PSYCHOSOCIAL FACTORS RELATED TO THE STIGMA OF SEEKING HELP FOR MENTAL HEALTH ISSUES

by

Miki Talebi

A thesis submitted to
the Faculty of Graduate and Postdoctoral Affairs
in partial fulfillment of the requirements of the degree of

Doctor of Philosophy

in

Psychology

Carleton University
Ottawa, Ontario

Your file Votre référence
ISBN: 978-0-494-93696-2

Our file Notre référence
ISBN: 978-0-494-93696-2

Abstract

Among adolescents, mental illness continues to escalate; yet an underwhelmingly small proportion seek treatment. Even then, many delay treatment for a prolonged period of time or fail to adhere to treatment regimens, perhaps owing to the admission of needing help reflecting weakness and an inability to be self-sufficient. Thus, gaining the courage to seek help might be considered one of the biggest hurdles in contending with mental illness. It was the goal of the present research to better understand the factors related to the stigma of seeking help for mental health problems, particularly among first year university students. Study 1 ($N = 325$) demonstrated that individuals experiencing depressive symptoms were more likely to perceive unsupport and decreased social support from peers. In turn, this was found to exacerbate their stigmatizing perceptions towards seeking help, for not only mental health concerns, but also academic issues. It was further established in Study 2 ($N = 328$) that, among individuals who presented with mild levels of depressive affect, greater levels of social support was associated with the endorsement of more problem-oriented coping strategies, which was subsequently related to diminished levels of the stigma for mental health help-seeking. Individuals with higher levels of depressive symptoms, however, appeared to perceive greater levels of unsupportive interactions, and this in turn was associated with the propensity to engage in more counter-productive coping strategies, ultimately serving to exacerbate stigmatizing attitudes towards seeking help for mental health concerns. Yet, when exposed to a vignette in which depressive symptoms primarily comprised of physical (versus psychological) symptoms (Study 3, $N = 168$), individuals' depressive symptoms were not predictive of the stigma of mental health help-seeking. Moreover, in Study 4 ($N = 301$),

presenting depressive symptoms as physically rooted served to diminish stigmatizing attitudes, particularly in a context where individuals were supported by their peers and endorsed more adaptive coping strategies. In this regard, although the complex issue regarding the stigma of mental health help-seeking ought not be undermined, it appears that the framing of depression may serve as a key element in diminishing barriers and promoting access to mental health resources.

Acknowledgements

I would like to express my most sincere gratitude to my supervisor, Dr. Kim Matheson. Your expertise and support throughout this whole process has been immense, and I am extraordinarily grateful for all of the guidance you have provided throughout these years. To Dr. Hymie Anisman. You have always had your door open to me, encouraging me in not only academic challenges, but offering tokens of wisdom (and humor) in life endeavors as well. I am immensely grateful for your support.

I would like to thank my committee members, Dr. Michael Wohl, Dr. Karen Schwartz and Dr. Simon Davidson. I do not take for granted the amount of time you have all set aside to participate in this.

I would also like to extend my gratitude to my lab mates in the Social Diversity Lab. It has been a pleasure working among peers who always made me feel welcome and offered points of humor and laughter, even when there really wasn't much to laugh about! In particular, I am indebted to my dearest friend Sheena Gereghty. You have been my partner in crime, not only in school but in life altogether. You have been by my side throughout every aspect of this process, making it not only tolerable, but an experience that I am incredibly grateful to have shared with you.

And to my family for the comedic relief that you have provided throughout all the years I've managed to stay in school, but most importantly, for having given me unconditional love and support.

Finally, to my husband Sana. You have done more than I can begin to say. You have been so patient and supportive with me throughout this whole process. It is a tall order to articulate the immense gratitude I have for all that you have done. Thank you.

Table of Contents

List of Tables

List of Figures

List of Appendices

Introduction

By all accounts the prevalence of mental illness should be on the decline. Significant strides in the knowledge of how biological functioning is linked to mental illness have been made, there are more effective treatments, we have a greater awareness of the contribution of psychosocial factors (Nathan & Gorman, 2007) and we understand that, not only can many mental illnesses be treated and managed, but also, if detected early enough, perhaps even prevented (Insel & Wang, 2010). So why then has the World Health Organization declared depression to be carrying the third largest disease burden, still ahead of physical diseases, and projected it to be the *leading* cause of disability globally by 2030 (World Health Organization [WHO], 2004)? In fact, among adolescents, the rate of mental illness continues to be on the rise (Hunt & Eisenberg, 2010), and still an underwhelmingly small proportion will seek any treatment, let alone from a mental health professional (Andrews, Issakidis, Carter, 2001; Megivern, Pellerito, & Mowbray, 2003; Sheffield, Fiorenza, & Sofronoff, 2004). Even then, many will delay treatment for a prolonged period of time (Thomspon, Issakidis, & Hunt, 2008; Wang et al., 2005), or fail to adhere to treatment regimens (Nock & Kazdin, 2005).

It is not surprising that the stigma of mental illness plays a significant role in this. There has been a substantial body of literature in recent years attempting to understand the extent and impact of stigma on the well being of those suffering from mental health concerns (see Hinshaw & Stier, 2008 for a review). Of equal import may be the stigma associated with seeking help. In fact, gaining the courage to seek help might be considered one of the biggest hurdles in contending with mental illness (Prior, 2011). The act of seeking help has been perceived as transcending from simply 'having

problems' and viewing this as a normal part of life, to considering distress as 'real' and necessitating formal help, and consequently turning one's private reality into something public and unequivocal (Biddle, Donovan, Sharp, & Gunnel, 2007; Schonert-Reichl & Muller, 1996). In our individualistic society, the admission of needing help is regarded as reflecting weakness and an inability to 'stand on one's own two feet' (Tata & Leong, 1994). Inasmuch as the stigma of seeking help might pose a significant barrier to both access to mental health care and sustained treatment, little research has been conducted in this area (Schomerus & Angermeyer, 2008). Thus, it was the goal of the present program of research to better understand the factors that diminish or increase the stigma associated with seeking help for mental health problems, particularly among first year university students. Students transitioning from high school to university have been shown to experience significant distress as they contend with a host of challenges in adjusting to their new environment (Roberts, Golding, Towell, & Weinreb, 1999), instigating vulnerabilities, such as the development of depression (Banks & Kerns, 1996). In this regard, it was deemed important to focus on the first year cohort in determining the antecedents associated with the stigma of seeking mental health help. Indeed, if students can be encouraged from the outset of this transition to adulthood to recognize and act on the need for help, it may promote greater resilience when they encounter later critical life stressors.

As seen in Figure 1.0, across a series of four studies it is proposed that mental illness symptoms, namely those associated with depression, will be related to reduced social support perceptions. Because social support may be a critical resource for effectively coping with life's challenges, this reduced support was expected to increase

the likelihood that individuals would adopt coping strategies that exacerbate (i.e., emotion-focused coping, such as rumination) rather than alleviate (i.e., problem-focused coping, such as getting more information) the perceived stigma of help-seeking. It is further proposed that this sequence of events might depend on various other factors. In this regard, several of the studies will also examine the validity of certain aspects of the model including (1) whether individuals perceive stigma towards seeking help in *general* or whether such stigma is greater toward mental health issues in particular, and (2) whether focusing on the emotional versus physical aspects of the phenomenology of depression alter the perceived stigma of help-seeking.

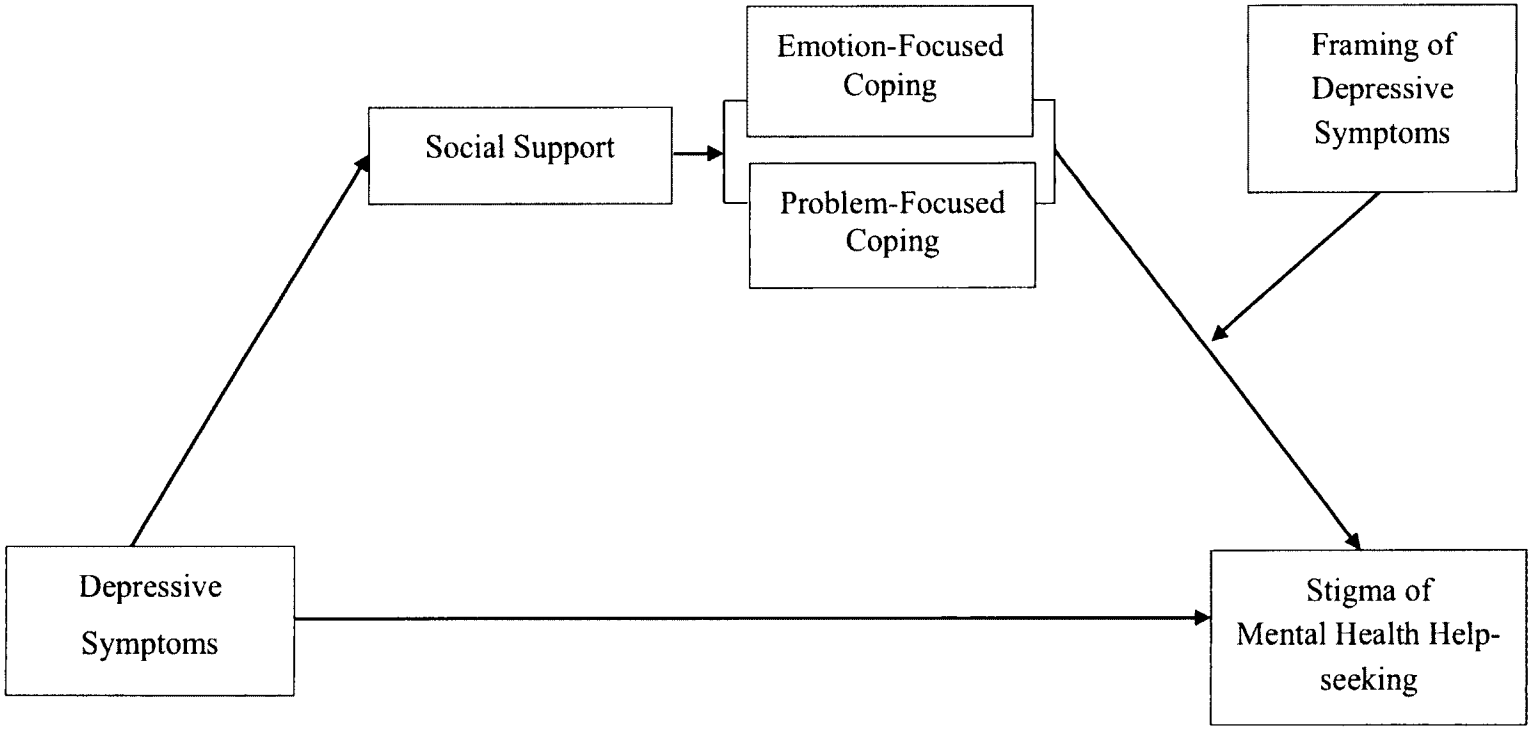

Figure 1.0. Overarching conceptual model proposing that higher levels of depressive symptoms will diminish social support perceptions, which in turn are anticipated to increase the likelihood that individuals would adopt emotion-focused rather than problem-focused coping strategies. Moreover, the framing of depressive symptoms (psychological vs. physical) is also anticipated to play a role in moderating the relation between coping and the stigma of seeking help for mental health issues.

Depressive Symptoms among Young People

For many mental health disorders, including depression, first onset of symptoms can set in anytime between late adolescence and early adulthood (Kessler et al., 2005a). For university students in particular, the onset of depression and anxiety disorders may be triggered by the anticipated or experienced transition to university. Approximately 15% of students entering post-secondary educational institutions may have undiagnosed or untreated mental illnesses (Midtgaard, Ekeberg, Vaglum, & Tyssen, 2008), with studies indicating a median delay to seeking treatment to be not days, weeks, or even months, but as much as 11 years between first onset of mental illness and treatment seeking (Kessler et al., 2005b; Post & Leverich, 2006; Wang et al., 2005). Depression is regarded as the most disturbing health concern and one of the leading causes of the disease burden among young people (Harrington, 2001; Hernan, Philpot, Edmonds, & Reddy, 2010).

Even those students who have never suffered from emotional problems may develop them in response to the new stressors of university or college life (Royal College of Psychiatrists, 2011). Indeed, the transition from high school to university can be extremely stressful (Berman & Sperling, 1991; Gall, Evans, & Bellerose, 2000), as students contend with a new-found independence, being separated from family and friends, managing finances, adapting to a different academic structure, and meeting the demands of a full course load. To be sure, studies that have examined the transition from high school to university have shown that students experience greater strain in their first semesters at university compared to pre-university (Bewick, Koutsopoulou, Miles, Slaa, & Barkham, 2010). In light of this significant life transition, they may be especially

vulnerable to developing symptoms of mood disorders, such as depression (Offer & Spiro, 1987; Rodgers & Tennison, 2009).

In fact, the psychological well being of students across the university population has become of great concern (Stewart-Brown et al., 2000). University students have been shown to display appreciably lower levels of mental health compared to population norms (Roberts, et al., 1999; Stewart-Brown et al., 2000). As stressors are a strong trigger of vulnerabilities such as the development of depression (Banks & Kerns, 1996), it should not be surprising that first year students are at a higher risk of developing mental illnesses (Price, McLeod, Gleich, & Hand, 2006). Thus, as university students, and in particular, first year students are a vulnerable population, focusing on the first year cohort in the proposed program of research offers an opportunity to determine factors that might predict the stigma of seeking help among a distressed population within a context that is sufficiently confined and where institutional interventions are possible.

Despite the significant implications associated with depressive symptoms, many young people are hesitant to seek help (Andrews, et al., 2001). In fact, only one in four students diagnosed with depression are receiving treatment (American College Health Association, 2008). A host of reasons have been reported for the undertreatment of depression, including failure to recognize symptoms, underestimating severity of symptoms, lack of healthcare, and noncompliance with treatment (Hirschfeld et al., 1997). Notwithstanding these concerns, the stigma of mental illness has also been implicated as a major reason for individuals' reluctance to seek help (Barney Griffiths, & Banfield, 2011; Corrigan, 2004; Hirschfeld, et al., 1997); presenting barriers not only to social inclusion, but also to obtaining appropriate medical care (Thornicroft, 2008).

Well before mental health professionals intervene, other members of the community such as friends, family, police, or even the individual him or herself will make a "lay appraisal" of the signs of mental illness and decide how to deal, or perhaps not deal, with the situation (Hollingshead & Redlich, 1958). These lay appraisals might reflect stereotypes of mental illness and have ensuing consequences regarding attitudes and decisions to turn to others and engage in the help-seeking process.

The Role of Social Support in the Relation between Depressive Symptoms and the Stigma of Seeking Help

In general, social support is viewed as a key factor that contributes to well being (Cohen & Wills, 1985; Hoge, Austin, & Pollack, 2007). Social support can include expressions of concern and care, material assistance (e.g., transportation, helping with meals, financial aid), and/or helping the person to address the situation (Dakof & Taylor, 1990; Weiss, 1974). According to the Network-Episode Model, help-seeking is distinct from social support, but is influenced by a number and variability of sources in one's social network, including family, friends, colleagues, and acquaintances (Pescosolido & Boyer, 1999). Members of the social network might facilitate one's willingness to seek help by offering support during difficult times. Conversely, if key elements within the individual's social network also transmit stigmatizing attitudes and beliefs about mental illness, concerns about these views could also serve as a mechanism for shaping one's *un*willingness to seek help (Lindsey, Joe, & Nebbitt, 2010).

Studies have demonstrated a strong link between depressive symptoms and social support. To be sure, many studies are founded on the notion that social support factors are the antecedents to healthy psychological functioning, and a lack of support is

associated with diminished well being; a phenomenon known as "social causation" (Kaniasty & Norris, 2008). Though some longitudinal studies have provided evidence for a directional association between these two (Yang et al., 2010), it has also been suggested that social support and depression maintain a bidirectional relationship (Sacco & Yanover, 2006; Simpson, Carlson, Beck, & Patten, 2002; Turner, 1981).

