessions. Eight participants (13%) missed one session, and two participants (3%) missed two sessions. Eight participants (13%) dropped out of the study after randomization but before starting the group, due to time constraints or relocating for clinical practica. After the intervention, 85% of participants completed the post intervention measures.

Research Measures

Participants completed all measures in person and were encouraged to ask questions or share concerns at any time throughout the screening interview and completion of the

questionnaires. This helped to prepare group members, to reduce attrition rates, and to develop rapport. All measures described below, with the exception of the Acceptability Evaluation, were completed before and after the waiting period and group intervention.

Self-Care Frequency

The Self-Care Assessment Worksheet (SCAI) measures the frequency of self-care strategies over the previous month (Saakvitne & Pearlman, 1996) (see Appendix D). The SCAI is comprised of 77 self-care activities that are group into six categories: physical (e.g. eat regularly, get medical care when needed), psychological (e.g., have my own personal psychotherapy, say no to extra responsibilities), emotional (e.g., spend time with people whose company I enjoy, find things that make me laugh), spiritual, (e.g., find a spiritual connection or community, meditate), relationship (e.g., make time to be with friends, spend time with animals), and workplace/professional workplace (e.g., take a bread during the day, identify rewarding tasks). In addition, overall balance is assessed using five items (e.g., "Strive for balance between play and rest").

Items are rated using a 5-point scale, ranging from 0 (*I never do this*) to 3 (*I do this well*). Participants are also able to indicate "?" (*this never occurred to me*), For this study's purposes, the response option, *this never occurred to me*, was omitted since I was only interested in the actual use of self-care. Since the benefits of self-care are not strategy-specific (Colman et al., 2016), and thus no benefit is theoretically incurred by any domain over the others, I used the total (summed) score in my analyses, with higher scores indicating higher self-care utilization (potential range = 0 to 231). In my study, the SCAI total had high internal consistency at each time point (Time 1 $\alpha = .94$; Time 2 $\alpha = .97$; Post $\alpha = .93$).

Professional Self-Care

The Professional Self-Care Scale (PSCS) (see Appendix E) is a 21-item self-report questionnaire that measures five factors of self-care deemed relevant to professional functioning: professional support (five items; e.g., "I cultivate professional relationships with my colleagues"); professional development (five items; e.g., "I find ways to stay current in professional knowledge"); life balance (four items; e.g., "I seek out activities or people that are comforting to me"); cognitive awareness (four items; e.g., "I monitor my feelings and reactions to clients"); and daily balance (three items; e.g., "I take breaks throughout the workday") (Dorociak et al., 2017).

Items are rated using a 7-point Likert scale, ranging from 1 (*never*) to 7 (*always*). Again, because the benefits of self-care have not been shown to be activity specific (Colman et al., 2016), I was only interested in the overall use of professional self-care strategies (rather than specific types). As such, the total score was used in my analyses. Higher scores indicate greater use of professional self-care (potential range = 21 to 147). In previous research, the PSCS shows acceptable internal consistency for subscale and total scores (α ranges from .70 to .80) among health students, and validity with mental health measures (e.g., Maslach Burnout Inventory; Dorociak et al., 2017; Zahniser et al., 2017). In the present study, the PSCS total score had high internal consistency for each time point (Time 1 α = .88; Time 2 α = .94; Post α = .87).

I administered both the SCAI and PSCS as each provide unique data. The PSCS provides more nuanced areas of professional self-care, whereas the SCAI uses a checklist-format to quantify a wide variety of general self-care behaviours. In addition, the PSCS embraces self-care as an ongoing, proactive process that is especially important for

professionals. To ensure that there was not redundancy amongst these measures, I examined the correlation between the Pre intervention SCAI and PSCS scores, which was significant (Pearson r = .65). I expected that these measures would be related; however, the correlation is not high enough to suggest that the inclusion of both measures is redundant.

Self-Care Agency

The Appraisal of Self-Care Agency Scale – Revised (ASAS-R) (see Appendix F) measures self-care agency, which refers to a person's capacity to perform self-care beahviours on their own (Orem, 1995). Self-care agency has been studied in nursing as a framework for improving patient self-care outcomes. For example, research shows that agency plays an important role in the utilization of health sustaining behaviours among patients with chronic health issues (Gharaibeh et al., 2016; Sousa et al., 2010). I tailored the ASAS-R based on the demographics of the sample by omitting items 2 ("If my mobility is decreased, I make the needed adjustments") and 7 ("If I take a new medication, I obtain information about the side effects to better care for myself"), thereby resulting in a modified version including 13-items. Each item was rated using a 5-point Likert scale, ranging from 1 (*totally disagree*) to 5 (*totally agree*). Higher scores indicate greater agency (potential range = 13 to 65). The ASAS-R has excellent internal consistency (α = .90), construct, and convergent validity with other measures of health promoting behaviours among adults in the general population (Sousa et al., 2010). In my study, the ASAS-R demonstrated good internal consistency for each time point (Time 1 α = .84; Time 2 α = .85; Post α = .82).

Emotional Distress

The Depression Anxiety and Stress Scale (DASS-21) is a commonly used 21-item self-report measure of emotional distress over the past week (Lovibond & Lovibond, 1995)

(see Appendix G). The DASS-21 is comprised of three subscales: Anxiety (seven items; e.g., "I felt I was using a lot of nervous energy"); Depression (seven items; e.g., "I felt that I had nothing to look forward to"); and Stress (seven items; "I found it hard to wind down"). Items are rated using a 4-point Likert scale, ranging from 0 (*never*) to 3 (*almost always*). Higher scores suggest greater emotional distress (potential range for each subscale = 0 to 42). The DASS-21 has demonstrated excellent reliability for the subscale scores (α ranges from .80 to .94), shows discriminant and convergent validity with other measures of depression and anxiety, and validity in both clinical and non-clinical samples (Antony et al., 1998; Creedy et al., 2017; Henry & Crawford, 2005; Sinclair et al., 2012). In my study, the subscales had good internal consistency: Stress (Time 1 α = .82; Time 2 α = .84; Post α = .80), Anxiety (Time 1 α = .80; Time 2 α = .78; Post α = .79), and Depression (Time 1 α = .85; Time 2 α = .79; Post α = .76).

Valued Living

The Valued Living Questionnaire (VLQ) identifies personal values and assesses the extent to which people live in accordance with them (Wilson et al., 2010) (see Appendix H). The VLQ is comprised of two subscales. The Importance subscale asks participants to rate the importance of each of 10 domains: family, marriage/couples/intimate relations, parenting, friendship, work, education, recreation, spirituality, citizenship, and physical self-care. Participants rate the importance of each domain using a 10-point Likert scale, ranging from 1 (*not at all important*) to 10 (*extremely important*). Higher scores indicate greater importance of values (Wilson et al., 2010). The Consistency subscale assesses how closely the participants have lived in accordance with these valued domains over the past week. Each domain is rated for consistency using a 10-point Likert scale, from 1 (*not at all*

consistent with my values) to 10 (*completely consistent with my values*). Higher scores indicate greater consistency between values and actions (potential range = 20 to 180).

I calculated and used a Valued Living Composite score in my data analysis. To calculate this, I first summed scores from the Importance and Consistency subscales. Next, I calculated the product of the Importance and Consistency ratings for each valued living domain. Finally, the composite score was calculated by taking the average of these values. Higher Composite scores suggest greater congruence between values and behaviours. The Valued Living Composite score has adequate reliability (α = .71 to.79) (Cotter, 2012; Wilson et al., 2010) and research supports the content and convergent validity of the valued living composite with other ACT processes (e.g., experiential avoidance, distress, mental health, quality of life) (Cotter, 2012; Wilson et al., 2010). In my study, the VLQ had adequate internal consistency (Time 1 α = .74; Time 2 α = .72; Post α = .70).

Committed Action

The Committed Action Questionnaire (CAQ-8) measures the ability to consistently engage in valued actions (McCracken et al., 2015) (see Appendix I). The CAQ-8 consists of eight items (e.g., "I can remain committed to my goals even when there are times that I fail to reach them") that are rated using a 7-point Likert scale, ranging from 0 (*never true*) to 6 (*always true*). Higher scores indicate a greater commitment to value-consistent behaviours (potential range = 0 to 48). Although the CAQ-8 was initially developed for chronic pain, some research demonstrates that it retains its psychometric properties in university students (Gagnon et al., 2017). In my study, the CAQ-8 had good internal consistency for each time point (Time 1 α = .85; Time 2 α = .84; Post α = .80).

Self-Esteem

The Rosenberg Self-Esteem Scale (RSES) is a measure of trait self-esteem (Rosenberg, 1965) (Appendix J). I administered the RSES for exploratory purposes to examine the impact of the intervention on self-esteem. The RSES consists of 10 items that are rated using a 4-point Likert scale, from 1 (*strongly disagree*) to 4 (*strongly agree*). Higher scores represent greater levels of self-esteem (potential range = 0 to 40). The RSES is a psychometrically sound measure that has been shown to have good reliability and validity in university samples (Donnellan et al., 2016; McMullen & Resnick, 2013). In my study, the RSES had adequate internal consistency (Time 1 $\alpha = .71$; Time 2 $\alpha = .81$; Post $\alpha = .77$).

Acceptability Evaluation

The first part of the Acceptability Evaluation questionnaire, which consisted of six items, was adapted from Hillhouse et al. (2008) (see Appendix K). Participants rated the intervention on four aspects: interesting, understandable, useful, and positive. In addition, participants provided an overall rating of the intervention and whether they would recommend the intervention to a friend if it was publicly available. Items were rated using a 0 to 10 Likert scale, ranging from *0* (*not at all*) to *10* = (*extremely*). In the second part, participants were asked about their satisfaction and experience of the intervention by rating their level of agreement on five statements, which were rated from 1 (*strongly disagree*) to 5 (*strongly agree*). Sample items include, “Overall, I am satisfied with this training” and “This training will help me to develop more effective self-care skills.”

Procedure

Screening Interview

To determine eligibility, I met individually with all interested potential participants for a 30- to 45-minute screening interview, which was based on my inclusion and exclusion criteria. All screening interviews were conducted in the VideoTherapy Analysis Lab (ViTAL), located in the Arts building at the U of S. During this time, we reviewed informed consent (see Appendix L) and then completed an interview, which asked about how they heard about the study, what interested them about the study, and what they hoped to gain from the group. This brief interview was primarily completed as part of the larger project that my dissertation is a component of. However, for the purposes of my dissertation, it allowed me to learn about each person's current self-care strategies and to build rapport prior to administering the M.I.N.I. English Version 5.0 for DSM-IV (Sheehan et al., 1998), which I used to screen participants for the exclusion criteria related to psychopathology.

M.I.N.I. The M.I.N.I. (Sheehan et al., 1998) is a widely used, brief (approximately 15 minutes) structured clinical interview that assesses for DSM-IV Axis I psychiatric disorders (Sheehan, 2015; Tolin et al., 2016). It is divided into 17 modules that correspond to each of the diagnostic categories. Each module (except for psychotic disorders) begins with one to two screening questions, to which participants respond either *yes* or *no*. If an affirmative response is given, the interviewer further explores diagnostic criteria by administering the full module questions (Sheehan et al., 1998). The M.I.N.I. has good interrater and retest reliability and it has been validated against longer, commonly used diagnostic interviews including the Structured Clinical Interview for DSM III-R Patients (SCID-P; Sheehan et al., 1998; Tolin et al., 2016). The M.I.N.I. has been previously used as

screening tool for students (Ko et al., 2008; Patel et al., 2017; Zamroziewicz et al., 2017). Moreover, research suggests that the M.I.N.I. is high in sensitivity and specificity, which indicates that it can detect a high proportion of people with a disorder and screen out people without a psychiatric disorder (Sheehan et al., 1998).

However, there are several limitations of the M.I.N.I. that warrant discussion. First, the binary yes/no format of the questions can be constraining for respondents and can limit the quality of the interview data. For example, since there might not be a clear-cut answer, respondents can estimate or guess, leading to biased or invalid results (Pettersson et al., 2018). As such, to maintain interviewee engagement and valid data, I asked for more information when appropriate. In this way, my use of the M.I.N.I. became more conversational and fluid, rather than stale and dehumanized. I believe that this increased the validity of participants' responses as I had background information to clarify their responses. This was especially useful when participants were unsure how to respond.

Second, the specificity of the duration of symptoms, especially when thought about in retrospect, can be difficult for participants to recall with accuracy. It was important for me to establish a positive relationship with interviewees so that they could thoughtfully reflect on the questions, and again so I could gauge when to ask for more information. For example, when asking about social anxiety, a substantial number of students responded *yes* to feeling fearful or embarrassed of being the focus of attention (e.g., public speaking). Asking for more information to determine the intensity and duration of the fear helped to reduce false positives (many participants disclosed that their symptoms fit the context and did not persist). Finally, I emphasized that anything that is culturally normative for them does not count. Table 3.5 reports criteria met on the M.I.N.I. for the entire screened sample.

Table 3.5

Study 2: M.I.N.I. Diagnostic Screening Criteria Met for Entire Screened Sample

Criteria Met	Percentage of Total Sample
Generalized Anxiety Disorder – Current (Past 6 Months)	15
Major Depressive Episode – Current (2 weeks)	4
Major Depressive Episode – Recurrent	3
Dysthymia – Current (Past 2 Years)	3
Suicidality – Low Risk	2
Suicidality – Medium Risk	3
Suicidality – High Risk	4
Manic Episode – Past	1
Hypomanic Episode – Current	3
Hypomanic Episode – Past	1
Panic Disorder – Current (Past Month)	4
Panic Disorder – Lifetime	4
Agoraphobia – Current	4
Social Phobia – Current (Past Month)	1
Alcohol Dependence – Past 12 Months	1
Psychotic Disorders – Lifetime	1
Borderline personality disorder (prior diagnosis)	1
Obsessive-Compulsive Disorder (met criteria)	2
Panic Disorder – Limited Symptom	3
Bipolar II (prior diagnosis)	1

If excluded, students were debriefed (see Appendix M) and thanked for their time. Individuals who were excluded due to severe mental health concerns were connected with other mental health services, either by providing community and/or campus resources, connecting students directly with on-campus mental health professionals if they were high risk, and by safety planning with students who were actively suicidal. Throughout, I received

clinical supervision. Despite being ineligible to participate, participants were exceptionally grateful to be connected with other accessible and affordable services that met their needs. Notably, they were often unaware of services beyond student counselling at the U of S.

Randomization

At the end of each screening interview and in the presence of the participant whenever possible[7], I randomized eligible participants into either to the intervention or waitlist condition using a true random number generator (www.random.org). To randomize participants, I electronically flipped one Canadian coin (toonie) and arbitrarily decided during the design phase of the study that the polar bear side represented the intervention group; the side of the coin showing a portrait of Queen Elizabeth II represented the wait list control group. To maintain participant privacy, participants created a unique ID number, which was then used to identify them. Each participant was then provided with a copy of the informed consent form that was reviewed at the start of the screening interview.

Measurement Time Points

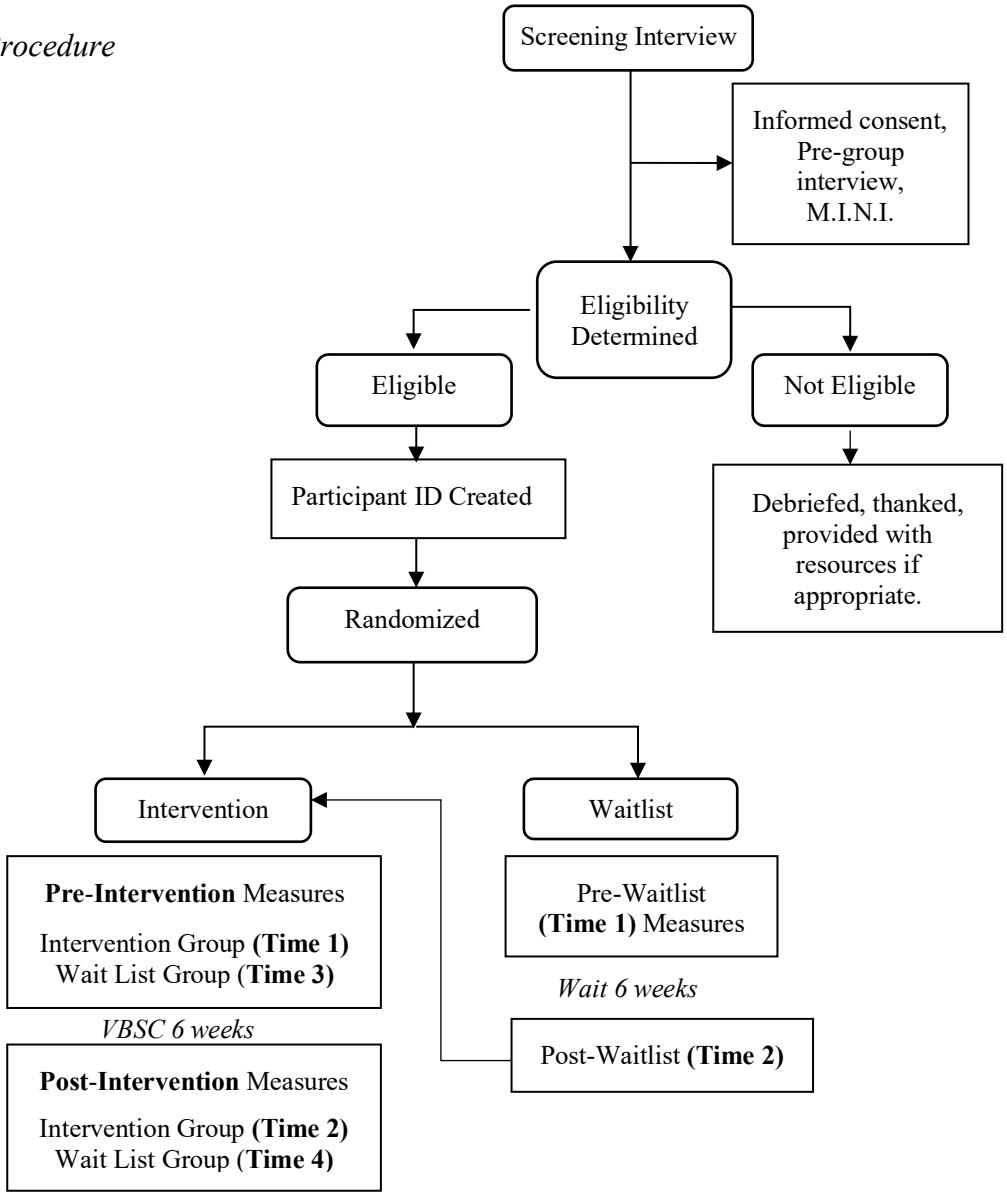
Following randomization, all participants completed the measures, with the exception of the acceptability evaluation. Participants were also asked demographic and program-related questions (Appendix N). The intervention group completed the pre-intervention measures approximately 1 week prior to the first group session. Participants in the waitlist control group completed the pre-wait list measures at the start of the wait period. They then

[7] In some cases, determining if a potential participant met inclusion/exclusion criteria required consultation with Dr. Cummings as my clinical supervisor for this project. In these cases, it was not possible to randomize the participant in their physical presence, as they were contacted following my supervision.

waited 6 weeks, and they did not receive any intervention or contact from the researchers. At the end of the wait period, participants returned to the lab to complete the post-wait list measures. The waitlist control group was transferred into the intervention arm of study. All participants completed the post-intervention measures at the end of the last group session. I aimed to followed Kazdin's (2003) three rudimentary features of a waiting-list control group: 1) no treatment during the wait period, 2) an equal amount of time between pre- and post-tests between the waitlist and intervention groups, and 3) the waitlist group should receive the intervention after the wait period. Figure 3.3 diagrams the full procedure.

Figure 3.2

Study 2 Procedure



Values-Based Self-Care (VBSC) Group Intervention

In this section, I describe the development of the intervention and then outline the final intervention model.

