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Influence of Social Support and Work Meaning on Mental Health in Adults Experiencing Mental Illness

by

Kristina Waldmann

A THESIS

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Abstract

Mental illness is a growing public health concern that has been exasperated by the covid-19 pandemic (OECD, 2021). Keyes' two continua model of mental health conceptualizes the relationship between mental health and mental illness as two separate continuums that intersect with one another. While the two terms are related, they are not analogous and it is possible for someone experiencing mental illness to experience good mental health. Grounded in the two continua model of mental health, the current study posited perceived social support and meaningful work would account for a significant amount of variance in the mental health of those living with mental illness. Participants included 125 working adults (18 – 56 years) who were experiencing mental illness at the time of the study. Participants completed a series of self-report surveys measuring meaningful work, social support and mental health. After controlling for age, gender, and relationship status, hierarchical multiple regressions revealed social support and meaningful work each accounted for a significant amount of unique variance to mental health in adults. These results highlight the importance of incorporating meaningful work and social support into counselling psychology practice, specifically with clients experiencing mental illness, as a potential way to improve mental health.

Keywords: Mental illness, Mental Disorders, Employment, Career Development, Work Meaning, Meaningful Work, Social Support, Mental Health

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Dedication

This thesis is dedicated to a cherished friend who lives on in my heart.

Table of Contents

Abstract ii

Acknowledgements iii

Dedication iv

Table of Contents ii

List of Tables and Figures v

Chapter 1: Introduction 1

Key Definitions 4

Mental Illness and Mental Health 4

Meaningful Work 5

Chapter 2: Literature Review 6

Mental Illness 6

Prevalence of Mental Illness 6

Consequences of Mental Illness 7

Work and Career Development 8

Mental Health in People with Mental Illness 9

Keyes's Dual Continua Model of Mental Health 9

Mental Illness and Flourishing 12

Foundational Concepts 14

Psychology of Work Theory 15

Perceived Social Support 16
Meaningful Work 18
Current Study 19
Chapter 3: Methods 21
Research Design 21
Recruitment 22
Pre-Study Requirements and Screening 22
Data Collection and Instruments 23
Demographics Questionnaire 23
The Work and Meaning Inventory (WAMI) 23
Multidimensional Scale of Perceived Social Support (MSPSS) 24
Mental Health Continuum–Short Form (MHC-SF) 24
Chapter 4: Results 26
Demographic Variables 26
Data Preparation 30
Hypothesis 1 31
Hypothesis 2 32
Chapter 5: Discussion 36
Hypothesis 1: Social Support 36
Hypothesis 2: Work Meaning 36

Conceptualizing Mental Health/Mental Illness 38

Strengths, Limitations & Future Directions 38

Implications for Counselling Psychology Practice 41

Conclusion 44

References 45

Appendix A. Pre-Screener 66

Appendix B. Recruitment Screener Full-Study 68

Appendix C. Consent Form Full Study 69

Appendix D. Demographic Study Survey 72

Appendix E. WAMI 75

Appendix F. MSPSS 76

Appendix G. MHC-SF 77

List of Tables and Figures

Table 1. Background Characteristics of Respondents.

Table 2. Country of Current Residence.

Table 3. Self-Reported Mental Illness(es).

Table 4. Descriptive Statistics of Continuous Variables.

Table 5. Means, SD's and Pearson correlation amoung the dependent and independent variables.

Table 6. Summary of hierarchal regression analysis between mental health and independent variables.

Figure 1. Keyes Two Continua Model.

Chapter 1: Introduction

In the career development literature, the terms mental health and mental illness are frequently viewed as two opposing psychological states (Redekopp & Huston, 2020). In other words, mental health is often viewed as the absence of mental illness. Similarly, the presence of mental illness assumes an absence or decreased level of mental health. This dichotomous viewpoint has been challenged by the growing evidence from outside of the career field, which supports the concept that mental illness and mental health exist on two distinct continua (e.g., Keyes, 2005). This viewpoint, referred to as the two continua model of mental illness and health, posits that mental health and mental illness are related but distinct dimensions (Westerhof & Keyes, 2010). The continuum of mental illness spans from high mental illness to low mental illness, while a second continuum spans from high mental health (i.e., flourishing) to low mental health (i.e., languishing). This distinction is important for counselling psychologists and other professionals working in the field of career development to recognize because the absence of mental illness does not necessarily translate to the presence of mental health, and vice versa. For example, in a study involving more than 1300 Dutch adults, 14.5% of participants identified as living with mental illness reported moderate to high level of mental health (Westerhof & Keyes, 2010). Examining influences on mental health in those who experience mental illness may enable researchers to identify contexts and factors that can help to improve mental health, which are separate from their mental illness. This viewpoint also recognizes that it is possible for someone to experience low levels of mental health even in the absence of any diagnosable mental illness. Furthermore, it has implications for understanding the career development and work life of individuals who have experienced a mental illness.

Work is an integral part of modern life and serves as a major determinant of mental health: Lack of work has a strong association with poor mental health, whereas having work, particularly work that is perceived as meaningful, is generally associated with positive mental health (Waddell & Burton, 2006). For those who experience mental illness, work may be of particular importance as work has been found to promote recovery and rehabilitation and a higher quality of life (e.g., Waghorn & Lloyd, 2005; Clubhouse International, n.d.). At least 15% of the global population is currently experiencing a mental illness (Ritchie & Roser, 2018). Individuals who experience mental illness have the highest unemployment rate of any disability in Canada and mental illness constituted the fastest growing cause of occupational disability prior to the covid-19 pandemic (e.g., Martin & McKee, 2015). Because mental illness and unemployment are so pervasive and work is such a fundamental part of life for many people, this thesis was designed to examine potential work-related factors that may influence the mental health of working adults who experience mental illness.

Mental health is a crucial factor to consider in relation to work. A robust amount of research examining the impact of work on mental health established that, in general, work has a positive impact on mental health (Waddell & Burton, 2006). Waddell and Burton also state positive mental health may improve chances of obtaining work that is more suitable and fitting to the individual. Additionally, they indicate positive mental health is associated with increased productivity and reduced turnover at work. However, literature examining the impact of mental health on work, in populations that experience mental illness is scarce and inadequate to make any substantial claims (Redekopp & Hutson, 2020). This issue may be a result of studies using the presence or absence of mental illness as a comparator to measure mental health, rather than mental health as a discrete construct, separate from mental illness. The distinction between

mental health and mental illness is discussed in more detail later on in this chapter. As mental illness and mental health have traditionally been conflated together in research, there is a deep chasm of research examining these concepts separately in the context of work. One purpose of the thesis was to address this gap by examining mental illness and mental health as separate variables.

Social support is an important factor in the mental health of workers (e.g., Rhoades & Eisenberger, 2002). Young workers are particularly impacted by a lack of social support. They are more likely to experience poor mental health outcomes and are more likely to lose or leave their jobs (Gmitroski et al., 2018). This finding is particularly important given that the age of onset for most mental illnesses occurs before the age of 25 (Solmi et al., 2021). A small number of studies report the positive impact of organizational social support on mental health in employees experiencing mental illness (e.g., Leskelä et al., 2006). Few studies have examined social support outside of the organization (i.e., family, friends and significant others) on working individuals with mental illness. Another aim of this thesis was to address this gap in literature.

Meaningful work, defined as work experienced as significant and positive (Rosso et al., 2010), is another important factor for mental health. People experience higher levels of mental health when they perceive their work to be meaningful (Arnold et al., 2007). Prior to the present study, the limited existing research on work meaning in those who experience mental illness has predominantly used qualitative approaches. Only one prior study utilized a quantitative approach in studying meaningful work in individuals experiencing mental illness and was limited to young Transylvanian Hungarian adults experiencing depression. In this study, Kállay (2015) found work meaning was not a significant factor in the wellbeing of this sample. This discrepancy in the literature, combined with the narrow sample in Kállay's study, provided additional

motivation for this thesis to expand quantitative research on work meaning and mental health in adults experiencing a wide range of mental illnesses.

Key Definitions

Prior to examining the literature that guided this thesis, it is important to have working definitions for the key concepts in the thesis, which include mental health and mental illness, along with work, meaningful work, and social support. The measures used to assess these constructs will be discussed in the Methods chapter. Another note of importance is since, "mental health" and "mental wellbeing" are often used interchangeably in the existing literature, this thesis will use the label *mental health* in order to maintain consistency.

Mental Illness and Mental Health

For the purposes of this thesis, mental illnesses are defined as alterations in thinking, mood or behaviour and are associated with significant distress and impaired functioning (Public Health Agency of Canada, 2015). Depending on the country or organizational context, mental illnesses may be classified in accordance to the Diagnostic and Statistical Manual of Mental Disorders (5th ed.; DSM-5; American Psychiatric Association, 2013) or by the International Statistical Classification of Diseases and Related Health Problems (11th ed.; ICD-11; World Health Organization, 2019a). Operationally, mental illnesses in this study were defined based on participant self-report.

Mental health is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to their community (World Health Organization, 2019b). Operationally, in this study mental health was defined using the Mental Health Continuum Short Form (MHC-SF).

Meaningful Work

Work is a set of activities with an intended set of outcomes, from which it is hoped that a person will derive personal satisfaction and contribute to some greater goal. Work is not necessarily tied to paid employment, but to meaningful and satisfying activities. As such, work can be conceptualized as including volunteer work, hobbies, domestic labour and caregiving (Canadian Standards and Guidelines for Career Development Practitioners [CSGCDP], 2012). Within this broad conceptualization of work, meaningful work is defined as the degree to which people find their work to have significance and purpose, the contribution work makes to finding broader meaning in life, and the desire and means for one's work to make a positive contribution to the greater good.

Operationally, meaningful work was defined by the Work and Meaning Inventory (WAMI) by Steger (2009), and includes three primary facets: psychological meaningfulness, meaning making through work, and greater good motivations.