In fact, contrary to the social causation theory, the social selection theory posits that individuals who are experiencing psychological distress may in turn be at a diminished capacity to receive social support (Coyne et al., 1987; Hammen, 1991; Kaniasty & Norris, 2008). It has been suggested that these individuals' diminished capacity to cope shapes their social context, consequently resulting in eroding support resources and less supportive relationships (Husaini & Von Frank, 1985; Johnson, 1991). This potential direction of relations is particularly important in the present context, given that the concern is the role social support plays in stigma of help-seeking for those individuals who are already experiencing depressive symptoms.

As social support has been found to modify perceptions of stigma (Mueller et al., 2006), it would be conceivable to consider that one who perceives diminished and negative levels of support might also regard a greater self- and perceived other-stigma to engage in seeking help for mental health concerns. Although previous research has not directly examined the mediating role of support in the relation between depressive symptoms and the *stigma* associated with seeking help, such associations might be gleaned from research predicting help-seeking intentions. For example, among studies that have looked at the relation between suicidal ideation (a key indicator of severe depression) and intention to seek help, social support was found to mediate this relation

(Yakunina, Rogers, Waehler, & Werth, 2010). More specifically, the researchers found that, in line with social selection theory, those individuals who reported higher levels of suicidal thoughts perceived lower levels of social support, and this in turn was associated with diminished intentions to seek help (Yakunina et al., 2010). In this sense, perceiving a limited support network can have a profound influence on the decision to seek help, particularly for those who are in the most distress. Another component that may be influenced by social support is individuals' fears regarding how others might stigmatize them for seeking help, as well as their own self-stigmatizing attitudes (Yakunina et al., 2010). Essentially, it would seem that the presence of support and/or unsupportive experiences could be critical in shaping stigmatizing attitudes towards seeking help, as well as intentions to seek help.

The role of parental and peer support. Parental support is an important resource in protecting against the stress that adolescents and young people encounter (Meadows, Brown, & Elder, 2006). Although some studies have demonstrated that parental support can help to attenuate levels of depressive symptoms, irrespective of social and environmental factors (Zimmerman et al., 2000), others have shown that support from parents is particularly beneficial in buffering against the negative impacts of stressful experiences (Herman-Stahl & Peterson, 1996; Lindsey et al., 2010; Windle, 1992). Parental support can even play a role in the levels of support individuals anticipate from their peers. More specifically, parental support has been shown to moderate the relation between anticipated peer support and depressive symptoms such that anticipated peer support was found to be protective among those who perceived high support from their parents; whereas it appeared to be a risk factor among those who perceived lower levels

of parental support (Young, Berenson, Cohen & Garcia, 2005). This said, as transitioning to university might elicit a preoccupation with peer acceptance, as well as reaffirming one's self-concept and social image as autonomous (Moses, 2010), it is not surprising that the role of peers tends to usurp that of parents (Helsen et al., 2000; Meadows, et al., 2006).

The effectiveness of support in facilitating the help-seeking process is dependent upon whether the individual believes that his or her peers stigmatize mental illness. Yet, research findings regarding the association between support and attitudes (i.e., stigma) towards seeking help remain inconsistent, with some studies suggesting that encountering unsupportive responses from friends was associated with a greater self-stigma (Lindsey et al., 2010), as well as perceived stigma by close others for engaging in help-seeking behavior (Moses, 2009). Moreover, depressed individuals feared that, if they were to disclose their mental health concerns to peers, these peers might in turn demonstrate behaviors of intolerance, judgment or lack of interest (Lindsey et al., 2010), although confiding with those "in the same boat" has been found to protect against feelings of stigmatization by others (Moses, 2010).

The role of unsupport. Encountering ineffective support or advice, otherwise known as *unsupport*, is an often overlooked aspect of supportive interactions (Matheson & Anisman, 2011) but that is equally important, if not more telling of the effect it can have on stressful experiences (Figueiredo, Fries, & Ingram, 2004; Song & Ingram, 2002). In fact, reduced well being has been associated with a greater number of perceived unsupportive interactions above and beyond that of positive social support (Figueiredo et al., 2004; Ingram, Jones, Fass, Neidig, & Song, 1999). Unsupportive social interactions

are considered to contribute additional distress to an already stressful situation (Ingram, Betz, Mindes, Schmitt, & Smith, 2001). These interactions do not simply reflect a perceived lack of social support, but rather represent the negative reactions of others to whom the individual has turned with an expectation that support would ensue. Behaviours that are considered unsupportive include forcing cheerfulness, being overprotective, conveying extreme worry, and displaying minimal concern, empathy or affection (Dakof & Taylor, 1990).

A great deal of the literature on unsupport has focused on its effect on the quality of life for patients with life-threatening diseases (e.g., cancer, HIV/AIDS), generally finding that unsupportive social interactions have a detrimental effect on the quality of life of patients, and are associated with psychological distress (Figueiredo, et al., 2004; Manne & Glassman, 2000; Manne, Ostroff, Winkle, Grana, & Fox, 2005). Indeed, unsupportive social interactions accounted for variance in depression in addition to that of physical discomfort and the perceived availability of social support (Ingram, et l., 1999). In this regard, it will be important to assess the contribution of both positive and negative aspects of support and their relation to the stigma of seeking help.

Coping

When faced with a stressful situation, individuals may choose to contend with it in a variety of ways. According to the transactional model of stress and coping (Lazarus & Folkman, 1984), stress is comprised of two appraisal processes. When confronted with a potential stressor, the individual first engages in a primary appraisal process wherein the stressful experience is perceived as either a threat or challenge to oneself. Following this, a secondary appraisal process occurs in which the individual determines if the

necessary coping resources are available to contend with the tribulation. This secondary appraisal is then the basis for instigating particular coping strategies. In particular, problem-focused coping may be utilized if the individual perceives coping resources to be available and thus might aim to alter or end the source of stress by engaging in problem-solving or cognitive restructuring efforts. Alternatively, emotion-focused coping strategies may be employed if the stressful event is perceived to be uncontrollable; in this situation, efforts such as avoidance, rumination or emotional expression might be engaged to manage the emotional distress.

A key resource for coping with stressful situations is the individual's social support network. Thus, the responses encountered by one's support network might inform the way in which the experience is dealt with. Indeed, greater levels of social support have been directly associated with decreased use of maladaptive coping strategies, such as avoidance, and an increase in the use of more beneficial coping strategies, such as problem-focused coping (Dunkel-Schetter, Folkman & Lazarus, 1987; Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000; Bigatti, Wagner, Lyndon-Lam, Steiner, & Miller, 2010).

Common coping strategies endorsed by those experiencing mental illness have been examined, including secrecy, and avoidance/withdrawal. Such strategies have proven to be not only ineffective, but also more damaging than beneficial (Link Mirotznik, & Cullen, 1991). In spite of the attempts to examine coping and its relation to stigmatizing perceptions, the contribution of stress and coping, particularly in regards to the transactional model of stress and its association with attitudes towards the help-seeking process remains scarce. Thus, gaining an understanding of the dynamics

between social support and coping among those individuals who are experiencing depression might inform one's attitudes towards the help-seeking process.

Stigma of Seeking Help

Early in their education teachers, parents, and other role models around them may discourage students from seeking help for problems they encounter, as they attempt to foster a sense of independence (Nelson-Le Gall & Jones, 1991). Although dissuading help-seeking behavior can encourage individuals to resolve issues on their own, the social and personal disadvantages of such self-sufficiency can be costly (Newman, 2006). For example, students withdrawing from their first year of university were especially vulnerable and distressed, and the least likely to take advantage of support resources available to them (Rickinsen & Rutherford, 1996). Unfortunately, perhaps because of social expectations, asking for help in itself has been associated with reduced well being and increased distress (Cruza-Guet, Spokane, Caskie, Brown, & Szapocznik, 2008). Individuals may go to great lengths to avoid relying on assistance from their social network to circumvent feeling dependent on others, and will often seek help only after personal coping strategies have been exhausted and proven futile (Eckenrode & Wethington, 1990). In this regard, it seems that the stigma associated with seeking help might be imbued by modern Western values of individualistic problem solving (Jost, Banaji, & Noseck, 2004), insinuating feelings of incompetence if one does turn to professional care for help. Young adults in particular, view help-seeking, especially from a professional source as a threat to the self as this is a time when a great deal of effort is made to eschew the influence of adults. Engaging in professional help is only warranted

in the most severe cases, suggesting that one is not capable of managing the distress on their own (Raviv, Sills, Raviv, & Wilansky, 2000).

Consistent with this orientation, many individuals suffering from mental illness in particular are reluctant to seek help (Hirschfeld et al., 1997), especially from mental health professionals (Burns & Rapee, 2006; Jorm et al., 2006). To be sure, the use of formal mental health treatment has been associated with feelings of shame (Lindsey, et al., 2010). Although youth felt that their family and friends would not stigmatize them for their mental illness, disclosing the fact that they were consumers of mental health care elicited concerns of being teased and harassed by peers (Moses, 2009). Thus, the shame that individuals feel is not necessarily in response to the experience of mental illness, but rather to the receipt of mental health treatment, which suggests that the admission of needing help can be more enfeebling than contending with mental illness itself. By example, admitting that one's distress is real and necessitates formal help has been regarded as highly negative and significant, signaling irreversible outcomes including changes in public and personal identity (Biddle et al., 2007).

The notion of public and personal concerns of identity as a consequence of seeking help extends from the general stigma literature regarding mental illness. Based on his notion of the 'spoiled identity' Goffman (1963) differentiates between the discredited and discreditable stigma. Discredited stigma is regarded as physical traits or blemishes that are clearly visible, such as in the case of ethnic groups or gender. Less obvious, discredit*able* stigmas are those blemishes or marks that make it more challenging to identify individuals as belonging to a stigmatized group. Mental illness falls into this category, and as a result, forces individuals to make judgments through signals, including

labels, psychiatric symptoms, deficits in social skills, and physical appearance (Penn & Martin, 1998).

The notion of mental illness as a discreditable stigma is inherently public, as it necessitates the judgment of others. Unfortunately, the stigma of mental illness is widely endorsed by the general public, with recent studies suggesting that this trend continues to be on the rise (Angermayer, Holzinger, & Matschinger, 2009; Lyons, Hopley, & Harrocks, 2009; Schomerus et al., 2012). Public stigma is understood as the public's endorsement of discrimination and marginalization of individuals with mental illness (Corrigan & Watson, 2002) and comprises of three aspects: stereotypes, prejudice, and discrimination (Corrigan, 2000). Stereotypes are cognitive frameworks used to classify groups. These are fundamentally social as they are premised on collectively agreed upon conceptions of the group. Such stereotypes are considered efficient or economic, as they represent the shortcuts that enable society to make snap judgments (e.g., dangerous, incompetent) of members of such a group based on preconceived notions (Hamilton & Sherman, 1994). Stereotypes, combined with the negative evaluative component of prejudice lead to behavioral reactions of discrimination (Corrigan, Edwards, Green, Diwan, & Penn, 2001). Feelings of fear can easily elicit behaviors, such as avoidance in the workplace when employers might not feel comfortable working with someone with mental illness.

The public stigma of mental illness might, in turn, result in individuals with psychiatric conditions internalizing these attitudes, thereby endorsing a self-stigma of mental illness (Corrigan, & Watson, 2002). In the same way that prejudice and discrimination result from public stigma, self-prejudice might precipitate diminished self-

esteem and feelings of inferiority (Corrigan, 2004), ultimately having critical implications for life goals, and overall quality of life (Corrigan & Watson, 2002).

Consistent with the profound influence that public stigma can have on one's personal attitudes, public stigma has also been linked to attitudes and decisions associated with engaging in seeking professional mental health help (Vogel, Wade, & Hackler, 2007). Thus, the decision to seek help might reflect a perception that others will view one's need for help unfavorably (i.e., other-stigma of seeking help) (Vogel, Wade, & Ascheman, 2009). In this regard, the attitudes of one's social group have been shown to have a significant influence on one's own attitudes and decisions regarding seeking professional mental health help (Chandra & Minkowitz, 2006). Likewise, and congruent with Western values of autonomy, the stigma associated with seeking help might also be reflected in personal views that seeking help is unacceptable (i.e., self-stigma of seeking help) (Vogel et al., 2009). Individuals contemplating engaging in help-seeking behavior may be reluctant to do so as they themselves believe that this is a sign of weakness and personal incompetence (Biddle et al., 2007; Vogel, Wade, & Haake, 2006). In fact, the self-stigma of seeking help has included the perception that individuals are less socially desirable, and a fear of diminishing one's self-regard, self-esteem, and global self-worth (Vogel, et al., 2006).

Overview of the Present Research

There is a general reluctance among individuals who are experiencing mental health concerns, such as depressive symptoms, to seek help from mental health professionals, and this, in large part, might be due to expectations of self-sufficiency and negative attitudes towards seeking help. This is of particular concern for those

individuals who are experiencing depressive symptoms as the stigma towards help-seeking can have profound consequences for health care treatment and long-term well being. Further, to the extent that depressed individuals perceive an absence of support or high levels of unsupport from peers and parents, such perceived and self-stigmatizing views might be exacerbated. Thus, one of the goals of the present program of research was to examine the mediating role of various sources of social support to determine their contribution in predicting the stigma of seeking help (Study 1). Moreover, as social support might serve as an impetus for the coping strategy that individuals endorse, and could have ensuing consequences for one's attitudes regarding mental health help-seeking, it was also of interest to examine the mediating role of coping (Study 2).

Although perceptions of the causes of mental illness have been associated with different stigmatizing attitudes, and mental illness has been shown to elicit greater levels of stigma compared to illnesses that are primarily physical in nature, it remains to be seen whether or not these reactions would be similarly evidenced if mental illness was construed in terms of psychological versus physical symptoms. As such, it was of interest to examine whether or not framing depression as primarily comprised of psychological compared to physical symptoms would be associated with different levels of stigmatizing views of mental health help-seeking (Study 3). Further, the role of the symptom profile (psychological vs. physical) in moderating the relations between the depressive symptoms, social support/unsupport, and the contribution of coping in predicting the stigma of seeking help (Study 4) was assessed.

Study 1

The goal of Study 1 was to determine the antecedents of both self- and other-stigmatizing attitudes associated with seeking help for mental health issues among students in their first year of university. In particular, it was of interest to investigate the experience of depressive symptoms and its relation to perceptions of the stigma of help-seeking. Additionally, the mediating roles of peer and parental support, as well as unsupport were examined.

Although students may be willing to disclose many personal issues to their friends and parents, seeking help for mental health difficulties is perceived as less acceptable than help-seeking for other challenges (Chandra & Minkowitz, 2006). For example, seeking help from an academic advisor is regarded as more acceptable for school and career oriented issues (Tinsley, St. Aubin, & Brown, 1982), in comparison to the stigma associated with seeking help for emotional and mental health issues (Eisenberg, Downs, Golberstein, & Zivin, 2009). In this regard, it was anticipated that stigma associated with seeking help would be greater in relation to mental health issues. This said, as the present study dealt exclusively with a cohort of first year university students, it remained to be seen whether or not help-seeking attitudes for academic problems, a domain in which it is also of importance for them to demonstrate competence, would also elicit high levels of stigma. To this end, it was hypothesized that:

1. There would be greater levels of self- and other-stigma associated with help-seeking for mental health problems, in comparison to academic help-seeking.
2. Higher levels of depressive symptoms would be associated with greater levels of self- and other-stigma of help-seeking, irrespective of the problem domain.