Preliminary Versions

The group was initially delivered as a four-session intervention to a pilot group (n = 4), who were not included in the final sample. The purpose of this pilot group was to trial the intervention and data collection, in order to make any necessary modifications before committing to the full randomized control trial. Based on feedback and clinical judgement, four modifications were made. No changes were made to the data collection procedure.

First, when conversing about values, participants often responded by discussing their goals. A missing step in values work was differentiating between values and goals. Values are ongoing and continuous guideposts for behaviour that do not have a final endpoint in the way that goals do. As goals are directed by values, such values must be explicated in order to gain greater clarity about the meaning and purpose behind goals. We drew on ACT and work by Russ Harris (2016) to differentiate these constructs. Second, I noticed that the pilot group tended to fluctuate in their focus between different self-care values each week. To stay targeted and to help participants to consolidate their self-care values, we modified the group to encourage participants to select one or two self-care values only that they would like to move towards throughout the group. We further emphasized that they could then generalize the skills learned to other values after the group. Third, the amount of psychoeducation provided in Session One was not feasible. Originally, this session covered both a discussion of values and an introduction to the ACT Matrix, the framework used for the remainder of the intervention. This felt rushed and did not allow time for self-reflection and/or to support

group members in discussing such sensitive topics, especially if group members were disconnected from their values. Therefore, we modified subsequent groups and presented the material across the first two sessions.

This four-session format of the VBSC group was used for Groups 1 to 4 (n = 17), after which point there were additional modifications that seemed necessary. First, group members informally shared that lengthening the program would be beneficial in providing future group members with more time and space to reflect on their self-care values and to modify their existing plans. Second, as the group facilitator, sessions felt very condensed and there was limited time to allow for a therapeutic group process to emerge. Rather, the group resembled a psychoeducational format in which group members learned self-care material from me, without much time to discuss or reflect on its content and personal applicability. Last, it was obvious that there was not enough time to implement self-care skills with only four sessions to practice, and as a result, this limited the clinical utility of the intervention.

Dr. Cummings and I spent much time discussing the advantages and disadvantages of making changes to the intervention after data collection was already underway. Although our clinical judgement and participant feedback indicated that the intervention should be longer, making changes to the intervention partway through the project had methodological and data analytical implications. Ultimately, we decided that the intervention should be lengthened in order to maximize its clinical utility and we accepted the potential disruption to methods. We deemed this both ethically and clinically responsible for a developing intervention. The CPA standards on evidence-based practice include responsiveness to unique client needs (Dozois et al., 2014). As per EBP, psychologists should monitor clients' reactions to treatment and be prepared to alter the treatment based on this data (Dozois et al., 2014). Similarly, the CPA

Ethics Code highlights the importance of tailoring treatment to client characteristics and preferences. In particular, under Principle II: Responsible Caring, Maximizing Benefit includes interventions that are "…relevant and tailored to the needs, characteristics, and contexts of the primary client" (II.18, p. 21). This ethical standard extends to psychotherapy research by suggesting that researchers be sensitive to the needs of research participants, who ultimately reflect the people that the intervention will serve. As such, the clinical responsibility to deliver helpful interventions was considered to trump consistency in protocol for my dissertation (which is one part of a larger intervention study). As such, the intervention was lengthened from four to six sessions.

There were two specific components that required lengthening. First, more time was required in early sessions to reflect on the meaning of self-care and to identify and articulate self-care values. I noticed that group members in Groups 1 to 4 were still engaged in values articulation and clarification well past Session One. Consistent with my grounded theory model, participants required time to reflect on Wake-Up Calls that informed the trajectory of their self-care. Therefore, we decided to develop a new session one that focused solely on the meaning of self-care and Wake-Up Calls (i.e., Phase 1 in the grounded theory from Study 1). This helped participants in the group to more fully articulate their version of self-care.

Second, Session Three, which originally lumped together in the same session how to maintain and persist through challenges, was modified to spread this content across two sessions. My grounded theory suggests that it takes time, via trial-and-error, to find "what works" in self-care planning. It also takes time to build confidence in using self-care. Spending time developing this sense of efficacy is imperative for later steps, especially persisting through challenges. Therefore, Session Three was modified to focus solely on

building a self-care plan, whereas Session Four focused on maintaining self-care. This allowed participants more time to develop a plan, engage in trial-and-error, and to actually practice using maintenance strategies. Session Five then invited participants to notice challenges to their self-care and begin to implement new strategies. This session also afforded time to troubleshoot existing challenges and allowed for homework between sessions. After these changes, no additional changes to the intervention were made. For a visual representation of these broad-level changes, see Table 3.6.

Table 3.6

Study 2: Modifications to VBSC: Four Versus Six Session Format

Total Sessions	**Session Number**					
	1	2	3	4	5	6
Four	Values, ACT Matrix	Self-care toolbox, plan	Maintaining, persisting strategies	Wrap up, monthly plan		
Six	Stress, self-care journey	Values, ACT Matrix	Self-care toolbox, plan	Maintaining strategies	Persisting strategies	Wrap up, monthly plan

I noticed several benefits resulting from this new format. The pace of the groups allowed time and space for group members to self-reflect and provide each another with support. From my perspective, the group process began to truly flourish and felt noticeably different as a result of lengthening the intervention and tweaking its components. In addition to slowing down the overall pace of the group, various new self-care topics emerged in group discussions (e.g., how to prioritize self-care values, program barriers), which maximized the clinical utility for the individuals in the groups.

Description of the VBSC Group Intervention (Final Six Session Version)

Sessions One and Two: Identifying the Meaning of Self-Care

The main purpose of Session One was to reflect on the meaning of self-care and each group member's self-care journey, including strategies that have worked well or not so well, and pivotal turning points (i.e., Wake-Up Calls). Reflecting on the definition of self-care served as a building block for identifying self-care values in Session Two. As such, Session Two built on Session One by inviting group members to explicate the values that underlie their definition of self-care. In addition, the group was taught about the difference between values and goals. To assist the group in identifying their self-care values and how well they live in congruence with these values, the Values Bullseye worksheet was used. The group was then encouraged to select one or two values that they wanted to target during the group.

Sessions Three to Five: Building and Maintaining a Self-Care Plan

Sessions Three to Five assisted group members to move closer to their identified value(s). The main purpose of Session Three was to develop manageable self-care goals that were informed by values. The ACT Matrix (Polk & Schoendorff, 2014) was used as a visual tool to help participants to identify behaviours that they can do to move towards their values, and on the other hand, difficult internal experiences that are barriers to self-care. After identifying personalized self-care strategies, the group then learned how to build a sustainable self-care plan. The main purpose of Session Four was to learn and select maintenance strategies (i.e., Internal and External Motivators). Session Five build off from the previous session by troubleshooting challenges that can trigger movement away from values, and to discuss how to problem-solve these challenges as per my grounded theory.

Session Six: Wrap Up and Goal Setting

The main purpose of Session Six was to troubleshoot any remaining challenges with self-care and to begin to develop a self-care plan for the next month. A review of the entire intervention was discussed, and the group was encouraged to reflect on "what is missing" in order for them to move forward with self-care planning. Participants were then invited to create approximately two to three self-care goals for the next month. The session ended with group goodbyes and then the group completed the post-intervention measures.

Data Analysis Plan

In this section, I provide a brief overview of the data analysis plan, as it unfolded during my analysis process. More details about each step are then provided, before I discuss the results of my hypothesis testing.

There are two primary ways to analyze data from randomized intervention trials (Kazdin, 2007). In a Per Protocol (PP) analysis, only participants who completed the intervention are included. That is, a PP analysis evaluates outcomes for participants who fully received the treatment provided. Per Protocol analyses answer important questions related to how well the intervention works for participants who receive it, the potential potency of that intervention, and can guide intervention development. However, in the reality of psychotherapy research, it is unfortunately not uncommon for some participants to not receive the intervention after starting the trial, with the most frequent reason for this being that they drop out prior to the end of the treatment. In this situation, some might argue that a PP analyses presents an overinflated or even inaccurate estimate of outcome, by only examining a subset of participants who complete treatment. To address this concern, psychotherapy researchers also use an Intent-to-Treat (ITT) analysis, which includes all

participants who were randomized into an intervention group, whether or not they completed the intervention. Therefore, an ITT analysis captures those participants who begin an intervention, whereas a PP analysis examines only those who finish.

Consistent with best practices in psychotherapy research, I conducted both an ITT and PP analysis (Fidler et al., 2008; Gupta, 2011). In most analyses, I report the ITT analysis only as this is what is recommended by the CONSORT guidelines on the reporting of randomized control trial results, specifically Item 16 (Altman et al., 2001). An analysis of all available participants is a useful primary analysis because it best reflects real-life clinical scenarios as it includes noncompliance, dropouts, and deviations from the intervention. This, in turn, results in an unbiased estimate of treatment effects and it also preserves the sample size and statistical power (Altman et al., 2001; Gupta, 2011). Moreover, an ITT analysis answers research questions about how an intervention works for those who begin an intervention and has implications (broadly) for the recruitment and retention of participants in future iterations of treatment development. However, when the PP and ITT analyses produced different results, I reported the results from both.

I now discuss the setup of my data. As mentioned previously, a waitlist control condition allowed for me to examine both within-group (intraindividual) and between-group (control vs. intervention) differences. In order to perform both comparisons, I separated the original data set into two parts that used different points of data. To compare the intervention and waitlist groups (i.e., between-subjects), I used the time 1 and time 2 scores for both groups. However, to compare within-person changes before and after the intervention, I used the waitlist control group's time 3 and time 4 scores (as this was their "intervention data"),

and again used the intervention group's time 1 and time 2 scores (Figure 3.3, provided in the procedures section, shows a visual depiction of the data collection time points).

To compare groups on one or more dependent variables, both univariate analysis of variance (ANOVA) and multivariate analysis of variance (MANOVA) are possible statistical options. Whereas ANOVA is restricted to detecting group differences on a single dependent variable, MANOVA analyzes group differences on several variables (Field, 2018). There are several advantages of using MANOVA when a research design has two or more dependent variables. MANOVA takes into account the correlation between dependent variables, making it a more informative and powerful test because it can detect group differences on a combination of related variables in the same analysis, and while protecting for Type I errors (Field, 2018; Tabachnick & Fidell, 2013). In addition to these statistical advantages, in my review of psychotherapy studies with at least four variables, I found that researchers most often used MANOVA (e.g., Lynch et al., 2012; Oliver & MacLeod, 2018).

Before deciding to use MANOVA, I checked for multicollinearity, which occurs when the dependent variables are highly related (i.e., $r = > .90$) (Tabachnick & Fidell, 2013). MANOVA works best when the variables are interrelated, but not highly correlated. If multicollinearity is present, then there is redundancy among the variables. To check for multicollinearity, I examined the correlation matrices for my dependent variables. All the correlations fell within the low to moderate range, suggesting that multicollinearity was not present in the data (see Tables 3.7 to 3.10). Therefore, given the power and suitability of MANOVA in a research design involving multiple dependent variables, and consistent with previous research, I decided to use this statistical procedure.

Table 3.7

Study 2: Intercorrelations: Between-Subjects, Time 1

Measure	1	2	3	4	5	6	7	8	9
1. SCAI	1.00								
2. PSCS	.60**	1.00							
3. ASAS-R	.63**	.23	1.00						
4. CAQ-8	.38**	.50**	.17	1.00					
5. VLQ	.48**	.55**	.36**	.32*	1.00				
6. DASS-21 Stress	-.41**	-.35*	-.38**	-.27*	-.20	1.00			
7. DASS-21 Anx	-.12	-.30*	-.23	-.04	.01	.56**	1.00		
8. DASS-21 Dep	-.21	-.36*	-.22	-.44**	-.20	.69**	.53**	1.00	
9. RSES	.32*	.37**	.21	.49**	.28*	-.20	-.19	-.49**	1.00

Note. SCAI = Self-Care Assessment Inventory; PSCS = Professional Self-Care Scale; ASAS-R = Appraisal of Self-Care Agency Scale – Revised; VLQ = Valued Living Questionnaire; CAQ-8 = Committed Action Questionnaire – 8 Item; DASS-21 = Depression Anxiety and Stress Scale; RSES = Rosenberg Self-Esteem Scale.

*$p < .05$, ** $p < .01$.

Table 3.8

Study 2: Intercorrelations: Between-Subjects, Time 2

Measure	1	2	3	4	5	6	7	8	9
1. SCAI	1.00								
2. PSCS	.63**	1.00							
3. ASAS-R	.76**	.57**	1.00						
4. CAQ-8	.39**	45**	.48**	1.00					
5. VLQ	.47**	.62**	.56**	.31*	1.00				
6. DASS-21 Stress	-.40**	-.48**	-.44**	-.43**	-.43**	1.00			
7. DASS-21 Anx	-.19	-.13	-.24	-.32*	-.20	.60**	1.00		
8. DASS-21 Dep	-.28*	-.42**	-.32*	-.48**	-.44**	.56**	.55**	1.00	
9. RSES	.25	.41**	.29*	.32*	.37**	-.41**	-.35**	-.48**	1.00

Note. SCAI = Self-Care Assessment Inventory; PSCS = Professional Self-Care Scale; ASAS-R = Appraisal of Self-Care Agency Scale – Revised; VLQ = Valued Living Questionnaire; CAQ-8 = Committed Action Questionnaire – 8 Item; DASS-21 = Depression Anxiety and Stress Scale; RSES = Rosenberg Self-Esteem Scale.

*$p < .05$, ** $p < .01$.

Table 3.9

Study 2: Intercorrelations: Within-Subjects, Time 1

Measure	1	2	3	4	5	6	7	8	9
1. SCAI	1.00								
2. PSCS	.48**	1.00							
3. ASAS-R	.77**	.38**	1.00						
4. CAQ-8	.28	.49**	.27*	1.00					
5. VLQ	.45**	.58**	.50**	.50**	1.00				
6. DASS-21 Stress	-.49**	-.52**	-.45**	-.40**	-.27*	1.00			
7. DASS-21 Anx	-.28	-.40**	-.26*	-.20	.01	.72**	1.00		
8. DASS-21 Dep	-.31*	-.48**	-.26*	-.47**	-.38**	.61**	.64**	1.00	
9. RSES	.32*	.33*	.27*	.52**	.44**	-.35**	-.28*	-.49**	1.00

Note. SCAI = Self-Care Assessment Inventory; PSCS = Professional Self-Care Scale; ASAS-R = Appraisal of Self-Care Agency Scale – Revised; VLQ = Valued Living Questionnaire; CAQ-8 = Committed Action Questionnaire – 8 Item; DASS-21 = Depression Anxiety and Stress Scale; RSES = Rosenberg Self-Esteem Scale.

*$p < .05$, ** $p < .01$.

Table 3.10

Study 2: Intercorrelations: Within-Subjects, Time 2

Measure	1	2	3	4	5	6	7	8	9
1. SCAI	1.00								
2. PSCS	.67**	1.00							
3. ASAS-R	.67**	.59**	1.00						
4. CAQ-8	.53**	.58**	.59**	1.00					
5. VLQ	.38**	.56**	.40**	.32*	1.00				
6. DASS-21 Stress	-.34*	-.41**	-.48**	-.41*	-.48**	1.00			
7. DASS-21 Anx	-.19	-.16	-.30*	-.36**	-.20	.57**	1.00		
8. DASS-21 Dep	-.06	-.14	-.18	-.32*	-.24	.46**	.49**	1.00	
9. RSES	.26	.41**	.34**	.38**	.30*	-.37**	-.34**	-.31*	1.00

Note. SCAI = Self-Care Assessment Inventory; PSCS = Professional Self-Care Scale; ASAS-R = Appraisal of Self-Care Agency Scale – Revised; VLQ = Valued Living Questionnaire; CAQ-8 = Committed Action Questionnaire – 8 Item; DASS-21 = Depression Anxiety and Stress Scale; RSES = Rosenberg Self-Esteem Scale.

*$p < .05$, ** $p < .01$.

As it did not make strong theoretical sense to combine all variables into one model, I grouped my variables into three theoretically-based MANOVA models: 1) emotional distress (as measured by the DASS-21 Stress, Anxiety, and Depression subscale scores), 2) self-care (as measured by the SCAI, PSCS, and ASAS-R), and 3) valued living (as measured by the VLQ and CAQ-8). The grouping of these variables made sense theoretically based on my Study 1 results and previous research (e.g., Hayes et al., 2012; Pakenham, 2015c; Sinclair et al., 2012), as well as statistically, given the higher correlations between these groupings of measures (see Tables 3.11 to 3.16). Moreover, a repeated measures ANOVA was used to examine group differences in self-esteem scores, as measured by the RSES, given that this variable was examined by itself.

Table 3.11

Study 2: Intercorrelations for Self-Care Measures, Between-Subjects

Measure	SCAI (Pre)	SCAI (Post)	PSCS (Pre)	PSCS (Post)	ASAS (Pre)	ASAS (Post)
SCAI (Pre)	1.00					
SCAI (Post)	.81**	1.00				
PSCS (Pre)	.65**	.44**	1.00			
PSCS (Post)	.51**	.71**	.67**	1.00		
ASAS (Pre)	.63**	.49**	.34*	.29*	1.00	
ASAS (Post)	.61**	.78**	.36**	.63**	.56**	1.00

Note. SCAI = Self-Care Assessment Inventory; PSCS = Professional Self-Care Scale; ASAS-R = Appraisal of Self-Care Agency Scale – Revised.

*$p < .05$, ** $p < .01$.

Table 3.12

Study 2: Intercorrelations for Valued Living Measures, Between-Subjects

Measure	VLQ (Pre)	VLQ (Post)	CAQ-8 (Pre)	CAQ-8 (Post)
VLQ (Pre)	1.00			
VLQ (Post)	.66**	1.00		
CAQ-8 (Pre)	.40**	.47**	1.00	
CAQ-8 (Post)	.32*	.37**	.67**	1.00

Note. VLQ = Valued Living Questionnaire; CAQ-8 = Committed Action Questionnaire – 8 Item.

*$p < .05$, ** $p < .01$.

Table 3.13

Study 2: Intercorrelations for Emotional Distress Measures, Between-Subjects

Measure	Stress (Pre)	Stress (Post)	Anxiety (Pre)	Anxiety (Post)	Depression (Pre)	Depression (Post)
Stress (Pre)	1.00					
Stress (Post)	.44**	1.00				
Anxiety (Pre)	.73**	.34**	1.00			
Anxiety (Post)	.33*	.68**	.53**	1.00		
Depression (Pre)	.67**	.46**	.65**	.42**	1.00	
Depression (Post)	.41**	.63**	.42**	.59**	.70**	1.00

*$p < .05$, ** $p < .01$.

Table 3.14

Study 2: Intercorrelations for Self-Care Measures, Within-Subjects

Measure	SCAI (Pre)	SCAI (Post)	PSCS (Pre)	PSCS (Post)	ASAS (Pre)	ASAS (Post)
SCAI (Pre)	1.00					
SCAI (Post)	.76**	1.00				
PSCS (Pre)	.65**	.41**	1.00			
PSCS (Post)	.54**	.74**	.61**	1.00		
ASAS (Pre)	.78**	.42**	.52**	.26	1.00	
ASAS (Post)	.58**	.72**	.42**	.65**	.47**	1.00

Note. SCAI = Self-Care Assessment Inventory; PSCS = Professional Self-Care Scale; ASAS-R = Appraisal of Self-Care Agency Scale – Revised.

*$p < .05$, ** $p < .01$.

Table 3.15

Study 2: Intercorrelations for Valued Living Measures, Within-Subjects

Measure	VLQ (Pre)	VLQ (Post)	CAQ-8 (Pre)	CAQ-8 (Post)
VLQ (Pre)	1.00			
VLQ (Post)	.70**	1.00		
CAQ-8 (Pre)	.52**	.50**	1.00	
CAQ-8 (Post)	.31*	.37**	.68**	1.00

Note. VLQ = Valued Living Questionnaire; CAQ-8 = Committed Action Questionnaire – 8 Item.

*$p < .05$, ** $p < .01$.