Perceived Social Support

Social support is the amount of assistance one receives through interactions with other people. This support can be emotional (e.g., empathy), tangible (e.g., practical help) or informational (e.g., advice) (Barrera 1981). There are objective and subjective ways to evaluate social support. Previous research supports the use of subjective measures of social support (e.g., a person's perceptions about their social support) as this exhibits superior validity with regard to predicting psychological wellbeing (Brandt and Weinert 1981; Ke et al. 2010; Sarason et al. 1985; Siedlecki et al. 2014; Solomon et al. 1987; Wilcox 1981). Consistent with this literature this research will focus on perceived social support, which will be defined by scores on the Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet & Farley, 1988).

Chapter 2: Literature Review

This chapter will provide an overview of the previous literature regarding mental health and work in those who experience mental illness. The first section reports the prevalence and consequences of mental illness and research examining the impact on work and career development. Keyes' Dual Continua Model of Mental Health is described detail, along with relevant research. Literature on the relationships between mental health, mental illness and work are presented, including ways to promote mental health. The chapter proceeds with an overview of the Psychology of Work Theory and relevance and applicability to the current thesis. This literature review emphasizes factors such as work meaning and perceived social support and concludes with several hypotheses.

Mental Illness

This section begins by reporting relevant statistics pertaining to mental illness prevalence and consequences of mental illness. This will be followed by a summary of research examining the relationships between mental illness, mental health, and career development.

Prevalence of Mental Illness

The Global Burden of Disease (GBD) study from the Institute for Health Metrics and Evaluation (IHME), estimate at least 15% of the world's population live with one or more mental illnesses or substance use disorders (Ritchie & Roser, 2018). The GBD produces global level estimates of the prevalence and disease burden of mental health and substance use disorders. "At least" is applied because reported rates of mental illness are thought to be underestimates, as mental illness stigma continues to be a driving force of under-reporting around the world (e.g., Bharadwaj et al., 2017; Marshall et al., 2021; Takayanagi et al., 2014).

In higher income countries with resources to combat mental illness stigma, rates of mental illness are purported to be even higher. For example, the National Health Services (NHS)

reports about 1 in 6 adults in England, have a common mental disorder (McManus et al., 2016). The Centers for Disease Control and Prevention (CDC) in the United States and the Mental Health Commission of Canada (MHCC) estimate about 1 in 5 adults in these two countries experience a mental illness (Ahrnsbrak, 2017; MHCC, 2013). Furthermore, the MHCC reported 21.4% of the working-age population of Canada (i.e., 20-64 years of age) was living with a mental health problem or illness in 2011 (MHCC, 2013). Despite these variations in reported prevalence, the data as a whole clearly demonstrate mental illness is a pervasive, widespread experience that impacts millions of people around the world each year.

Consequences of Mental Illness

An expansive body of research has shown mental illness can have substantive and far-reaching consequences on individuals, families, society, and the economy. For individuals who experience mental illness, age of mortality is disproportionately younger compared with the general population (Correll et al. 2017; Nemani et al. 2019). Mental illness has also been associated with lower quality of life and life satisfaction (e.g., Doran & Kinchin, 2020; Evans et al., 2007) and significant decreases in self-esteem and self-efficacy (e.g., Fung, Tsang, Corrigan, Lam, & Cheung, 2007; Kleim et al., 2008; Link & Phelan, 2001). Furthermore, primary caregivers of people living with mental illness experience significant increases of stress, family cohesion problems and rates of divorce (Fekadu, et al., 2019; Tasmin et al., 2020).

Despite the widespread experience of mental illness, stigma continues to be an enduring feature of the mental illness experience. Stigma has been shown to be a powerful motivation behind people's reluctance to seek out mental health care or disability accommodations at work or school (Knaak et al., 2020). Stigma of mental illness has been linked to housing and employment discrimination (Corrigan et al., 2003; Peterson et al., 2006). For example, Pheister et al. (2019) purports on average, medical students experience depression at higher rates than

their age-matched peers. However, disclosing a history of mental illness during residency applications significantly decreases their chances of obtaining interviews and lowers overall ranking for a residency position.

The economic costs of mental illness are substantial. The Organisation for Economic Co-operation and Development (2012) estimate the costs exceed 4% of a countries' GDP. To put this number into perspective, Australia estimates costs associated with mental illness to be $60 billion (AUD) annually (Australian Government National Mental Health Commission, 2016) and the global estimates amount to $16 trillion (USD) between 2010 and 2030 (Bloom et al., 2011). Mental illness has been found to be the most expensive disability in the Canadian workplace (Dewa et al., 2010). The annual economic impact of mental illness in Canada for 2011 was estimated to be over $48.6 billion dollars (CAD), with projected cumulative costs exceeding $2.5 trillion over the next 30 years (Smetanin et al., 2011). This is believed to be a conservative estimate because it excludes incurred costs to social services, education, justice systems, services for children and youth, informal care and support for those with mental illness, and costs related to losses in health-related quality of life. Furthermore, considering the impacts of the covid-19 pandemic on mental health (Organisation for Economic Co-operation and Development, 2021), the actual economic cost of mental illness in Canada are likely to be substantially higher in the future than the estimates provided by Smetanin and colleagues.

Work and Career Development

According to a large body of research, mental illness can have significant consequences on a person's work and career. Being diagnosed with a mental disorder reduces the likelihood of an individual completing school, obtaining a full-time job and having a highly paid professional career (Doran & Kinchin, 2020). Unemployment rates for individuals who experience persistent and severe mental illness may be as high as 70 - 90% (Marwaha & Johnson, 2004). Mental

illness is the leading cause of work absence due to sickness and long-term disability (Petrie et al., 2018), and has also been associated with increases in absenteeism, presenteeism, poor work performance, attitude, and work relationships (Harnois & Gabriel, 2000; Redekopp & Huston, 2019; Sainsbury et al., 2008).

Researchers have shown employment plays important role in recovery from mental illness. For example, compared to unemployed individuals living with mental illness, those who obtained employment were less likely to require hospitalization due to their mental illness, less likely to face poverty and were more likely to participate in social engagement (Diby et al., 2021; Martin & McKee, 2015; MHCC, 2011). It is essential to recognize that a majority of the research on the potential benefits of employment for individuals living with mental illness do not utilize experimental research designs. Therefore, caution must be taken to avoid the assumption that employment is the cause of these recovery factors. Despite this caveat, it remains worthwhile to explore the nature of these connections between work and improved functioning in those living with mental illness. Perhaps the most important thing to consider when it comes to work and mental illness is that most people with mental illness express a desire to work and often thrive in the workplace when provided with the proper supports (Gmitroski et al., 2018; MHCC, 2014).

Mental Health in People with Mental Illness

It is imperative to distinguish mental health from mental illness. This following section discusses the relationship between mental health and mental illness using Keyes' Dual Continua Model, including research evidence supporting this model. This is followed by an overview of the research regarding mental health flourishing in people living with mental illness.

Keyes's Dual Continua Model of Mental Health

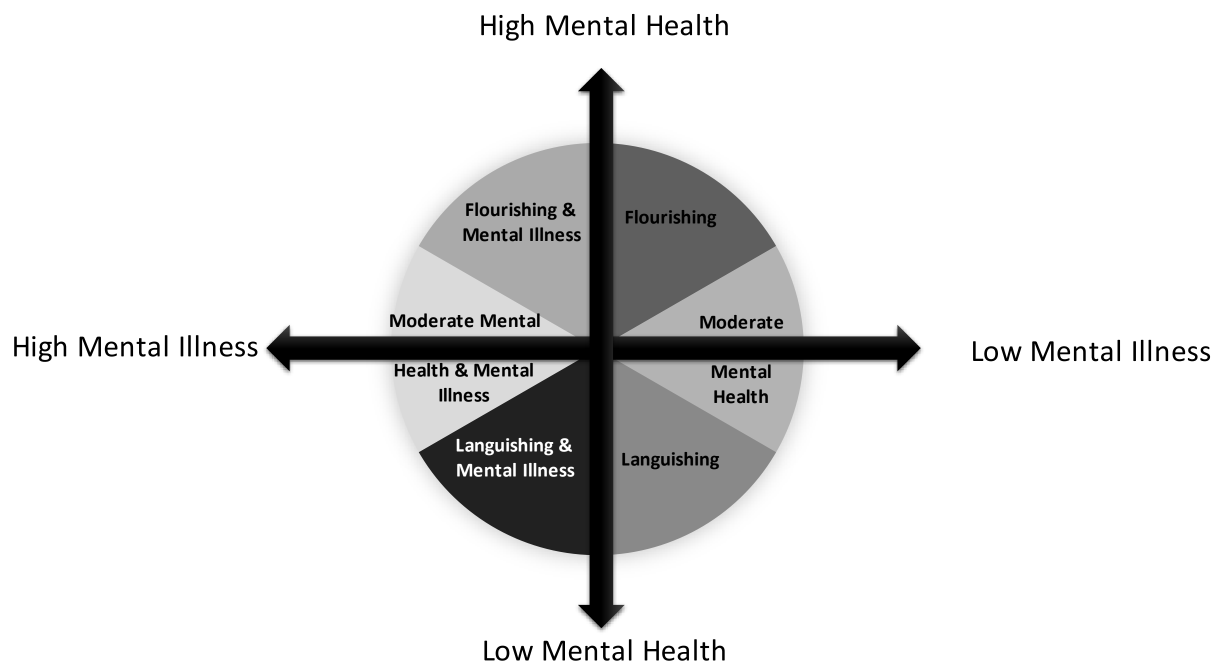
Historically, mental health and mental illness have been viewed and studied as though they exist along a single continuum. Namely, the absence of mental illness was seen as the

presence of positive mental health (e.g., Keyes, 2008). Consequently, the vast majority of studies examining mental health and illness have used a single instrument to measure both mental health and mental illness (Redekopp & Huston, 2020). Accumulating evidence has demonstrated mental illness and mental health are related but distinct constructs (e.g., Lamers et al., 2015). For example, the absence of mental illness is only moderately related to the presence of positive mental health (Huppert & Whittington, 2003; Kendler et al., 2011; Keyes, 2002, 2005; Lamers, et al., 2011; Macaskill, 2012; Weich et al., 2011; Westerhof & Keyes, 2010). However, a bidirectional relationship has been found between mental illness and mental health, where the presence of a mental illness impacts positive mental health over time (Eack & Newhill, 2007; Hansson, 2006; Zatzick et al.,1997; Lamers et al., 2015) and negative mental health has been found to longitudinally predict some forms of mental illness, such as depression and anxiety (Grant, Guille, & Sen, 2013; Keyes, Dhingra, & Simoes, 2010; Wood & Joseph, 2010; Lamers et al., 2015).