3. Higher levels of support and/or lower levels of unsupportive interactions would be associated with lower self- and other-stigma towards seeking help for mental health challenges and academic problems.
4. Social support and unsupportive interactions would mediate the relations between depressive symptoms and self- and other-stigma associated with help-seeking. Specifically, greater levels of depressive symptoms would be associated with a diminished perception of social support and/or greater levels of unsupport. This in turn, was expected to be associated with greater levels of help-seeking stigma for both mental health as well as, albeit to a lesser extent, academic concerns. (Figure 1.1).

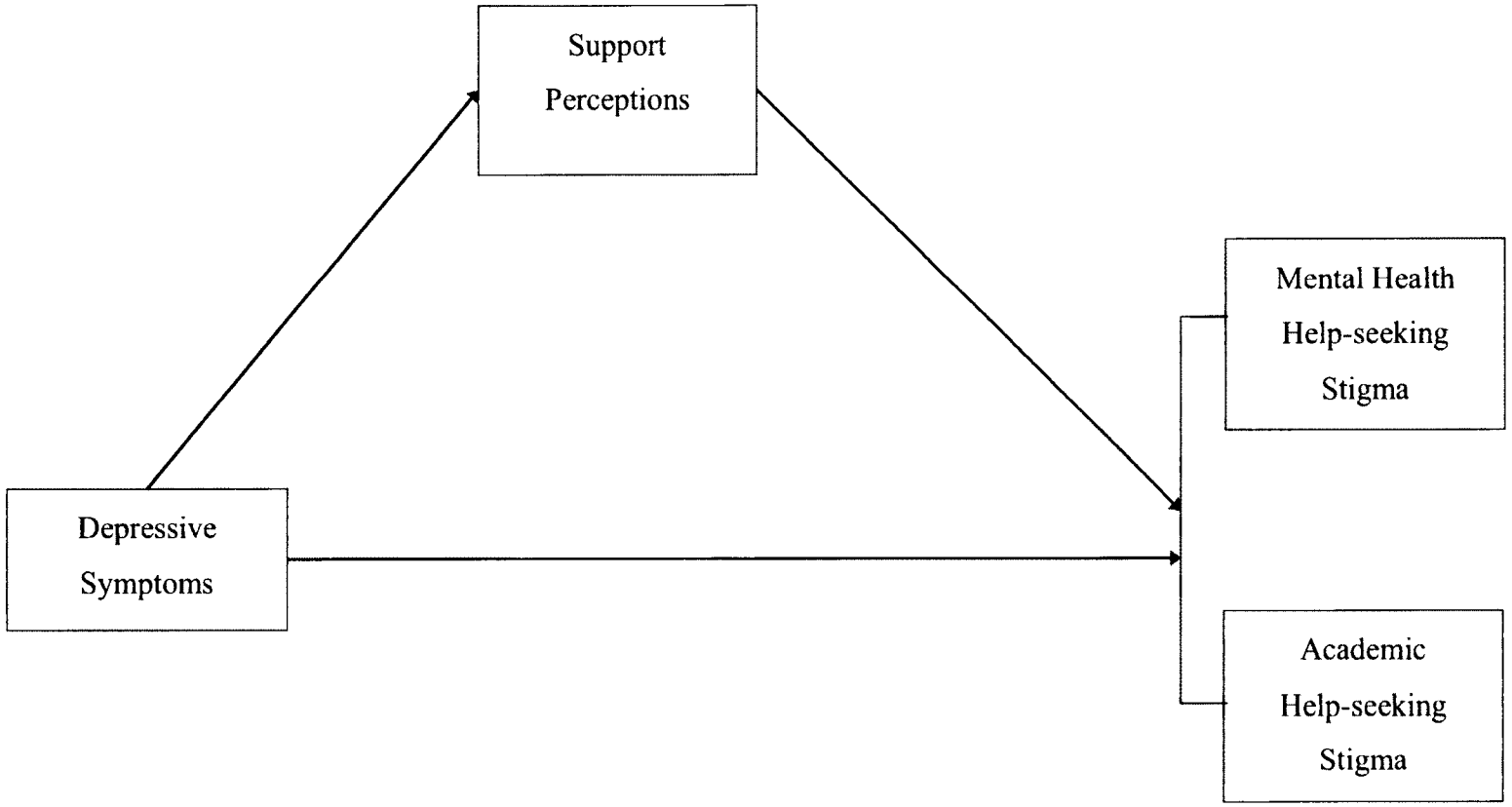

Figure 1.1. Study 1 conceptual model linking depressive symptoms, support perceptions (support from peers, parents and unsupport), (self and other) stigma of seeking help for mental health issues, and (self and other) stigma of seeking help for academic issues.

Method

Participants

Students in their first year of university (female $n = 229$; male $n = 96$) ranging in age from 17 to 29 years ($M = 18.96$, $SD = 2.18$) participated in an online study. Participants' ethnicity comprised of Euro-Caucasian (72.6%, $n = 236$), Black (4.9%, $n = 16$), Asian (4.9%, $n = 16$), South Asian (4.6%, $n = 16$), Arab (3.7%, $n = 12$), Latin American (1.8%, $n = 6$), South East Asian (1.5%, $n = 5$), Aboriginal (0.6%, $n = 6$), and Other (e.g., mixed ethnicity, 5.2%, $n = 17$). A majority of participants were full time as opposed to part time students (92.9%, $n = 302$; 6.8%, $n = 22$, respectively). A large proportion of students reported living on campus (41.8%, $n = 136$), followed by off campus either with their family (35.1%, $n = 114$), other Carleton students (8.6%, $n = 28$), other friends not attending Carleton, (7.1%, $n = 23$), their spouse (3.4%, $n = 11$), or other non-specified living arrangements (1.8%, $n = 6$). Lastly, the vast majority of participants reported that they had never received psychological therapy or counseling (83.7%, $n = 272$), although some responded that they either had, but were no longer (12%, $n = 39$), or that they were currently receiving counseling (4.3%, $n = 14$).

Procedure

Carleton University's Ethics Committee for Psychological Research approved the study. Participants were recruited through Carleton's online SONA system from October 14 to November 27, 2009. The study was described as assessing how individual characteristics and personal resources affect success in their first year at university. After obtaining their informed consent (Appendix A), participants responded to a battery of demographic questions (Appendix B) as well as measures of depressive symptoms

(Appendix C), perceived support from their friends, partner, and parents (Appendix D), unsupportive interactions from their peers (Appendix E), self-stigma and other-stigma for seeking help for mental health (Appendix F) and academic issues (Appendix G). Upon completing the study, participants were debriefed (Appendix H) and given the choice of course credit or a $10 gift certificate. It was recognized that, inevitably, there would be a subgroup of students exhibiting clinically significant psychopathology and would be in need of psychiatric care. Thus, students who responded to questions of suicidal ideation were prompted with an additional debriefing (see Appendix I).

As participants took part in an online study, steps were taken to ensure that responses were genuine. Validation of responses was carried out by considering whether the amount of time taken to complete the questionnaire exceeded the amount of time that was needed to read each question, and that highly similar reverse scored items were answered in the appropriate directions.

Measures

Depressive Symptoms. The 13-item Beck Depression Inventory (BDI) (Beck & Beck, 1972) assessed depressive symptoms. Participants responded to one of four options, which ranged from mild to high depressive symptomatology. The total score for this scale was calculated by summing across all items (α = .84).

Unsupport. The Unsupportive Social Interactions Inventory (USII, Ingram et al., 2001) is comprised of 24 items. The scale measures stressor-specific unsupportive responses of individuals when they have approached someone for help or advice (e.g., *"someone refused to provide the type of help or support I was looking for"*). Participants rated how much of each type of response they encountered from their close friend/partner

(i.e., peers) on a 5-point scale ranging from 0 (*never*) to 4 (*all the time*). Scores for this measure were created by taking the average rating across all items. This scale demonstrated good internal reliability (α = .92).

Social Support. The 12-item Social Provisions Scale (Cutrona & Russell, 1987) assessed the degree to which friends, partners and then parents were perceived to provide social support. Each item (e.g. *"are there friends you can depend on/ can you depend on your partner/parents if you really need it?"*) was rated on a three-point scale, ranging from 1 (*no*) to 3 (*yes*). The means across all items for social provisions from peers (α = .89) and parents (α = .82), were calculated to provide indices of perceived social support. It should be noted that support from peers was collapsed across two support scales, specifically support from friends (α = .82) and support from partner (α = .90). This was deemed appropriate as correlations across other variables were highly similar between these two support sources. Furthermore, as only a portion of participants did not self-identified as having a partner, and therefore did not respond to this scale (students with partner n = 206, 63.4%), to preserve the sample size, the mean across these two scales was calculated and considered an overall assessment of peer support.

Self-Stigma. The six-item scale measured the self-stigma associated with seeking help (adapted from Vogel et al., 2006). Participants completed this measure twice, once in reference to seeking help for mental health issues, and again for seeking help for academic issues (e.g., *"I would feel inadequate if I went to a mental health/academic counselor for help"*). Responses were made on a seven-point scale ranging from -3 (*strongly disagree*) to +3 (*strongly agree*). Total scores were calculated by taking the

mean across items assessing self-stigma for seeking help for mental health issues (α = .90) and academic issues (α = .89).

Other-Stigma. The six-item Perceived Stigma by Others for Seeking Help scale measured the perceived stigma held by others associated with seeking help (adapted from Vogel et al., 2009). Participants also completed this measure twice, once in reference to seeking help for mental health issues, and a second time in reference to seeking academic help (e.g., *"If you were to get help from a mental health/academic counselor, to what degree do you believe that the people you interact with would: react negatively to you; think bad things of you"*). Responses were made on a five-point scale ranging from 1 (*not at all*) to 5 (*a great deal*). Total scores were calculated by taking the mean across all items assessing other-stigma for seeking help for mental health issues (α = .92) and academic issues (α = .92), respectively.

Statistical Analyses

Descriptive Statistics. T-tests among all variables were performed to assess gender differences. Next, a repeated measures analysis was conducted to test the first hypothesis that mental health help-seeking would elicit greater levels of stigma compared to academic help-seeking. Following this, correlations among all variables of interest were examined to evaluate the hypothesized relations; namely, whether depressive symptoms would be related to greater levels of the stigma of help-seeking and if levels of support would be positively, and unsupport negatively, associated with help-seeking stigma.

Main Analysis. To test the mediation hypothesis in a single model, a path analysis was conducted in Lisrel 8.8 for Windows. This approach was taken as it offered

several advantages. First, it offered the opportunity to test for several mediator variables and outcome variables within one single model. Testing this hypothesis within a single model afforded the ability to account for multicollinearity between the hypothesized mediating variables. Additionally, this approach allowed us to determine specifically which measure of support and unsupport served as significant mediators and which measures of stigma regarding seeking help these mediators were subsequently associated with, above and beyond having accounted for shared variance between the variables. Lastly, this statistical analysis enabled us to compare our predictive model to alternative models to establish which model best fit the data.

In order to determine whether the model appropriately fit the data several fit indices were utilized. These included the Comparative Fit Index (CFI) and Non-Normative Fit Index (NNFI), for which values greater than .90 were considered acceptable (Pedhazur & Schmelkin, 1991), as well as the Root Mean Square Error of Approximation (RMSEA), for which values less than .08 were considered acceptable (Brown, 2006). Chi-square (χ^2) measures of fit have been known to be sensitive to sample size; however in order to be able to compare alternative models against the hypothesized model, the Minimum Fit Function Chi-square was utilized. As the path analysis is limited to a descriptive function, it was necessary to run inference tests to determine the significance of the hypothesized indirect effects (Hayes & Preacher, in press). Thus, where paths were significant, bootstrapping techniques for mediation, using 10000 resamples and based on 95% confidence intervals (Preacher & Hayes, 2008) were utilized. Finally, alternative nested models that were compared against our hypothesized predictive model included (1) removing all paths related to parental support, including

depressive symptoms and all four outcome variables, (2) specifying depressive symptoms to predict all outcome variables, while removing all mediating paths, and (3) considering the predictor, depressive symptoms as the mediator, and the mediator variables, support perceptions as the predictors to test for alternative directionality.

Certainly, it is possible that other extraneous factors, such as gender and history of counseling or therapy might have exerted an influence on the findings. Thus, to ensure that participants are as similar as possible, gender and history of having sought counseling was entered as covariates and kept in the models when significant.

Results and Discussion

Descriptive Statistics

The role of gender. As seen in Table 1.1, female students reported higher levels of depressive symptoms compared to males. Additionally, males tended to endorse higher levels of both self- and other-stigma regarding help-seeking for academic issues. No gender differences were observed for perceptions of unsupport, support availability (from both parents and peers), or self- and other-stigma for seeking help for mental health concerns.

Table 1.1

Study 1 Descriptive Statistics (Means, Standard Deviations) and t-tests as a function of Gender

	Female (n = 229)		Male (n = 96)		
	M	*SD*	*M*	*SD*	$t(323)$
Depressive Symptoms	5.14	4.56	3.57	3.83	2.97**
Unsupport	1.06	0.68	1.07	0.68	-0.08
Social Support					
Parents	2.59	0.39	2.60	0.34	-0.13
Peers	2.72	0.29	2.67	0.30	1.54
Self-Stigma					
Mental Health	-0.72	1.58	-0.58	1.52	-2.41*
Academic	-1.42	1.39	-1.01	1.43	-2.34*
Other-Stigma					
Mental Health	1.62	0.77	1.62	0.74	-0.73
Academic	1.19	0.42	1.36	0.64	-0.07

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

The role of academic versus mental health help-seeking. In keeping with the first hypothesis, higher levels of self-stigma regarding help-seeking for mental health (M = -0.67, SE = 0.03), compared to academic issues (M = -1.30, SE = 0.07) were reported, $F(1, 324) = 1413.56$, $p<.001$, $\eta^2 = .81$, as well as higher levels of other-stigma for seeking help for mental health (M = 1.62, SE = 0.06) compared to academic issues (M = 1.24, SE = 0.05), $F(1, 324) = 86.46$, $p<.001$, $\eta^2 = .21$. This suggests that the stigma associated with seeking help does not necessarily apply equally across various support domains, but rather, there exists a particularly negative attitude towards the help-seeking of mental illness-related issues.

Correlations between depressive symptoms, support perceptions, and stigma. As predicted, higher levels of depressive symptoms were associated with greater levels of stigma for both self- and other-stigma associated with seeking help for mental health, as well as academic issues (see Table 1.2). Thus, although mean differences were greater for stigma towards seeking help for mental health challenges, individuals experiencing heightened levels of depression perceived greater levels of help-seeking stigma, both personally and by others, irrespective of the nature of the concern help was sought for. Not unexpectedly, higher levels of depressive symptoms were also associated with lower perceptions of social support from both parents and peers, and greater perceptions of unsupportive interactions (see Table 1.2). It was further hypothesized that lower levels of unsupport and higher levels of support would be associated with diminished stigma of help-seeking. Though this relation generally held for unsupport and support from peers, parental support was largely not correlated with any of the stigma of help-seeking measures. Given that the present study comprised exclusively of first year students, this

latter finding is not necessarily surprising, and is in fact in keeping with previous research (Helsen et al., 2000; Meadows et al., 2006). This confirms the notion that, at a time during which a need for acceptance by one's immediate social network (i.e., peers) is paramount, parental support is less critical to one's personal attitudes.

Lastly, in order to determine whether gender (scored 0 for males and 1 for females) and history of having sought therapy (scored 0 for no history and 1 for having seen a therapist currently or in the past) should be controlled, these variables were regressed onto all four stigma outcome measures. Gender was significantly related to self-stigma of seeking help for academic issues (gender: $B = .46$, $SE = .17$, $p<.01$; therapy: $B = .31$, $SE = .21$, *ns*, $F(2,324) = 3.96$), whereas history of therapy was significantly associated with self-stigma of seeking help for mental health concerns (gender: $B = .06$, $SE = .19$, *ns*; therapy: $B = -.57$, $SE = .24$, $p<.05$, $F(2,324) = 3.13$). In addition, gender significantly predicted other-stigma associated with seeking academic help (gender: $B = .16$, $SE = .06$, $p<.01$; therapy: $B = -.04$, $SE = .08$, *ns*, $F(2,324) = 3.93$), whereas history of having seen a therapist was linked with other-stigma for seeking mental health help (gender: $B = .06$, $SE = .19$, *ns*; therapy: $B = -.57$, $SE = .24$, $p<.05$, $F(2,324) = 3.13$). As such, both covariates were maintained throughout the main analyses.