Table 3.16

Study 2: Intercorrelations for Emotional Distress Measures, Within-Subjects

Measure	Stress (Pre)	Stress (Post)	Anxiety (Pre)	Anxiety (Post)	Depression (Pre)	Depression (Post)
Stress (Pre)	1.00					
Stress (Post)	.54**	1.00				
Anxiety (Pre)	.77**	.31**	1.00			
Anxiety (Post)	.40**	.65**	.50**	1.00		
Depression (Pre)	.62**	.38**	.67**	.37**	1.00	
Depression (Post)	.46**	.65**	.34**	.54**	.66**	1.00

*$p < .05$, ** $p < .01$.

Data Cleanup and Assumption Check

Before proceeding with the data analysis, I took several steps to clean my data and to check that the appropriate multivariate statistical assumptions were met. I used the process recommended by Meyers et al. (2013): 1) address missing values, 2) deal with outliers, and 3) assumption testing.

Missing Data

I examined all dependent variables for missing values. First, I found a substantial amount of missing data for item three on the Valued Living Questionnaire, which asked participants how much they value and live consistently with parenting as a value. Given that approximately 51% of participants did not complete it, and many participants wrote on the questionnaire that they were not currently in a parenting role, I decided to omit this item on both subscales of the VLQ from my analyses. I report the Cronbach's alpha for this revised scale. Second, to check if the missing data occurred at random or systematically (which could introduce bias), I conducted Little's Missing at Completely Random (MCAR) multivariate test, which tests the null hypothesis that missing values are randomly distributed across all observations (Little, 1988). I completed this test using the original dataset, with the exception of item three on the VLQ. Little's MCAR test suggested that the missing data occurred completely at random ($p < .05$).

Outliers

An outlier is a score that is noticeably different from the rest of the data (Field, 2018). If a score deviates from the rest of the data, it is possible that it is from a different population and, therefore, it can bias the results by increasing Type I or Type II errors (Fidell & Tabachnick, 2013). Outliers can occur at two levels: on one (univariate) or at least two (multivariate) variables (Fidell & Tabachnick, 2013).

Univariate Outliers. To identify univariate outliers, I first reviewed the data graphically by examining the histograms and boxplots. Since graphical representations of the data do not always catch all possible outliers, I then numerically checked each outcome variable for outliers by converting each dependent variable into *z*-scores and then compared them to a critical cut-off value (Meyers et al., 2013). I standardized the data first so that the scores could be expressed in

terms of a distribution with a mean of 0 and a standard deviation of 1, which allowed me to apply a standard cut-off value regardless of the original mean and standard deviation. I used a critical cut-off value of +/- 2.5 as this has been recommended to indicate "probable" outliers (Hair et al., 2010; Meyers et al., 2013). If the score exceeded the critical value and appeared to depart from the rest of the data set, I dropped (deleted) that score from the analysis.

Between-Subjects Data. First, I removed 19 univariate outliers as these were identified by the histograms and boxplots. Generally, each outcome variable had zero to three outliers, with the exception of the DASS-21 Anxiety subscale (which had six outliers). I then removed an additional five outliers after converting scores into *z*-scores and using a critical value *z* +/- 2.5.

Within-Subjects Data. From looking at the histograms and boxplots, I identified and removed 13 scores that were outliers. I then removed an additional nine outliers after converting scores into *z*-scores and using a critical value *z* +/- 2.5.

Multivariate Outliers. To assess for multivariate outliers, I calculated the Mahalanobis distance for each case and compared these values with a Table of Critical Values for chi square at $p < .001$ (Meyers et al., 2013; Pallant, 2007, p. 280). The Mahalanobis distance statistic (D^2) measures the distance between each case and the group multivariate mean, while taking into account the correlations between variables (Fidell & Tabachnick, 2013). No multivariate outliers were identified in either the within- or between-subjects data.

Dropouts

Eight participants were missing data on the pre- and/or post-intervention measurements as they dropped out before beginning the intervention. To determine what to do with participants who dropped out of the study, I read other psychotherapy research studies and decided to use the Last Observation Carried Forward (LOCF) method, which involves replacing each participant's

missing data point(s) with the last available measurement for that participant, prior to withdrawal. I selected the LOCF method as it is a straightforward method of handling missing data and it provides a relatively conservative estimate of treatment effects by assuming that participants showed no improvement over time (rather than assuming that some change occurred) (e.g., Houck et al., 2004). In addition, the LOCF method minimizes the number of excluded participants, which in turn increases statistical power (e.g., Renna et al., 2018; Streiner & Geddes, 2001; Zwerenz et al., 2019). However, some studies show that the LOCF can overestimate treatment effects (O'Connor, 2010; Streiner, 2008; Ware, 2003). By replacing missing values with the last score, this negates the possibility that people deteriorated over time.

Multivariate Assumption Testing

After the initial data cleanup, I performed checks for each dependent variable to ensure that the data were suitable for parametric testing (Field, 2009; Tabachnick & Fidell, 2013). This was a crucial step in my preliminary data check since a violation of statistical assumptions can bias or distort the results and compromise the integrity of the test that is being used (Field, 2018; Tabachnick & Fidell, 2013). I examined the following assumptions: normality, linearity, homogeneity of variance-covariance matrices, and independence of observations. Since I had two different sets of data to answer my between- and within-subjects hypotheses, I checked for these assumptions separately for each file. Unless results differed, I present the results of the full dataset (i.e., ITT, which includes dropouts).

Normality. For parametric testing, it is important that the data roughly resemble the shape of a normal distribution (i.e., bell-shaped curve) (Meyers et al., 2013). To check for normality, I looked at the data both graphically and numerically. Furthermore, I examined normality for each outcome variable and then for each variable separately by group. I examined

the data visually by looking at the histograms and Q-Q plots. If the data is normally distributed, it should appear bell-shaped (i.e., the mean scores are in the centre, with more extreme scores falling on either ends) and the scores should not deviate from the diagonal line on the Q-Q plot (Meyers et al., 2013). I then supplemented graphical data with numerical tests of normality (i.e., Shapiro-Wilk and Kolmogorov-Smirnov), which compare scores in the data to a normally distributed set of scores with the same mean and standard deviation (Meyers et al., 2013). Since these tests are sensitive to minor departures from normality, I used a more stringent alpha level of $p < .01$ (Meyers et al., 2013). I then examined the skewness and kurtosis values, which should be within the range of + or – 1 for the data to resemble a normal distribution.

Between-Subjects. The following variables did not resemble a normal distribution, but rather they were positively skewed as the "tail" of the distribution fell towards the higher end of scores and the mean fell on the right side of the peak (instead of the middle of the distribution): CAQ-8, VLQ, and DASS-21. In addition, some variables had high kurtosis (i.e., PSCS and RSES), as shown these distributions had several peaks in scores.

Within-Subjects. The following variables did not resemble a normal distribution but were positively skewed: DASS-21 Anxiety and Depression subscales, and the RSES. In contrast the PSCS (Post) showed a negative skew, as evidenced by the tail falling on the left side of the distribution. Additionally, the PSCS, CAQ-8 (Post), and RSES (Post) scores were kurtotic.

Linearity. This assumption states that there is a linear relationship among all pairs of dependent variables (Meyers et al., 2013). Having linearity present in the data is important because MANOVA relies on correlations to represent the relationship between variables. If this assumption is not met, then multivariate testing does not describe the data adequately and this reduces the power of the analysis. I checked this assumption by examining the scatterplots,

which plot each variable against every other variable (Tabachnick & Fidell, 2013). Normally distributed data resemble an elliptical (oval) shape.

Between-Subjects. The self-care variables did not appear linearly related with each other.

Within-Subjects. The DASS-21 subscales did not appear linearly related with each other.

Homogeneity of Variance-Covariance Matrices. The homogeneity of variance-covariance matrices assumption states that there are equal levels of variance for the dependent variables across groups (Meyers et al., 2013). If there are not equal variances, this suggests that the residuals are systematically related to the dependent variables. To test this assumption, I used Box's M Test of Equality of Covariance Matrices (Tabachnick & Fidell, 2013) and used a stringent alpha level as this test is sensitive in MANOVA (Tabachnick & Fidell, 2013).

Between-Subjects. This assumption was met ($p > .001$).

Within-Subjects. There were no between-subjects factors to test this assumption.

Independence of Observations. This assumption states that the observations in each group or between groups are not related (Meyers et al., 2013). This assumption is naturally violated in a repeated-measures design since the scores for each case are more related to each other than the scores between different cases (Meyers et al., 2013). In addition, a grouping effect may occur since the participants who were randomly assigned to the waitlist condition were then transferred into the intervention group. It is possible that their experience during the waiting period influenced their post-intervention outcome scores. Meyers et al. (2013) state that a violation of this assumption is crucial as it can inflate the alpha level, thereby biasing the results.

To Transform or Not?

Given that numerous statistical assumptions were violated, the results of parametric testing would be questionable in terms of its interpretation and accuracy. To remedy this, I

considered transforming the variables to make the distribution more normal. There are different views about whether to transform data. Some researchers argue that transformations can help to modify the data to fit more closely to a normal distribution (Tabachnick & Fidell, 2013). However, other researchers state that transformations create more problems than they solve, and they complicate the interpretation of transformed data as the researcher must compare different types of scores (e.g., arithmetic averages versus logarithm of scores) (Field, 2009; Tabachnick & Fidell, 2013). That is, transformations "…fundamentally alter the nature of the variable" (Osborne, 2010, p. 1), making interpretation more complex as the transformed data may share little in common with the original data (Feng et al., 2014). Given the complexity in interpreting transformed data, in addition to the fact that not all variables in my data required transformations, I decided to follow the suggestions of Field (2013), Osborne (2010), and Feng (2014) to not transform my data. Instead, I conducted nonparametric tests of my hypotheses.

Results: Descriptive Statistics, Group Comparisons

Descriptive Statistics

The averages, standard deviations, and ranges for all measures are shown in Tables 3.17 to 3.21.

In order to check on the success of the group randomization in reducing the influence of demographic and pre-group variables, independent sample *t*-tests were used to compare the intervention and control groups on these measures. There were no statistically significant differences between the groups (all p values > .11). Table 3.22 summarizes these findings.

Table 3.17

Study 2: Between-Subjects, Time 1: Mean Scores and Standard Deviations

Measure	*M* (*SD*)	
	Intervention	Waitlist
SCAI	134.81(24.17)	134.52(35.36)
PSCS	100.00(11.62)	102.61(17.11)
ASAS-R	42.64(6.59)	44.24(8.79)
VLQ	51.97(13.17)	51.79(13.89)
CAQ-8	30.67(6.25)	31.04(6.30)
DASS-21 Stress	15.65(6.95)	14.96(8.57)
DASS-21 Anxiety	8.35(5.86)	5.74(5.83)
DASS-21 Depression	7.06(5.31)	7.25(7.07)
RSES	26.36(1.52)	26.52(1.94)

Note. SCAI = Self-Care Assessment Inventory; PSCS = Professional Self-Care Scale; ASAS-R = Appraisal of Self-Care Agency Scale – Revised; VLQ = Valued Living Questionnaire; CAQ-8 = Committed Action Questionnaire – 8 Item; DASS-21 = Depression Anxiety and Stress Scale; RSES = Rosenberg Self-Esteem Scale.

Table 3.18

Study 2: Between-Subjects, Time 2: Mean Scores and Standard Deviations

Measure	*M* (*SD*)	
	Intervention	Waitlist
SCAI	148.06(22.10)	136.92(28.21)
PSCS	109.70(13.49)	104.36(15.22)
ASAS-R	47.97(5.06)	44.24(7.55)
VLQ	60.51(13.12)	53.32(15.12)
CAQ-8	31.44(4.83)	30.40(6.54)
DASS-21 Stress	11.83(7.00)	14.17(8.11)
DASS-21 Anxiety	5.76(4.76)	5.05(4.97)
DASS-21 Depression	6.00(5.15)	8.17(7.29)
RSES	27.25(1.86)	26.80(2.06)

Note. SCAI = Self-Care Assessment Inventory; PSCS = Professional Self-Care Scale; ASAS-R = Appraisal of Self-Care Agency Scale – Revised; VLQ = Valued Living Questionnaire; CAQ-8 = Committed Action Questionnaire – 8 Item; DASS-21 = Depression Anxiety and Stress Scale; RSES = Rosenberg Self-Esteem Scale.

Table 3.19

Study 2: Between-Subjects: Range of Scores

Measure	Range	
	Pre	Post
SCAI	70-198	58-203
PSCS	58-139	47-139
ASAS-R	26-58	31-57
VLQ	26-99	24-90
CAQ-8	8-46	19-46
DASS-21 – Stress	0-42	0-34
DASS-21 – Anxiety	0-38	0-30
DASS-21 – Depression	0-34	0-34
RSES	24-30	23-30

Note. SCAI = Self-Care Assessment Inventory; PSCS = Professional Self-Care Scale; ASAS-R = Appraisal of Self-Care Agency Scale – Revised; VLQ = Valued Living Questionnaire; CAQ-8 = Committed Action Questionnaire – 8 Item; DASS-21 = Depression Anxiety and Stress Scale; RSES = Rosenberg Self-Esteem Scale.

Table 3.20

Study 2: Within-Subjects: Mean Scores and Standard Deviations (Intervention)

Measure	*M* (*SD*)	
	Pre	Post
SCAI	135.07(25.29)	148.16(27.95)
PSCS	101.06(12.30)	110.70(14.23)
ASAS-R	43.30(6.98)	48.46(6.64)
VLQ	52.87(13.59)	60.28(12.97)
CAQ-8	30.41(6.34)	31.96(5.6)
DASS-21 Stress	15.36(7.76)	12.50(7.37)
DASS-21 Anxiety	8.03(6.60)	5.36(4.61)
DASS-21 Depression	7.83(6.57)	5.00(4.23)
RSES	26.54(1.76)	27.38(1.89)

Note. SCAI = Self-Care Assessment Inventory; PSCS = Professional Self-Care Scale; ASAS-R = Appraisal of Self-Care Agency Scale – Revised; VLQ = Valued Living Questionnaire; CAQ-8 = Committed Action Questionnaire – 8 Item; DASS-21 = Depression Anxiety and Stress Scale; RSES = Rosenberg Self-Esteem Scale.

Table 3.21

Study 2: Within-Subjects: Range of Scores (Intervention)

Measure	Range	
	Pre	Post
SCAI	58-186	58-213
PSCS	47-139	47-142
ASAS-R	29-57	32-64
VLQ	24-99	24-91
CAQ-8	19-44	22-46
DASS-21 – Stress	2-42	0-34
DASS-21 – Anxiety	0-38	0-30
DASS-21 – Depression	0-34	0-34
RSES	23-30	25-30

Note. SCAI = Self-Care Assessment Inventory; PSCS = Professional Self-Care Scale; ASAS-R = Appraisal of Self-Care Agency Scale – Revised; VLQ = Valued Living Questionnaire; CAQ-8 = Committed Action Questionnaire – 8 Item; DASS-21 = Depression Anxiety and Stress Scale; RSES = Rosenberg Self-Esteem Scale.

Table 3.22

Study 2: Pre-Group Differences: Waitlist and Intervention Groups

Variable	*df*	*t*-test	*p* value	Mean Difference	95% Confidence Interval of the *M* Difference	
					Lower	Upper
Age	59	-1.47	1.46	-3.81	2.59	-8.99
Gender	57	-1.62	.11	-.13	-.29	.03
Ethnicity	58	-.29	.77	-.10	-.76	.56
Number of sessions	59	-.55	.58	-.07	-.30	.17
SCAI	42	-.91	.37	-8.18	-26.62	10.25
PSCS	52	.52	.60	2.70	-7.84	13.24
ASAS-R	59	-.81	.42	-1.60	-5.54	2.34
VLQ	59	.30	.76	1.13	-6.39	8.65
CAQ-8	59	.31	.76	.55	-3.04	4.13
DASS-21 Stress	59	1.14	.26	2.53	-1.91	6.98
DASS-21 Anxiety	58	1.55	.13	3.11	-.92	7.14
DASS-21 Depression	59	.313	.76	.66	-3.54	4.85
RSES	59	-.36	.72	-.16	-1.05	.73

Note. SCAI = Self-Care Assessment Inventory; PSCS = Professional Self-Care Scale; ASAS-R = Appraisal of Self-Care Agency Scale – Revised; VLQ = Valued Living Questionnaire; CAQ-8 = Committed Action Questionnaire – 8 Item; DASS-21 = Depression Anxiety and Stress Scale; RSES = Rosenberg Self-Esteem Scale.

Comparison of the Four and Six Session Versions of VBSC

As previously discussed, modifications were made to the length of the intervention, making it a possible confounding variable, and if so, problematic for me to combine these data into the same analysis. As such, I compared these two versions of the group. First, I used independent samples *t*-tests to compare the four- and six-session groups on the dependent variables. No statistically significant differences were found (all *p* values > .21) (see Table 3.23).

Table 3.23

Study 2: Pre-Group Differences: Four- and Six-Session VBSC Groups

Variable	*df*	*t*-test	*p* value	Mean Difference	95% Confidence Interval of the *M* Difference Lower	Upper
Age	59	.18	.86	.49	-4.97	5.95
Gender	57	-.75	.46	-.06	-.21	.10
Ethnicity	58	-.74	.46	-.25	-.93	.43
SCAI	42	-.38	.71	-3.48	-22.17	15.12
PSCS	52	.96	.34	4.59	-4.97	14.15
ASAS-R	59	-.38	.71	-.82	-5.16	3.52
VLQ	59	-.60	.55	-2.48	-10.71	5.76
CAQ-8	59	1.28	.21	2.49	-1.39	6.37
DASS-21 Stress	59	.56	.58	1.40	-3.60	6.41
DASS-21 Anxiety	58	.32	.75	.71	-3.77	5.19
DASS-21 Depression	59	-1.13	.26	-2.53	-7.00	1.94
RSES	59	.33	.75	.15	-.77	1.07

Note. SCAI = Self-Care Assessment Inventory; PSCS = Professional Self-Care Scale; ASAS-R = Appraisal of Self-Care Agency Scale – Revised; VLQ = Valued Living Questionnaire; CAQ-8 = Committed Action Questionnaire – 8 Item; DASS-21 = Depression Anxiety and Stress Scale; RSES = Rosenberg Self-Esteem Scale.

However, null hypothesis testing (NHST) only confirms that the groups are likely not different; it does not say anything whether or not they are equivalent (Tryon, 2001). Therefore, I also tested for group equivalence using Tryon's (2001) method, which relies on inferential confidence intervals (ICIs), rather than *p* values, to test for equivalence (Beckstead, 2008; Tryon, 2001). Different from descriptive confidence intervals, ICIs account for the sample size and standard deviation of each group, making them algebraically equivalent to NHST (Stuppy-Sullivan et al., 2016; Tryon, 2001) but able to address a different question. Tryon's method (2001) tests for equivalence by comparing the range of the group inferential confidence intervals

to a criterion that is considered to be an inconsequential difference (i.e., Delta, ∆). Equivalence is said to exist when the difference between the group ICI ranges are *less* than Delta (i.e., $Rg \leqq \Delta$) (Tryon, 2001).

Tryon's (2001) method involves three steps, which I completed using an Excel macro spreadsheet developed by Jason Beckstead (2008), for each measure.

First, I calculated inferential confidence intervals for each group by entering the sample size and standard deviation. After inputting these values, the Excel sheet then generated the confidence interval range (*Rg*).