Keyes' Dual Continua Model of Mental Health represents a fundamental change in the way mental health and mental illness are commonly conceptualized. Specifically, Keys proposes that mental health and mental illness are distinct constructs, with some individuals having high levels of both, some individuals having low levels of both, and other individuals having high levels of one but low levels of the other. The distinct nature of the two constructs is illustrated in Figure 1. Keyes' model is more akin to the way many understand physical health in the sense that one can have a medical condition, but remain physically healthy. This shift in thinking is important in the way in which research, policies and interventions approach mental illness. Rather than focusing solely on the treatment of mental illness, research can simultaneously examine ways to promote mental health in those living with mental illness.

Figure 1

Keyes' Two Continua Model



Note: Individuals are theorized to have a level of mental health level falls somewhere on the vertical axis and a level of mental illness that falls somewhere on the horizontal axis. As a result, they can be thought of as falling in one of the six quadrants represented by the different shades of grey. This figure is adapted from a visual representation of the Two Continua Model presented in Keyes (2010).

Research has provided a robust amount of evidence supporting Keyes' model by demonstrating mental health and mental illness are two distinct but interrelated concepts. Iasiello et al., (2020) performed a scoping literature review on the Dual Continua Model of mental health in clinical and non-clinical populations. Of the 83 peer-reviewed empirical articles, 13 focused on participants with mental illness (e.g., affective disorders, post-traumatic stress disorder, eating

disorders). All but one study found validity for the existence of two distinct continua. Consequently, the authors advocated for the assessment of both positive mental health and mental illness, rather than using one or the other to provide a more complete understanding of mental health status. The authors also emphasized high levels of positive mental health was attainable for people living with mental illness and the absence of mental illness does not guarantee high levels positive mental health.

Researchers have also observed evidence for a bidirectional relationship between mental health and mental illness. For example, Lamers et al. (2015) found a bidirectional relationship between low mental health and mental illness. That is, both were found to be a risk factor for the development of one another over time. Additionally, Iasiello et al., (2019) found increased levels of positive mental health or maintaining high levels of positive mental health predicted recovery from a mood disorder over a period of 10-years. There is also evidence demonstrating mental health and mental illness have shared and unique predictors. For example, the trait of curiosity, problem-solving self-efficacy, and positive approach coping strategy were found to be predictors of mental health, but not mental illness (e.g., Jovanovic and Brdaric, 2012; Karademas, 2007). Life stress, poorer physical health, greater negative appraisals were unique predictors of mental illness but not mental health (e.g., Karademas, 2007; Pruchno et al., 1995).

Mental Illness and Flourishing

Some researchers have categorized people's mental health as languishing, moderate, or flourishing, with flourishing as the pinnacle of good mental health. Research confirms people with a variety of mental illnesses experience this high level of mental health (Mjøsund, 2021). For example, Chan et al., (2018) observed the mental health of adults living with schizophrenia over a 6-month period. Initial measurements indicated 28% of participants were flourishing, 53% were moderately mentally healthy and 19% were languishing. These findings remained relatively

stable at the 6-month follow-up with 27% flourishing, 60% moderately mentally healthy and 19% languishing. Participants who fell into the flourishing category were also found to have significantly lower levels of negative symptoms of schizophrenia (i.e., blunted affect, alogia, asociality, avolition and anhedonia). They also had higher personal recovery and enhanced social and occupational function. These findings illustrate mental health can serve as a protective factor in those experiencing mental illness.

Stanga et al. (2019), examined the prevalence of mental well-being in psychiatric patients with different diagnoses and compared scores to a control group (i.e., workers employed in a firm, who were over 18-year-old without a diagnosis of mental illness after a psychiatric interview). Stagna and colleagues reported the prevalence of flourishing in participants as follows: unipolar depression 23%, cluster B personality disorder 24%, schizophrenia 33%, bipolar disorder 37%, and control 53%. All diagnostic groups scored significantly lower than the control group. Furthermore, schizophrenia and bipolar disorder groups scored significantly higher than unipolar depression and cluster B personality disorders. These results illustrate the importance of considering type and severity of mental illness may influence mental health outcomes.

One study compared mental health in employed and unemployed adults living with mental illnesses. Using the Korean MHC-SF, Na and Lim (2019) measured mental health in employed and unemployed South Korean adults who were experiencing schizophrenia and were living in the community. The authors did not report on the prevalence of flourishing in this study; however, they did report on the constructs that make up the MHC-SF (i.e., social, emotional, and psychological well-being). Several important findings were observed. First, the positive mental health scores of employed participants in this study, did not differ from mental

health scores observed in the general population in Korea. Secondly, employed participants scored significantly higher than unemployed participants on the constructs of emotional and psychological well-being. Thirdly, and counter to their hypothesis, no effect was found for social well-being. These findings suggest that employment may be an important factor in positive mental health relating to emotional and psychological wellbeing, but not social wellbeing. More research is required to understand social wellbeing in people living with mental illness in the context of employment. Finally, there is a body of research demonstrating that it is possible to promote mental health and flourishing in individuals who are living with a mental illness. Carr et al., (2021) conducted a meta-analysis on positive psychology interventions (PPIs) aimed at improving mental health in clinical and non-clinical populations. A total of 347 studies were included and, of those, 56 included children and adults living with mental illness (i.e., mood disorders, anxiety disorders, alcohol and drug use disorders, dementia, PTSD, psychosis, eating disorders). The authors found mental illness moderated the effect of PPIs on mental health and positive effects were greater for those with mental illness than those without. Furthermore, Carr and colleagues found PPI programs with multiple sessions over a longer duration, that were offered face-to-face in individual, or group format were more effective than self-help formats. This meta-analysis shows that, despite the presence of mental illness, interventions aimed at improving wellbeing can help improve mental health.

Foundational Concepts

The following section considers foundational concepts that guided the current research. The section begins with an overview of the psychology of working theory (PWT), along with research pertinent to this thesis. Next, the core concept of perceived social support is introduced, along with a review of relevant scholarship regarding social support and mental illness. Finally,

the concept of working meaning is discussed and the limited existing research on work meaning in people living with mental illness is described.

Psychology of Work Theory

The current research is based on the understanding that work is an essential part of life and decent work is a fundamental right of all human beings. Decent work as defined by the International Labour Organization (ILO, 2008) is work that stable and dignified and includes elements such as safe working conditions (physical and interpersonal), sufficient time for rest and free time, adequate compensation, and access to healthcare (Duffy et a., 2016). Decent work has become the “hallmark of an aspirational foundational baseline for working people across the globe” (Bluestein et al. 2019).

These core assumptions form the basis for the psychology of working theory (PWT; Duffy et al., 2016). Along with the emergence of social justice-orientated perspectives, PWT was developed in response to critiques of twentieth century career development theories in that they were not inclusive of the work experiences of disenfranchised and marginalized populations. PWT also recognizes that many people are in precarious work situations, rather than being able to follow the kinds of career development trajectories that were the focus of previous theories. The recognition of precarious work within PWT makes this theory particularly useful for understanding the connections between work and mental health in people living with mental illness, because many individuals with mental illness find themselves in precarious work situations (Doran & Kinchin, 2020; Marwaha & Johnson, 2004; Petrie et al., 2018).

Using research from the areas of multiculturalism, intersectionality, vocational psychology and sociology of work, Duffy and colleagues constructed PWT, an empirically testable theory. PWT asserts sociocultural factors (e.g., social class, gender, health status) are foundational in understanding career development and work. One important motivation and goal

for the current research which aligns with PWT is the desire to gain a better understanding of the work experiences in those living with mental illness, a disenfranchised and marginalized population. Another aim that aligns with PWT is to provide more empirical research to the career development discourse and to remedy the paucity of career development research that involves people living with mental illness.

Drawing from PWT, scholars have identified meaningful work a predictor of positive work outcomes such as work engagement, job commitment, job satisfaction, and positive mental health (Allan et a., 2019; Allan et al., 2018; Steger & Dik, 2009; Steger et al., 2012). In addition, research embedded within the PWT found social support was a significant predictor of burnout, job satisfaction, and productivity (e.g., Allan et al., 2020). Nonetheless, there is very limited research that has used PWT to examine mental health and mental illness in the context of work. Using elements from PWT, the current research sought to help to fill this gap.

In an attempt to balance parsimony and inclusion, a notable limitation of PWT is the exclusion mental health status in the current model, despite evidence mental health status's influence on attainment of positive work experiences (Duffy et al., 2016).

Perceived Social Support

Social support plays an important role in the mental and physical health of individuals (e.g., Birtel et al., 2017; Gülaçtı, 2010). For example, higher levels of perceived social support were found to inhibit the adverse physiological complications of diseases and increase self-care among older people (Shoja et al., 2013). When examining risk factors for mortality, the influence of social support was found to be comparable to factors such as smoking and alcohol consumption, and stronger than factors such as physical inactivity and obesity (Holt-Lunstad et al., 2010). Research also indicates higher levels of perceived social support act as a protective factor against stress, particularly in marginalized or disadvantaged populations such as

immigrants, parents with disabled children, university students, veterans, and older adults (Harandi et al, 2017).