Table 1.2

Study 1 Bivariate Correlations depicting relations between Depressive Symptoms, Support Perceptions, Self-Stigma, and Other-Stigma

	1	2	3	4	5	6	7
1. Depressive Symptoms	---						
2. Unsupport (Peers)	.20***	---					
Social Support							
3. Parents	-.24***	-.08	---				
4. Peers	-.19***	-.29***	.34***	---			
Self-Stigma							
5. Mental Health	.13*	.12*	-.06	-.06	---		
6. Academic	.22***	.13*	-.08	-.16**	.45***	---	
Other-Stigma							
7. Mental Health	.19***	.19***	-.11	-.15**	.42***	.22***	---
8. Academic	.12*	.24***	-.10	-.30***	.16**	.34***	.41***

*$p<.05$, **$p<.01$, ***$p<.001$

Main Analysis

Predictive model. Initially, a path analysis was used to test the hypothesized relations between the predictor, depressive symptoms, mediating variables, unsupport and support, and all outcome variables. This predictive model was specified such that depressive symptoms were set to predict unsupport and support from peers. Unsupport and peer support were then set to predict self- and other-stigma of seeking help for mental health concerns, as well as self- and other-stigma for academic issues. The path between parental support and outcomes was not included in this model (i.e., set to zero) since correlations revealed no significant relations between these variables. To control for collinearity, the mediating variables and all outcome variables were set to covary.

Examination of the fit indices suggested that this model was an appropriate fit to the data. The chi-square value was significant (χ^2 (21) = 61.56, p<.001), though NNFI was slightly below .90, CFI yielded a value above .90 (NNFI = .83, CFI = .92), and RMSEA was equal to .08 (RMSEA = .08, 90% CI{.06; .10}). As illustrated in Figure 1.2, greater depressive symptoms were associated with perceiving more unsupportive interactions and lower perceived support from both parents and peers[1]. This finding is in keeping with proponents of the social selection theory (Coyne et al., 1987; Hammen, 1991; Kaniasty & Norris, 2008), indicating that those individuals who

---

[1] It should be noted that relations between the predictor and outcome variables remained unchanged when support perceptions from partners and friends were specified separately, in that both sources of support were predictive of depressive symptoms, further confirming the appropriateness of collapsing across these measures of support.

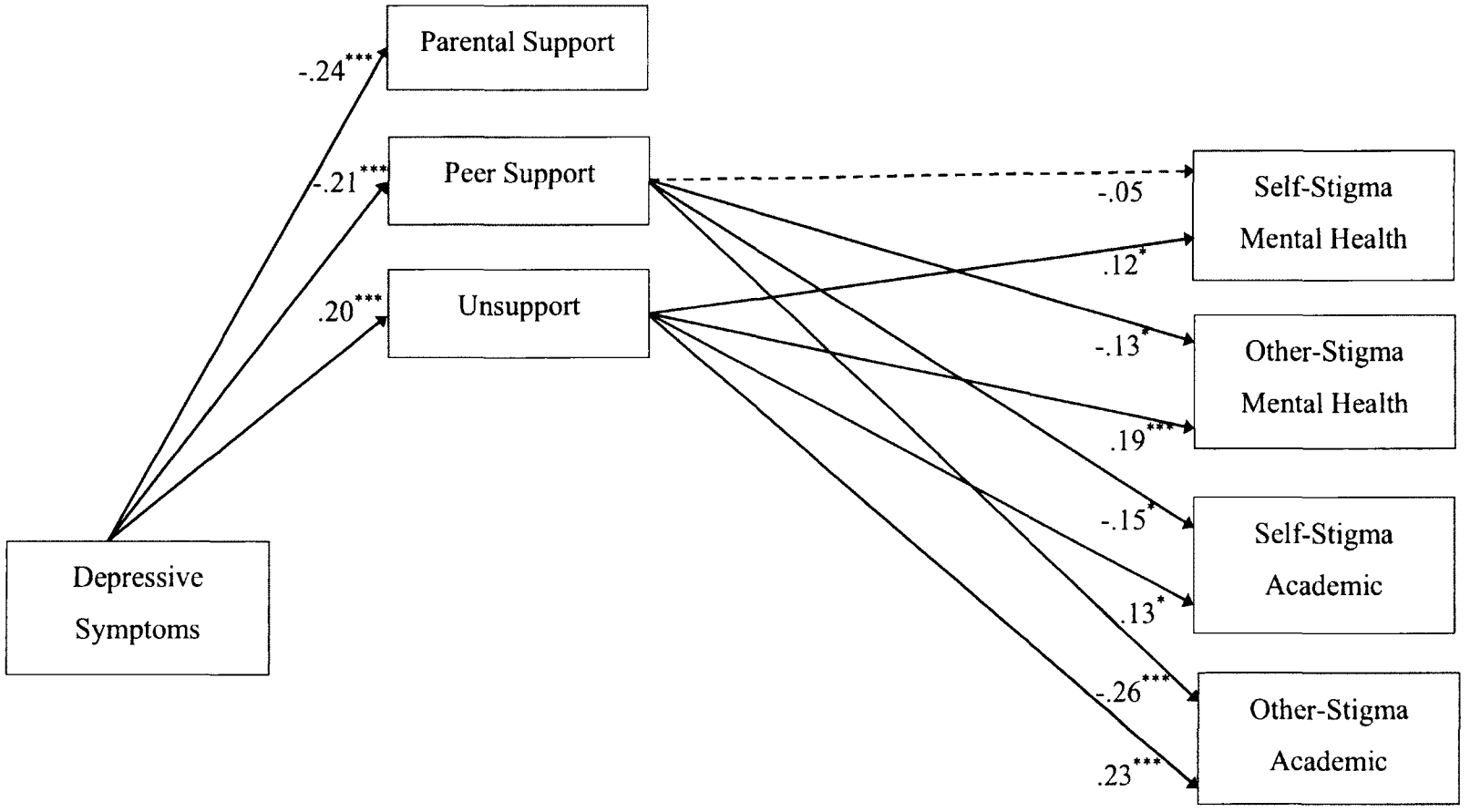

Figure 1.2. Study 1 standardized beta (β) estimates of the predictive model linking depressive symptoms, unsupport, peer support, parental support (with relations to outcomes constrained), and self- and other-stigma for academic help-seeking as well as self- and other-stigma for mental health help-seeking. *Dashed arrows indicate nonsignificant relations.* * $p < .05$, ** $p < .01$, *** $p < .001$.

are perhaps in the most need of support, but who are at a diminished capacity to cope (i.e., experiencing symptoms of depression) may be wearing down their supportive networks (Husaini & Von Frank, 1985), consequently resulting in perceptions of a reduced availability of support. Furthermore, as expected, greater perceptions of unsupport and a lack of support from peers (with the exception of the relation between peer support and self-stigma for seeking mental health help) was associated with greater self- and other-stigma for help-seeking for both academic as well as mental health concerns.

Testing indirect effects in relations between depressive symptoms and self-stigma. With respect to testing for indirect effects, mediators that did not support significant pathways, as well as gender and history of therapy, were controlled for. In examining the indirect relation between depressive symptoms and self-stigma for mental health help-seeking, the confidence interval for the pathway through unsupport did not overlap with zero (95% CI {.0003; .0094}, *SE* = .002). In contrast, however, indirect effects for the relation between depressive symptoms and self-stigma for academic help-seeking through peer support and unsupport revealed confidence intervals that overlapped with zero (peer support: 95% CI {-.0010; .0123}, *SE* = .004; unsupport: 95% CI {-.0039; .0139}, *SE* = .004). Thus, although correlations suggested possible indirect effects of support and unsupportive interactions, it appears that these dimensions of support did not in fact play an intermediary role in accounting for the relation between depressive symptoms and self-stigma associated with seeking academic help. Instead, both depressive symptoms and support perceptions and unsupportive interactions were directly and independently predictive of self-stigma of academic help-seeking.

Testing indirect effects in relations between depressive symptoms and other-stigma. Significant indirect effects were noted when other-stigma was considered the outcome. More specifically, for the relation between depressive symptoms and other-stigma for mental health concerns, the test of indirect effects did not include zero for pathways through unsupport (95% CI {.0011; .0121}, *SE* = .003), although the indirect relation through peer support was not significant (95% CI {-.0016; .0061}, *SE* = .002). This finding suggests that, as in the previous finding where self-stigma was considered the outcome variable, particularly for those individuals who are experiencing symptoms of depression, encountering unsupportive experiences can be influential in diminishing one's own confidence as well as perceptions that others will view one unfavorably for the decision to seek help for mental health concerns. Indeed, in studies that examined the advantages and disadvantages of turning to friends and family for support, the most commonly reported disadvantage centered around feelings of close others undermining the validity of their depressive symptoms, thereby eliciting feelings of shame, blame and self-pity (Griffiths, Crisp, Barney & Reid, 2012). Thus, although these negative cognitions were not directly tested, it seems that encountering unsupportive interactions might have played a part in evoking such emotions.

With respect to the relation between depressive symptoms and other-stigma for academic help-seeking, tests of indirect effects did not include zero for pathways through both unsupport (95% CI {.0007; .0083}, *SE* = .002) as well as peer support (95% CI {.0005; .0088}, *SE* = .002). Thus, the more negative social support perceptions that emanated from depressive symptoms accounted for the relation between symptoms and the perceived stigma of seeking help for academic problems. Indeed, as the present

sample consisted of first year students who were in their first months of university, seeking help for academic issues, and the attitudes and opinions of others in regard to seeking help for issues of this nature were likely particularly distressing, especially for those who might have been experiencing difficulty with the transition to university (i.e., experiencing depressive symptoms) and who felt that their peer support network was not well established.

Alternative model 1. In the first alternative model all of the specifications remained unchanged, except that *all pathways related to the parental support mediator variable were set to equal zero.* Model fit indices revealed a significant chi-square (χ^2 (22) = 81.43, p< .001), both NNFI and CFI were below the minimum desired value of .90 (NNFI = .76, CFI = .88), and RMSEA exceeded the desired value of .08 (RMSEA = .10, 90% CI{.07; .12}). Furthermore, the chi-square difference test to this alternative model indicated that this model was a significantly worse fit to the data ($\chi^2_{difference}$ (1) = 19.87, p<.001), suggesting that the hypothesized predictive model was better suited to the data compared to the alternative model in which all pathways related to parental support were constrained.

Alternative model 2. In the second alternative model *all pathways related to the mediator variables were set to equal zero* and model fit indices were then evaluated with depressive symptoms predicting each of the outcome variables. Goodness of fit indices revealed a significant chi-square, (χ^2 (28) = 110.64, p< .001), both NNFI and CFI were below the minimum criteria of .90 (NNFI = .73, CFI = .83), and RMSEA yielded a value greater than .09 (RMSEA = .10, 90% CI{.08; .11}). A chi-square difference test to this alternative model indicated that this model was also a significantly worse fit to the data,

$\chi^2_{difference}(7) = 49.08, p < .001$, suggesting that the predictive model in which the mediators, unsupport and peer support were included, was better suited to the data.

Alternative model 3. In this instance, the directionality of the variables was tested to determine if *depressive symptoms as a mediator in the relations between support perceptions and stigma* would be better suited to the data. Model fit indices indicated a significant chi-square, ($\chi^2(24) = 57.75, p < .001$), NNFI was below .90 whereas CFI yielded a value greater than .90 (NNFI = .87, CFI = .93), and RMSEA was below .08 (RMSEA = .06, 90% CI{.04; .08}). When these models were compared, however, a nonsignificant chi-square difference, $\chi^2_{difference}(3) = 3.81$, *ns*, suggested that there was no difference between these two models. This said, on the basis of the theoretical rationale proposed at the outset, the original hypothesized model, in keeping with the social selection theory, was maintained.

In effect, the present model illustrates the intervening role of unsupport as well as social support, particularly that from peers, and the influence that such support networks might play in diminishing one's willingness to seek help for not only mental health counseling, but also to seek help for academic problems. Despite these findings, the model derived from these data remains correlational, thus any causal explanations should be regarded with caution.

Notwithstanding the cross-sectional nature of this data, the present study did serve to illustrate the important role that support perceptions play, particularly in the presence of depressive symptoms, in the stigma associated with seeking help. A main objective of the present study was to determine whether the stigma of help-seeking was specific to the mental health domain, or whether academic concerns would also elicit stigmatizing

attitudes towards seeking help. Indeed, although mean differences confirm our initial expectations that mental health issues would generate more negative attitudes towards help-seeking, examination of the correlations as well as the path model suggested that when stigma is elicited, it is associated with a reluctance to seek help, irrespective of the problem domain. Indeed, in an effort to avoid academic help-seeking and to cope with challenges, students have reported lowering their academic goals, and engaging in other non-adaptive coping strategies, such as avoidance (Alexitch, 2002). Several factors might contribute to the decision to engage in help-seeking behaviour, including feelings of threat, avoidance, and diminution of self-esteem (Karabenick, 2004). Students who perceive that they are at a disadvantage relative to their peers (e.g., experiencing depressive symptoms) might be especially concerned about performing well in order to avoid being poorly judged, and believe that the academic supports in place are better designed to fit the needs of more 'normative' students (Cole, Matheson, & Anisman, 2007). Thus, although seeking academic help might be regarded more acceptable than seeking help for mental health issues (Eisenberg, Downs, Golberstein, & Zivin, 2009; Tinsley, St. Aubin, & Brown, 1982), when help-seeking is stigmatized, it appears to undermine help-seeking in important domains.

Study 2

Previous research has shown that the perception of support availability or unsupport can have consequences for the type of coping strategy employed (Dunkel-Schetter, et al., 1987; Dunkley, et al., 2000; Bigatti, et al., 2010). Specifically, it is reasonable to expect that, in keeping with the mediated model established in Study 1, the presence of depressive symptoms would be associated with diminished perceptions of social support. Perceiving lower support or greater *un*support would then be the impetus for utilizing more emotion-focused strategies of coping compared to problem-focused efforts. Given that social support has been shown to be an important resource to facilitate effective coping (e.g., Bigatti et al., 2010), and the ability to cope might further influence attitudes towards seeking help, it was the goal of Study 2 to examine the contribution that coping might have as a sequential mediator, particularly in the relation between social support resources and stigma associated with help-seeking. It was hypothesized that:

1. Greater endorsement of emotion-focused coping strategies would be associated with higher self- and other-stigma of mental health help-seeking. In contrast, negative relations would be evident between problem-focused strategies and the dimensions of stigma.

Individuals with mild levels of depressive symptoms would perceive greater social support from peers and fewer unsupportive interactions and this would, in turn, be associated with greater problem-focused coping, and lower emotion-focused coping efforts, which would subsequently be related to the stigma of seeking mental health help (i.e., sequential mediation) (Figure 2.1).