Second, I selected a value for Delta (∆), which is an a priori criterion of how far apart the confidence intervals can differ while still being equivalent (Briones & Benham, 2017). Delta should be based on substantive literature (Tryon, 2001; Tryon & Lewis, 2008). In clinical psychology, although tests of equivalence have been gaining popularity (e.g., Manzoni et al., 2010), there is a lack of research, as well as no consensus, on the value of ∆. Thus, what constitutes a meaningful difference is subjective (Ball et al., 2013; Cribbie & Arpin-Cribbie, 2009; Kendall et al., 1999). To determine a value for ∆, I reviewed psychological research studies using this method. In this small body of research, researchers have used both standardized (i.e., standard deviation) and non-standardized values for delta (i.e., 20% of the mean) (e.g., Briones & Benham, 2017; Lewis et al., 2009; Rusticus & Lovato, 2011). Using standard deviation as a criterion for delta, researchers have used values that range from 1/3 *SD* to 2 *SD*s, with 1 *SD* and 2 *SD* being the most commonly used (Ball et al, 2013; Sheldrick et al., 2001). Kendall et al. (1999) argue that scores falling within 1 *SD* from the mean are not meaningfully different from each other and further, that 1 *SD* is a liberal criterion that increases in the probability of obtaining equivalency. Using this guideline from Kendall et al. (1999), I

decided to use 2 *SD*s as a criterion for delta to be as conservative as possible and to use a standardized unit for delta.

Third, I determined statistical equivalency by comparing *Rg* to Delta. In each analysis, *Rg* was $\leqq \Delta$ and furthermore, the ICIs overlapped to varying degrees dependent on the outcome measure (ranging from 8% to 100%) (Table 3.24).

Therefore, the results supported the equivalency of these groups and for all my inferential statistics, the four and six session data were combined. In addition, I also followed this process to determine equivalency between the health (n = 54), helping (n = 5), and non-health (n = 2) participant data. Results showed they were not equivalent on the outcome measures ($Rg \geq \Delta$). However, small sample sizes lead to wide CIs and increased error. As such, I decided to still combine the groups. This also increased statistical power for my analyses.

Table 3.24

Study 2: Pre-Group Differences: Equivalency Testing of Four- and Six-Session VBSC Groups

Between-Subjects	Δ	*Rg*	Within-Subjects	Δ	*Rg*
SCAI	28.76	21.24	SCAI	26.08	16.73
PSCS	12.63	8.94	PSCS	12.23	7.79
ASAS-R	7.68	4.56	ASAS-R	7.02	5.07
VLQ	13.02	7.08	VLQ	13.28	8.80
CAQ-8	6.18	4.09	CAQ-8	6.26	5.26
DASS-21 Stress	7.65	5.42	DASS-21 Stress	7.90	4.70
DASS-21 Anxiety	6.05	4.22	DASS-21 Anxiety	6.56	4.92
DASS-21 Depression	6.10	3.87	DASS-21 Depression	6.73	6.36
RSES	1.67	1.27	RSES	1.75	1.35

Note. SCAI = Self-Care Assessment Inventory; PSCS = Professional Self-Care Scale; ASAS-R = Appraisal of Self-Care Agency Scale – Revised; VLQ = Valued Living Questionnaire; CAQ-8 = Committed Action Questionnaire – 8 Item; DASS-21 = Depression Anxiety and Stress Scale; RSES = Rosenberg Self-Esteem Scale.

Results: Hypothesis Testing

Comparison of the Intervention and Waitlist Control Groups

Between-subjects analyses were conducted to test the hypotheses that, post-intervention, the intervention group would show significant increases in self-care, valued living, and self-esteem but decreases in emotional distress, when compared to the waitlist control group. To compare groups, I used a Mann-Whitney test (Mann & Whitney, 1947), which compares groups by ranking the scores, and it is the non-parametric equivalent of the independent *t*-test (Field, 2013). In my results, I report the mean rank as this is more appropriate for this non-parametric test (Field, 2013). Moreover, to control for individual variation in baseline scores, I used difference scores. Difference scores are a straightforward way to calculate change between time points, and they provide a value of absolute change.

Self-Care

Post-intervention there were significant group differences in SCAI scores ($M_{\text{rank, intervention}} = 36.18$, $M_{\text{rank, waitlist}} = 21.98$) demonstrating a medium magnitude effect for self-care frequency ($U = 636.50$, $z = 3.09$, $p = .002$, $r = .40$). In addition, there were significant post-intervention group differences in ASAS-R scores ($M_{\text{rank, intervention}} = 37.71$, $M_{\text{rank, waitlist}} = 21.34$) demonstrating a medium magnitude effect for self-care self-efficacy ($U = 691.5$, $z = 3.55$, $p < .001$, $r = .45$). Finally, there were significant post-intervention group differences in PSCS scores ($M_{\text{rank, intervention}} = 28.39$, $M_{\text{rank, waitlist}} = 19.88$) showing a medium magnitude effect for professional self-care ($U = 349$, $z = 2.15$, $p = .032$, $r = .30$). However, when dropouts were not included in the analysis, these differences in PSCS scores were no longer significant ($U = 376$, $z = 1.96$, $p = .05$, $r = .28$).

Valued Living

Post-intervention there were significant group differences in VLQ scores ($M_{\text{rank, intervention}}$ = 34.91, $M_{\text{rank, waitlist}}$ = 24.32) demonstrating a medium magnitude effect for valued living (U = 592, z = 2.32, p = .02, r = .30). There were no significant post-intervention group differences in committed action scores ($M_{\text{rank, intervention}}$ = 31.86, $M_{\text{rank, waitlist}}$ = 27.29) as measured by the CAQ-8 (U = 485, z = 1.01, p = .31, r = .13).

Emotional Distress

Post-intervention there were significant group differences in DASS-21 depression scores ($M_{\text{rank, intervention}}$ = 24.81, $M_{\text{rank, waitlist}}$ = 36.15) demonstrating a medium magnitude effect for depression (U = 248.5, z = -2.57, p = .01, r = .34). Post-intervention there were no statistically significant group differences on stress ($M_{\text{rank, intervention}}$ = 26.26, $M_{\text{rank, waitlist}}$ = 34.08) (U = 298, z = -1.75, p = .08, r = .23). However, when dropouts were excluded from the analysis, there were significant post-intervention group differences in stress ($M_{\text{rank, intervention}}$ = 23.68, $M_{\text{rank, waitlist}}$ = 32.48) demonstrating a medium magnitude effect (U = 220.5, z = -2.02, p = .04, r = .28). Post-intervention there were no statistically significant group differences for anxiety ($M_{\text{rank, intervention}}$ = 24.47, $M_{\text{rank, waitlist}}$ = 30.86) as measured by the DASS-21 (U = 255, z = -1.5, p = .13, r = .21).

Self-Esteem

Post-intervention there were no statistically significant group differences in self-esteem scores as measured by the RSES (U = 564.5, z = 1.8, p = .072, r = .23).

Effects of Waiting for the Intervention

As there were some positive changes during the wait period, which can be seen when looking at the mean scores, I examined the possibility that the waitlist condition experienced some treatment effects during the wait period. First, I examined the post-intervention scores

using a new grouping variable: people who waited and those who did not. Results showed that participants who waited to receive the intervention (M_{rank} = 35.70) showed statistically significant higher post-intervention scores on self-care frequency, when compared to participants who did not wait (M_{rank} = 24.47) (U = 237, z = -2.5, p = .01). However, to account for baseline (time 1) scores, I then ran another analysis which compared difference scores for pre- to -post intervention (i.e., overall change), between participants who waited and those who did not. The results were non-significant (U = 224, z = -.60, p > .05). Therefore, although the waitlist control group experienced some change in self-care during the wait period, these were not statistically significant changes when comparing overall change from pre- to post-intervention.

Within-Subjects Changes Before and After the Intervention

Within-subjects analyses were conducted to test the hypotheses that pre- to post-intervention, participants would show significant increases in self-care, valued living, and self-esteem but less emotional distress (i.e., the intervention would be associated with within-person changes on these outcome measures). To examine within-group changes, I used a Wilcoxon Signed-Rank test (Wilcoxon, 1945), which compares two sets of scores that come from the same participants, and it is the non-parametric equivalent of the paired-samples *t*-test (Field, 2013). I report the median as this is more appropriate for this non-parametric test (Field, 2013).

Self-Care

There were statistically significant increases from pre- to post-intervention in SCAI scores (Mdn_{pre} = 134, Mdn_{post} = 149) demonstrating a large magnitude effect for self-care frequency (T = 462, z = 4.2, p < .001, r = .63). There were also statistically significant increases from pre- to post-intervention in PSCS scores (Mdn_{pre} = 103, Mdn_{post} = 111) showing a large magnitude effect for professional self-care (T = 1063, z = 4.48, p < .001, r = .61). Finally, there

were statistically significant increases from pre- to post-intervention in ASAS-R scores (Mdn_{pre} = 43, Mdn_{post} = 49) which again showed a large magnitude effect for self-efficacy in self-care (T = 1035.50, z = 4.99, p < .001, r = .64).

Valued Living

There were statistically significant increases from pre- to post-intervention in VLQ scores (Mdn_{pre} = 52.2, Mdn_{post} = 59.6) showing a large effect size for valued living (T = 1033.50, z = 4.2, p < .001, r = .54). In addition, there were statistically significant increases from pre- to post-intervention in CAQ-8 scores (Mdn_{pre} = 30, Mdn_{post} = 32) showing a medium magnitude effect for committed action (T = 819.50, z = 2.38, p = .017, r = .30).

Emotional Distress

There were statistically significant decreases from pre- to post- intervention on DASS-21 stress subscale scores (Mdn_{pre} = 14, Mdn_{post} = 10) showing a medium effect size for stress (T = 253.50, z = -2.83, p = .005, r = .37). Similarly, there were statistically significant decreases from pre- to post-intervention on anxiety (Mdn_{pre} = 6, Mdn_{post} = 4) and depression (Mdn_{pre} = 6, Mdn_{post} = 4). These represent medium effect sizes for anxiety (T = 204, z = -2.04, p = .041, r = .27) and depression (T = 189, z = -3.17, p = .002, r = .43). Notably, when dropouts were excluded, the differences in anxiety scores were not significant (T = 243.50, z = -1.86, p = .064, r = .26).

Self-Esteem

There were significant increases from pre- to post-intervention in RSES scores (Mdn_{pre} = 26, Mdn_{post} = 27) demonstrating a large magnitude effect for self-esteem (T = 506.50, z = 4.10, p < .001, r = 53).

Acceptability of VBSC Group Intervention

Participants reported that the intervention was a useful and positive experience. The overall mean rating of the intervention was 9.24 (*SD* = 1.10), out of a possible score of 11. All but one participant rated the intervention's usefulness at least an 8 out of 10. When asked to rate their satisfaction with the training, approximately 73% of participants reported that they were strongly satisfied. Approximately 69% of participants reported that they strongly agreed that the intervention helped them to develop more effective self-care skills. When asked if participants would recommend this intervention to other students, 100% responded yes, and approximately 95% of participants reported that they would attend this intervention if offered by their programs.

Discussion

The purpose of Study 2 was to examine the effectiveness of Values-Based Self-Care (VBSC), a 6-week group intervention designed to promote self-care practices for health students. My Study 2 results show that self-care is a teachable skill that does not require long intervention. In comparison with other ACT-based interventions, VBSC is an efficient program given its brevity and that it can be delivered to a heterogeneous sample of health students, both undergraduate and graduate, in a group format, which services more students at the same time. Moreover, consistent with my grounded theory, promoting engagement in self-care through valued living appears to be a useful approach for this student population. As well, although not directly a target of the intervention, my results indicate that intervening in self-care impacts students' emotional distress and self-esteem. This is important because negative affect of the health provider has been found to impact the quality of patient/client care, and students are at a greater risk for poor mental health (e.g., APA, 2011; Duarte et al., 2016; Salyers et al., 2015).

Values-Informed Self-Care Decisions

My results show that an engaged response style (i.e., values and committed action) produces very similar findings to self-care interventions that target all 6 components of ACT's psychological flexibility model (Pakenham, 2015c; Pakenham & Stafford, 2013; Stafford-Brown & Pakenham, 2012), and it also extends this work on clinical psychology students to a heterogenous sample of health students. This adds to the efficiency of the VBSC intervention from a resource perspective. Within-person changes in self-care utilization and efficacy were seen in just six sessions, which is briefer than existing self-care interventions (Greene et al., 2017; Pakenham, 2015c; Stafford-Brown & Pakenham, 2012).

Similarly, previous research has largely evaluated ACT as a whole (i.e., all six processes) on depression, anxiety, and stress (e.g., Abdollah et al., 2015; Eilenberg et al., 2015; Yadegari et al., 2014). My results indicate that emphasizing values and committed action, without explicitly focusing on the four remaining processes of ACT, can still lead to some meaningful changes in emotional distress. Similar to my results, researchers have found very small to medium effect sizes in stress reduction (Stafford-Brown & Pakenham, 2012; Viskovich & Pakenham, 2019). Moreover, only one study reported effect sizes for anxiety and depression, and these have been in the low to medium range, similar to my results (*d* ranges from 0.32 to 0.36) (Viskovich & Pakenham, 2019). My Study 2 findings, however, did not show any statistically significant differences between the groups on anxiety. Viskovich and Pakenham's (2019) mediation analysis may shed light on my non-significant findings. They found that acceptance mediated changes in anxiety and depression, whereas valued living mediated changes in depression only. It is possible that, for anxiety reduction, acceptance is an important ACT process to include. This might explain why the VBSC intervention only reduced depression scores and not anxiety.

Many self-care interventions provide strategies in a list format without providing the opportunity for students to reflect on their relationship with self-care. By thinking about self-care in the context of their own lives and values, this invited participants in my Study 2 to examine the discourse between what they say is important and what they actually do. As an action, thinking involves an internal dialogue that is capable of raising a person's consciousness about the degree to which there is congruency between what they think and believe, and how they act (Arendt, 1971). If people do not examine self-care information within the context of self, "it teaches them to hold fast to whatever the prescribed rules of conduct may be at a given time in a given society" (Arendt, 1971, pp. 435-436). Thinking about self-care personally invites self-reflection about the meaning of taking care for oneself, and how one's own behaviours align with this perspective. Moreover, teaching health students to reflect on the relationship that they have with professional guidelines helps them make more meaningful applications in their own lives so that they may flourish, which is especially important when working in a challenging and dynamic profession (Edgar & Pattison, 2016; Wise & Reuman, 2019).

An Idiographic, but Still Nomothetic, Intervention

When it comes to intervention development for health students, my study suggests that it is important to modify the program to meet student needs. The VBSC group intervention is an important starting point as it is a highly adaptable intervention. It provides a general structure that can be personalized to the individual and sub-group of students. When evaluating self-care interventions, it is important to allow for this flexibility so that the program can meet users where they are in their self-care development. For example, the VBSC intervention was adaptable enough to be helpful for people who are at different stages (as per my grounded theory model), from students who are just learning about their values to students who are comfortable in their

values but require support in navigating challenges. The ability for interventions to be flexible enough to allow for individual variation, while still providing an overall framework, is important for bridging the science-practice gap (Naar et al., 2018). It also allows for clinicians to best meet user needs as it may be tailored to where the person/group is, to stay within a therapeutic window that is important for change.

Moreover, many participants reported a mismatch between student mental health supports and their program demands. Many students reported that, due to practical constraints in time, they found it challenging to use student mental health services. Students were required to work long, and oftentimes unpredictable, hours, especially in their clinical placements. They also feared the consequences of taking time off during the day in order to attend therapy. Students reported that they either did not seek out these services, or they waited for several weeks/months to receive services. To best meet student needs, I was flexible in coordinating group meeting times and offered evening groups (which were a popular choice for many students). I was also flexible in that I offered an individual session for students who had to miss a group session. Students were very appreciative and open to this option. Time is an essential factor in intervention development as it is the most commonly cited barrier to self-care reported by students (Bettney, 2017; El-Ghoroury et al., 2012; Pakenham & Stafford-Brown, 2012). Flexibility in delivering wellness programs helps to reduce barriers for students.

The Importance of Support

Many participants reported preferring and liking that the intervention was offered in a group format. They valued hearing other students' stories and experiences, receiving support from students who were facing similar program and life challenges, and learning different self-care strategies used by others. In addition, informational support was offered. Participants shared

campus and community resources, including mental health groups, financial, and academic supports. Unfortunately, health students report feelings of isolation. For example, in a study of a diverse sample of health students (i.e., dentistry, medicine, nursing, pharmacy, and public health), 19.4% of students reported feeling socially isolated in several ways, including feeling different from peers, competition, faculty relationships, and being busy with coursework (Ray et al., 2019). Social support is a basic human need and protective mental health factor (Alsubaie et al., 2019; Kleiman & Liu, 2013; Pereira-Lima & Loureiro, 2017) that relates to greater self-efficacy and coping with stress among college students (Grether et al., 2018; Roming & Howard, 2019; Samssudin & Barros, 2011; Yıldırım et al., 2017).

Group therapy offers social support and connection, and the sharing of private information allows for feedback to occur between group members, which help to foster therapeutic change (Barlow & Burlingame, 2006). In addition, social support is an empirically supported predictor of posttraumatic growth. Socializing helps people to derive new meaning and perspectives from others (Grad & Zeligman, 2017; Dickinson, 2020). Furthermore, as a result of sharing their self-care choices in the group, they modelled this behaviour to other group members, and by receiving positive feedback, this likely reinforced self-care behaviours. Given the importance of social relationships on behaviour, it is possible that some of the treatment gains found are due to the therapeutic alliance between group members.

According to Ricoeur (2005), social exchanges provide a necessary opportunity for individuals to both reflect on their individual capacity, but also to build a collective and shared moral responsibility for change. Storytelling builds a sense of viewing the self as an active and capable agent. Through narrating one's story, this invites the possibility of re-narrating and impacting the storyline. As well, by sharing with others, people begin to weave their life stories

with that of others. These exchanges contribute to the validity and truth that self-care *is* needed, both individually and as a collective. Therefore, these interpersonal exchanges not only impact self-identity and confidence, but also a sense of shared moral and collective agency. The pairing between capabilities and rights (i.e., group members come to view themselves as capable agency who require self-care as a fundamental need), allows for the actual practice of agency (Ricoeur, 2005). Similarly, other socially oriented approaches to health argue that a sense of collective agency between people promotes health behaviour change. That is, knowledge acquisition and behavioural changes are learned and reinforced by observing others and by the social reactions that such changes evoke (Bandura, 2004; Bandura & National Institute of Mental Health, 1986).

An important area of future study is to evaluate and monitor the group alliance using psychometrically valid measures. In my Study 2, participants benefitted from the anonymity offered by being part of a group therapy that was separate from their direct programs of study (i.e., there were rarely students from the same programs in the same group, the physical location of study was different from their programs). Some participants expressed that they preferred to not be part of a group that had students from their program. Based on my observations of the groups and student feedback, it seems likely that program-related factors (e.g., the relationships between students, the culture of self-care) play a role in the group alliance and may inform how future researchers form groups to best maximize participant safety.

Values and Self-Esteem

Higher and more stable self-esteem has been shown to predict better coping in college students (Tam et al., 2020; Mann et al., 2004; Smith & Petty, 1995; Yıldırım et al., 2017) as students believe they are able to exert some form of control over events and outcomes in their lives (i.e., they have a greater internal locus of control) (Kurtovic et al., 2018). Since I only

measured trait levels of self-esteem, my results only suggest that intervening in self-care via values has an impact on this type of self-esteem.

Another informative framework from which to understand self-esteem and behaviour are contingencies of self-worth, which refer to the domains in which people stake their self-worth (Crocker, 2002a). Researchers conceptualize contingencies of self-worth along a continuum from internal to external forms of self-worth. Internal self-worth is derived from factors that are internal to the self (e.g., virtue, faith), whereas external self-worth is obtained from sources that are extrinsic to the person (e.g., approval from others, one's physical appearance). Contingencies of self-worth are an important area of study for future self-care research because they have been found to relate to health and coping, with internal self-worth predicting greater wellbeing and use of more health sustaining behaviours (Crocker, 2002a, 2002b).