For those living with mental illness, low levels of perceived social support predicted poorer life satisfaction, increased depressive symptoms, and more severe psychiatric symptoms (Waddell & Burton, 2006). Higher levels of perceived social support were independently linked to a lower probability of involuntary hospitalization. (Walker et al., 2019). A systematic review of 34 studies found substantial evidence that lower perceived social support is associated with increased adverse outcomes in terms of symptoms, recovery, and functioning, in clinical populations aged 16 years or older who experience depression (Wang et al., 2018). Wang and colleagues also found evidence for a relationship between perceived social support and life outcomes. That is, those who perceived greater social support had higher levels of quality of life and functioning. In addition, research has found that greater perceived social support in those living with mental illness, predicted better social and work adjustment (Rytsälä et al., 2006).

Social support also plays an important role in work and employment for the general population. For example, low social support is related to increasing prevalence of job burnout (e.g., Lim et al., 2010; Maslach & Leiter, 2016; Singh et al., 2015). Research also reveals that low social support was an independent predictor of poorer mental health and lower work ability (Peters et al., 2018). Increased levels of social support are related to increased job satisfaction (e.g., Eisenberger et al., 1997) and job performance ratings (e.g., Gerstner & Day, 1997). Social support also has a protective effect on presenteeism (e.g., Saijo et al, 2017). In addition, social support mediates the association between job stress and job burnout: Fiorilli et al. (2019) found family social support played a significant protective role in reducing the risk of burnout and bolstering work engagement.

Existing research on the intersection of work and social support for individuals who have experienced mental illness is more limited. Nonetheless, higher levels of social support from co-workers have been found to have a significant and substantial positive impact on job satisfaction in employed individuals experiencing serious mental illness (Villotti et al., 2012). Research also reveals social support to be significantly and positively related to higher work productivity, job tenure, self-efficacy and negatively related to self-stigma for those living with serious mental illness (Villotti et al., 2018).

Meaningful Work

Work plays an important role in the lives of many people. For some, work is one of the most important sources of meaning in their lives (Baum & Stewart, 1990; Klinger, 1977). Lack of work meaning is associated with negative consequences such as substance abuse, suicidal ideation, alienation, and poor workplace performance (Allan et al., 2018). While higher levels of meaningful work are associated with greater well-being (Arnold et al., 2007), greater job satisfaction (e.g., Allan et al., 2018; Kamdron, 2005), reduced burnout and higher work engagement (Suarez, 2018). The role of meaningful work has been shown to be a significant factor in reducing turnover for employees facing adverse working conditions (Arnoux-Nicolas, 2016). Meaningful work even transcends the individual into a larger organizational context. For example, an employee's organizational commitment significantly increased when work meaning was high (Steger et al., 2012).

However, there is a paucity of research in examining meaningful work from the perspective of those who experience mental illness. In one exception, Khalaf beigi et al. (2014) conducted a qualitative study on the meaning of work in adults with serious mental illness (i.e., bipolar and schizophrenia) in Iran. Using inductive content analysis, the authors identified four main themes of perceived meaning of work: (a) acquiring personal and social identity, (b) work

as a drive to overcome symptoms of mental illness and expand abilities, (c) time passing as in escape from boredom and desire to have fun by interacting with others and (d) financial independence. This study found that, although earning income was important, developing a sense of identity was the most important. Therefore, the authors suggested non-paid work, such as participation in religious ceremonies, could be offered as a way to meet this need.

At the time of this writing, only one quantitative study that examined work meaning, mental health (depression) and wellbeing has been identified. In response to decreased levels of wellbeing and quality of life in Romania, Kállay (2015) investigated the relationship between meaningful work and subjective and psychological well-being, and depression within a young adult Transylvanian Hungarian population. Female participants reported significantly higher levels of meaning through work and greater motivation for work than male participants. Unlike previous research on work meaning and well-being in non-clinical populations, Kállay found no significant relationship between work meaning and mental health in their sample. The author conjectures major work changes in Romania (e.g., workplace insecurity, increased reliance on temporary and unstable labour, and excessive mental and emotional demands) may have led to a reduction in the influence of work meaning on wellbeing for their participants. As this study questions the utility and importance of considering work meaning, the current research seeks to resolve this discrepancy.

Current Study

Research examining work meaning from the perspective of people living with mental illness is limited and the connections to mental health are unclear. Specifically, one qualitative study from Iran suggests that work meaning is important for aspects of mental health, while a quantitative study from Romania found no significant relationship between work meaning and

wellbeing/quality of life (Kállay, 2015; Khalaf beigi et al., 2014). This lack of research, combined with other research revealing that meaningful work is associated with positive outcomes for the general population (Arnold et al., 2007; Suarez, 2018), reveals a gap in the literature that needs to be addressed. Therefore, this study investigated the significance of work meaning on mental health in adults living with mental illness. In addition, it was important to explore the influence of work meaning over and above, the influence of social support because of the potential social support benefits provided by work. Finally, we wanted to confirm that the existing research on the benefits of social support for mental health continue to hold in the context of the covid-19 pandemic. A quantitative research design was implemented to investigate these issues. The following specific hypotheses were tested:

1. For adults living with mental illness, perceived social support (i.e., MSPSS) will account for a significant amount of variance in mental health, after controlling for age, gender, and relationship status.
2. For adults living with mental illness, work meaning will account for a significant amount of variance in mental health, over and above the influence of perceived levels of social support, age, gender, and relationship status.

Chapter 3: Methods

Research Design

The primary purpose of this research was to identify how perceived social support and work meaning are connected with the mental health of working individuals experiencing mental illness. Therefore, a quantitative research approach was the most appropriate method for this study. All data was collected using an online survey administered through a crowdsource data collection platform. Hierarchical multiple regression analyses were performed to examine the relationships between a set of independent variables (i.e., social support and meaningful work) and a dependent variable (i.e., mental health), after controlling for the effects of age, gender, and relationship status. In addition, a hierarchical multiple regression was employed in order to determine if work meaning makes a significant contribution to the model, beyond the variance that can be attributed to social support.

Sample and Sampling

To be included in the study, participants had to be at least 18 years of age, and be fluent in English. Participants also had to endorse they were currently experiencing mental illness at the time of the study, and were working at least 5 or more hours a week (paid or unpaid). G*Power was used to estimate the minimum required sample size for this study (Faul et al., 2007). Assuming an effect size of 0.15, a power of 0.80 and an alpha of 0.05, this a priori power analysis revealed the minimum required number of participants required is 103. In order to ensure the minimum sample size criteria was met even if some participants have to be removed during the data preparation stage of the analysis, the aim was to recruit 125 participants.

Recruitment

Participants were recruited through an online crowdsourcing platform, Prolific Academic (Prolific). Prolific is aimed at recruiting participants for academic research (Palan & Schitter, 2018; Peer et al., 2017). Recruitment of participants though online platforms has grown in recent years, with Amazon's Mechanical Turk (MTurk) being the most commonly used (e.g., Bohannon, 2016). However, research has shown Prolific has several important advantages, such as the ability to screen participants based on their answers from previous pre-screening questions. This helps to reduce potential dishonesty from participants wanting to complete the survey despite not satisfying the criteria. Additionally, from a social justice perspective, participants recruited through Prolific are fairly compensated for their participation, with the platform recommending a participant compensation rate of £7.50 GBP per hour and requiring a minimum compensation rate of £5.00/hour (Prolific Academic, n.d.). Finally, Peer et al. (2017) reported higher quality data, as Prolific users were found to be more naïve and less dishonest than MTurk users. The Pre-Screener survey can be found in Appendix A.

Pre-Study Requirements and Screening

Demographic requirements were implemented to screen potential participants through Prolific. Potential participants were limited to those who were proficient fluency in English, and responded "yes" to the Prolific participant pool specification question, "Do you have – or have you had – a diagnosed, on-going mental health/illness/condition?"

Proflic users were directed to a pre-screener survey to ensure they meet the full inclusion criteria. Participants were asked about their present work status and current mental illness status. See Appendix A. Only participants who endorsed working, on average, a minimum of 5 hours a week and who were currently experiencing a mental illness were invited to participate in the full

study. The average time to complete the screener was less than 1 minute. Participants were paid £0.15 GBP for their time.

Data Collection and Instruments

All data (including the pre-screener survey) were collected through self-report surveys administered using, Qualtrics, the University of Calgary's online survey platform. Participants who meet the criteria in the pre-screener survey were directed to the full study consent form (Appendix C) and survey. The average time to complete the survey was 5 minutes and 48 seconds. Those who completed the full-survey were paid £0.85 GBP for their time.

Demographics Questionnaire

The survey collected the following demographic information for each participant: age, gender, and relationship status. These demographic characteristics were included as control variables in the analysis. Country of residence, self-reported type(s) of mental illness and highest level of education attained were also collected and reported in the description of the sample. See Appendix D.

The Work and Meaning Inventory (WAMI)

The WAMI, developed by Steger (2009), is a 10-item questionnaire that measures meaningful work. It is comprised of three domains: positive meaning (e.g., I have discovered work that has a satisfying purpose.), meaning-making through work (e.g., My work helps me better understand myself), and greater good motivations (e.g., The work I do serves a greater purpose). In addition, an overall *Meaningful Work* score is calculated by adding all scores together. The WAMI uses a 5-point Likert scale with responses ranging from "absolutely True" to "Absolutely Untrue." Previous research has used the WAMI to explore the relationship meaning of work plays in factors such as perceived work conditions, turnover intentions, burnout, job-satisfaction, person-environment fit and mental health (e.g., Arnoux-Nicolas et al.,

2016; Bayer et al., 2021, Zhang et al., 2019). Previous research has shown the internal consistency of the WAMI illness to be α = .90 or higher (Duffy et al., 2012; Duffy et al., 2014). The WAMI illness has been translated and validated in multiple languages including Italian (e.g., Di Fabio & Kenny, 2019), Portuguese (e.g., Lenardo et al., 2019), Korean (e.g., Tak et al., 2015), and Turkish (e.g., Akin et al., 2013).