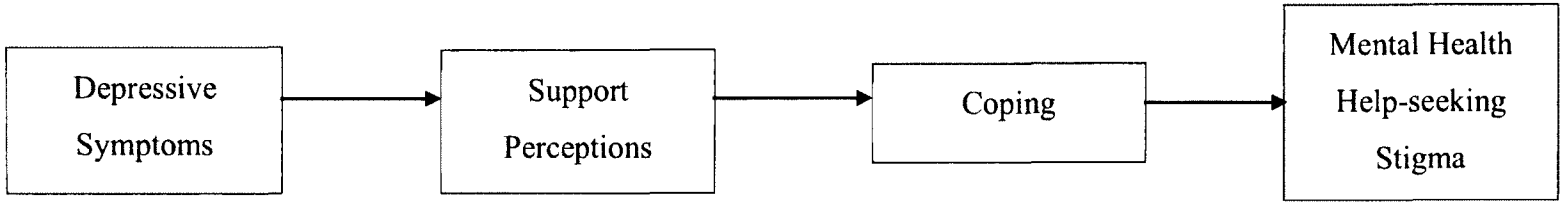

Figure 2.1. Study 2 conceptual sequential mediating model linking depressive symptoms, support perceptions (peer support, unsupport), coping (emotion-focused, problem-focused), and (self- and other-) stigma of seeking help for mental health issues.

Method

Participants

Students in their first year of university (female $n = 229$; male $n = 99$) ranging in age from 16 to 29 years ($M = 18.79$, $SD = 1.74$) participated in an online study. Participants' ethnicity comprised of Euro-Caucasian (71.3%, $n = 234$), Asian (7.6 %, $n = 25$), South Asian (4.9%, $n = 16$), Black (4.6%, $n = 15$), Arab (3.0%, $n = 10$), Latin American (1.5%, $n = 5$), Aboriginal (1.5%, $n = 5$), South East Asian (0.9%, $n = 3$), and Other (e.g., mixed ethnicity, 4.6%, $n = 15$). A majority of participants were full time as opposed to part time students (93.0%, $n = 305$; 7.0%, $n = 23$, respectively). A large proportion of students reported to be living on campus (41.2%, $n = 135$), or off campus either with their family (40.2%, $n = 132$), followed by off campus with other Carleton students (8.2%, $n = 27$), other friends not attending Carleton, (5.2%, $n = 17$), alone (3.0%, $n = 10$), with their spouse (0.6%, $n = 2$), or other non-specified living arrangements (1.5%, $n = 5$). Lastly, the vast majority of participants reported that they had never received psychological therapy or counseling (87.8%, $n = 288$), although some responded that they either had, but were no longer (8.8%, $n = 29$), or that they were currently receiving counseling (3.4%, $n = 11$).

Procedure

Carleton University's Ethics Committee for Psychological Research approved the study. Participants were recruited through Carleton's online SONA system from October 14 to November 27, 2009. The study was described as assessing how individual characteristics and personal resources affect success in their first year at university. After obtaining their informed consent (see Appendix A), participants responded to a battery of

demographic questions (Appendix B) as well as measures of depressive symptoms (Appendix C), perceived support from their peers (Appendix D), unsupportive interactions from their peers (Appendix E), coping (Appendix J), self-stigma and other-stigma for seeking help for mental health issues (Appendix F). Upon completing the study, participants were debriefed and given the choice of course credit or a $10 gift certificate (Appendix H). As in the previous study, where necessary, an additional distress debriefing was also provided to students (Appendix I).

As participants took part in an online study, steps were taken to ensure that responses were genuine. Validation of responses was carried out by considering whether the amount of time taken to complete the questionnaire exceeded the amount of time that was needed to read each question, and that highly similar reverse scored items were answered in the appropriate directions.

Measures

Depressive Symptoms. As in Study 1 the BDI (Beck & Beck, 1972) assessed depressive symptoms (α = .85).

Unsupport. As in Study 1 stressor-specific unsupportive responses from peers were assessed using the USII (Ingram et al., 2001). This scale demonstrated good internal reliability (α =.91).

Social Support. The means across all items for social provisions from peers (α = .89) was calculated to provide indices of perceived social support. As in Study 1, support from peers was collapsed across two support scales, specifically support from friends (α = .80) and support from partner (α = .90). Though correlations appeared to differ across

some variables, in order to maintain consistency across studies, these two scales were once again collapsed and considered an overall assessment of peer support.

Coping. The 50-item Survey of Coping Profiles Endorsed (SCOPE, Matheson & Anisman, 2003) assessed 14 strategies that individuals use to cope with various situations. Participants rated, on a 5-point scale ranging from 0 (*never*) to 4 (*almost always*), how often they used each strategy to cope with stressors in the last two weeks. In order to reduce the number of coping strategies and retain parsimony, a principal components analysis with varimax rotation was conducted on 13 of the 14 coping strategies (the religious coping strategy was removed from the factor analysis as this factor did not cleanly load onto factors with other coping strategies). Based on a scree test and the rotated component matrix, three factors were originally generated, problem-focused, emotion-focused and avoidance. The avoidance factor, however, comprised of only two coping strategies, and as this factor would not be reliable on its own, a subsequent factor analysis with varimax rotation was conducted where two fixed factors were specified. Based on this factor analysis all coping strategies clearly loaded onto two factors. The first factor, emotion-focused coping, comprised rumination, wishful thinking, emotional expression, emotional containment, self-blame, other-blame, passive resignation, and avoidance ($\alpha = 84$). The second factor, problem-focused coping, comprised problem solving, cognitive restructuring, social support seeking, active distraction, and humor ($\alpha = .70$). These factors were mildly associated with each other ($r = .16, p < .01$). It should be noted that, to gain generalizability with respect to the type of stressors being responded to, participants were randomly assigned to one of two conditions where they were asked to recall either how they cope with events related

directly to their *physical health*, or to their *psychological health*. Irrespective of the type of stressor, no differences were elicited across either problem-focused (physical M = 2.24, SD = .64; psychological M = 2.31, SD = .60; $t(326) = -1.03$, *ns*) nor emotion-focused coping strategies (physical M = 1.90, SD = .70; psychological M = 1.90, SD = .67; $t(326) = 0.06$, *ns*). Thus, participants were collapsed across conditions for all analyses.

Self-Stigma. As in Study 1 total scores were calculated by taking the mean across items (α = .90).

Other-Stigma. As in Study 1 total scores were calculated by taking the mean across all items (α = .93).

Statistical Analyses

Descriptive Statistics. As in Study 1, t-tests among all variables were conducted to examine the presence of gender differences. Subsequently, correlations were examined to determine if the variables of interest were indeed related.

Main Analysis. To test the sequential mediation hypothesis within a single model, a path analysis was utilized in this study as well. To test for model fit, the same model indices were applied. Inference tests to determine the significance of the indirect effects were also conducted, whereby bootstrapping techniques for sequential mediation, using 10000 resamples and based on 95% confidence intervals (Preacher & Hayes, 2010) were utilized. A Minimum Fit Function Chi-square was also utilized in order to compare model fit between the predictive and alternative nested models. In particular, the first alternative model that was explored comprised of removing all paths associated with emotion- and problem focused coping. In the second alternative model, paths related to

unsupport and support from peers were removed from the model. In the final alternative model, directionality was tested by considering coping as the first mediator and support perceptions as the second mediator in relations between depressive symptoms and stigma of help-seeking. Chi-square difference tests were applied so as to compare model fit.

Once again, to maximize similarity across participants, where significant, gender and history of counseling were be included as covariates.

Results and Discussion

Descriptive Statistics

The role of gender. In contrast to Study 1, no differences in levels of depressive symptoms were observed between female and male students. Additionally, though females tended to endorse emotion-focused coping strategies more than males, they did not differ in their endorsement of problem-focused coping strategies (Table 2.1). As in Study 1, no gender differences were observed for perceptions of unsupport, although in this study females perceived higher levels of support from their peers compared to male students. In contrast to the previous study, differences were observed in levels of self- and other-stigma for seeking help for mental health concerns, such that males tended to endorse greater levels of stigma regarding help-seeking (Table 2.1).

Table 2.1

Study 2 Descriptive Statistics (Means, Standard Deviations) and t-tests as a function of Gender

	Female (n = 229)		Male (n = 99)		
	M	*SD*	*M*	*SD*	*t*(326)
Depressive Symptoms	5.84	4.68	5.13	4.95	1.24
Unsupport (Peers)	1.13	0.64	1.08	0.63	-0.56
Social Support (Peers)	2.73	0.28	2.66	0.32	2.04*
Coping					
Emotion-focused	2.00	0.68	1.66	0.61	4.33***
Problem-focused	2.31	0.60	2.18	0.64	1.73
Self-stigma of Mental Health	-0.06	1.61	-0.09	1.48	-2.73**
Other-stigma of Mental Health	1.62	0.82	1.86	0.93	-2.23*

*p<.05, **p<.01, ***p<.001

Correlations between depressive symptoms, support perceptions, coping and stigma. As in Study 1, higher levels of depressive symptoms were associated with greater levels of self- and other-stigma associated with seeking help for mental health issues (Table 2.2). Similarly, higher levels of depressive symptoms were associated with diminished perceptions of social support and greater perceptions of unsupport from peers. Not surprisingly, depressive symptoms were also related to coping strategies. Specifically, greater symptoms were strongly associated with a greater endorsement of emotion-focused coping, and lower endorsement of problem-focused coping. Furthermore, in line with relations observed in Study 1, unsupport was positively associated, and social support from peers was negatively associated, with both self- and other-stigma of help-seeking.

It has been suggested in previous studies that social support is related to the decreased use of maladaptive coping strategies (Dunkel-Schetter, Feinstein, Taylor, & Falke, 2000). Indeed, in the present study, greater perceived support from peers was associated with a greater endorsement of problem-focused strategies, whereas perceptions of unsupport were linked to the use of more emotion-focused efforts. This finding fits with the, albeit untested, suggestion in Study 1 that unsupportive interactions might be evoking negative cognitions and emotional reactions. Furthermore, as hypothesized, greater endorsement of emotion-focused coping strategies were associated with higher self- and other-stigma of mental health help-seeking, whereas negative relations were observed between problem-focused strategies and the dimensions of stigma.

To determine whether gender and history of therapy should be controlled in subsequent analyses, these dimensions were regressed onto the outcome variables. In

examining the role of these covariates on self-stigma of seeking mental health help, it appeared that both gender and history of having received therapy exerted an influence (gender: $B = .46$, $SE = .19$, $p<.05$; therapy: $B = -.65$, $SE = .26$, $p<.05$, $F(2,327) = 6.58$), whereas only gender was significantly related to other-stigma of seeking help (gender: $B = .24$, $SE = .10$, $p<.05$; therapy: $B = -.03$, $SE = .14$, *ns*, $F(2,327) = 2.76$). Thus, both variables were maintained as covariates throughout the main analyses.

Table 2.2

Study 2 Bivariate Correlations depicting relations between Depressive Symptoms, Support Perceptions, Coping, Self-Stigma, and Other-Stigma of Seeking Help

	1	2	3	4	5	6
1. Depressive Symptoms	---					
2. Unsupport (Peers)	.34***	---				
3. Support (Peers)	-.23***	-.30***	---			
Coping						
4. Emotion-focused	.52***	.49***	-.10	---		
5. Problem-focused	-.17**	.04	.23***	.16**	---	
6. Self-stigma of Mental Health	.22***	.18***	-.20***	.16**	-.26**	---
7. Other-stigma of Mental Health	.30***	.33***	-.27***	.31***	-.15**	.40***

*$p<.05$, **$p<.01$, ***$p<.001$

Main Analysis

Predictive model. As depicted in Figure 2.1, it was predicted that depressive symptoms would be associated with perceptions of support and unsupport. In turn, support and unsupport were anticipated to be related to coping strategies, and coping strategies were expected to be linked to dimensions of the stigma of help-seeking for mental health issues. In addition to these paths, depressive symptoms were also set to predict coping strategies, and support perceptions were set to predict the stigma outcome variables. To control for collinearity, the support variables were set to covary, as were both coping variables, and both outcome variables.

Examination of the fit indices suggested that this model yielded an acceptable fit to the data. The chi-square value was not significant (χ^2 (3) = 7.26, *ns*), NNFI and CFI were above the minimum criteria of .90 (NNFI = .91, CFI = .99), and RMSEA did not exceed the cut-off criteria of .08 (RMSEA = .07, 90% CI{.00; .13}). As seen in Figure 2.2, levels of depressive symptoms were positively associated with unsupport and negatively related to perceptions of support from peers. In keeping with the findings in Study 1, these relations add further credence towards the social selection theory and suggest the unfortunate consequences of depressive affect on one's social support resources. Subsequent to this, it appeared that greater perceptions of peer support were related to the endorsement of more problem-focused coping strategies, whereas those who perceived greater levels of unsupport from their peers were less likely to employ problem-focused coping and more likely to engage in emotion-focused coping efforts. It has been suggested that perceptions of support can have implications for the appraisal of

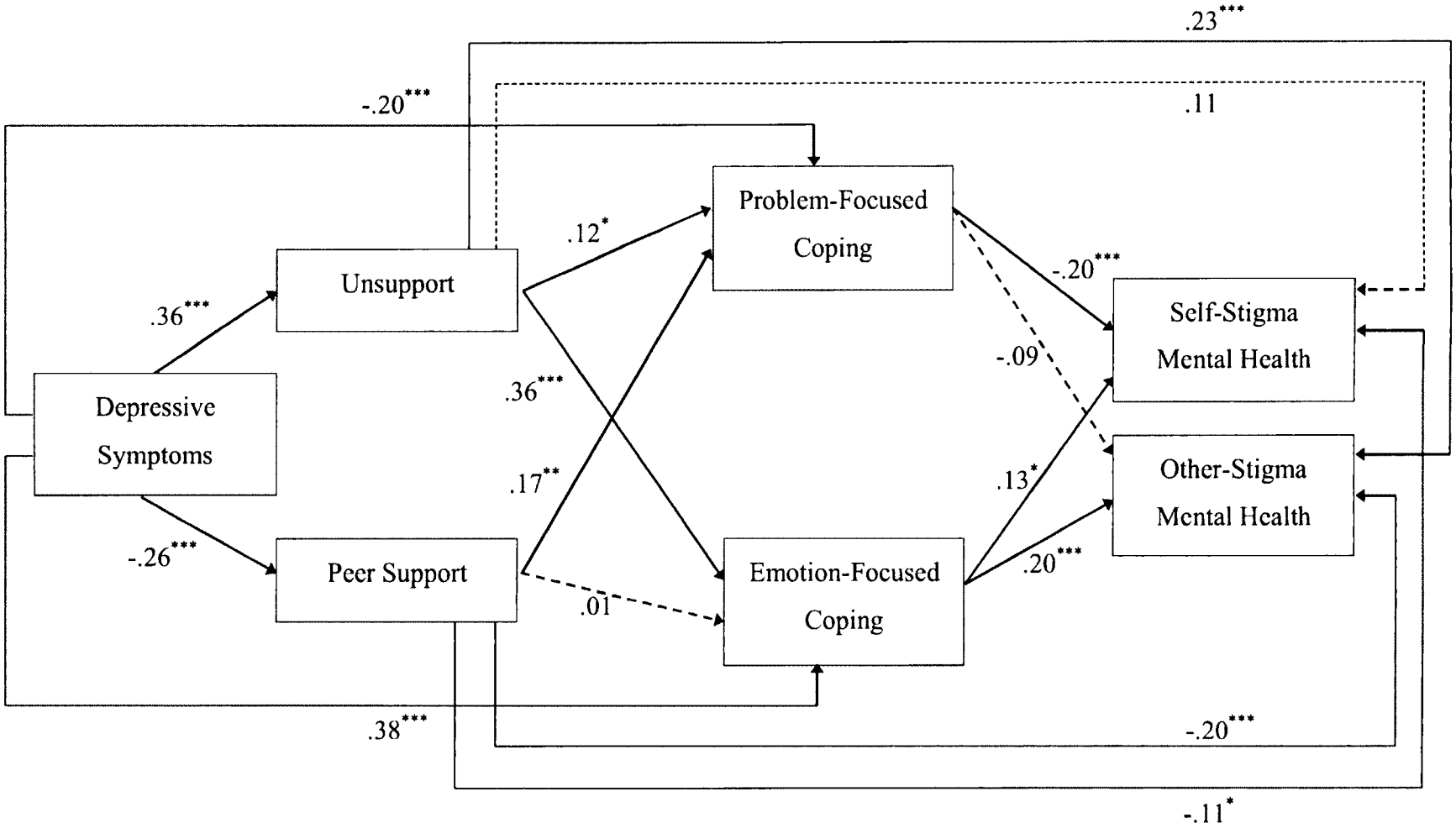

Figure 2.2. Study 2 standardized beta (β) estimates of the predictive model linking depressive symptoms, unsupport, peer support, emotion-focused and problem-focused coping and self- and other-stigma for seeking mental health help. *Dashed arrows indicate nonsignificant relations.* $*p < .05$, $**p < .01$, $***p < .001$.

stressful events, thereby influencing the type of coping strategy endorsed (Bandura, 1997). Thus, for an individual who might have already expressed vulnerability, encountering unsupportive interactions could very well have contributed to appraising stressors as more threatening and less controllable, thereby endorsing more emotion-focused strategies. Furthermore, in line with expectations, emotion-focused coping was associated with greater stigma of help-seeking, whereas problem-focused efforts were associated with lower stigma of mental health help-seeking[2].