Building on this previous work, it is possible that contingencies of self-worth also reflect the values that students believe are important (i.e., they are more likely to move towards activities that they value). If so, this highlights the importance of values in interventions. There are several possible ways in which values may play a role in the type of contingencies of self-worth. First, it is possible that having a greater connection with one's values and merging these into one's identity increases one's sense of internal self-worth because students are moving towards events that occur in areas that are meaningful and personally relevant. Alternatively, a second possibility is that having internal self-worth increases and further drives self-care. It is possible that rather than selecting strategies to numb or avoid emotions, people with internal self-worth use self-care in ways that reduce stress more effectively. Some research shows that self-worth changes across professional training (Longfield et al., 2006), such that self-worth becomes

increasingly dependent on internal (rather than external) sources. It is possible that entering into professional training with an external form of self-worth is a risk factor for poor use of self-care. A third possibility is that self-worth is a moderating variable between valued living and self-care. More research is needed for both theoretical and intervention development.

Study Limitations

Mental Health Screening

As I screened out participants with serious mental health concerns (n = 6), it is impossible to know the potential impact of VBSC on students who present with severe levels of mental health concerns, particularly students who are actively suicidal, have severe depression or anxiety, hypomania/mania, in psychosis, or with substance dependency/abuse. Unfortunately, as previously discussed, health students are more likely to experience mental health concerns at rates higher than the general population (El-Ghoroury et al., 2012; Heinen, et al., 2017; Rahimi et al., 2014). Understanding the intersection of self-care and mental health for these students is a crucial endeavour for future research in this area.

Self-Report Measures

There are limitations of self-report measures that are particularly relevant to my dual role as the group facilitator and student researcher. Participants might have been motivated to inflate the positive impact of the group as there were many participants who were also completing a thesis or dissertation during the study. As such, they might have felt compelled to complete the measures as they could relate to the need for collecting complete participant data in order to finish a research project. A way to mitigate this dual role would have been to have another therapist as the group facilitator; however, this was not feasible. To manage this dual role, participants completed the self-report measures alone and then they put them in an envelope that

they sealed. The measures did not have any personally identifiable information on them. Finally, a trained research assistant entered the data and I only viewed the data at an aggregate level.

There are additional broader limitations of self-report measures. Although self-report measures have several advantages (e.g., they are versatile, inexpensive, and easy to administer/score), they are subjective and often subject to social desirability and other forms of response bias. For example, social desirability has been found to increase self-ratings of well-being after controlling for sociodemographic variables such as gender, age, and employment status. However, some research suggests that social desirability plays only a small role, accounting for approximately 3 to 6% of the variance (Caputo, 2017). In addition, the self-report of various health attitudes and behaviours may be different from what might be gathered via more objective measures, like observational ratings. Extraneous factors, such as time of day and stress, may impact reporting. This bias in reporting may not necessarily be intentional. It is possible that this self-report data is a depiction of perceived, rather than actual, self-care. Additional discussion of the measurement of self-care is located in my general discussion.

Difference Scores

Difference scores have several limitations in comparison with other approaches. Some researchers argue that difference scores are less reliable and they do not correct for imbalances in baseline scores, but rather they can produce biased estimates of the mean difference by increasing false positives in testing (Fu & Holmer, 2015; Thomas & Zumbo, 2012). Importantly, difference scores do not provide a measure of clinically meaningful change, nor do they use standardized units. A more superior approach to examining raw difference scores that would provide a measure of clinically and statistically significant change is to use reliable change scores (Schmitt & Di Fabio, 2004). Reliable change scores are highly responsive to change, they

take into account the reliability of the measure used, and they are useful comparisons across studies as they use standardized units (Schmitt & Di Fabio, 2004; Zahra & Hedge, 2010).

Research Design

My study design was limited in four ways. First, I did not include an active, treatment-as-usual control group, which limited the conclusions that I could draw. Including a treatment-as-usual control group would be informative for disentangling the additive effects of values on self-care, in addition to self-care education as it is normally delivered. Second, it is possible that the intervention was not long enough to produce reliable or statistically significant changes in the outcome variables when compared to an inactive control group. For example, although participants individually experienced a greater ability to identity and move towards their values (and this is a positive trajectory of change), the intervention might not have allowed for enough time to reach the threshold of committed action, which involves persistence and flexibility (Hayes et al., 2012). This hypothesis is what would be predicted by my grounded theory model, as Building Confidence required time and practice. Third, I did not include a follow-up measurement. It is unknown if and how long benefits were maintained, and how this compares with other self-care intervention research.

Chapter 4: General Discussion

My dissertation aimed to drive the self-care agenda in health students by first creating a theory about how students naturalistically create and maintain self-care plans, and then by developing a group intervention based on this theory, in collaboration with my advisor and previous literature on values. In both studies, values were foundational in helping students to create, maintain, and use their self-care plans when challenges arose. In addition to using values, my grounded theory showed that social support and gaining confidence in using self-care helps students to consolidate self-care behaviours into their identity as people. Self-care is a teachable skill that students, with support and practice, can master over time. Furthermore, the group intervention, VBSC, was a positive experience for students and it had an impact on self-care, valued living, mental health, and self-esteem, especially when looking at within-person changes before and after the intervention. Both of my studies used a heterogeneous sample of health students, suggesting applicability of the model and intervention across health programs. My findings from Study 1 and Study 2 have implications for self-care research, the development of self-care interventions, and curricula/training opportunities for students in health programs. I discuss this below, as well as strengths and limitations of my dissertation as a whole.

Meta Findings

My dissertation findings show that values can be leveraged to help health students to develop meaningful and sustainable self-care plans. Whereas the majority of research has focused on values in the context of chronic pain, my findings extend this literature to non-clinical, student samples and everyday health behaviours. As suggested by previous research and confirmed in my dissertation, framing health goals within a person's personal values helps them to move towards these goals in the face of discomfort, as they are freely chosen and intrinsically

motivating to the individual (Páez-Blarrina et al., 2008; Hayes et al., 2012; Trindade et al., 2016; Wilson et al., 2010). In order to be successful in moving towards health goals, these behaviours must be contextualized within the personal values system and life context of the person. Moreover, my findings suggest that values impact mental health in health students, and this coincides with research on the health benefits of meaning (Bramwell & Richardson, 2017; Cohen et al., 2015; Hayes et al., 2012; Hooker et al., 2017; Sherman et al., 2009).

It is possible that in order to circumvent the suffering involved in Phase 1 via Wake-Up Calls, students can learn about values and reflect on their own. Research shows that people can experience psychological growth independent of the valence of the event itself; that is, both positive and negative events may lead to post-traumatic growth, and negative events are not superior in facilitating growth than positive events (Mangelsdorf et al., 2019). On the other hand, it is also possible that participants in my Study 2 did not experience Wake-Up Calls, but rather they experienced post-ecstatic growth, which has been shown to occur after events that provoke inspiration, meaning, and new opportunities (Roepke, 2013). Evaluating how values-articulation exercises work to promote self-care is an important area for future intervention development.

The idea that self-care should be tailored to what constitutes a "good life" according to the individual is not new, but it has been acknowledged by philosophers for decades. Foucault (1985) discussed caring for the body (i.e., *Dietetics*) as reflected by Greek philosophers. Although the Greek philosophers acknowledged that there were several common self-care "regimens" (e.g., exercise, food, sleep, sexuality), they viewed self-care as "an art of existence" that went beyond preventing illness or disease, but as a way to live a good life (p. 108). They also recognized the importance of using the "right measure" for the person (Foucault, 1985, pp. 101-102). That is, they did not believe that knowledge about dietetics was to be merely

transmitted from a doctor to an individual, but rather, it involved self-awareness about one's body and circumstances (Foucault, 1985). These earlier wisdoms appear to be forgotten in our contemporary practices. Many programs provide checklists of strategies that assume there is a universal practice of self-care. Self-care is also viewed as a way to reduce burnout, rather than moving towards a life that is joyful and meaningful. Given my dissertation findings and these earlier reflections on self-care, the lack of attention paid to individual values may explain the ineffectiveness of checklist style self-care interventions.

Another way in which our current approach is ineffective is due to how we usually transmit knowledge about self-care. Current approaches provide information about self-care in a top-down fashion, thereby expecting students to apply this knowledge without support. My dissertation findings show that learning how to develop and maintain a sustainable self-care plan takes time and it requires support. Again, this finding is not new. Research in health psychology shows that self-efficacy predicts more consistent engagement with health behaviours (e.g., exercise, dietary changes, medication adherence, smoking cessation) (Bender & Ingram, 2018; Borhaninejad et al., 2017; Brouwer & Mosack, 2012; Fridberg & Gustavsson, 2019; Lepore et al., 2019; Pan et al., 2009). However, in the context of self-care, self-efficacy has not been incorporated well into interventions, and only a few researchers have examined the relation between self-efficacy and self-care (Callaghan, 2003; Greene et al., 2017). Similar to other health behaviours, the decision to change self-care behaviours requires some degree of capacity and agency. It is not enough to provide students with a list of self-care strategies, but just like any other skill, mastery requires a sense of efficacy.

In my grounded theory, social support not only helped students to build and learn about self-care strategies, which is an important piece of existing self-care interventions, but they

importantly required ongoing support in several ways. Students prefer to have an ongoing support network from which they can learn to further modify their self-care plan, as well as to have a support network of like-minded others as a form of support and accountability. Often, students would incorporate trusted family/friends into their self-care plans, or they would rely on others to provide them with feedback about meeting their self-care goals or positively reinforcing feedback through others noticing the impact of self-care on them. Similarly, based on my group observations and participant feedback, participants enjoyed the group format as it allowed for them to learn from others, to receive feedback and support on their self-care, and it served to positively reinforce self-care behaviours. It is in part through this group context that students learned about how to create and re-create their self-care plans based on group dialogue, sharing, and feedback from others. As demonstrated in my Study 1 discussion, deliberate practice, which involves an iterative process between practicing skills and receiving feedback, is crucial for skill mastery (Barrett-Naylor et al., 2020; Gillespie, 2018; Macnamara et al., 2018). Support and feedback from others foster skill mastery because it helps people to integrate new learning about the skill and practice it response to feedback, which further consolidates learning (Chow et al., 2015; Goldberg et al., 2016; Goodyear & Rousmaniere, 2017).

Without receiving support on how to apply self-care, a possible implication of the checklist approach is that, in addition to not using self-care altogether, students may inadvertently misuse it. For example, they might overuse strategies at the expense of being critical consumers of information, which would allow them to strategically select activities that meet their needs. Another possible outcome is that students may overapply self-care without considering what is feasible for them. This makes it difficult to sustainably use self-care. In addition, many self-care measures focus on relaxation strategies that emphasize soothing stress.

Self-care is often misperceived as an indulgence and is not viewed as a way to service a greater good (e.g., values) but rather as a means to end (to feel good). When self-care being is used as a means to an end (e.g., for pleasure, to reach a certain aesthetic), this can become detrimental to health (Foucault, 1985).

Theoretical/Research Implications

My dissertation findings show that the construct of self-care varies across people. Values differ between people, and therefore we cannot apply the same definition of self-care to all. In my Study 1, as self-care was defined by personal values, there was individual variation in the type of Wake-Up Calls that triggered participants to enact changes in their self-care. Similarly, in Study 2, participants defined self-care according to their values. Even when the same domain of self-care was valued as important, there were often different self-care strategies that were selected, or the same strategy was used differently. Researchers have made progress in broadening our conceptualization of self-care by viewing it as behaviours that promote health and wellness in different domains, including mental and physical health, spiritual and social wellness, and creating an overall balance between personal and professional functioning (Baker, 2003; Bickley, 1998; Brucato & Neimeyer, 2009; Coster & Schwebel, 1997; Jordan, 2010; Lee & Miller, 2013; Meyers et al., 2013). Thus, there is growing consensus on self-care being a multidimensional construct, which is positive.

Conceptually, although there is some recognition that self-care should be individually defined (e.g., Williams-Nickelson, 2006), the definitions of self-care that are used within research studies ignore the individual variation in perceptions about self-care, and how it must be adapted to the person and context. This approach misses the personhood that is involved when making self-care choices (i.e., what matters to the person, what they are needing in their life

context). My dissertation shows that self-care is a highly personalized process that must be flexibly used depending on the person, setting, and situation. Accordingly, we need to account for this individual variability so that we can obtain a more accurate measurement of self-care behaviours in students. However, this is not to suggest that our approach should be purely individualistic. That is, there must be both an appreciation for individual variability in self-care choices, as well as opportunities to engage in collective learning. This would prevent students from being siloed from others and allow them to build collective agency and action.

Another problem with existing self-care measures is that they total scores in terms of frequency, with higher scores indicating "better" self-care (Bloomquist et al., 2015; Cook-Cottone & Guyker, 2017; Dorociak et al., 2017; Goncher et al., 2013; O'Neill et al., 2019). There are several challenges in this approach that limit the progression of empirical research and intervention development in this area. As per my grounded theory model, successful self-care does not necessarily mean *more* self-care. Rather, it entails individually selecting and tailoring strategies to the person's values and context. In Study 2, I used the SCAI as a measure of the frequency of self-care utilization; however, this was limited because it did not look at the extent to which these strategies aligned with personal values. It was possible, for example, for a student to score "low" if the domains of self-care did not align with the way in which they view self-care. It is also possible that across the intervention, some participants realized that their self-care strategies were not tailored to their values and thus they *decreased* their utilization of these strategies. Although in theory it would be expected that they would use more strategies that are based on their values, this does not necessarily suggest an overall more frequent use of self-care.

Thus, measuring self-care according to its frequency is limiting and may provide a biased and inaccurate representation of self-care. It seems likely that some strategies are not used

because they are not relevant or important to the person; this, I would argue, *is* successful self-care. The Valued Living Questionnaire was limited in this respect, as it provided students with a generic list of values, some of which were not applicable, especially the parenting domain. Self-care is, by nature, difficult to define conceptually and to operationalize. As self-care can encompass a seemingly endless array of activities (e.g., nutrition, exercise, meditation, journaling, prayer, socializing with others, balancing personal and professional demands; Bamonti et al., 2014; Myers et al., 2012), trying to measure self-care by creating a comprehensive list of activities does not seem to provide a sensitive measure of self-care. What is needed is a measure of self-care that matches a person's actual definition of self-care so that we can outcome monitor in a way that is more sensitive to participants as people.

Recommendations for Training Programs

Researchers have described three themes for improving the culture and education on self-care in health programs. To inform our understanding more fully of how to improve self-care in students, these recommendations address both micro (individual use of self-care) and macro (program-related factors, the culture of self-care) level factors. First, since students experience high levels of stress and many develop burnout at some point during their training and/or careers, a preventative approach to self-care is imperative (Barnett et al., 2006; Barnett & Cooper, 2009; Mafla et al., 2015; Norcross & Guy, 2007). To assist students in managing their stress and develop a foundation of self-care that sets them up for future success, training in self-care should start early on. Many of the stressors that students encounter during their training characterize the profession in which they will be working (Pakenham & Stafford-Brown, 2013). Instilling the importance of self-care and helping students to develop sustainable plans during training is advantageous because this is when their professional identity develops and thereby may help to

set the stage for future self-care behaviours (Barnett & Cooper, 2009; Dearing et al., 2005; Pakenham, 2015b). Moreover, placing an emphasis on prevention and a focus on the ability to flourish helps people to adopt a more positive and proactive orientation to self-care (Wise et al., 2012), which is possibly more sustainable. A shift by programs from an impairment to proactive view of self-care is needed (Maranzan et al., 2018).

Second, to create a sustainable and workable self-care plan, activities should be self-selected by the person according to their values and needs. That is, self-care should be "…defined and discovered individually" (Williams-Nickelson, 2006, p. 183). Minimal research has used a bottom-up approach to understand self-care from the perspective of health students (Ayala et al., 2017). Students' values and preferences need to drive their self-care because what one person considers self-care might be stressful for another (Pakenham, 2015b). For example, one person might enjoy playing sports, meanwhile another might find the competition stressful (Williams-Nickelson, 2006). Therefore, experiential exposure to self-care, which encourages students to exercise their personal preferences and to consider issues of feasibility, is important for creating sustainable self-care behaviours (El-Ghoroury et al., 2012).

Third, a larger cultural shift towards more "assertive" self-care is needed (Skovholt & Trotter-Mathison, 2016, p. 127). Assertive self-care calls for professionals to develop a greater self-awareness of their needs and to commit to enriching their selves to help others more effectively (Skovholt & Trotter-Mathison, 2016; Wise et al., 2012). A cultural transition towards a greater, more assertive emphasis on self-care would be well-received by students (Zahniser et al., 2017). Students recognize the poor culture of self-care in their training programs, and some of the biggest changes that students wish to see relate to the emphasis that is placed on self-care,

including how to use specific self-care strategies, support from faculty, and having self-care modeled by faculty and/or clinical supervisors (Rummell, 2015; Zahniser et al., 2017).

My dissertation findings broadly converge with the recommendations towards individualized, preventative, and assertive self-care solutions. Valued living was what influenced participants to build and maintain their self-care plans. Moreover, in order to develop preventative and assertive self-care practices, participants had to first sustain a pattern of behavioural change, and this required self-efficacy and support. Self-efficacy has been shown to increase confidence in stress management skills and in applying newly learned behaviours (Bandura, 1986); Ebner et al., 2018; Schonfeld et al., 2017; Vlasceanu, 2013). My findings also show that assertiveness plays an important role in navigating self-care barriers; but in order to do so, they must understand the purpose of self-care in their own lives. By knowing the importance of self-care in one's own life and having the belief and support in order to enact this choice, students can begin to use self-care more effectively.

Based on my dissertation findings, below I offer several recommendations for designing interventions at the program level. I suggest that these recommendations are complementary to our existing self-care approach; basic education is important when used simultaneously with values, as well as experiential learning on how to implement and sustain strategies.

Training programs should offer deductive learning about values and experiential engagement opportunities for students to reflect on their values, how consistently they live to these values, and space to select and reflect on which self-care strategies would move them closer to their values. This may be done effectively in a group format, as shown by my Study 2 findings. One suggested tool might be the Values Bulls-Eye (Harris, 2009), which asks respondents to identify their values and how consistently they live to these values. However,

based on group feedback in my Study 2, I would recommend first allowing students to think about their values and then provide a list of values, as it is needed. Since students can reap the benefits of self-care irrespective of the activity chosen (Colman et al., 2016), training programs should encourage students to select and tailor strategies to their own values, needs, and preferences. Students should be taught to be critical consumers of self-care knowledge by evaluating and applying it in the context of their values and needs.

In addition, programs should offer formal training on how to create a self-care plan utilizing three essential components: tailoring strategies, setting manageable goals, and scheduling self-care. Training programs must set students up for success by supporting them on how to set goals that are realistic and sustainable given training and other life demands. Once established goals have been set, programs should encourage students to schedule self-care, as they would other training responsibilities. They may also encourage students to utilize reminder aids (e.g., phone planners, agendas), again, as they would for other program requirements.

Rather than viewing self-care knowledge as a unidirectional flow of information to students, programs should provide opportunities for students to reflect on their existing self-care plans to further individualize and fine-tune their toolbox and/or plans as needed. For example, programs should incorporate into formal training follow up self-care discussions that invite students to reflect on what is working and what is not working as they implement self-care. Programs can also offer ongoing self-care maintenance opportunities for students to stay on track with their self-care plans. For example, bi-weekly group meetings or monthly self-care check ins can help students to navigate how to maintain their self-care, and this should be done in the context of a supportive, non-judgmental environment. In doing so, programs emphasize the

perspective that self-care is not static but rather it requires ongoing engagement, reflection, and fine-tuning depending on students' work and other life demands.

Furthermore, advanced seminars and/or workshops may be held to train students how to stay on track with self-care when challenges arise. Integrated into this training should be discussions on the barriers to self-care that students experience and strategies to help overcome them. Students should be provided with tangible strategies, for example interpersonal (e.g., using self-awareness, revising a plan, reflecting on values) and intrapersonal (e.g., using supports, being assertive), and again within the context of a safe, welcoming environment.