This study includes both paid and unpaid work (e.g., childcare, volunteer work). To reflect this definition, minor changes in the wording of two questions were made. Specifically, the question, "I have found a meaningful career" was altered to "I have found meaningful work" and the question, "I have a good sense of what makes my job meaningful" was altered to "I have a good sense of what makes my work meaningful. See Appendix E for the revised scale.

Multidimensional Scale of Perceived Social Support (MSPSS)

The MSPSS (Zimet et al. 1988) is a 10-item questionnaire which aims to measure an individual's perception of social support they receive, using a 7-point Likert scale with responses ranging from "very strongly disagree" to "very strongly agree." The MSPSS assesses perceived social support from family (e.g., My family really tries to help me.), friends (e.g., I can count on my friends when things go wrong) and a significant other (e.g., There is a special person in my life who cares about my feelings). Previous research has demonstrated satisfactory internal consistency (Cronbach alphas > .84 to .92) for the MSPSS. Zimet et al., 1990). The MSPSS is one of the most widely used measures of social support in research over the past 30 years (e.g., Dambi et al., 2018). See Appendix F.

Mental Health Continuum–Short Form (MHC-SF)

The MHC-SF (Keyes et. al, 2008) is a 14-item questionnaire assessing three dimensions of mental health: emotional well-being (e.g., interested in life), social well-being (e.g., that you had warm and trusting relationships with others) and psychological well-being (e.g., that your

life has a sense of direction or meaning to it). Participants were asked to rate how often they felt various aspects of mental health over the past month using a 6-point Likert scale ranging from "Never" to "Every day." The MHC-SF has been found to demonstrate excellent internal consistency (Cronbach alphas > .80) and discriminant validity in adults (Keyes, 2005, 2006; Keyes et al., 2008; Lamers et al., 2011; Westerhof & Keyes, 2010). Previous research has used the MHC-SF to better understand how mental health is related to such things as suicidal ideation, professional burnout, altruistic professional beliefs (Dyrbye et al., 2012), risk of future mental illness (Keyes et al., 2010), risk of premature mortality (Keyes & Simoes, 2012), as well as healthcare utilization, missed days of work, disability, and self-reported academic impairment among colleges students (e.g., Keyes, 2007, Keyes, Eisenberg, Perry, Dube, Kroenke, & Dhingra, 2012). See Appendix G.

Chapter 4: Results

Demographic Variables

Of the 239 people who completed the pre-screener, 85 were ineligible because they were not currently experiencing a mental illness and/or were not currently working. The remainder were invited to complete the full survey. A total of 126 people completed the full study, with one participant being removed from the final sample. This decision will be discussed in the following "Data Preparation" section. Descriptive statistics were conducted for demographic variables of age, gender, relationship status, country of residence and level of education. Participants were aged 18 to 56 years old with a mean age of 28.41. Of the 125 participants who were part of the final sample, 103 (82.4%) identified as female, 21 identified as male (17.6%) and one participant preferred not to say. Information regarding relationship status revealed 78 (62.4%) participants had never been married, were divorced or separated, while 47 (37.6%) lived with a partner or were married. Additional demographic information is provided in Table 1. Table 2 provides information on participants' country of residence.

Table 1

Background Characteristics of Respondents (n = 125)

Country	n	%
Gender		
Male	21	16.8
Female	103	82.4
Prefer not to say	1	0.8
Education		
Less than high school or high school graduate	24	19.20
Some college or university but no degree or credential	38	30.4
Initial university or college degree/credential*	53	42.4
Graduate/postgraduate degree (e.g., MA, PhD, MD)	10	8.0

Note: *2-, 3-, or 4-year credential

Table 2

Country of Current Residence (n = 125)

Country	n	%
United States of America	43	34.4
United Kingdom of Great Britain and Northern Ireland	32	25.6
South Africa	15	12.0
Mexico	13	10.4
Canada	6	4.8
Germany	3	2.4
Portugal	3	2.4
Italy	2	1.6
Other*	8	6.4

Note: *Austria, Chile, Estonia, Finland, Greece, Ireland, Israel and Spain

The most common mental illness reported was anxiety disorders, 88%. More information on the different mental illnesses reported by participants is available in Table 3. Importantly, all but 2 participants reported at least one of their mental illnesses had been diagnosed by a mental health professional, and 67.5% of the sample indicated having two or more mental illnesses. Based on Keyes (2009) categorical scoring criteria for the MHC-SF, it was determined most of participants (66%), were moderately mentally healthy, while 22% were considered to be languishing and 11% flourishing.

Table 3

Self-Reported Mental Illness(es) (n = 125)

Mental Illness Category	n	%
Anxiety Disorders	110	88.00
Mood Disorders	74	59.20
PTSD and Trauma Related Disorders	27	21.60
Eating Disorders	21	16.80
Obsessive-Compulsive and Related Disorder	19	15.20
Neurodevelopmental Disorders	18	14.40
Personality Disorders	10	8.00
Substance Abuse Disorder	6	4.80
Psychotic Disorders	2	1.60

Note: Respondents could select multiple items, and a majority of them endorsed two or more diagnoses.

Data Preparation

Univariate descriptive statistics were examined as the first step in preparing the data. No out-of-range values or missing data were identified. A box plot indicated one univariate outlier score on the dependent variable (MHC-SF) and one on the independent variable (MSPSS). Both scores were Windsorized in order to reduce the influence on the data (Warner, 2013). Two outliers were identified for age, but were not Windsorized as age is a natural measure. A regression standardized residual scatterplot was created and visually examined to assess for multivariate outliers. One participant had a residual greater than 3 standard deviations and was removed from the data set for a final total sample size of 125. Table 4 reveals the descriptive statistics of all continuous variables for the final sample of participants.

Table 4

Descriptive Statistics of Continuous Variables (n = 125)

	Mean	Std. Deviation	Minimum	Maximum
MHC-SF	30.94	13.37	5.00	63.00
MSPSS	4.92	1.17	1.92	7.00
WAMI illness	33.32	9.56	12.00	50.00

Note: MHC-SF = Mental Health Continuum Short Form; MSPSS = The Multidimensional Scale of Perceived Social Support; WAMI illness = The Work and Meaning Inventory.

Prior to conducing a hierarchical multiple regression with the final sample of participants, relevant assumptions of this statistical analysis were examined. Mahalanobis' distances were calculated to identify potential multivariate outliers by comparing scores to chi-square distribution, using p <. 001. The maximum Mahalanobis’ distance in the sample was 17.67,

which is below the critical value of 20.52, indicating an absence of multivariate outliers. Shapiro-Wilk's test of normality was not statistically significant ($p < 0.05$), indicating the dependent variable was normally distributed. Scatterplots of the relationship between the DV (MHC-SF) and each IV (MSPSS; WAMI illness) were produced to check the assumption of linearity. Each graph showed the relationship between the IV and DV could be modelled by a straight line, indicating the relationship between these variables is linear. Therefore, it was concluded that the assumption of linearity was met. A normal probability plot of the residuals showed data points were approximately linear and supported the assumption that the error terms are normally distributed. Pearson correlations indicated the assumption of non-multicollinearity was satisfied as the highest correlation among the independent variables was $r = .23$ (See Table 5). The full-summary model has a Durbin-Watson score of 2.13, indicating the values of the residuals are independent. A plot of standardized residuals versus predicted values showed points are approximately equally distributed across all values of the independent variables, suggesting that the assumption of Homoscedasticity was met. Finally, Cook's values were computed to identify potential influential data points. All values were below 1, indicating there were no overly influential data points.

Hypothesis 1

A two-stage hierarchical multiple regression was conducted with MHC-SF as the dependent variable. Age, gender (coded 0=non-female; 1= female), and relationship status (coded 0 = never married or separated/ divorced; 1 =Married/Living with partner) were entered in stage one of the regression, to control for the influence of these demographic influences on MHC-SF. Stage 1 results revealed that age, gender, and relationship status did not contribute significantly to the regression model, $F(3,121) = .58$, $p > .05$ and accounted for 1.42% of the variation in MHC-SF.

Next, MSPSS was added to the regression model in stage 2. This model explained an additional % of the variation in MHC-SF scores. This change in R² was significant, $\Delta R^2 = .22$, F (1,120) = 34.47, $p < .001$. Therefore, the results supported the hypothesis that social support accounts for a significant amount of variance in self-reported mental health, over and above the influence of the demographic variables. In other words, participants who reported higher levels of social support were also more likely to report higher levels of mental health.

Hypothesis 2

Next, a three-stage hierarchical multiple regression was conducted to investigate whether WAMI illness accounted for a significant amount of variance in MHC-SF, above and beyond MSPSS age, gender, and relationship status. Building on the previous model, age, gender, and relationship status were entered at stage 1 and MSPSS was entered at stage 2. To test the second hypothesis, scores on the WAMI were added to the model in a third stage. Intercorrelations between the multiple regression variables are reported in Table 5 and the regression statistics are in Table 6.

Table 5

Means, SD's and Pearson correlation amoung the dependent and independent variables.