Testing indirect effects in relations between depressive symptoms and self-stigma. Examination of the confidence interval for the indirect effect of unsupport and emotion-focused coping revealed that it did not contain zero (95% CI{.0008; .0120} *SE* = .003), suggesting a total indirect effect. Furthermore, the confidence interval for tests of sequential effects of social support from peers and problem-focused coping did not overlap with zero (95% CI{.0006; .0068} *SE* = .002). This finding confirms that support from peers and problem-focused coping as well as unsupport and emotion-focused coping do indeed serve as intervening variables, respectively, accounting for the relation between depressive symptoms and the self-stigma of seeking help for mental health

---

[2] As in Study 1 the path model was examined specifying support perceptions from friends and partners separately to determine if the relations would be replicated. Examination of the paths revealed that relations were not fully replicated, although this was likely due to the reduced sample size as a smaller portion of participants self-identified as being in a relationship (n = 191). Indeed, when only friend support was considered in the dataset, all relations were replicated. In order to maintain consistency across the support and unsupport measures and to maximize sample size, it was deemed appropriate to collapse across these scales.

concerns. That endorsing the use of problem-focused coping strategies was associated with a lower perception of self-stigma for seeking mental health help suggests that those who are more inclined to engage in problem-solving techniques might also have a greater propensity to actually seek help, rather than self-stigmatize for doing so. To be sure, studies in other stressor domains (e.g., women with breast cancer) have suggested that women who were more psychologically prepared to deal with their stressor were more likely to accept that they had the disease and come up with active, problem-focused coping strategies to overcome their cancer status (Miller, Manne, Taylor, Keates, & Dougherty, 1996). Alternatively, it is not surprising that an inverse relation was observed between emotion-focused coping and self-stigma of seeking help, which has been associated with the employment of denial behavior (Carver et al., 1993). Finally, examination of the indirect effect of unsupport and problem-focused coping revealed that the confidence intervals contained zero (95% CI{-.0015; .0005} *SE* = .001), indicating that the sequential mediation was nonsignificant.

Testing indirect effects in relations between depressive symptoms and other-stigma. Significant indirect effects were also observed when other-stigma was considered the dependent variable, such that the confidence intervals for the indirect effect of unsupport and emotion-focused coping did not contain zero (95% CI{.0019; .0082} *SE* = .002). This finding suggests that the greater unsupportive interactions encountered by those with more depressive symptoms was associated with an increased tendency to engage in emotion-focused coping, which further exacerbated perceptions that others would stigmatize them for seeking help. Studies have suggested a relation between emotion and avoidant coping efforts and negative self-worth (Mullis &

Chapman, 2010), which has been implicated in the concern for others' attitudes and opinions (Zeigler-Hill, Clark, & Pickard, 2008). Thus, it should not be surprising that emotion-focused coping would be negatively related to other-stigma for help-seeking, particularly in the context of one experiencing depressive symptoms and having encountered unsupportive interactions.

Alternative model 1. In the first alternative model, fit indices of our predictive model were compared against a model in which *all pathways related to the coping variables were set to equal zero.* Model fit indices indicated a significant chi-square (χ^2 (17) = 278.50, p< .001), NNFI and CFI were below .90 (NNFI = .03, CFI = .54), and RMSEA exceeded the desired value of .08 (RMSEA = .20, 90% CI{.17; .22}). Additionally, a chi-square difference test revealed that this alternative model was a worse fit to the data compared to our original hypothesized model ($\chi^2_{difference}$ (14) = 271.24, p<.001).

Alternative model 2. In the second alternative model *all pathways related to the support and unsupport variables were set to equal zero.* Examination of the fit indices once again revealed a significant chi-square, (χ^2 (17) = 164.01, p< .001), both NNFI and CFI were below the minimum criteria of .90 (NNFI = .45, CFI = .74), and RMSEA yielded a value greater than .08 (RMSEA = .15, 90% CI{.13; .18}). Furthermore, a chi-square difference test to this alternative model indicated that this model was also a significantly worse fit to the data, $\chi^2_{difference}$ (14) = 156.75, p < .001, suggesting that the predictive model in which the support and coping mediators were included, was better suited to the data.

Alternative model 3. Directionality was explored in this alternative model to determine whether the type of *coping strategy employed would be predictive of support and unsupport perceptions* would be a better fit to the data. Examination of the fit indices revealed a significant chi-square, (χ^2 (5) = 18.45, p< .01), NNFI was below and CFI was above the minimum criteria of .90 (NNFI = .83, CFI = .98), and RMSEA yielded a value greater than .08 (RMSEA = .09, 90% CI{.05; .14}). Finally, a chi-square difference test revealed that this model was also not well-suited to the data $\chi^2_{difference}$ (2) = 11.19, p < .01, thereby reaffirming the directionality of the original hypothesized model in which support perceptions are predictive of coping strategies in the relations between depressive symptoms and the stigma of seeking mental health help.

Altogether, in addition to the intervening role of support and unsupport, the model presented in Study 2 demonstrates the role that coping serves in diminishing or exacerbating one's willingness to seek help for mental health challenges. In particular, it appeared that those students experiencing mild levels of depressive symptoms were more inclined to perceive greater social support and less unsupport, and this in turn served as the impetus for engaging in more problem-focused, as opposed to emotion-focused coping strategies. In keeping with previous research that has linked the use of more active, problem-oriented coping with optimism and an inclination to deal with issues first-hand (Miller, Manne, Taylor, Keates, & Dougherty, 1996), the present study also demonstrated that a problem-focused orientation was associated with diminished self-stigmatizing attitudes towards seeking help.

Unfortunately, greater perceptions of unsupport also accompanied the depressive symptoms experienced by students. Not surprisingly, unsupport was subsequently

associated with the proclivity to employ more emotion-centered coping strategies which, in turn, were predictive of perceptions that others held stigmatizing attitudes toward those seeking mental health help. At first glance, it seems that these findings might be discouraging. Changing one's coping profile or perceptions of support and unsupport might be difficult, especially in the event that one's perceptions are clouded by symptoms of depressive affect. However, it is possible that negative perceptions of help-seeking can be influenced by other factors. For example, studies have suggested that the framing of depressive symptoms can have a significant influence on one's perceptions of depression and ensuing decisions to treat the disease. In this regard, it may be that when confronted with a predisposition to perceive stigma (e.g., lack of perceived support, emotion-focused strategies), reframing people's understanding of depression as a physical rather than emotional problem might serve to buffer against the perceived stigma for seeking help for mental health problems.

Study 3

Although stigma towards help-seeking has been established as a prevalent and important factor in facilitating the treatment of individuals suffering with mental disorders, little attention has been paid to the role that explanatory models of mental illness play in stigmatizing attitudes, including the stigma associated with help-seeking behavior. Promoting the notion that behavioral and physical disorders are associated with varying implications are studies that have compared responses to physical illnesses versus psychological illnesses. Indeed, although perceived stigma has been associated with physical illnesses, perceptions of stigma diminished when the condition was situated as having a clear medical pathology (e.g., multiple sclerosis) compared to those that were more ambiguous in nature (e.g., chronic fatigue syndrome) (Looper & Kirmayer, 2004). In the same vein, among individuals with a chronic medical condition who also presented with a mental illness, the perceived stigma of mental illness was related to their mental well-being, but no such correlation was found between stigma and the severity of their medical condition (McManus, Stubbings, & Martin, 2006). Adding credence to the notion that physical disorders are less stigmatized and less likely to impact patient health is a study in which individuals who were described as having sought medical help for depression were more stigmatized and viewed as more emotionally unstable, less interesting, and lacking confidence, compared to those who sought treatment for physical concerns such as back pain, or those who were depressed but who refrained from getting help altogether (Ben-Porath, 2002). Thus, reactions to physical versus psychological health issues tend to be very different.

Another possibility that could account for stigmatizing attitudes might be varying notions of controllability associated with physical versus mental illness symptoms (Nieuwsma & Pepper, 2010; Weiner, Perry, & Magnusson, 1988). In this regard, diminished stigma outcomes associated with a physical etiology may be largely due to the fact that, under these conditions, the disorder is viewed as uncontrollable, and consequently not the individual's fault. In contrast, those living with disorders that were viewed as emanating from their own behaviors (e.g., AIDS, drug abuse, obesity), received less support, pity, and engendered more anger than disorders that were perceived as biologically rooted (Alzheimer's disease, blindness, cancer, heart disease, paraplegia) (Weiner, et al., 1988). Even in relation to mental illnesses such as depression, less stigmatizing perceptions were observed when physical complaints (e.g., headaches, gastrointestinal disturbance) were described, suggesting that it is the emotive aspects of depressive symptoms that are "socially disadvantageous". The experience of physical symptoms is something that most people can identify and are familiar with, and may be viewed as beyond the individual's control. In contrast, the affective symptoms associated with depression have been socially constructed as something that is private and that the individual should be able to manage. When depressed individuals are not able to simply 'turn off' their poor mood, the individual is regarded as weak and ineffectual (Barney, Griffiths, Christensen, & Jorm, 2009), and social support systems may falter and lose patience, thus the illness becomes socially disadvantageous (Raguram, Weiss, Channabasavanna, & Devins, 1996).

In this regard, the nature of the symptoms portrayed (physical versus psychological) might have implications not only for the self- and other-stigma regarding

depressive symptoms, but also for their confidence in seeking professional help. It was the goal of Study 3 to assess whether varying the way in which symptoms were portrayed (physical versus psychological) would have implications for stigmatizing attitudes towards help-seeking. It was hypothesized that:

1. When depression was described in physical versus psychological symptoms, lower self- and other-stigma associated with help-seeking would be reported.
2. As in Studies 1 and 2, greater depressive symptoms would be associated with higher levels of self- and other-stigma of mental health help-seeking. However, it was further expected that the symptoms portrayed would moderate these relations such that when physical symptoms were conveyed, the relation between depressive symptoms and self- and other-stigma would not be significant, whereas when psychological symptoms were conveyed, symptoms would be associated with greater stigma.

Method

Participants

Students in their first year of university (female $n = 104$; male $n = 58$; unspecified $n = 6$) ranging in age from 17 to 24 years ($M = 18.70$, $SD = 1.19$) participated in an in-lab study. Participants' ethnicity comprised of Euro-Caucasian (47.6%, $n = 80$), Black (19.6 %, $n = 33$), Arab (10.1%, $n = 17$), South Asian (9.5%, $n = 16$), Asian (6.0%, $n = 10$), South East Asian (3.6%, $n = 6$), Latin American (1.8%, $n = 3$), and Other (e.g., mixed ethnicity, 1.8%, $n = 3$). A majority of participants were full time as opposed to part time students (92.3%, $n = 155$; 3.6%, $n = 6$, respectively; unspecified $n = 7$). A large proportion of students reported to be living on campus (42.3%, $n = 71$), or off campus either with their family (41.1%, $n = 69$), followed by off campus alone (6.5%, $n = 11$), with Carleton friends (5.4%, $n = 9$) other friends not attending Carleton, (3.6%, $n = 6$), or other non-specified living arrangements (1.2%, $n = 2$). The vast majority of participants reported that they had never received psychological therapy or counseling (74.4%, $n = 125$), although some responded that they either had, but were no longer (17.3%, $n = 29$), or that they were currently receiving counseling (4.2%, $n = 7$). Similarly, a small proportion of students disclosed that they had a family history of mental illness (16.1%, $n = 27$), and self-identified as having been diagnosed with a mental illness (8.3%, $n = 14$).

Procedure

Carleton University's Ethics Committee for Psychological Research approved the study. Participants were recruited through Carleton's online SONA system from February 19th, 2011 to April 1st, 2011. The study was described as assessing how individual characteristics and personal resources affect success in their first year at

university. After obtaining their informed consent (Appendix K), participants completed a battery of revised demographic questions (Appendix L) as well as a scale assessing their depressive symptoms (Appendix C). Following this, they were randomly assigned to one of two vignettes describing an individual experiencing (either psychological or physical) symptoms of depression (Appendix M). The vignettes consisted of a paragraph in length. Gender of the person in the vignette was randomly assigned to participants, such that an equal proportion of male and female participants responded to Anne or Bill's experience of either physical or psychological symptoms of depression. All aspects of the vignette maintained identical descriptions, whereby the individual was depicted as being a first year undergraduate student experiencing academic and social problems. The vignettes differed only with respect to the symptomatology. For instance, where Anne/Bill was described as having woken up with a "flat heavy feeling" in the vignette emphasizing psychological symptoms, in the physical version Anne/Bill was described as having woken up "feeling like s/he has slept badly". After reading the vignette, they were then asked to make various treatment recommendations (Appendix N), responded to questions assessing their self-stigma and other-stigma for seeking help for mental health (Appendix O for a revised version), as well as their perceptions of the causes of depression (Appendix P). Upon completing the study, participants were debriefed and given the choice of course credit or a $10 gift certificate (Appendix Q). In keeping with protocol regarding students displaying signs of suicide ideation, where applicable, the in-lab suicide ideation protocol was exercised (Appendix R) and the additional debriefing form provided (Appendix I).

Measures

Depressive Symptoms. The BDI (Beck & Beck, 1972) demonstrated good internal reliability (α = .84).

Self-Stigma. As in Studies 1 and 2, the scale measured the self-stigma associated with seeking help (adapted from Vogel et al., 2006). In order to be able to compare responses between the self-stigma and other-stigma measure, the rating scale for self-stigma was modified to be consistent with that of the other-stigma scale (original rating scale ranged from -3 (*strongly disagree*) to +3(*strongly agree*)). Thus, responses were made on a five-point scale ranging from 0 (*not at all*) to 4 (*a great deal*). Total scores were calculated by taking the mean across items (α = .75).

Other-Stigma. As in Studies 1 and 2, this scale measured the perceived stigma held by others associated with seeking help (adapted from Vogel et al., 2009). This scale demonstrated excellent internal reliability (α = .93).

Treatment Recommendations. Upon being presented with a vignette of psychological or physical depressive symptoms, participants were asked to make various treatment recommendations (Phelan et al., 2006). Participants were asked "Do you think that Anne/Bill should: go to a general medical doctor for help, go to a psychiatrist, go to a therapist or counselor, such as a psychologist, social worker, or other mental health professional, take prescription medication, check into a hospital, or check into a mental hospital?" Each treatment option was scored as a "yes" or "no" response. To assess perceived treatment effectiveness, participants were subsequently asked, "in your opinion, how likely is it that Anne/Bill's situation will improve with treatment," with responses ranging from a scale of 1 (*not very likely*) to 5 (*very likely*).

Perception of Causes of Depression. A modified version of the Public Perceptions of Causes was used to ask participants about six possible causes of the condition described in the vignette: the person's own bad character, a chemical imbalance in the brain, the way the person was raised, a genetic or inherited problem, and "God's will" (Link, Phelan, Bresnahan, Stueve, & Pescosolido, 1999). Participants were asked to rate, on a five-point scale ranging from 0 (*not at all*) to 4 (*a great deal*) how likely it is "that Anne/Bill's situation might be caused by..." (Table 3.3 for descriptive statistics as a function of vignette condition).