To move towards a preventative approach, value-based discussions about self-care should be offered during the first year of training. For example, programs may explicate self-care as a program value during training orientation. As a result, the process of building an effective self-care plan should begin during the first year of training. If programs offer self-care training during the first year of training, it is possible that two levels of self-care training be offering. Level One training might assist students to identify their self-care values and begin to develop and implement a workable self-care plan (Phases 1 to 3 from my grounded theory model). This program might be offering during the junior years of the program. Level Two training might involve assisting students to continue to stay on track with self-care and ways to persist when challenges arise (Phases 3 to 4). Of course, it would be unfair to assume that year of study is indicative of where a student is at in terms of their self-care development. This would necessitate an evaluation tool for programs to identify their students' self-care needs so that they can respond appropriately. A potential tool to screen students for program assignment would be to conduct open-ended interviews as part of the formal orientation process to determine the student's current engagement with self-care and area(s) in which they require support.

Ethical Challenges of my Dissertation Work

First and foremost, issues of privacy and confidentiality were central in my dissertation work. Both of my samples were small, and some students were enrolled in programs with a small number of students. These characteristics heightened my ethical responsibility to maintain privacy and confidentiality. To protect students, in my Study 1, any identifying information that could identify a student's program (e.g., name of program, names, nature of work), was deleted from the transcripts. In addition, program demographics were stored separately from the rest of the data. In my Study 2, after the student was determined to be eligible, I informed them that disclosing their program name was optional within the group setting. As well, I discussed with participants what to do if we saw each other on campus. In Study 2, I also took several procedural steps to add in a layer of anonymity between the data and myself. For example, unique participant codes made it challenging to identify participants and ideally helped to encourage them to self-report more honestly. Data was also largely entered by a trained research assistant. Furthermore, the Acceptability Evaluation questionnaire was anonymous, and all data was entered by a research assistant. I did not access the data until it was aggregated. My hope was that these measures helped participants to disclose information accurately and honestly.

A second major ethical challenge in my dissertation work was managing my dual roles as a researcher and graduate student, who largely identified with participants' sources of stress and self-care challenges. I have my own perceptions of self-care as a health student, and I often experienced similar personal, academic, and institutional stress/barriers to those that were reported by participants. I had to remain mindful and self-aware of these and the ways in which my own experiences and perceptions about self-care may influence how I approach and interpret my data. In Study 1, memo-ing was used to help me to reflect on the data, as well as my own

experience as a student hearing others' perspective on self-care. I kept a journal to document my personal and research-related reactions to the data. This process helped me to acknowledge my own perspectives and assumptions that I hold about the process of self-care and helped to keep me centered in the data. In addition, constant comparison of themes across research participants and supervision was used throughout the research process to keep me grounded in the data.

Balancing my dual roles was complex in Study 2 as I was the researcher, a graduate student, and the group facilitator. There were several steps that I took to help me balance these roles. During the screening process, my researcher and student roles wanted to recruit participants; however, given the novelty of the intervention, that was something that I not only had to disclose, but also had to consider for students with more severe mental health concerns. This decision was difficult because it posed difficult to triage students with other services given their academic/practica schedules. Sometimes mental health services were not available to suit student availability. As a student, I also wanted to help these students in receiving support, but I also had to consider the ethical and clinical appropriateness of including higher-risk students. Throughout, I received clinical consultation to assess for risk and service triage where needed.

In addition, I also had to balance being relatable as a graduate student myself and being credible as a student researcher. While delivering the intervention, I was transparent with participants in the first group session about my dual roles and the conflicts that this can pose. I found this useful for keeping an open dialogue and added a sense of relatability and credibility as fellow graduate student and self-care researcher. Also, in Study 2, I had to balance rapport, transparency, and clinical appropriateness. I only self-disclosed information about myself when it would be clinically useful and drew on clinical supervision where appropriate.

Dissertation Strengths and Limitations

Strengths that were consistent across both studies include focusing on a vulnerable population of students who are at risk for mental health concerns and burnout. Current approaches to self-care in this student population use top-down methods by disseminating (limited) self-care information to students, without considering the perspectives or needs of students. In contrast, my dissertation used a bottom-up approach to understand the experience of self-care from the perspectives of health students. From a knowledge mobilization perspective, this was essential in closing the research-practice gap as it allowed me to understand what they find helpful in creating and maintaining self-care, as well as factors that can impede self-care. When designing interventions, it is important to understand the users experience that way the intervention can be tailored to best fit their needs.

My dissertation findings add an important contribution to the evidence-based research for self-care interventions, specifically for a heterogenous sample of health students. Other evidence-based self-care interventions focus on a specific subset of health students without considering the commonalities amongst students. I created a grounded theory from a diverse range of health students, and empirically tested this again using a broad group of health students. This allowed me to develop a research-driven self-care intervention that was informed by the user perspectives and needs. In addition, my intervention also further informed my grounded theory model by providing me with a theoretical framework in which to clinically evaluate where they are in the model and how to best support them.

The use of both qualitative and quantitative research methods allowed me to triangulate data from multiple sources. This allowed me to use the strengths of both types of information, which counteracted the limitations of single methods. I used a mixed methods approach by first

exploring the process of developing self-care plans from the student perspective, and while this provided me with a detailed account of this process, it was not empirically tested. However, I then tested this qualitative theory by developing an intervention that applied my grounded theory model in practice. In testing my model using quantitative data, this provides initial evidence to support the validity of my grounded theory model.

My dissertation was also limited in several ways. In both studies, the samples were restricted on several characteristics, and this may influence the interpretation of my results. First, the participants were predominantly women. This limits the generalizability of my grounded theory model and intervention findings to health students who are men. The strong overrepresentation of women participants in my dissertation could be due to an overall gender imbalance in health programs; however, a gender breakdown of programs is not available at the U of S. Another possible reason for this gender imbalance is that women are more likely to seek help in general, as compared to men (Liddon et al., 2018; Nam et al., 2010). Gender is one of the most consistent and robust factors that predicts help-seeking behaviours in college students (Nam et al., 2010). Women might also be more likely to be encouraged or pressured to engage in self-care and/or to seek support for their self-care. This is consistent with research recently conducted in our lab demonstrating that lay expectations of self-care appear to be heavily informed by gender expectations and that behaviours frequently labelled as self-care often target and conform with gendered expectations for women (e.g., engaging in beauty routines, dieting) (Knowles & Cummings, 2020). It is possible that men are less inclined than women to express themselves and explore their challenges. However, it is also possible that men might not perceive themselves to have the same type of difficulty with self-care similar to women (due to the construction of womanhood).

Second, the majority of participants identified as Caucasian (i.e., 65 to 76%). Again, a breakdown of ethnicity for health students is not available at the U of S. This limits the generalizability of the findings to other ethnicities. Few studies explore the impact of culture on self-care; it is possible that culture influences a person's experience of applying self-care knowledge and on the relevance or effectiveness of certain self-care practices. Pedrotti and Burnes (2016) argue that early career psychologists from ethnic minorities who have been historically marginalized may face difference obstacles compared with their non-marginalized counterparts. For example, discussing difficulties related to meeting their self-care needs with their colleagues might lead to the perception that others might attribute their difficulties to their cultural backgrounds, in turn, making assertiveness particularly difficult for culturally diverse people. By extension, it is possible that ethnically diverse health students might require specific strategies to support their self-care. For example, students from collectivistic cultures may find it challenging to explore values as they relate to their own health and wellness. Instead, by placing an emphasis on others (e.g., family), it is possible that there is an additional subprocess required for them to meet this self-care need while balancing it with taking care of their own wellness. Although these ideas are hypothetical in nature, they warrant further investigation to create culturally sensitive self-care interventions.

Third, I recruited participants only from the U of S; as such, the findings are confined to the experiences of students studying in this particular geographical area. It is possible that, as a result of different subcultures within other academic institutions, that my grounded theory model and VBSC intervention would require modification is used in other types of colleges (e.g., vocational schools). In addition, I largely only recruited participants who were studying in health programs, which limits generalizability to students in non-health programs. As well, lumping all

programs into one resulted in me potentially overlooking the nuances (or sub-cultures) within health programs. Programs are not equal in the types of stressors or demands within them. For example, the nature of interpersonal connection with clients/patients between health programs differs and could result in different types of stress and/or risks (e.g., greater compassion fatigue or vicarious trauma). Lumping professions together overlooks the diversity in self-care cultures.

In the disability literature, there is a debate about whether disability is caused by individual deficits (i.e., medical model of disability) or by the way in which society is organized (i.e., social model of disability) (Hughes & Paterson, 1997; Shyman, 2016)[8]. Applying this debate to self-care, the lack of self-care utilization can be regarded as resulting from student deficits (medical model) or due to program-level barriers that reduce students' ability to implement self-care (social model). I primarily embraced aspects of the medical model in my dissertation, namely by focusing on this problem – and ways to intervene – at the level of the individual. However, there are social, cultural, and systemic factors that impede self-care behaviours that were not explored in my dissertation. I noticed this while facilitating the group. Students who were in the same program often referenced how program characteristics impacted their self-care utilization in ways that were not reported by students in different programs.

Researchers have documented program and institutional barriers to self-care. For example, in medical programs, researchers have explored the *hidden curriculum*, which refers to the values that are transmitted (but not openly acknowledged) through the learning environment

[8]While disability does not result from the ineffective use of self-care, I suggest that impairment in the ability to conduct ethical, competent work implies some degree of disability.

and from the behaviours and attitudes of faculty (D'Eon, 2013; Hafler et al., 2011; Wilkinson, 2016). As such, researchers have advocated for curriculum changes in medical schools so that these systemic barriers to self-care are removed (e.g., D'Eon, 2014; Slavin, 2016; van Dijk et al., 2017). More broadly, the culture of speed in academic institutions has received criticism by scholars, who argue that our consumer model of education, which emphasizes efficiency while ignoring the lack of time that teachers and learners have, results in superficial learning, high stress, and ultimately strips the humanity out of academic institutions and replaces it with consumerism (Berg & Seeber, 2016). The *Slow Movement* has been used to counter this commodification of education by advocating for a slower approach to learning and teaching that involves using agency and time to act purposefully, to cultivate resilience, and to create a supportive and open learning environment that encourages reflection (Berg & Seeber, 2016; Skovholt & Trotter-Mathison, 2011). Consistent with the movement in organizational psychology towards understanding how social norms and structures within the work setting impact wellness (Koppes, 2008; Williams et al., 2016), self-care research for health students would similarly advance from such an approach.

Future Directions

My results raise several avenues for possible future research in this area. First, as this is a new area of research, it is important to replicate my findings using new samples and settings. Replication helps us to understand the boundaries in which generalizability can be established. Future researchers may evaluate the intervention using a larger sample of students who are from a different academic institution(s). It is possible that the intervention is not effective for students in certain programs or in particular geographic locations. Second, future researchers should broaden the samples that they study. The vast majority of research on self-care includes samples

with mostly women participants (e.g., Pakenham, 2015b; Pakenham, 2015c; Pakenham, & Stafford-Brown, 2013; Stafford-Brown & Pakenham, 2012). Researchers should aim to recruit samples that are inclusive of both men and women. I found no studies exploring gender disparities in seeking support for self-care. Such studies would be important for informing how we can further tailor our interventions and teaching methods on self-care. It is possible that gender roles and norms play a role in men's use of self-care programs. In addition, many self-care studies explore isolated pockets of health students, especially clinical psychology, medicine, and nursing. Future researchers should examine the effectiveness of self-care interventions for students in other health programs (e.g., pharmacy, nutrition).

Third, future researchers should develop a more sensitive measure of self-care that accounts for individual variation. Recent research has made progress in this area by developing more comprehensive self-care measures (e.g., Marsh et al., 2020). However, given my dissertation findings, future researchers should go beyond designing multidimensional measures of self-care to those that account for this individual variation in values. For example, researchers could design a measure that assesses movement towards value(s) that participants identify as being disconnected from earlier on in treatment. If participants make modifications to these values (e.g., identify a new value, re-label the value), outcome monitoring should be modified in a way that accounts for this self-awareness. In this way, our measure of pre-post changes is more attuned to the nuances in values and becomes a more sensitive and accurate measure of change.

Fourth, future researchers should develop and evaluate phased-matched self-care programs that are tailored to where students "fall" in my grounded theory model (i.e., Phase- or Stage-specific interventions). For example, if students have not had any Wake-Up Calls, it would be beneficial for students to be provided with training opportunities that focus on identifying and

clarifying self-care values. On the contrary, students who are well versed in their self-care values might benefit more by learning how to persist in utilizing self-care when challenges arise. Similar to the stages of change for recovery or treatment, we could predict where people are in their self-care journey utilizing this model as a framework through which to conceptualize students' development and then to use this information to determine their treatment needs. This would assist us in creating interventions that are theoretically informed and individually tailored, which is consistent with evidence-based practice.

Fifth, future interventions and researchers should explore how group dynamics and the social relationships within self-care training affect students' perceptions and experiences of these programs. Understanding these social and systemic factors may help to reduce isolation, powerlessness, and social structures that disenfranchise students as capable agents. Political thinker, Hannah Arendt (1979), wrote about the necessity of people coming together in solidarity as a way to bring about social and political change. Through social exchange, people build capacity and a collective identity, both of which are necessary for initiating social and political change. Similarly, Harro (1997) emphasizes group empowerment as a way to interrupt the cycle of socialization and to unlearn old ways of doing. In this sense, self-care is not only a personal need, but an issue that has social, moral, and political implications that warrant future research.

Sixth, future researchers should conduct component studies comparing an engaged response style with the other ACT processes. This would allow us to see the additive effects of values and other ACT process on self-care and help to develop effective and efficient interventions that optimize the best use of ACT.

Finally, future researchers should explore how self-esteem impacts self-care behaviours. For example, researchers have found that unstable self-esteem predicts more impulsive

behaviours (Crocker & Park, 2004). These behaviours provide short-term gains rather than long-term solutions and they are a form of self-soothing unpleasant emotions and thoughts. In contrast, self-care can involve strategies that do not necessarily "feel good," but help the person to move towards a valued life direction (Brown, 2012). Future researchers should examine the relation between soothing, self-care, and self-esteem.

Conclusion

My dissertation provides the first evidence for the role of values in self-care among health students. This finding has important implications for training programs, as well as on how we conceptualize and measure self-care. Consistent with evidence-based practice, our self-care interventions must be tailored to meet student needs, in addition to being grounded in scientifically driven theory. My findings show that self-care is a teachable skill that, like any other skill, requires practice and support in order to gain mastery. As well, self-esteem appears to play a role in self-care behaviours. It is possible that self-esteem increases as a result of valued living, or that self-esteem is a product of better self-care. A limitation of my dissertation, and an area for future research, is to explore institutional barriers that impede self-care, other gender's perceptions (e.g., men) of self-care, and the ways in which program subcultures can be used for intervention development. Given the limitations to our self-care approach, there must be a shift in the way in which we perceive and teach self-care. We must begin to view the purpose of self-care beyond burnout; we must first and foremost teach students how to flourish as people.

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Appendix A: Study 1 Interview Guide

A.1 Study 1 Interview Guide (interviews 1 to 4)

1. Tell me about your self-care, starting anywhere you are comfortable with and that feels right for you.
   Prompts (if needed):
   i. *What images, thoughts, or feelings come to mind when you hear "self-care?"*
   ii. *Tell me a story about you and self-care.*
   iii. *Looking back on your self-care during the last few months, is there anything that stands out in your mind?*

2. How do you make the decision to use self-care?
   Tell me about a time when you decided to use self-care.
   Prompts (if needed):
   i. *Describe the events that led up to your decision.*
   ii. *What were you thinking or feeling during that time?*

   Can you describe a time when you decided to not use self-care when you thought you should have?
   Prompts (if needed):
   iii. *Describe the events that led up to your decision.*
   iv. *What were you thinking or feeling during that time?*

3. Have there been any changes in your self-care in the last few months? What do you think contributed most to this change?

4. Is there something else you think I should know about your self-care that we have not discussed?

5. **Demographic questions:**
   a. What is your age?
   b. What is your gender?
   c. Which ethnicity do you identify with?
   d. What is the name of your program? What is your year of study?

6. Is there anything you would like to ask me?

7. Thank participant for their time and for sharing their experiences.

8. What has this experience been like for you? Did you learn anything new about your self-care or yourself?

A.2 Study 1 Interview Guide (interviews 5 to 11)

1. Tell me about your self-care, starting anywhere you are comfortable with and that feels right for you.
   Prompts (if needed):
   i. *What images, thoughts, or feelings come to mind when you hear "self-care?"*
   ii. *Tell me a story about you and self-care.*
   iii. *Looking back on your self-care during the last few months, is there anything that stands out in your mind?*

2. How do you make the decision to use self-care?
   Tell me about a time when you <u>decided to use self-care</u>.
   Prompts (if needed):
   i. *Describe the events that led up to your decision.*
   ii. *What were you thinking or feeling during that time?*

   Can you describe a time when you <u>decided to not use self-care</u> when you thought you should have?
   Prompts (if needed):
   i. *Describe the events that led up to your decision.*
   ii. *What were you thinking or feeling during that time?*

3. How do you persist in using self-care during challenges?
   Prompt (if needed):
   i. *What helps you to still use self-care despite being busy, having competing demands, or other obstacles?*

4. How does knowledge about self-care influence your self-care choices?

5. How does social support (formal and informal) influence your self-care choices?
   Prompt (if needed):
   i. *Who is your social support?*
   ii. *What role does your support system play in your self-care?*

6. How do you know when you've arrived at successful self-care?
   Prompt (if needed):
   i. *What does this look like? What does it involve?*
   ii. *What would you be doing?*

7. Have there been any changes in your self-care in the last few months? What do you think contributed most to this change?

8. Is there something else you think I should know about your self-care that we have not discussed?

9. **Demographic questions:**
    a. What is your age?
    b. What is your gender?
    c. Which ethnicity do you identify with?
    d. What is the name of your program? What is your year of study?

10. Is there anything you would like to ask me?

11. Thank participant for their time and for sharing their experiences.

12. What has this experience been like for you? Did you learn anything new about your self-care or yourself?

A.3 Study 1 Interview Guide (interviews 12 to 17)

1. Tell me about your self-care, starting anywhere you are comfortable with and that feels right for you.
   Prompts (if needed):
   i. *What images, thoughts, or feelings come to mind when you hear "self-care?"*
   ii. *Tell me a story about you and self-care.*
   iii. *Looking back on your self-care during the last few months, is there anything that stands out in your mind?*

2. How do you make the decision to use self-care?
   Tell me about a time when you <u>decided to use self-care</u>.
   Prompts (if needed):
   i. *Describe the events that led up to your decision.*
   ii. *What were you thinking or feeling during that time?*

   Can you describe a time when you <u>decided to not use self-care</u> when you thought you should have?
   Prompts (if needed):
   i. *Describe the events that led up to your decision.*
   ii. *What were you thinking or feeling during that time?*

3. Tell me about your experiences changing your self-care habits (if the participant has no experience with positive self-care changes, ask about what it's like to move away from self-care)?
   Prompt (if needed):
   i. *What was this experience like, from your perspective?*
   ii. *How would you describe this process of change?*

4. What do you think most influences your choice to follow through with self-care?
   Prompt (if needed):
   i. *What gives you the strength or determination to follow-through with your commitment to self-care?*

5. How do you persist in using self-care during challenges?
   Prompt (if needed):
   i. *What helps you to still use self-care despite being busy, having competing demands, or other obstacles?*

6. How does knowledge about self-care influence your self-care choices?

7. How does social support (formal and informal) influence your self-care choices?
   Prompt (if needed):
   i. *Who is your social support?*
   ii. *What role does your support system play in your self-care?*

8. How do you know when you've arrived at successful self-care?
   Prompt (if needed):
   i. *What does this look like? What does it involve?*
   ii. *What would you be doing?*

9. Have there been any changes in your self-care in the last few months? What do you think contributed most to this change?

10. Is there something else you think I should know about your self-care that we have not discussed?

11. **Demographic questions:**
    a. What is your age?
    b. What is your gender?
    c. Which ethnicity do you identify with?
    d. What is the name of your program? What is your year of study?