Variable	M	SD	1	2	3	4	5	6
1. MHC-SF	30.94	13.37	-					
2. Age	28.28	8.74	-.055	-				
3. Gender	.82	.38	-.097	-.113	-			
4. Relationship Status	.38	.49	-.010	.335*	.055	-		
5. MSPSS	4.92	1.17	.464*	-.129	.086	-.018	-	
6. WAMI illness	33.32	9.56	.507*	.005	.066	-.047	.234*	-

Note: MHC-SF = Mental Health Continuum Short Form; MSPSS = The Multidimensional Scale of Perceived Social Support; WAMI illness = The Work and Meaning Inventory. **Correlation is significant at the 0.01 level (2-tailed).*

Table 6

Summary of hierarchal regression analysis between mental health and independent variables.

	B	t	R	R^2	Adjusted R^2	ΔR^2
Stage 1			.12	.01	-.01	0.01
Age	-.11	-.76				
Gender	-3.72	-1.17				
Relationship Status	.57	.22				

Stage 2			.48	.23	.21	.22
Age	-.02	-.16				
Gender	-4.90	-1.73				
Relationship Status	.30	.13				
Social Support	.54	5.87**				
Stage 3			.64	.41	.39	.18
Age	-.06	-.54				
Gender	-5.76	-2.30*				
Relationship Status	1.10	.53				
Social Support	4.24	5.08**				
Work Meaning	.61	6.00**				

Note: *$p<.05$; **$p<.001$

The addition of the WAMI variable to the regression model explained an additional 17.60% of the variation in MHC-SF, beyond the variance attributed to the demographic variables and MSPSS. This change in R^2 square was also significant, $\Delta R^2 = .18$, $F(1,119) = 35.51$, $p < .001$. These results supported the second hypothesis, and indicate that work meaning accounts for a significant amount of variance in self-reported mental health, above and beyond the influence of social support, age, gender, and relationship status. In this sample of adults living with a mental illness, those who reported higher levels of meaning in their work were more likely to report higher levels of mental health.

All together the independent variables accounted for 35.51% of the variance in MHC-SF, $R^2 = .64$ (adjusted $R^2 = .41$), $F(5,119) = 16.55$, $p < .001$. Three of the five predictors significantly contributed to the model, with WAMI being the strongest predictor, ($\beta = .43$, $p<.001$), followed

by MSPSS, ($\beta = .37$, $p<.001$), and gender ($\beta = -.17$, $p=.02$). That is to say, in the final regression model higher levels of work meaning and higher levels of social support each significantly predicted higher perceived mental health. Furthermore, identifying as female predicted lower perceived mental health.

Chapter 5: Discussion

Based on the two continua model of mental health (Keyes, 2002) and prior research, the current study sought to gain a better understanding of how social support and meaningful work influences mental health in adults living with mental illness. It was hypothesized that social support and meaningful work would each account for a significant amount of variance in mental health, after controlling for age, gender, and relationship status. Results supported both hypotheses, suggesting that social support and meaningful work are both important contributors to mental health in those living with mental illness.

Hypothesis 1: Social Support

The results of this study, conducted with a sample of participants residing in 16 countries around the world and reporting numerous different kinds of mental illnesses, confirmed the well-established conclusion in the current research literature that perceived social support is a significant predictor of mental health (e.g., Peters et al., 2018) in populations both with and without mental illness diagnosis (e.g., Waddell & Burton, 2006). In combination with previous research, this study indicates social support may serve as both a protective factor against mental illness and an asset for mental health. Importantly, data were collected in October 2021, well into the covid-19 pandemic. As such, this study reveals that the connection between social support and mental health is robust even during unusual circumstances that have exacerbated the prevalence of mental illness around the world (OECD, 2021).

Hypothesis 2: Work Meaning

The primary goal of this study was to see if work meaning accounted for a significant amount of variance in mental health after controlling for influences of social support, age, gender, and marital status. Work meaning was found to be positively associated with mental

health, with the results indicating that, as people with mental illness reported higher perceived levels of meaningful work, they also reported higher levels of mental health. These results are consistent with previous qualitative research that found meaningful work to be a valuable asset for promotion of mental health and recovery in those who experience mental illness (e.g., Borg & Kristiansen, 2008; Dunn et al., 2008; Leufstadius et al., 2009). These results also help to resolve a tension with the existing literature. On the one hand, there is a robust amount of research indicating that non-clinical populations who perceive their work as more meaningful also experience higher levels of mental health (Arnold, et al., 2007). On the other hand, the only previous quantitative study which looked at meaningful work, mental illness (i.e., depression) and the influence on mental health did not find meaningful work to be a significant predictor of psychological wellbeing (Kállay, 2015). The results of the present study aligned more with the results of qualitative studies examining the general population. It is possible that Kállay's results may have been influenced by some of the distinct characteristics of their research design.

Another important consideration is Kállay (2015) used the Beck Depression Inventory (BDI, Beck et al., 1979) to measure for possible presence of depression. The BDI is an older screener for depression and may not be reflective of a diagnosable mental illness. The present study relied on self-reported mental illness and included a wide variety of mental illnesses (e.g., anxiety disorders, mood disorders, PTSD and trauma related disorders, eating disorders, obsessive-compulsive and related disorder). Furthermore, Kállay’s study was specific to a young adult population from Romania, with the author speculating that the unique socio-economic circumstances in Romania at the time may have influenced the wellbeing and quality of life of participants at the time that their study was conducted. Therefore, Kállay’s results may be specific to that sample.

Conceptualizing Mental Health/Mental Illness

Moving beyond the specific hypotheses of this study, as previously mentioned, mental health can be conceptualized along a continuum and subdivided into three categories or levels (flourishing, moderately mentally health or languishing). Results indicated the majority of participants were either experiencing moderate mental health (i.e., 66%), or were flourishing (i.e., 11%). Only a minority of participants were languishing (i.e., 22%). This is consistent with other research which found a similar pattern in outpatient adults diagnosed with schizophrenia spectrum disorders in Hong Kong (Chan et a., 2018) and adults diagnosed with schizophrenia, mood disorders and personality disorders in Canada (Stanga, 2019). Therefore, the present study provides indirect support for the two continua model of mental health. The participants all experienced mental illness and all but two of the sample received at least one diagnosis from a mental health professional. Because, scores on the MHC-SF varied significantly, this substantiates the claim mental health and mental illness are distinct constructs.

Strengths, Limitations & Future Directions

The inclusion of nonpaid work is a notable strength of this study. Consistent with PWT, the present research was driven by a social justice perspective that strives to prioritize experiences of marginalized communities. For this reason, it was important to acknowledge and include the often-overlooked (i.e., invisible) unpaid labour that is disproportionately carried out by women (Seedat & Rondon, 2021). People living with mental illness are a highly stigmatized population (Corrigan & Kleinlein, 2005) and this is amplified through the intersection of multiple stigmatized identities (Oexle & Corrigan, 2018). A social justice perspective strives to yield scholarly work that contributes to social and systemic change of systems conducive to oppression and discriminatory practices. As such, it is crucial to recognize, acknowledge, and

challenge the commonly held belief in modern industrialized countries that valuable work is tied exclusively to monetary compensation (e.g., Daniels, 1987). Unpaid work is equally important as paid work (Glasser,1999). The importance of including nonpaid work in this study was reinforced by an unsolicited message from one of the participants:

> Thank you very much for considering childcare, etc as work. It is very discouraging to constantly be doing surveys that don't seem to consider childcare as work since it's not paid when in reality I am busier and more stressed than I have been in any paid job I've ever had.

Aside from a social justice perspective, conceptualizing work as both paid and unpaid labour may be of particular importance to people who live with mental illness, as they are more likely to experience precarious employment and it is possible paid work may not be the primary goal for some people experiencing mental illness (Kennedy-Jone et al., 2005; Kirsh, 2000). Moreover, including nonpaid work is advantageous as is it opens up more opportunities for counselling psychologists and other career service workers (CSW) to help clients identify and engage in work they find meaningful.

There are at several potential limitations concerning the results of this study. A first potential limitation concerns the generalizability of the findings. Highly educated women who identified as not being in a relationship were overrepresented in this sample. To confirm that the results of the current study are representative of the broader population of people living with mental illness, it may be useful to replicate this study using a broader sample, in which male and nonbinary individuals and individuals of varying degrees of education are better represented.

An important limitation to acknowledge in this study was no data on the presence and severity of mental illness symptoms was collected. Prior research found levels of social support,

work meaning and mental health were all subject to the influence of severity of mental illness symptoms (Citation). Therefore, a potential future research direction is to expand on the current research design by including indicators of mental illness symptom severity, either as a control variable or as another predictor variable.

The study excluded participants who indicated they did not work at least 5 or more hours a week in either paid or unpaid work. This minimum number of hours is somewhat arbitrary as no precedent for minimum number of hours could be found in the research literature. This may have excluded legitimate participants who work less than 5 hours a week or work precarious hours, which is more common in individuals living with mental illness (Kennedy-Jone et al., 2005; Kirsh, 2000).

Another potential limitation to be aware of is potential selection bias. As participants self-selected to participate in the study through the online survey platform, it is possible people who were more interested in topics of mental health, social support and/or work meaning participated in the study. Furthermore, since participants were given a small monetary stipend for their time, it is possible some participants may have been compelled to respond to the pre-screen questions in a way that would qualify them for the full study.

Finally, due to the non-experimental design of the study, it is impossible to draw causal conclusions about the connections between social support and work meaning and mental health. While previous research and theoretical literature informed the current study's research design, it is conceivable mental health is actually a determinant rather than an outcome of social support and/or work meaning.

Implications for Counselling Psychology Practice

The current study has several important implications for counselling psychology as an applied health profession and for career services workers (CSW). First and foremost, results substantiate the idea that those living with mental illness can concurrently experience positive mental health. More than 77% of participants from the current study reported experiencing moderate or flourishing levels of mental health. This is important information particularly for CSWs who have expressed a desire to help people living with mental illness, but also convey hesitancy if mental illness symptoms have not yet been resolved (Martin & McKee, 2016). This study reinforces the fact people do not have to be symptom free in order to work or benefit from services offered by CSWs, even if the CSW does not have the same level of competency in treating mental illness as a counselling psychologist would.