Statistical Analyses

Descriptive Statistics. The data was first examined for gender differences. Following this, chi-square tests were performed to assess whether suggestions to seek help from varying sources (physician, psychiatrist, mental health professional, pharmaceutical medication, hospital, mental health hospital) would vary as a function of physical versus psychological symptoms. In addition to this, a multivariate analysis of variance (MANOVA) was performed to examine whether individuals appraised the individual's symptoms presented in the vignette as being caused by varying factors (person's own bad character, a chemical imbalance in the brain, the way the person was raised, a genetic or inherited problem, and "God's will") as a function of physical versus psychological symptoms.

Main Analyses. To test the first hypothesis, a one-way Analysis of Variance (ANOVA) was performed to assess whether depressive symptoms varied as a function of the symptoms presented in the vignette. A hierarchical linear regression was subsequently conducted to test the second hypothesis. Standardized scores for depressive

symptoms and condition (coded 0 and 1 for psychological and physical, respectively) were entered on the first step, and the interaction term was entered on the second step. This analysis was performed twice, once in response to self-stigma of mental health help-seeking and a second time considering other-stigma as the outcome variable. As in the previous studies, where applicable, gender and history of having received counseling were included as covariates.

Results and Discussion

Descriptive Statistics

The role of gender. As in Study 1, and in contrast to Study 2, females reported higher levels of depressive symptoms than their male counterparts, and no differences were observed in levels of self- and other-stigma regarding seeking help for mental health concerns (Table 3.1).

Table 3.1

Study 3 Descriptive Statistics (Means, Standard Deviations) and t-tests as a function of Gender

	Female (n = 104)		Male (n = 58)		
	M	*SD*	*M*	*SD*	$t(326)$
Depressive Symptoms	6.60	5.29	3.72	3.04	4.40***
Self-stigma of Mental Health	1.47	0.76	1.61	0.80	-1.12
Other-stigma of Mental Health	0.70	0.85	0.52	0.78	1.29

***p<.001

Responses following the framing of depressive symptoms. After reading the vignette, participants rated the extent to which various factors were the cause of the depressive symptoms. For the most part, the causal basis was not seen to differ between the two conditions, although some mild differences were evident. Specifically, contrary to expectations, students were more likely to view depressive symptoms to be caused by a genetic or inherited problem when depression was framed in terms of psychological, rather than physical symptoms (Table 3.2). Typically, physical symptoms are viewed as something beyond the individual's control, whereas psychological or emotional symptoms are a socially constructed phenomenon and thus perceived to be more manageable (Nieuwsma & Pepper, 2010). It is possible that highlighting symptoms as psychological was more cognitively aligned to traditional conceptions that depression is a mental illness (Link et al., 1999), comprising of more emotional, as opposed to physical attributes. And, in keeping with recent strategies to medicalize the understanding of mental illness (Haslam, 2005) perhaps framing depression in this light lent it to be viewed as seemingly more heritable. Indeed, as in other studies (e.g., Schomerus et al., 2012), that participants in the present study regarded depression as mostly due to stress, a chemical imbalance and upbringing, rather than bad character and God's will suggests that educational campaigns have been effective, at least insofar as to what people will report as the acknowledged causal basis for depression, irrespective of the way symptoms are framed.

Table 3.2

Study 3 Descriptive Statistics (Means, Standard Deviations) and F-tests of Perceptions of the Causes of Depression as a function of Vignette Condition

	Psychological (n = 82)		Physical (n = 86)			
	M	*SD*	*M*	*SD*	$F(1,163)$	η^2
Bad Character	0.82	1.08	1.12	1.18	2.73	.02
Chemical Imbalance	2.23	1.37	2.24	1.19	0.00	.00
Upbringing	2.12	1.18	2.27	1.24	0.62	.01
Stressful Circumstances	3.49	0.67	3.53	0.61	0.13	.00
Genetics	2.15	1.25	1.74	1.16	4.72*	.03
God's Will	0.60	1.04	0.60	1.00	0.00	.00

*$p<.05$

Following the presentation of physical versus psychological symptoms, participants also recommended treatment alternatives. It appeared that the causal basis for the depressive symptoms did influence participants' treatment recommendations (Table 3.3). Specifically, psychological symptoms elicited more suggestions to seek help from a psychiatrist, or a therapist or counselor. This is in keeping with expectations as there is a general perception that psychiatrists and mental health counselors are sources that individuals would turn to for affective symptoms, as opposed to concerns that are exclusively physical in nature. No differences however were found with respect to suggestions to see a general physician, take pharmaceutical medication, or be admitted to a hospital. Finally, as in other studies examining the role of biological compared to the emotional basis of mental illness (Phelan et al., 2006), being presented with psychological ($M = 3.93$, $SD = 1.12$) versus physical ($M = 3.97$, $SD = .92$) symptoms of depression in the present study was not associated with perceived treatment effectiveness, $F<1$.

Lastly, gender and history of having sought therapy were regressed onto both stigma of seeking help outcomes to determine whether these variables should be controlled in the main analyses. As both control variables were not significantly related to either self-stigma (gender: $B = .14$, $SE = .13$, *ns*; therapy: $B = .03$, $SE = .15$, *ns*, $F <1$) or other stigma (gender: $B = -.14$, $SE = .14$, *ns*; therapy: $B = .13$, $SE = .16$, *ns*, $F<1$), these variables were excluded from subsequent analyses.

Table 3.3

Study 3 Chi-square tests of Treatment Recommendations as a function of Vignette Condition

	Psychological (n = 82)		Physical (n = 86)		
	No	Yes	No	Yes	$\chi^2(1)$
Medical Doctor	37	45	39	47	.00
Psychiatrist	25	57	43	43	6.63**
Therapist/Counselor	8	74	21	65	6.32*
Prescription Medication	67	14	66	20	.92
Hospital	77	4	81	5	.06
Mental Hospital	75	7	83	2	3.13

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

Main Analysis

Moderating role of vignette condition on the relations between depressive symptoms and stigma of help-seeking. It was expected that symptoms portrayed in the vignette would moderate the relation between depressive symptoms and the self- and other-stigma of help-seeking. Although the vignette did not appear to elicit varying levels of the stigma toward seeking mental health help (Table 3.4), it remained possible that the different framing of the symptoms would alter the relations between depressive symptomatology and stigma of help-seeking. Using hierarchical regression analysis, standardized scores for depressive symptoms and vignette condition (i.e., symptoms portrayed in vignette) were entered on the first step, followed by the interaction term on the second step.

As seen in Table 3.5, when self-stigma was considered the dependent variable, neither main effects nor the interaction between depressive symptoms and the conditions in the vignette yielded any significant results. However, when perceived stigma by others was considered the outcome, the addition of the interaction term accounted for variance above and beyond the individual variables of depressive symptoms and vignette condition (Table 3.6).

Table 3.4

Study 3 Descriptive Statistics (Means, Standard Deviations) and F-tests of Perceptions of the Causes of Depression as a function of the Stigma of Seeking Mental Health Help

	Psychological (n = 81)		Physical (n = 85)			
	M	*SD*	*M*	*SD*	$F(1,163)$	η^2
Self-stigma of Mental Health	1.60	0.78	1.44	0.81	1.67	.01
Other-stigma of Mental Health	0.69	0.92	0.55	0.72	1.14	.01

Table 3.5.

Study 3 Hierarchical Regression Assessing Moderated Role of Vignette Condition in the relation between Depressive Symptoms and the Self-Stigma of Seeking Mental Health Help

		Unstandardized Coefficients		
Step	Variable	*B*	*SE*	R^2_{change}
1.	Depressive Symptoms	.08	.06	
	Vignette Condition	-.16	.12	.021
2.	Depressive Symptoms x Vignette Condition	-.08	.12	.003

Table 3.6.

Study 3 Hierarchical Regression Assessing Moderated Role of Vignette Condition in the relation between Depressive Symptoms and the Other-Stigma of Seeking Mental Health Help

		Unstandardized Coefficients		
Step	Variable	*B*	*SE*	R^2_{change}
1.	Depressive Symptoms	.26***	.06	
	Vignette Condition	-.13	.12	.102***
2.	Depressive Symptoms x Vignette Condition	-.25	.12	.022*

*$p<.05$, ***$p<.001$

A simple slopes analysis indicated that, among those participants who read the vignette in which psychological conditions predominated, as depressive symptoms increased, they became increasingly concerned with how others would stigmatize them for engaging in help-seeking behavior (Figure 3.1). This relation was not significant when symptoms were described as physical in basis.

This pattern is in keeping with expectations (Ben-Porath, 2002; Raguram, et al., 1996). What is more of a puzzle is that the nature of the symptoms appeared to influence help-seeking stigma perceptions, particularly among those individuals who were expressing higher levels of symptomatology. It may be that although the physical basis of depression is relatively widely known, and hence did not alter participants' identification of the causes of depression, how it is framed continues to exert effects on how people respond to it. In this case, it appears that depressed individuals were most sensitive to the framing, perhaps because they believed that others continue to regard depression as a sign of weakness, and hence would be more likely to stigmatize those who seek help. This is in keeping with other research that has illustrated the negative connotations associated with mental illness (Griffiths et al., 2009), and serves to highlight the heightened awareness of the negative attributes of depression among those experiencing depressive symptoms. Indeed, this is also consistent with research that has been conducted among medical students, suggesting that, in spite of being extremely familiar with the biological basis of depression, they nonetheless held negative attitudes towards those with mental illness, and continued to be reluctant to seek help themselves on account of the stigma associated with mental illness (Hu et al., 2012). Similarly, though educational campaigns have demonstrated that mental health literacy

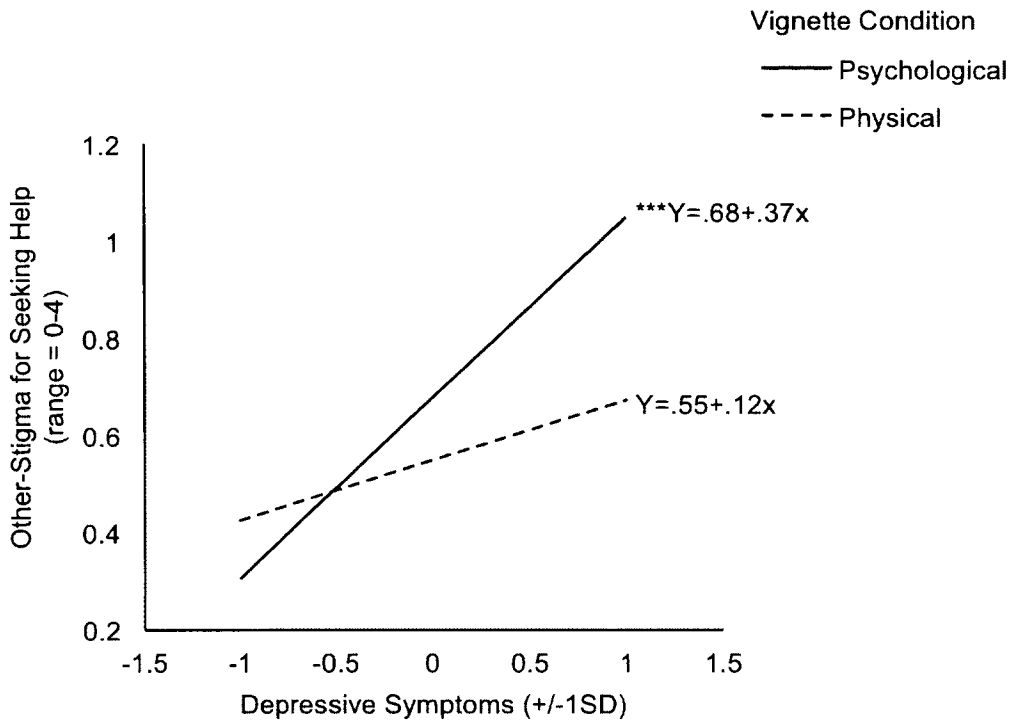

Figure 3.1. Study 3 moderating effect of vignette condition on the relation between depressive symptoms (+/-1SD) and other-stigma for seeking mental health help.

has improved in society, the vast majority are still inclined to socially distance themselves from those with mental illness (Angermayer et al., 2009; Lyons, et al., 2009; Schomerus et al., 2012). Finally, consistent with Studies 1 and 2, this study reaffirms how the relation between depressive symptoms and the stigma perceived by others can undermine one's confidence in engaging in help-seeking, and the role that affective symptomatology serves in exacerbating such a relation.

Study 4

It will be recalled that, in Study 1, support perceptions were found to mediate the relation between depressive symptoms and the stigma associated with seeking mental health help. Further, in the previous study (Study 3) it was established that portraying depressive symptoms as physical or psychological in nature moderated the relation between one's own depressive symptoms and the stigma of help-seeking. Extending the findings of these earlier studies, the aim of Study 4 was to examine whether the framing of the physical versus psychological basis for depression would moderate the mediated model established in Study 1 (Figure 1.2). As the main objective of this program of research was to better understand, not only the antecedents of the stigma associated with seeking help, but factors that might *diminish* the stigma of help-seeking, it was of particular interest to investigate if the framing of depressive symptoms would influence the mechanisms linking depression to help-seeking stigma. Studies have demonstrated that support perceptions play a critical role in the ensuing decisions that individuals make in regard to engaging in help-seeking (Griffiths et al., 2012). Thus, it is conceivable that encountering unsupportive responses, particularly in the context of the *emotional* symptoms of depression being most salient (highlighting aspects that may be interpreted as reflecting personal weakness) (Barney et al., 2009), might particularly exacerbate negative attitudes towards seeking help.

Likewise, it was established in Study 2 that encountering unsupport can have implications for the type of coping an individual endorses. Specifically, it appeared that individuals who experienced greater levels of depressive symptoms were more likely to perceive unsupport, which was subsequently associated with engaging in more emotion-

centered coping strategies. In turn, these individuals were more likely to perceive stigmatizing attitudes for engaging in the help-seeking process (Figure 2.2). In line with this, it is possible that those who engage in more avoidant and ruminative strategies (i.e., emotion-focused coping) *and* for whom affective elements of depression are made most salient (which have been linked to perceptions of ineffectual coping and an inability to 'snap out of it' (Barnes et al., 2009)) would express even greater stigmatizing attitudes towards mental health help-seeking. In contrast, making salient physical symptomatology might diminish this relation, and facilitate relations between problem-focused coping and attitudes towards seeking help. In effect, the framing of depression may be a key element for promoting more effective coping mechanisms, and hence reduce sensitivity to stigma toward help-seeking.

Taken together, it was hypothesized that:

1. As in Study 1, depressive symptoms would be positively related to self- and other-stigma of seeking mental health help. Additionally, peer support and/or unsupport would mediate these relations, such that depressive symptoms would be associated with support perceptions, which would in turn be associated with self- and other-stigma associated with seeking help (Figure 1.1).
2. Further to this mediated model, symptoms portrayed in the vignette would moderate this model such that peer support and unsupport would interact with symptoms emphasized in the vignette to influence self- and other- stigma of seeking help (Figure 4.1). Specifically, these

mediated relations would be pronounced when psychological, rather than physical symptoms, were highlighted.

3. As in Study 2, depressive symptoms would be associated with lower perceived support and encountering unsupportive interactions and these, in turn, would be associated with utilizing less problem-focused and more emotion-focused coping efforts. In turn, emotion-focused coping would be more strongly, and positively associated with the stigma of seeking mental health help, whereas the inverse relation would be observed for problem-focused coping (Figure 2.1).
4. It is further anticipated that the mediated relations linking lower support and more unsupportive interactions with emotion-focused coping efforts and subsequently more stigmatizing attitudes for seeking help would be exacerbated when psychological symptoms of depression are most salient, whereas these relations would diminish when depressive symptoms are emphasized to be primarily physical in nature (Figure 4.2).