12. Is there anything you would like to ask me?

13. Thank participant for their time and for sharing their experiences.

14. What has this experience been like for you? Did you learn anything new about your self-care or yourself?

A.4 Study 1 Follow-Up Interviews

1. Thank participant for their interest in doing a follow-up interview. In this interview, I'm especially interested in learning about your experience with changing your self-care habits, from your perspective.

2. Tell me about your experience changing your self-care habits.
   Prompts (if needed):
   What was this experience like, from your perspective?
   How would you describe your process of change?

3. What do you think most influenced your commitment to follow through with changing your self-care?
   Prompt (if needed):
   What gave you the strength or determination to follow through with your commitment to self-care?

4. Have there been any changes in your self-care since your last interview?

5. Did you learn anything new about your self-care since the previous interview?

6. Share model with participant.

7. Is there anything you would like to ask me?

8. Thank for their time and for sharing their experiences.

9. What has this experience been like for you? Did you learn anything new about your self-care or yourself?

Appendix B: Study 1 Consent Forms

B.1 Study 1 Information and Consent Form

Project Title: Self-Care in Professional Health Care Trainees: A Grounded Theory Examination of Self-Care Choices.

Researcher: Jessica Campoli, Ph.D Candidate in Clinical Psychology, Department of Psychology, University of Saskatchewan, (306) 966-6731, trauma.research@usask.ca.

Research Supervisor: Jorden Cummings, Ph.D., R.D. Psych, Associate Professor, Department of Psychology, University of Saskatchewan, (306) 966-7147; **jorden.cummings@usask** or trauma.research@usask.ca.

Purpose and Objective of the Research

- The purpose of this research is to understand health care trainees' experiences with self-care, specifically the processes that they go through when deciding whether to use self-care as well as their general views on self-care and strategies for self-care.

Procedures

- You will be invited to complete a face-to-face interview focused on your views of self-care, instances in which you had to decide to use self-care, and if and how your personal values and perceptions about yourself impact your self-care.
- You will also be invited to provide the researcher with demographic information (age, ethnicity, gender, name of program, and year of study), to describe the overall sample in any research output.
- This interview is anticipated to take approximately 45-60 minutes
- Your interview will be audio-recorded for coding purposes. You may request that the audio-recorder be turned off at any time.
- Interviews will be transcribed either by the Researcher or trained research assistants of the Social Science Research Lab complex (SSRL) who have signed a confidentiality agreement.
- At the end of the interview you will be invited for permission to be contacted for a potential follow-up interview(s). Please note that if you provide this permission, you can decline to be interviewed when contacted in the future.

Potential Risks

- It is possible that discussing your self-care could bring up difficult experiences from either your personal or professional life. Please note that you are asked to only share what you are comfortable with, and if for any reason you wish to not answer a question, you are free to do so without any penalty.
- Although it is not anticipated that you will have any negative reactions associated with participation, you can contact the University of Saskatchewan Student Counselling Services, which is free to all students. You can contact Student Counselling Services at (306) 966-4920, and they are located on the 3rd Floor in Place Riel, University of

Saskatchewan. In addition, for 24-hour support that is free, you may also contact mobile crisis Saskatoon at (306) 933-6200.

Potential Benefits

- Although no personal benefits are guaranteed from participating in this study, your experience will aid our understanding of barriers to self-care, how health care trainees decide to engage in self-care, and how training programs can best promote it. Further, results from this study will be used to developing a training intervention promoting self-care for health care trainees.

Compensation

- $20 honorarium.

Storage of Data

- Your research records will be stored for a minimum of 5 years on a password protected computer network in a secured lab. Your data will be stored using a unique ID number and your name will be removed from any interview transcript and you will be given a pseudonym instead.
- Your name, phone number, and/or email address will be required for scheduling of both this interview and any follow-up interviews that you consent to participate in.
- Your name and individual responses will never be stored in the same data files.
- Your data will be archived and potentially used in future research.

Confidentiality

- All responses you provide in this study will be kept confidential, except for a few circumstances described below.
- Any information derived from this research project that personally identifies you will not be disclosed to anyone by the researchers.
- If we consider quoting your information in any research products, we will not include any identifying information and will create a pseudonym to be used in place of your name.

Limits of Confidentiality

- There are some situations where your confidentiality can be broken **without your permission:**
- Should you indicate that you have imminent intent to **harm yourself or someone else** we are required to help keep you safe and can report your identifying information to seek help.
- If we have **reason to suspect a child is currently being abused,** we are obligated to report this information to child protective services and your confidentiality may be waived to do so.
- We will make our best attempt to discuss any required waiver of your confidentiality with you prior to doing so.

Right to Withdraw

- Your participation is voluntary, and you can answer only those questions that you are comfortable with
- You may withdraw from this research project for any reason, until the time that the data from this project is pooled (i.e., all participants' responses have been combined), without penalty of any sort. After this time, it might not be possible to withdraw your data
- If you withdraw from the research project prior to that point, any data that you have contributed will be destroyed
- Your decision to stop participating or to refuse to answer particular question(s) will not affect your relationship with the researchers or the University of Saskatchewan.

Questions or Concerns:

- If you have any questions or concerns about this research study, please contact the researchers at 306-966-6731. You are also free to contact the research supervisor, Jorden Cummings, at the contact information provided above.
- This project was approved by the University of Saskatchewan Behavioural Research Ethics Board on January 9, 2017. If you have concerns about your rights as a participant, you may contact the Research Ethics Office: ethics.office@usask.ca; (306) 966-2975 or toll free at 1-888-966-2975.

Statement of Consent

I have read and understood the description of this research. I understand that my participation in this study is voluntary and that I may choose to withdraw at any time, without fear of reprisal. I understand that the information regarding my personal identity and individual results will be kept confidential. By signing below, I acknowledge that I am willing to participate in this research.

Participant's Printed Name_____

Participant's Signature_____ Date_____

I, the interviewer, have fully explained the relevant details of this research study to the participant named above and believe that the participant has understood and has knowingly provided his or her consent.

Researcher's Signature_____ Date_____

B.2 Study 1 Consent to be Contacted for Future Research

Consent to be Contacted for Future Research

What is the Purpose of this Consent?

The Principal Investigator, Dr. Jorden Cummings, Ph.D., R.D. Psych and her graduate student, Jessica Campoli, B.A., are conducting research on how to promote self-care in professional health professions students. They want to know if you are interested in participating in future related studies on self-care.

Please note that this consent is only to contact you in the future. You have no obligation to actually participate in future studies until your consent to participate is obtained.

Right to Withdraw and Confidentiality

- You may withdraw permission to be contacted at any time by contacting the researchers by phone at 306-966-6731.
- Declining consent to be contacted in the future will not affect your relationship with the researchers and/or the University of Saskatchewan.
- If you decide to consent to be contacted for future research, this data will be kept separate from your previous information.

Questions or Concerns:

- If you have any questions or concerns about signing this form, please contact the researchers at 306-966-6731.
- If you have concerns about your rights as a participant, you may contact the Research Ethics Office: ethics.office@usask.ca; (306) 966-2975.

By signing this form, you give permission for the researchers to contact you in the future. The researchers will ask if you are interested in participating in future studies on self-care. If you agree to be contacted in the future, please indicate how we can contact you and sign below.

Preferred contact method (please check one):

☐ Phone: _____

Is it okay to leave you a voice message?

Yes ☐ No ☐

☐ Email address: _____

_____ _____

Signature Date

_____ _____

Signature of Person Obtaining Consent Date

B.3 Study 1 Information and Consent Form (Follow-Up Interviews)

Information and Consent Form (Follow-Up Interviews)

Project Title: Self-Care in Professional Health Care Trainees: A Grounded Theory Examination of Self-Care Choices.

Researcher: Jessica Campoli, Ph.D Candidate in Clinical Psychology, Department of Psychology, University of Saskatchewan, (306) 966-6731, trauma.research@usask.ca.

Research Supervisor: Jorden Cummings, Ph.D., R.D. Psych, Associate Professor, Department of Psychology, University of Saskatchewan, (306) 966-7147; **jorden.cummings@usask** or trauma.research@usask.ca.

Purpose and Objective of the Research

- The purpose of this research is to understand health care trainees' experiences with self-care, specifically the processes that they go through when deciding whether to use self-care as well as their general views on self-care and strategies for self-care.

Procedures

- You will be invited to complete an interview focused on your views of self-care, instances in which you had to decide to use self-care, and if and how your personal values and perceptions about yourself impact your self-care.
- This interview is anticipated to take approximately 30 minutes.
- Your interview will be audio-recorded for coding purposes. You may request that the audio-recorder be turned off at any time.
- Interviews will be transcribed either by the Researcher or trained research assistants of the Social Science Research Lab complex (SSRL) who have signed a confidentiality agreement.
- At the end of the interview you will be invited for permission to be contacted for a potential follow-up interview(s). Please note that if you provide this permission, you can decline to be interviewed when contacted in the future.

Potential Risks

- It is possible that discussing your self-care could bring up difficult experiences from either your personal or professional life. Please note that you are asked to only share what you are comfortable with, and if for any reason you wish to not answer a question, you are free to do so without any penalty.
- Although it is not anticipated that you will have any negative reactions associated with participation, you can contact the University of Saskatchewan Student Counselling Services, which is free to all students. You can contact Student Counselling Services at (306) 966-4920, and they are located on the 3rd Floor in Place Riel, University of Saskatchewan. In addition, for 24-hour support that is free, you may also contact mobile crisis Saskatoon at (306) 933-6200.

Potential Benefits

- Although no personal benefits are guaranteed from participating in this study, your experience will aid our understanding of barriers to self-care, how health care trainees decide to engage in self-care, and how training programs can best promote it. Further, results from this study will be used to developing a training intervention promoting self-care for health care trainees.

Compensation

- There is no compensation for follow-up interviews.

Storage of Data

- Your research records will be stored for a minimum of 5 years on a password protected computer network in a secured lab. Your data will be stored using a unique ID number and your name will be removed from any interview transcript and you will be given a pseudonym instead.
- Your name, phone number, and/or email address will be required for scheduling of both this interview and any follow-up interviews that you consent to participate in.
- Your name and individual responses will never be stored in the same data files.
- Your data will be archived and potentially used in future research.

Confidentiality

- All responses you provide in this study will be kept confidential, except for a few circumstances described below.
- Any information derived from this research project that personally identifies you will not be disclosed to anyone by the researchers.
- If we consider quoting your information in any research products, we will not include any identifying information and will create a pseudonym to be used in place of your name.

Limits of Confidentiality

- There are some situations where your confidentiality can be broken **without your permission:**
- Should you indicate that you have imminent intent to **harm yourself or someone else** we are required to help keep you safe and can report your identifying information to seek help.
- If we have **reason to suspect a child is currently being abused,** we are obligated to report this information to child protective services and your confidentiality may be waived to do so.
- We will make our best attempt to discuss any required waiver of your confidentiality with you prior to doing so.

Right to Withdraw

- Your participation is voluntary, and you can answer only those questions that you are comfortable with.
- You may withdraw from this research project for any reason, until the time that the data from this project is pooled (i.e., all participants' responses have been combined), without penalty of any sort. After this time, it might not be possible to withdraw your data.

- If you withdraw from the research project prior to that point, any data that you have contributed will be destroyed.
- Your decision to stop participating or to refuse to answer particular question(s) will not affect your relationship with the researchers or the University of Saskatchewan.

Questions or Concerns:

- If you have any questions or concerns about this research study, please contact the researchers at 306-966-6731. You are also free to contact the research supervisor, Jorden Cummings, at the contact information provided above.
- This project was approved by the University of Saskatchewan Behavioural Research Ethics Board on January 9, 2017. If you have concerns about your rights as a participant, you may contact the Research Ethics Office: ethics.office@usask.ca; (306) 966-2975 or toll free at 1-888-966-2975.

Statement of Consent

I have read and understood the description of this research. I understand that my participation in this study is voluntary and that I may choose to withdraw at any time, without fear of reprisal. I understand that the information regarding my personal identity and individual results will be kept confidential. By signing below, I acknowledge that I am willing to participate in this research.

Participant's Printed Name_____

Participant's Signature_____ Date_____

I, the interviewer, have fully explained the relevant details of this research study to the participant named above and believe that the participant has understood and has knowingly provided his or her consent.

Researcher's Signature_____ Date_____

Appendix C: Study 1 Debriefing Form

Debriefing Form

Project Title: Self-Care in Professional Health Care Trainees: A Grounded Theory Examination of Self-Care Choices.

Researcher: Jessica Campoli, Ph.D Candidate in Clinical Psychology, Department of Psychology, University of Saskatchewan, (306) 966-6731, trauma.research@usask.ca.

Research Supervisor: Jorden Cummings, Ph.D., R.D. Psych, Associate Professor, Department of Psychology, University of Saskatchewan, (306) 966-7147; **jorden.cummings@usask** or trauma.research@usask.ca.

Purpose and Objective of the Research

- Previous research shows that there is a gap between knowledge and action in self-care, and that health professions students are at a risk for experiencing health complaints due to demanding training experiences. This research aims to understand why self-care is not used despite it being an ethical and professional necessity.
- The purpose of this research is to understand the process of self-care in health professions students, specifically the factors and processes that affect the decision to use (or not use) self-care.
- A secondary objective is to understand if and how trainees perceive their self-worth and values to inform their decision to use self-care.
- We hope to inform an individualized and preventative approach to self-care that accounts for the factors that impede or contribute to engagement with self-care.

References for further reading

Bamonti, P. M., Keelan, C. M., Larson, N., Mentrikoski, J. M., Randall, C. L., Sly, S. K., … McNeil, D. W. (2014). Promoting ethical behavior by cultivating a culture of self-care during graduate training: A call to action. *Training and Education in Professional Psychology*, *8*, 253-260. doi:10.1037/tep0000056.

Rogers, M. E., Creed, P. A., Searle, J., & Nicholls, S. L. (2016). Coping with medical training demands: thinking of dropping out, or in it for the long haul, *Studies in Higher Education*, *41*(9), 1715-1732. doi:10.1080/03075079.2014.999318.

Shen-Miller, D. S., Grus, C. L., Van Sickle, K. S., Schwartz-Mette, R., Cage, E. A., Elman, N. S., . . . Kaslow, N. J. (2011). Trainees' experience with peers having competence problems: A national survey. *Training and Education in Professional Psychology, 5,* 112–121. doi:10.1037/ a0023824.

Skovholt, T., & Trotter-Mathison, M. (2016). *The resilient practitioner: Burnout and compassion fatigue prevention and self-care strategies for the helping professions* (3rd Edition). New York, NY: Routledge/Taylor & Francis Group.

A summary of the results will be sent to you once the study is complete.
Thank you again for your participation!

Appendix D: Self-Care Assessment Inventory (SCAI)

The following worksheet for assessing self-care is not exhaustive, merely suggestive. Feel free to add areas of self-care that are relevant for you and rate yourself on how often and how well you are taking care of yourself these days.

Rate the following areas according to how well you think you are doing…
3 = I do this well (e.g., frequently)
2 = I do this OK (e.g., occasionally)
1 = I barely or rarely do this
0 = I never do this

Physical Self-Care

____ Eat regularly (breakfast, lunch, and dinner)
____ Get regular medical care for prevention
____ Get medical care when needed
____ Take time off when sick
____ Wear clothes I like
____ Do some fun physical activity
____ Think positive thoughts about my body
____ Exercise
____ Eat healthily
____ Get massages
____ Take vacations
____ Get enough sleep
____ Do some fun artistic activity
____ (Other) _____

Psychological Self-Care

____ Take day trips or mini-vacations
____ Have my own personal psychotherapy
____ Make time away from technology/internet
____ Read something unrelated to work
____ Notice my thoughts, beliefs, attitudes, feelings
____ Engage my intelligence in a new way or area
____ Do something at which I am not expert
____ Make time for self-reflection
____ Write in a journal
____ Attend to minimizing life stress
____ Be curious
____ Say no to extra responsibilities
____ Be okay leaving work at work
____ (Other)_____

Emotional Self-Care

____ Spend time with people whose company I enjoy
____ Stay in contact with important people in my life
____ Re-read favorite books, re-view favorite movies
____ Identify and seek out comforting activities/places
____ Express my outrage in social action or discussion
____ Love myself
____ Allow myself to cry
____ Give myself affirmation/praise
____ Find things that make me laugh
____ (Other)_____

Rate the following areas according to how well you think you are doing…
3 = I do this well (e.g., frequently)
2 = I do this OK (e.g., occasionally)
1 = I barely or rarely do this
0 = I never do this

Spiritual Self-Care

____ Make time for reflection
____ Find a spiritual connection or community
____ Be aware of non-material aspects of life
____ Try at times not to be in charge or the expert
____ Identify what is meaningful to me
____ Seek out reenergizing or nourishing experiences
____ Contribute to causes in which I believe
____ Read or listen to something inspirational
____ Spend time in nature
____ Be open to inspiration
____ Cherish my optimism/hope
____ Be open to knowing
____ Meditate
____ Find time for prayer or praise
____ Have experiences of awe
____ (Other)_____

Relationship Self-Care

____ Schedule regular dates with my partner
____ Call, check on, or see my relatives
____ Share a fear, hope, or secret with someone I trust
____ Stay in contact with faraway friends
____ Make time for personal correspondence
____ Allow others to do things for me
____ Make time to be with friends
____ Ask for help when I need it
____ Communicate with my family
____ Enlarge my social circle
____ Spend time with animals
____ (Other)_____

Workplace or Professional Self-Care

____ Take time to chat with coworkers
____ Identify projects/tasks that are exciting
____ Balance my load so that nothing is "way too much"
____ Arrange workspace to be comfortable
____ Get regular supervision or consultation
____ Negotiate/advocate for my needs
____ Make quiet time to work
____ Take a break during the day
____ Set limits with my boss/peers
____ Have a peer support group
____ Identify rewarding tasks
____ (Other)_____

Overall Balance

____ Strive for balance within my work-life and workday
____ Strive for balance among my family, friends, and relationships
____ Strive for balance between play and rest
____ Strive for balance between work/service and personal time
____ Strive for balance in looking forward and acknowledging the moment

Areas of Self-Care that are Relevant to You

____ (Other)_____
____ (Other)_____
____ (Other)_____

Appendix E: Professional Self-Care Scale (PSCS)

Instructions: The items below contain statements about your personal and professional activities. Please use the following scale to indicate how often you engage in each activity.

How Often: 1 2 3 4 5 6 7
Never Always

	Never 1	2	3	4	5	6	Always 7
1. I spend time with people whose company I enjoy.	1	2	3	4	5	6	7
2. I maintain a professional support system.	1	2	3	4	5	6	7
3. I take part in work-related social and community events.	1	2	3	4	5	6	7
4. I take breaks throughout the workday.	1	2	3	4	5	6	7
5. I participate in activities that promote my professional development.	1	2	3	4	5	6	7
6. I cultivate professional relationships with my colleagues.	1	2	3	4	5	6	7
7. I find ways to foster a sense of social connection and belonging in my life.	1	2	3	4	5	6	7
8. I am mindful of triggers that increase professional stress.	1	2	3	4	5	6	7
9. I seek out activities or people that are comforting to me.	1	2	3	4	5	6	7
10. I connect with organizations in my professional community that are important to me.	1	2	3	4	5	6	7

	Never 1	2	3	4	5	6	Always 7
11. I make a proactive effort to manage the challenges of my professional work.	1	2	3	4	5	6	7
12. I avoid workplace isolation.	1	2	3	4	5	6	7
13. I spend time with family or friends.	1	2	3	4	5	6	7
14. I find ways to stay current in professional knowledge.	1	2	3	4	5	6	7
15. I share positive work experiences with colleagues.	1	2	3	4	5	6	7
16. I try to be aware of my feelings and needs.	1	2	3	4	5	6	7
17. I take some time for relaxation each day.	1	2	3	4	5	6	7
18. I avoid over-commitment to work responsibilities.	1	2	3	4	5	6	7
19. I monitor my feelings and reactions to clients.	1	2	3	4	5	6	7
20. I share work-related stressors with trusted colleagues.	1	2	3	4	5	6	7
21. I maximize time in professional activities I enjoy.	1	2	3	4	5	6	7

Appendix F: The Appraisal of Self-Care Agency Scale – Revised (ASAS-R)

Please answer the questions below using the following rating scale:

	Totally Disagree 1	**Disagree 2**	**Neither Disagree nor Agree 3**	**Agree 4**	**Totally Agree 5**
1. As circumstances change, I make the needed adjustments to stay healthy.	1	2	3	4	5
2. When needed, I set new priorities in the measures that I take to stay healthy.	1	2	3	4	5
3. I often lack energy to care for myself in the way that I know I should.	1	2	3	4	5
4. I look for better ways to take care of myself.	1	2	3	4	5
5. When needed, I manage to take time to care for myself.	1	2	3	4	5
6. In the past, I have changed some of my old habits in order to improve my health.	1	2	3	4	5
7. I routinely take measures to ensure the safety of myself and my family.	1	2	3	4	5
8. I regularly evaluate the effectiveness of things that I do to stay healthy.	1	2	3	4	5
9. In my daily activities I seldom take time to care for myself.	1	2	3	4	5
10. I am able to get information I need, when health is threatened.	1	2	3	4	5
11. I seek help when unable to care for myself.	1	2	3	4	5
12. I seldom have time for myself.	1	2	3	4	5
13. I am not always able to care for myself in a way I would like.	1	2	3	4	5

Appendix G: Depression Anxiety and Stress Scale (DASS-21)

Please read each statement and select a number 0, 1, 2 or 3 which indicates how much the statement applied to you over the **past week**. There are no right or wrong answers. Do not spend too much time on any statement.