Another implication of the current study is reinforcing a shift in the theoretical framework from which mental illness is viewed. The dominant approach to mental illness is rooted in the pathogenic approach which considers health as the absence of disease and illness or in the case of mental illness the absence of psychopathology (Keyes, 2014). While essential to the prevention and treatment of mental illness, this approach overlooks the potential for mental health promotion in people living with mental illness. Mental illnesses have proven not only to be prevalent, but chronic conditions for some and adopting a salutogenic approach (Antonovsky, 1979) may be more constructive in enriching the lives of those living with mental illness by identifying and promoting assets of mental health.

Martin and McKee (2016) encourage CSWs to adopt a salutogenic recovery-oriented approach when working with people living with mental illness. This approach shifts attention away from mental illness symptoms and treatment and towards identifying unique strengths and

abilities in order to promote mental health and social and economic inclusion. However, this should not be interpreted as a call to completely ignore pathogenic perspectives or treatment focused approaches. Instead, the recommendation is for practitioners to adopt a complete state model that incorporates both pathogenic and salutogenic paradigms in mental health care, such as Keyes' (2005) two continua model of mental health. As Martin and McKee explain:

> This [approach] requires all professionals to work collaboratively across systems and with other services in order to improve service access and build partnerships that will expand opportunities and create welcoming communities that are free from stigma and discrimination. Addressing the attitudinal and structural barriers that limit opportunity - including within employment counselling services important start in this transformational recovery journey. (Martin & McKee, 2016, p. 9)

Adopting a complete state model provides counselling psychology the opportunity to place greater attention towards health promotion for this population, which aligns with the growth-oriented values of the discipline (Beatch et al., 2009).

The results of this study highlight another important implication for counselling psychology; the importance of recognizing that work and career are integral to mental health care. Historically, work and career development has been a siloed specialization within psychology. However, emerging constructivist and holistic theories of career development recognize work and career development are intrinsically linked with mental health and wellbeing (Hudson Breen & Lawrence, 2021). The results of the present study are consistent with this perspective. Therefore, including a focus on work as part of the scope of practice for counselling psychology may help to facilitate positive mental health in people diagnosed with mental illness. Furthermore, the connections between mental health and work/career indicate that counselling

psychologists and CSWs in agencies that provide work and career related counselling are in a unique position to help people with mental illness by focusing on career development in a way that contribute to their clients' mental health, while continuing to practice within the mandate of their agency. This is particularly important for clients who may find it more socially acceptable and less stigmatizing to seek counselling for career concerns than for their mental health concerns (Richardson, 2018).

Some implications of this study for counselling psychology practice relate to promoting meaningful work with clients, particularly clients experiencing mental illness. Counselling psychologists seeking practical interventions to promote mental health may want to encourage and assist their clients to obtain work that is personally meaningful for them, regardless of whether it is paid or unpaid. For example, some clients may find it more meaningful to engage in the work of raising their children than to work in a service industry job. With such clients, it may be useful to explore this option as a way to help them to maintain their mental health, rather than assuming that all adults experiencing a mental illness will benefit from being employed. Additionally, the WAMI is an easily understood self-report measure with adequate psychometric properties, and is freely accessible online, along with scoring and interpretation instructions. Therefore, counselling psychologists may find it useful to incorporate this measure into their career counselling practice as a way to assess and monitor progress. Consistent with the values of counselling psychology (Beatch et al., 2009), practitioners can also engage in advocacy work for clients who may be involved in employment agencies. Specifically, if these agencies are not considering how meaningful the work is in their job placements with clients experiencing mental illness, it may be worthwhile for the psychologist to consult with the agency staff to discuss the mental health implications of helping the client to obtain work that is meaningful to the client.

This may be particularly important if the client has expressed dissatisfaction with their current work situation.

Conclusion

Results from the present study highlight the importance of examining social support and meaningful work, as potential assets that contribute to positive mental health in adults living with mental illness. Both study hypotheses were supported, as meaningful work and social support each accounted for a unique and significant amount of variance in mental health. These findings, obtained during the covid-19 pandemic from a sample of participants from around the world, were consistent with Waddell and Burton (2006) in terms of social support's importance on mental health, and with Arnold, et al. (2007) in terms of meaningful work's importance on mental health. There remains much work to be done to more fully understand the role of meaningful work in the lives and mental health of adults experiencing mental illness. Nonetheless, this study provides initial suggestions for counselling psychologists and CSWs seeking to improve mental health in those living with mental illness: it may be important to engage with these clients around their social support systems and the meaningfulness of their paid and unpaid work.

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Appendix A. Pre-Screener

1. Are you currently experiencing a mental health illness/disorder/condition?
   - ❒ Yes
   - ❒ No

2. Are you currently working on average 5 or more hours a week?
   Note: Work can be paid or unpaid employment. Examples of unpaid work include unpaid internship, volunteering, care of children, family members, parents and domestic work.
   - ❒ Yes
   - ❒ No

Recruitment Pre-Screener

Social Support and Work Meaning in Adults Experiencing Mental Illness

Hosted by Kristina Waldmann

£0.15 • 1 minute • £9.00/hr • 250 places remaining

Dear Participant,

My name is Kristina Waldmann and I am graduate student from the Werklund School of Education at the University of Calgary. I am inviting you to participate in the first stage of my research study about mental health and work. You are eligible to take part in this stage of my study because you are 18 or older and are fluent in English. IF you decide to participate in this stage of the study, you will respond to a very brief questionnaire that should take less than 1 minute to complete. You will receive £0.15 for your time. The information provided in this stage may qualify you to take part in future stages of this study, should you choose to.

Participation is completely voluntary, and you can choose to be in this study or not. If you would like to participate, please proceed to the survey. If you have any questions about the study, please email me at kgwaldma@ucalgary.ca.

The University of Calgary Conjoint Faculties Research Ethics Board has approved this study (REB21-0590).

Thank you very much,
Kristina Waldmann

Principal Investigator: Dr. José Domene, Faculty of Graduate Studies, Werklund School of Education, University of Calgary, Alberta, Canada 1-403-220-3364, jfdomene@ucalgary.ca

Appendix B. Recruitment Screener Full-Study

Social Support and Work Meaning in Adults Experiencing Mental Illness
Hosted by Kristina Waldmann
£0.88 • 7 minutes • £7.45/hr • 125 places remaining

Dear Participant,

My name is Kristina Waldmann and I am graduate student from the Werklund School of Education at the University of Calgary. I am inviting you to participate in the first stage of my research study about mental health and work. You are eligible to take part in this stage of my study because you are 18 or older and are fluent in English. If you decide to participate in this stage of the study, you will respond to a very brief questionnaire that should take less than 1 minute to complete. You will receive $0.25 CAN (£0.14) for your time. The information provided in this stage may qualify you to take part in future stages of this study, should you choose to.

Participation is completely voluntary, and you can choose to be in this study or not. If you would like to participate, please proceed to the survey. If you have any questions about the study, please email me at kgwaldma@ucalgary.ca.

The University of Calgary Conjoint Faculties Research Ethics Board has approved this study (REB21-0590).

Thank you very much,
Kristina Waldmann

Principal Investigator: Dr. José Domene, Faculty of Graduate Studies, Werklund School of Education, University of Calgary, Alberta, Canada 1-403-220-3364, jfdomene@ucalgary.ca

Appendix C. Consent Form Full Study

Department, Telephone & Email:
Kristina Waldmann, Faculty of Graduate Studies, Werklund School of Education, 403-220-3364, kgwaldma@ucalgary.ca
Supervisor:
Dr. José Domene, Faculty of Graduate Studies, Werklund School of Education
Title of Project:
Social Support and Work Meaning in Adults Experiencing Mental Illness

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This consent form, which you should print or save/screenshot, is only part of the process of informed consent. If you want more details about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

The University of Calgary Conjoint Faculties Research Ethics Board has approved this research study (REB21-0590).

Participation is completely voluntary and anonymous.

Purpose of the Study
This study aims to examine the potential influence of social support and work meaning on the mental health of working adults who experience mental illness. Work is an important part of modern life and serves as a major determinant of mental health. For those who experience mental illness, work may be of particular importance as work has been found to promote recovery and a higher quality of life. This study will examine the relationship social support and work meaning may have with the mental health of working adults who experience mental illness. It is the hope of the researchers involved that the findings of this study will provide better, more tailored career counselling and work programs for individuals experiencing mental illness.

What Will I Be Asked To Do?
You will be asked to complete a short (less than 15 minute) survey. The survey will include general information about your background (i.e., gender, age, etc.) as well as questions about your mental illness diagnosis, how much social support you have in your life, how you see the role of work in your own life and mental health. Examples of questions include "I have found a meaningful work" and "I can talk about my problems with my family.".
Participation is completely voluntary. You may choose to stop your participation, decline to answer any and all questions, and may withdraw from the study at any time. You will still be compensated £0.85 GBP regardless of whether you withdraw or decline to answer any/all questions, provided that you submit your completion code to Prolific.

What Type of Personal Information Will Be Collected?
Should you agree to participate, you will be asked to provide the following demographic your age, country of residence, gender, marital status, race/ethnicity and mental illness diagnoses.

All participants data will be anonymized.

Are there Risks or Benefits if I Participate?
Foreseeable risks are minimal. However, it is possible that some of the questions will lead you to think more about aspects of your life that could be negative, such as lack of social support or meaningful work.

You will be paid $0.85 GBP for your participation in this study. This will remain the case even if you choose to withdraw or decline to answer any questions.

What Happens to the Information I Provide?
No one except the researcher and her supervisor will be allowed to see or hear any of the answers to the questionnaires or demographic data collected. There are no names on the questionnaire or demographic data. Only group information will be summarized for any presentation or publication of results. An electronic file of the anonymous data will be kept by the researcher and supervisor for potential use in future research.