The rating scale is as follows:
0 = Did not apply to me at all
1 = Applied to me to some degree, or some of the time
2 = Applied to me to a considerable degree or a good part of time
3 = Applied to me very much or most of the time

1	I found it hard to wind down	0	1	2	3
2	I was aware of dryness of my mouth	0	1	2	3
3	I couldn't seem to experience any positive feeling at all	0	1	2	3
4	I experienced breathing difficulty (e.g. excessively rapid breathing, breathlessness in the absence of physical exertion)	0	1	2	3
5	I found it difficult to work up the initiative to do things	0	1	2	3
6	I tended to over-react to situations	0	1	2	3
7	I experienced trembling (e.g. in the hands)	0	1	2	3
8	I felt that I was using a lot of nervous energy	0	1	2	3
9	I was worried about situations in which I might panic and make a fool of myself	0	1	2	3
10	I felt that I had nothing to look forward to	0	1	2	3
11	I found myself getting agitated	0	1	2	3
12	I found it difficult to relax	0	1	2	3
13	I felt down hearted and blue	0	1	2	3
14	I was intolerant of anything that kept me from getting on with what I was doing	0	1	2	3
15	I felt I was close to panic	0	1	2	3
16	I was unable to become enthusiastic about anything	0	1	2	3
17	I felt I wasn't worth much as a person	0	1	2	3
18	I felt that I was rather touchy	0	1	2	3
19	I was aware of the action of my heart in the absence of physical exertion (e.g. sense of heart rate increase, heart missing a beat)	0	1	2	3
20	I felt scared without any good reason	0	1	2	3
21	I felt that life was meaningless	0	1	2	3

Appendix H: Valued Living Questionnaire (VLQ)

Part 1

Below are areas of life that are valued by some people. We are concerned with your quality of life in each of these areas. One aspect of quality of life involves the importance one puts on different areas of living. Rate the importance of each area (by circling a number) on a scale of 1-10. 1 means that area is not at all important. 10 means that area is very important. Not everyone will value all of these areas, or value all areas the same.

Rate each area according to **your own personal sense of importance**.

not at all important **extremely important**

	1	2	3	4	5	6	7	8	9	10
1. Family (other than marriage or parenting)	1	2	3	4	5	6	7	8	9	10
2. Marriage/couples/intimate relations	1	2	3	4	5	6	7	8	9	10
3. Parenting	1	2	3	4	5	6	7	8	9	10
4. Friends/social life	1	2	3	4	5	6	7	8	9	10
5. Work	1	2	3	4	5	6	7	8	9	10
6. Education/training	1	2	3	4	5	6	7	8	9	10
7. Recreation/fun	1	2	3	4	5	6	7	8	9	10
8. Spirituality	1	2	3	4	5	6	7	8	9	10
9. Citizenship/community life	1	2	3	4	5	6	7	8	9	10
10. Physical self-care (diet, exercise, sleep)	1	2	3	4	5	6	7	8	9	10

Part 2

In this section, we would like you to give a rating of how consistent your actions have been with each of your values. We are **not** asking about your ideal in each area. We are also **not** asking what others think of you. Everyone does better in some areas than others. People also do better at sometimes than at others.

We want to know how you think you have been doing during the past week.

Rate each area (by circling a number) on a scale of 1-10.
1 means that your actions have been completely inconsistent with your value.
10 means that your actions have been completely consistent with your value.

	Inconsistent 1	2	3	4	5	6	7	8	9	Consistent 10
1. Family (other than marriage or parenting)	1	2	3	4	5	6	7	8	9	10
2. Marriage/couples/intimate relations	1	2	3	4	5	6	7	8	9	10
3. Parenting	1	2	3	4	5	6	7	8	9	10
4. Friends/social life	1	2	3	4	5	6	7	8	9	10
5. Work	1	2	3	4	5	6	7	8	9	10
6. Education/training	1	2	3	4	5	6	7	8	9	10
7. Recreation/fun	1	2	3	4	5	6	7	8	9	10
8. Spirituality	1	2	3	4	5	6	7	8	9	10
9. Citizenship/community life	1	2	3	4	5	6	7	8	9	10
10. Physical self-care (diet, exercise, sleep)	1	2	3	4	5	6	7	8	9	10

Appendix I: Committed Action Questionnaire – 8 item version (CAQ-8)

Below you will find a list of statements. Please rate the truth of each statement as it applies to you by circling a number. Use the following rating scale to make your choices.

0	1	2	3	4	5	6
Never	Very Rarely	Seldom	Sometimes	Often	Almost	Always

1. I can remain committed to my goals even when there are times that I fail to reach them.	0	1	2	3	4	5	6
2. When a goal is difficult to reach, I am able to take small steps to reach it.	0	1	2	3	4	5	6
3. I prefer to change how I approach a goal rather than quit.	0	1	2	3	4	5	6
4. I am able to follow my long terms plans including times when progress is slow.	0	1	2	3	4	5	6
5. I find it difficult to carry on with an activity unless I experience that it is successful.	0	1	2	3	4	5	6
6. If I feel distressed or discouraged, I let my commitments slide.	0	1	2	3	4	5	6
7. I get so wrapped up in what I am thinking or feeling that I cannot do the things that matter to me.	0	1	2	3	4	5	6
8. If I cannot do something my way, I will not do it at all.	0	1	2	3	4	5	6

Appendix J: Rosenberg Self-Esteem Scale (RSES)

Below is a list of statements dealing with your general feelings about yourself. Please indicate how strongly you agree or disagree with each statement.

	Strongly Disagree 0	**Disagree 1**	**Agree 2**	**Strongly Agree 3**
1. On the whole, I am satisfied with myself.	0	1	2	3
2. At times I think I am no good at all.	0	1	2	3
3. I feel that I have a number of good qualities.	0	1	2	3
4. I am able to do things as well as most other people.	0	1	2	3
5. I feel I do not have much to be proud of.	0	1	2	3
6. I certainly feel useless at times.	0	1	2	3
7. I feel that I'm a person of worth, at least on an equal plane with others.	0	1	2	3
8. I wish I could have more respect for myself.	0	1	2	3
9. All in all, I am inclined to feel that I am a failure.	0	1	2	3
10. I take a positive attitude toward myself.	0	1	2	3

Appendix K: Training Evaluation Form

To help us improve the quality of our training, we would appreciate your feedback!

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
1. Overall, I am satisfied with this training.					
2. The content was organized and easy to follow.					
3. This training will help me to develop more effective self-care skills.					

4. Would you recommend this training to other students? **(circle one)**	Yes	No
5. Would you attend this training if it were offered by your program? **(circle one)**	Yes	No

Thank you for your feedback!

Appendix L: Study 2 Consent Form

Participant Consent Form

Project Title: Values-Based Self-Care: Pilot Project with One Month Follow-Up

Principal Investigator
Jorden A. Cummings, Ph.D., R.D.Psych
Associate Professor
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Name: Jessica Campoli
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Purpose(s) and Objective(s) of the Research: The purpose of this Study is to examine the clinical utility of a Values-Based Self Care (VBSC) group intervention. VBSC closely maps onto a previously conducted grounded theory analysis on how health-care trainees become successful at using self-care. A primary purpose of this Study is to examine the utility of this theory on self-care behaviours. In addition, VBSC is also informed by a theoretical model called Acceptance and Commitment Therapy (ACT). An integral component of ACT are values and committed action (i.e., commitment to actions that help people to live closer to their values; Hayes, Strosahl, & Wilson, 2012). Research shows that value-consistent behaviour reduces stress and increases health sustaining behaviours (e.g., Grumet & Fitzpatrick, 2016; Sherman, Bunyan, Creswell, & Jaremka, 2009). Given the scarcity of research exploring the utility of values and committed action on self-care behaviours, another primary purpose of this Study is to examine a more accessible, shorter ACT-based training tool that promotes greater commitment to self-care via the use of values.

Because you are participating in a clinical research study, there are some other points you should be aware of. First, the work of clinical psychologists is overseen by the Saskatchewan College of Psychologists, and because of this we must follow a number of ethical guidelines set out by the College. One is clinical record keeping: In addition to the data you provide as part of this research study, the primary investigator is required to keep progress notes documenting each session. Progress notes outline that you attended session and describe, in general, what occurred at that session. You may ask to see these notes at any time. These notes are not part of your research data, and will be stored separately, in a locked filing cabinet, which only the principal investigator may access.

Procedures: First, you will complete an initial interview asking about your interest in this intervention and what you hope to learn from it. This portion of our meeting today will be audio-recorded and archived for later data analysis. You will later (in the week of the first group session) complete a packet of measures assessing variables such as your current self-care activities, how you feel about yourself, symptoms of stress, anxiety, and depression, burnout and compassion satisfaction as a health care trainee, your experiences of your emotions, and your personal values. You will also complete a brief screening interview that will assess other concerns which, if present, would indicate that you might not benefit from this group right now. Those concerns include active mania, psychosis, substance abuse, or severe depression. Together today's meeting should take about an hour.

If you meet inclusion criteria, you will then be randomly assigned to one of two groups: an immediate-treatment group ("Treatment Group") or a wait-list control group ("Wait List Group"). Random assignment means that the experimenter will flip a coin to decide what group you are in, and that she has no control over which group you are assigned to. While both groups will receive treatment, the Treatment

Group will begin therapy right away. The Wait List Group will be asked to wait 5 to 6 weeks before beginning therapy. If you are randomly assigned to the Wait List Group, you will be asked to complete a pre-treatment assessment (the same measures you did for the previous study) in the week prior to beginning treatment (i.e., 5 to 6 weeks from today). In addition, we would like to ask you about how your self-care was during this waiting period.

A wait-list control is being used in this study because it allows the researcher to compare participants receiving therapy ("Treatment Group") to those not receiving therapy ("Wait List Group"), in order to look for differences between receiving and not receiving treatment. However, using a wait-list control group means all participants will receive the intervention.

You will then participate in 6 sessions of our group-based intervention, consisting of approximately 5 people. These sessions will occur weekly and each session will be approximately 90 minutes long. The first two sessions will provide you with information and education about values and self-care activities. Sessions 3-6 will focus on creating a specific self-care plan for you, how to maintain that plan, and problem-solving challenges. Your therapist will be either the principal investigator, or a doctoral-level student in the Clinical Psychology program here at the University of Saskatchewan. Treatment will take place here in the Videotherapy Analysis Research Lab, located in Arts 168. All group sessions will be video recorded for later coding purposes.

Following completion of the group, you will be asked to complete a post-treatment assessment. This is the same assessment you completed as part of the first study and will be completed as part of the final group session. Approximately 5 to 6 weeks later you will be contacted to schedule a post-treatment interview, which will review how your self-care has been since the group ended, your experience of the group, and ask you to complete the same packet of measures you completed at the end of the group. This should take approximately 60 minutes and you will be provided with a $40 honorarium for your participation in the follow-up interview.

Please feel free to ask any questions regarding the procedures and goals of the study or your role.

Potential Risks: There are no known or anticipated major risks to you by participating in this research. This intervention is based on a similar but longer intervention that has been shown to increase self-care behaviours in some health care trainees. However, psychotherapy is often hard. You might experience a temporary increase in emotion during therapy. Please feel to discuss any distress with your group facilitator and/or the principal investigator at any time.
If you feel so distressed that you are worried about your safety, you may contact Student Counseling Services at 306-966-4920, the Saskatoon Mobile Crisis Intervention at 306-933-6200 or you may go to your nearest Emergency Room.

Potential Benefits: Training to become a health care professional can be a stressful experience, and self-care is often a challenge. Previous research shows that improving self-care can decrease stress and burnout. There is no guarantee that you will benefit from the intervention provided in this study. However, this study is based on previous interventions that have shown positive outcomes. We hope that the results of this study will inform intervention development that allows us to help others.

Compensation: No compensation is provided for the pre-treatment interview(s) or participation in the group intervention. A $40 honorarium is provided for completion of the post-treatment interview.

Confidentiality: The data you provide for this study will be kept confidential, except for some situations (discussed below) where confidentiality can be waived without your permission. Your data will be identified and stored with a non-identifying, unique ID number. At no point will your name be placed on

any data, and consent forms will be stored separately from the data. Paper data (e.g., consent forms, questionnaire packets prior to electronic data entry), will be stored in a locked filing cabinet in a locked room. Electronic data, such as your questionnaires after they have been entered into a database, audio-recordings of the pre- and post-treatment interviews, and video-recordings of the group, will be stored temporarily on a password-protected computer. They will then be backed up on external hard drives and stored in a locked cabinet in a locked room. Clinical records (e.g., progress notes), of the group will be kept separately in a different locked filing cabinet in a locked office, to which only the principal investigator has access.

Please note that all research assistants who work on this project sign confidentiality agreements, and no research assistant is allowed to review sessions of any participant that they may know, should this situation arise.

Please also note that we will strongly encourage group members to adhere to expectations of confidentiality but that we cannot guarantee that group members will maintain confidentiality. Having a safe, confidential space is an important component of any group intervention and we will be reviewing this request for confidentiality at the first group meeting.

Limits to Confidentiality: In some situations, your confidentiality can be waived without your permission. However, should any of these situations arise, the primary investigator will attempt to discuss them with you prior to waiving confidentiality. First, your confidentiality can be waived if you disclose that you are at imminent risk for harming yourself or someone else, in order to keep you safe and keep other people safe. Second, experimenters are required to report allegations of child abuse that have not been previously reported to child protective services. Third, if your data was ever subpoenaed for a court case, the principal investigator may be required to provide that data. In addition, you should be aware that the Saskatchewan College of Psychologists, who regulates the provision of psychological services in the province, may inspect the PI's clinical records (e.g., brief progress notes of the group sessions) as part of their regulatory activities in the public interest.

Right to Withdraw: Your participation in all aspects of this study is voluntary, and you can answer only those questions that you are comfortable with. You may withdraw from the research project for any reason, at any time, without explanation or penalty of any sort. Should you wish to withdraw, we will ask you to consider allowing us to retain any data you have already provided in order to include it in our analyses. However, if you prefer, your data will be destroyed beyond retrieval. You will also be provided with a list of community mental health resources, should you with to pursue additional services. Your right to withdraw data from the study will apply until results have been disseminated. After this date, it will not be possible to withdraw your data from the dissemination that has already occurred.

Follow up: At the end of the group you will be invited to join our project mailing list, via which we will distribute results summaries and any future opportunities to participate in our self-care research. If you prefer, in order to obtain results from this study, you may contact the principal investigator approximately one year following your group. In addition, at your final assessment you will be provided with a debriefing form and the opportunity to consent for a summary of the research results to be automatically mailed to you upon their completion.

Questions or Concerns: If you have any questions or concerns, please feel free to discuss them now with the research assistant. You may also contact the principal investigator, Jorden A. Cummings, Ph.D., R.D.Psych. This research project has been approved on ethical grounds by the University of Saskatchewan Research Ethics Board. Any questions regarding your rights as a participant may be addressed to that committee through the Research Ethics Office ethics.office@usask.ca (306) 966-2975. Out of town participants may call toll free (888) 966-2975.

Consent

Your signature below indicates that you have read and understand the description provided; I have had an opportunity to ask questions and my/our questions have been answered. I consent to participate in the research project. A copy of this Consent Form has been given to me for my records.

Name of Participant	*Signature*	*Date*

Researcher's Signature	*Date*

Appendix M: Study 2 Debriefing Form

DEBRIEFING – VALUES-BASED SELF-CARE PILOT WITH ONE MONTH FOLLOW-UP

This study examined the effectiveness of Values-Based Self-Care, designed to develop improved self-care practices. This intervention was based on our previous research examining how health care trainees develop self-care practices and was influenced by Acceptance & Commitment Therapy (ACT), an empirically supported therapy for a number of concerns. Training to become a health care provider can be a stressful experience. Self-care can lower stress and burnout. We hope that the results of this research study will help inform service delivery for other health care trainees like you.

You were asked to complete measures of mood, stress, values, self-care, and emotional experiences both before and after this group intervention. In addition, you completed pre- and post-treatment interviews about your self-care experiences, and the group sessions were videorecorded for later coding purposes. You should understand that we will be looking at overall trends across participants and not findings for specific individuals. Overall, all results will be reported at the aggregate level

If you are reading this debriefing form at the end of the group, you will be contacted in approximately 5 to 6 weeks to schedule your post-treatment interview. You will be reimbursed $40 for your time. If you are reading this debriefing form at the end of the post-treatment interview, thank you for your participation. If you have any comments or questions regarding the conduct of this research or your rights as a research participant, you may contact Dr. Jorden Cummings at 966-7147, Dr. Gordon Sarty (Head of the Psychology Department at the University of Saskatchewan) at 966-6657, and/or the Ethics Office at (306) 966-2975. Out of town participants may call toll free (888) 966-2975.

Final results regarding this study are estimated to be available in approximately 1 year. If you are interested in an overall verbal summary of results prior to that, you may also contact Dr. Cummings. If you are interested in automatically receiving a summary of the results of this project as well as notification of any future self-care studies being done in the lab, you may indicate so by checking the below. Otherwise, you may contact Dr. Cummings to individually request a results summary.

☐ Yes, I would like to be added to the project mailing list.
My email address is: _____

We understand that self-care is a personal experience. If you feel upset following your participation in this group or completing these questionnaires, we would like to discuss this with you. We can be reached at 306-966-6731. In addition, you may contact Student Counseling Services at 306-966-4920, the Saskatoon Mobile Crisis Line at 306-933-6200 or go to your nearest Emergency Room. Please note that Dr. Cummings may not receive your voicemail or be able to return your call immediately, and so you should not contact her if you have an emergency or are so distressed you are worried about your imminent safety. If you feel so distressed that you are worried about your safety, you may contact the Saskatoon Mobile Crisis Intervention at 933-6200 or you may go to your nearest Emergency Room.

_____	_____	_____
Name of Participant	*Signature*	*Date*

_____	_____
Researcher's Signature	*Date*

Appendix N: Study 2 Demographic and Program Questions

Demographic questions:
1. What is your age? _____
2. Which gender do you identify with? _____
3. Which ethnicity do you identify with? _____

Program-related questions:
1. Which school do you attend? (circle one)
   University of Saskatchewan Saskatchewan Polytechnic
   Other (please specify): _____

2. What is the name of your program & degree that you are obtaining?
   _____

3. What year of study are you in? _____

Thank you for your interest in our project & for sharing your valuable time!