Participants are free to withdraw until they submit their completion code on Prolific. Once a completion code is submitted on Prolific, all data will be anonymized so withdrawal will no longer be possible. Should a participant complete the survey but choose to withdraw prior to submitting their completion code on Prolific, they are required to email kgwaldma@ucalgary.ca with this decision. All of that participant's survey data will subsequently be destroyed.

Signatures

Clicking that you consent to participate indicates that 1) you understand to your satisfaction the information provided to you about your participation in this research project, and 2) you agree to participate in the research project.

In no way does this waive your legal rights nor release the researchers or involved institutions from their legal and professional responsibilities. You are free to withdraw from this research project at any time. You should feel free to email kgwaldma@ucalgary.ca to ask for clarification or new information throughout your participation.

I consent to participate in this research study.

I do not wish to participate in the research study.

Questions/Concerns

If you have any further questions or want clarification regarding this research and/or your participation, please contact:

Kristina Waldmann
Faculty of Graduate Studies, Werklund School of Education, University of Calgary, Alberta, Canada
kgwaldma@ucalgary.ca and

Dr. José Domene,
Faculty of Graduate Studies, Werklund School of Education, University of Calgary, Alberta, Canada
403-220-3364, jfdomene@ucalgary.ca

If you have any concerns about the way you've been treated as a participant, please contact the Research Ethics Analyst, Research Services Office, University of Calgary at 403.220.6289 or 403.220.8640; email cfreb@ucalgary.ca. Please keep a copy of this consent form has been given to you to keep for your records and reference. The investigator has kept a copy of the consent form.

Appendix D. Demographic Study Survey

How old are you in years?

[Text Entry]

What is your sex?

- ☐ Male
- ☐ Female
- ☐ You don't have an option that applies to me. I identify as: [Text Entry]
- ☐ Prefer not to say

What is your current marital status?

- ☐ Married
- ☐ Living with a partner
- ☐ Widowed
- ☐ Divorced/Separated
- ☐ Never been married
- ☐ In which country do you currently reside?

What is the highest level of school you have completed or the highest degree you have received?

- ☐ Less than high school degree
- ☐ High school graduate (high school diploma or equivalent including GED)
- ☐ Some college or university but no degree or credential
- ☐ Associate degree in college or university (2-year credential)
- ☐ Bachelor's degree in college or university (3 or 4-year credential)
- ☐ Graduate/postgraduate degree (e.g., MA, PhD, MD)

In what country do you currently reside?

Drop Down Menu

Ethnic/race background (choose all that apply)?

☐ African	☐ Filipino	☐ Middle Eastern
☐ Alaskan Native	☐ First Nations	☐ Native Hawaiian
☐ American Indian	☐ Inuit	☐ Pacific Islander
☐ Black	☐ Japanese	☐ Southeast Asian
☐ Caribbean	☐ Korean	☐ South Asian
☐ Chinese	☐ Latin or South American	☐ White
☐ European	☐ Métis	☐ Other (please specify) [Text Entry]

Which statement best describes your current work status?

☐ Paid work (full-time; 30+ hours per week)
☐ Paid work (part-time; less than 30 hours per week)
☐ Unpaid work (full-time; 30+ hours per week)
☐ Unpaid work (part-time; less than 30 hours per week)

How many hours of unpaid work do you do in a week, on average? [Text Entry]

Please select the category that best describes your job.

☐ Management
☐ Business, finance, and administration
☐ Natural, applied sciences and related occupations
☐ Health
☐ Education, law and social, community and government services
☐ Art, culture, recreation and sport
☐ Sales and services
☐ Trades, transport, and equipment operators and related occupations
☐ Natural resources, agriculture and related production occupations
☐ Manufacturing and utilities
☐ Other occupation (please specify) [Text Entry]

How many hours of unpaid work do you do in a week, on average?

Examples of unpaid work: caregiving (e.g., parent, child, dependent), unpaid domestic labour, volunteer work. [Text Entry]

What best describes your unpaid work?

- ☐ Volunteering
- ☐ Caregiving (e.g., parent, child, dependent)
- ☐ Domestic Labour (e.g., house cleaning, cooking meals; household banking)
- ☐ Unpaid Internship (i.e., practicum)
- ☐ Student
- ☐ Other (please specify) [Text Entry]

What mental illness/disorder/condition are you currently experiencing (choose all that apply)?

- ☐ Anxiety Disorders (e.g., Panic Disorder, Social Anxiety Disorder, Phobias)
- ☐ Eating Disorders (e.g., Anorexia Nervosa, Binge Eating Disorder, Bulimia Nervosa)
- ☐ Mood Disorders (e.g., Major Depression, Bipolar Disorder)
- ☐ Neurodevelopmental Disorders (e.g., Autism Spectrum Disorder, Attention-Deficit/Hyperactivity Disorder)
- ☐ Obsessive-Compulsive and Related Disorders (e.g., Body Dysmorphic Disorder, Hoarding Disorder)
- ☐ Personality Disorders (e.g., Borderline Personality Disorder, Narcissistic Personality Disorder)
- ☐ Psychotic Disorders (e.g., Schizophrenia, Delusional Disorder)
- ☐ PTSD and Trauma Related Disorders (e.g., Acute Stress Disorder, Adjustment Disorder)
- ☐ Substance Abuse Disorders (e.g., Alcohol Use Disorder, Opioid Use Disorder)
- ☐ Other(s) (please specify) [Text Entry]

Has at least one of your mental illness/disorder/conditions been diagnosed by a mental health professional such as a psychiatrist, psychologist or physician?

- ☐ Yes
- ☐ No
- ☐ Uncertain

Appendix E. WAMI

The Work and Meaning Inventory (WAMI)

The Work and Meaning Inventory. Work can mean a lot of different things to different people. The following items ask about how you see the role of work in your own life. Please honestly indicate how true each statement is for you and your work.

	Absolutely Untrue	Mostly untrue	Neither True nor Untrue	Mostly True	Absolutely True
1. I have found ~~a~~ meaningful work*	1	2	3	4	5
2. I view my work as contributing to my personal growth.	1	2	3	4	5
3. My work really makes no difference to the world.	1	2	3	4	5
4. I understand how my work contributes to my life's meaning.	1	2	3	4	5
5. I have a good sense of what makes my work* meaningful.	1	2	3	4	5
6. I know my work makes a positive difference in the world.	1	2	3	4	5
7. My work helps me better understand myself.	1	2	3	4	5
8. I have discovered work that has a satisfying purpose.	1	2	3	4	5
9. My work helps me make sense of the world around me.	1	2	3	4	5
10. The work I do serves a greater purpose.	1	2	3	4	5

* Note: Original items used the work "career". In the context of this study, "work" was better represented employment is most often associated with paid work, whereas this study was examining paid and unpaid work.

Appendix F. MSPSS

Multidimensional Scale of Perceived Social Support (MSPSS)

Multidimensional Scale of Perceived Social Support (Zimet, Dahlem, Zimet & Farley, 1988)

Instructions: We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

Circle the "1" if you **Very Strongly Disagree**
Circle the "2" if you **Strongly Disagree**
Circle the "3" if you **Mildly Disagree**
Circle the "4" if you are **Neutral**
Circle the "5" if you **Mildly Agree**
Circle the "6" if you **Strongly Agree**
Circle the "7" if you **Very Strongly Agree**

1.	There is a special person who is around when I am in need.	1	2	3	4	5	6	7	SO
2.	There is a special person with whom I can share my joys and sorrows.	1	2	3	4	5	6	7	SO
3.	My family really tries to help me.	1	2	3	4	5	6	7	FAM
4.	I get the emotional help and support I need from my family.	1	2	3	4	5	6	7	FAM
5.	I have a special person who is a real source of comfort to me.	1	2	3	4	5	6	7	SO
6.	My friends really try to help me.	1	2	3	4	5	6	7	FRI
7.	I can count on my friends when things go wrong.	1	2	3	4	5	6	7	FRI
8.	I can talk about my problems with my family.	1	2	3	4	5	6	7	FAM
9.	I have friends with whom I can share my joys and sorrows.	1	2	3	4	5	6	7	FRI
10.	There is a special person in my life who cares about my feelings.	1	2	3	4	5	6	7	SO
11.	My family is willing to help me make decisions.	1	2	3	4	5	6	7	FAM
12.	I can talk about my problems with my friends.	1	2	3	4	5	6	7	FRI

The items tended to divide into factor groups relating to the source of the social support, namely family (Fam), friends (Fri) or significant other (SO).

Appendix G. MHC-SF

Mental Health Continuum Short Form (MHC-SF)

Adult MHC-SF

Please answer the following questions are about how you have been feeling during the past month. Place a check mark in the box that best represents how often you have experienced or felt the following:

During the past month, how often did you feel …	NEVER	ONCE OR TWICE	ABOUT ONCE A WEEK	ABOUT 2 OR 3 TIMES A WEEK	ALMOST EVERY DAY	EVERY DAY
1. happy						
2. interested in life						
3. satisfied with life						
4. that you had something important to contribute to society						
5. that you belonged to a community (like a social group, or your neighborhood)						
*6. that our society is a good place, or is becoming a better place, for all people						
7. that people are basically good						
8. that the way our society works makes sense to you						
9. that you liked most parts of your Personality						
10. good at managing the responsibilities of your daily life						
11. that you had warm and trusting relationships with others						
12. that you had experiences that challenged you to grow and become a better person						
13. confident to think or express your own ideas and opinions						
14. that your life has a sense of direction or meaning to it						

* Note: The original wording for item 6 was “that our society is becoming a better place for people like you.” This item does not work in all cultural contexts. Alternate wording provided by Keyes (2009) was used as it worked best in the context of this study.