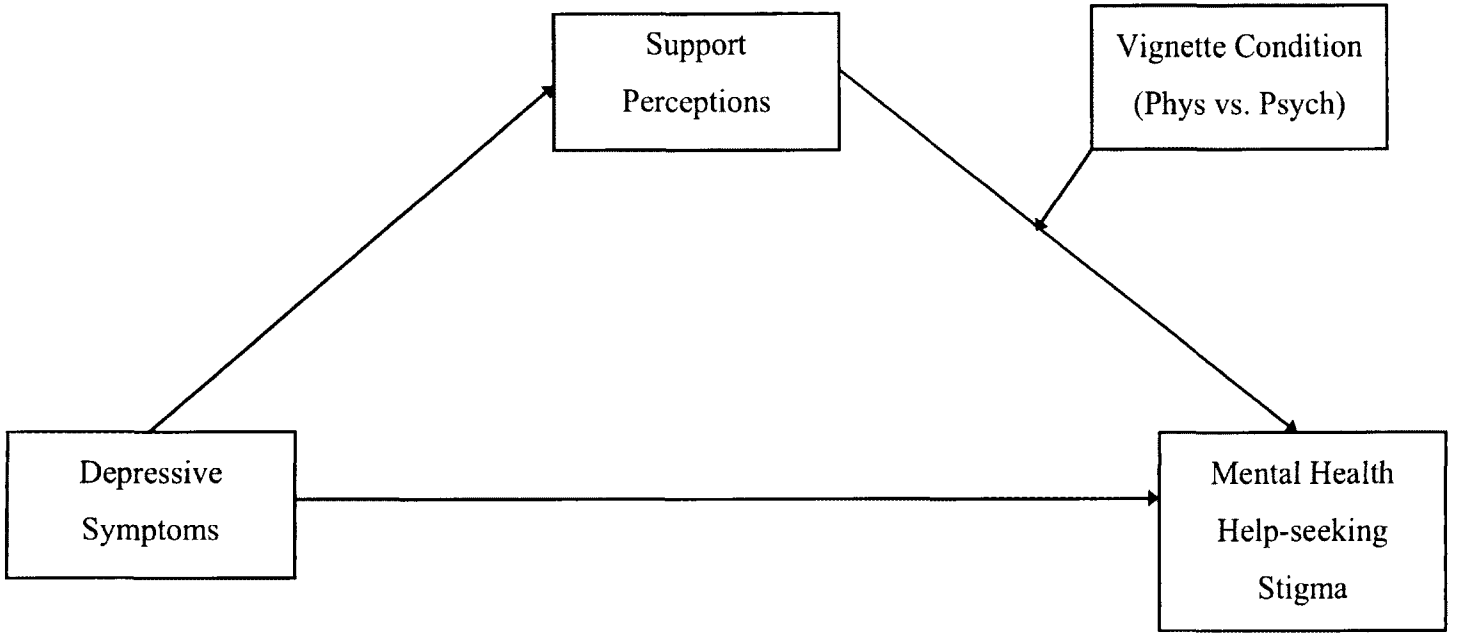

Figure 4.1. Study 4 conceptual mediation model linking depressive symptoms, peer support/unsupport, and (self and other) stigma of seeking help for mental health issues, which is expected to vary by symptoms (physical vs. psychological).

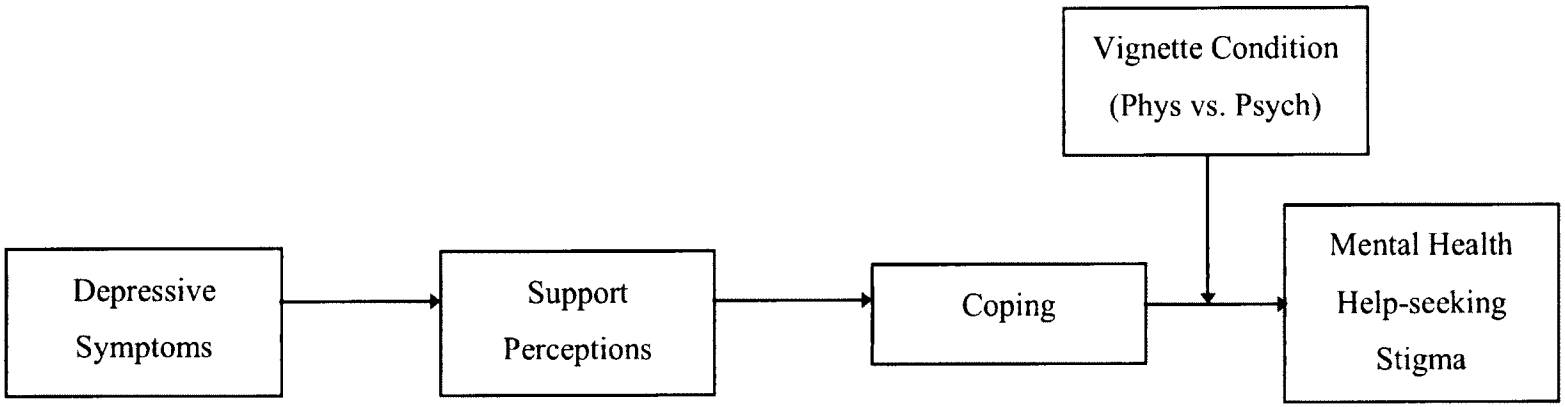

Figure 4.2. Study 4 conceptual sequential mediation model linking depressive symptoms, peer support/unsupport, coping, and (self and other) stigma of seeking help for mental health issues, which is expected to be moderated by vignette condition (physical vs. psychological).

Method

Participants

Students in their first year of university (female $n = 213$; male $n = 84$; unspecified $n = 4$) ranging in age from 16 to 29 years ($M = 18.75$, $SD = 1.66$) participated in an in-lab study. Participants' ethnicity comprised Euro-Caucasian (59.8%, $n = 180$), Black (10.0%, $n = 30$), Arab (9.0%, $n = 27$), South Asian (7.0%, $n = 21$), Asian (6.0%, $n = 18$), Latin American (2.7%, $n = 8$), Aboriginal (0.7%, $n = 2$), South East Asian (0.3%, $n = 1$), and Other (e.g., mixed ethnicity, 4.7%, $n = 14$). A majority of participants were full time as opposed to part time students (94.7%, $n = 285$; 2.7%, $n = 8$, respectively; unspecified $n = 5$). A large proportion of students reported to be living off campus either with their family (42.2%, $n = 127$), or on campus (38.9%, $n = 117$), followed by off campus with Carleton friends (6.3%, $n = 19$), with other friends not attending Carleton, (4.3%, $n = 13$), alone (3.3%, $n = 10$), with a spouse (1.3%, $n = 4$), or other non-specified living arrangements (3.7%, $n = 11$). The vast majority of participants reported that they had never received psychological therapy or counseling (81.1%, $n = 244$), although some responded that they either had, but were no longer (14.3%, $n = 43$), or that they were currently receiving counseling (3.0%, $n = 9$; unspecified 1.7%, $n = 5$). Similarly, a small proportion of students disclosed that they had a family history of mental illness (15.9%, $n = 48$), and self-identified as having been diagnosed with a mental illness (4.3%, $n = 13$).

Procedure

Carleton University's Ethics Committee for Psychological Research approved the study. Participants were recruited through Carleton's online SONA system from October 11th, 2011 to November 14th, 2011 and from February 6th, 2012 to April 4th, 2012. The

study was described as assessing how individual characteristics and personal resources affect success in their first year at university. After obtaining their informed consent (Appendix S), participants completed a battery of demographic questions (Appendix L), scales assessing depressive symptoms (Appendix C), perceptions of support (Appendix E), as well as a revised version of unsupport (Appendix T) and coping strategies (Appendix J). Following this, participants were randomly assigned to read one of two vignettes describing an individual experiencing (either physical or psychological) symptoms of depression (Appendix M). After reading the vignette, they were then asked to make various treatment recommendations (Appendix N), responded to questions assessing their self-stigma and other-stigma for seeking help for mental health (refer to Appendix O), as well as their perceptions of the causes of depression (Appendix P). Upon completing the study, participants were debriefed and given the choice of course credit or a $10 gift certificate (Appendix Q). When necessary, suicide ideation protocol was also utilized (Appendix R).

Measures

Given that a pivotal focus of these studies was to determine participants' attitudes towards seeking help for experiencing depressive symptoms, it was thought that examining perceptions of support (Appendix U), unsupport (Appendix V), and coping (Appendix W) specifically in regard to a mental health concern, such as depressive symptoms, would be important to asses. However, examination of the mean differences suggested that, irrespective of the nature of the presentation of the items, participants' perceptions did not alter. Furthermore, as examination of interitem correlations did not appear to differ, these data were collapsed to maximize the sample size and power.

Depressive Symptoms. As in the previous studies, the BDI (Beck & Beck, 1972) was utilized (α = .84).

Unsupport. A reduced version (8 items with the highest factor loadings reported from the original study, Ingram et al., 2001) of the Unsupportive Social Interactions Inventory (USII, Ingram et al., 2001) was used to measure stressor-specific unsupportive responses. Participants responded to perceived unsupport from Carleton friends (α = .80), and then again from non-Carleton friends (α = .75). These scales did not differ across the variables of interest, and as such were collapsed across both friend sources (α = .87).

Social Support. The 12-item Social Provisions Scale (Cutrona & Russell, 1987) assessed the degree to which friends and partners would be perceived to provide social support. As in Studies 1 and 2, support from peers was collapsed across two support scales, specifically support from friends (α = .80) and support from partner (α = .86). The mean across these two scales was calculated and considered an overall assessment of peer support (α = .87).

Coping. The 50-item Survey of Coping Profiles Endorsed (SCOPE, Matheson & Anisman, 2003) assessed 14 strategies that individuals use to cope. To maintain consistency across studies, the two-factor structure established for the SCOPE in Study 2 was used to create an index of emotion-focused coping (α = .92) and problem-focused coping (α = .84). As in study 2, relations between the two types of coping remained mildly significant (r = .16, $p < .05$).

Self-Stigma. As in earlier studies, this scale measured the self-stigma associated with seeking help (adapted from Vogel et al., 2006) (α = .75).

Other-Stigma. As in earlier studies, this scale measured the perceived stigma held by others associated with seeking help (adapted from Vogel et al., 2009). Interestingly, differences as a function of time for this scale were observed ((Time 1 M = 0.58, SD = .73, Time 2 M = 0.81, SD = 0.88, $t(119) = -2.21$, $p<.05$), however as inter-item correlations did not appear to differ, and as no other scales demonstrated any significant differences, it was considered acceptable to collapse across the two studies for this scale as well (α = .91).

Statistical Analyses

Descriptive Statistics. The data was examined for gender differences and to confirm the validity of the vignette manipulation. Correlations were also examined to determine the presence of relations between the variables of interest.

Main Analyses. As in Studies 1 and 2, to test the mediation and sequential mediation models (hypotheses 1 and 3, see Figures 2.1 and 3.1, respectively) within a single model, path analyses were conducted, followed by bootstrapping tests for indirect effects.

With respect to incorporating interaction terms into path analyses, it has been suggested that simpler analyses first be conducted. Then, only those analyses revealed to be significant are combined to form the full path model (Hayes & Preacher, in press). As such, for the second hypothesis (Figure 5.1), separate moderated mediation analyses were first run by considering the role of each of the mediators (support, unsupport) in the relation between depressive symptoms and help-seeking stigma (self-stigma, other-stigma), along with whether these relations varied by vignette condition. In particular, the strength of the association between support perceptions and help-seeking stigma was

examined to determine if it varied as a function of vignette condition. Similarly, for the final hypothesis (Figure 5.2), moderated mediation analyses were first run by considering the role of coping as mediators (emotion-focused, problem-focused) in the relation between support perceptions (support, unsupport) and help-seeking stigma (self-stigma, other-stigma), and whether these relations were altered based on vignette condition. For each of the models, the strength of the relation between coping and stigma of seeking help as a function of vignette condition was of interest. As it is not possible to examine sequential moderated mediation, the role of depressive symptoms was controlled in this analysis. These moderated mediation analyses were conducted using bootstrapping procedures and 95% confidence intervals based on 10000 resamples (Preacher, Rucker, & Hayes, 2007). Where necessary, covariates were included in the analyses.

Results and Discussion

Descriptive Statistics

The role of gender. Females reported greater levels of depressive symptoms compared to males (Table 4.1). In addition, females perceived greater levels of support from their peers and endorsed greater levels of emotion-focused coping strategies, whereas males perceived greater levels of self-stigma for seeking mental health help. No gender differences were observed for perceptions of unsupport, problem-focused coping or other-stigma of seeking mental health help (Table 4.1).

Table 4.1

Study 4 Descriptive Statistics (Means, Standard Deviations) and t-tests as a function of Gender

	Female (n = 213)		Male (n = 84)		
	M	*SD*	*M*	*SD*	*t*(295)
Depressive Symptoms	5.60	4.53	3.75	4.09	3.26***
Unsupport	1.33	0.64	1.41	0.75	-0.97
Social Support	2.75	0.25	2.66	0.35	2.21*
Coping					
Emotion-focused	2.03	0.61	1.74	0.69	3.62***
Problem-focused	2.45	0.57	2.33	0.57	1.62
Self-stigma of Mental Health	1.44	0.78	1.66	0.87	-2.13*
Other-stigma of Mental Health	0.59	0.74	0.75	0.85	-1.52

*p<.05, ***p<.001

Responses following the framing of depressive symptoms. As in the previous study, participants rated the extent to which they believed differing factors were the cause of the depressive symptoms displayed in the vignette. Whereas in Study 3 the framing of symptoms in the vignettes (psychological vs. physical) was found to yield a mild difference with respect to the role of genetics, no differences regarding any of the causes of depression were observed in the present study. This said, as in Study 3, participants tended to regard depression to be mainly a result of stressful circumstances, upbringing, and due to a chemical imbalance (Table 4.2). Such trends suggest that, as seen in other research (e.g., Schomerus et al., 2012), efforts to educate the public have been effective in raising awareness of the factors influencing mental illnesses such as depression, and dispelling the role of other factors, such as 'God's will' and weak character.

Table 4.2

Study 4 Descriptive Statistics (Means, Standard Deviations) and F-tests of Perceptions of the Causes of Depression as a function of Symptoms

	Psychological (n = 150)		Physical (n = 151)			
	M	*SD*	*M*	*SD*	$F(1,175)$	η^2
Bad Character	0.91	1.11	0.82	1.08	0.57	.00
Chemical Imbalance	2.13	1.27	2.25	1.38	0.63	.00
Upbringing	2.41	1.08	2.27	1.17	1.25	.00
Stressful Circumstances	3.47	0.64	3.47	0.68	0.00	.00
Genetics	2.04	1.22	2.20	1.31	1.13	.00
God's Will	0.48	0.93	0.55	1.13	0.35	.00

Participants in the present study were also asked to recommend treatment options for the individual described in the vignette. As in Study 3, differences in treatment recommendations were observed as a function of the salient symptoms of depression (Table 4.3). More specifically, it appeared that psychological symptoms yielded more suggestions that the individual seek help from a psychiatrist or mental health counselor. In addition, participants also appeared to be more inclined to recommend that the individual go to the hospital when symptoms were presented as physical in nature. Lastly, in the same vein as previous findings (Phelan et al., 2006), as well as that of Study 3, being presented with psychological ($M = 4.06$, $SD = 0.92$) versus physical ($M = 4.07$, $SD = 0.98$) symptoms of depression was found to be unrelated to likely treatment effectiveness, $F<1$.

Table 4.3

Study 4 Chi-square tests of Treatment Recommendations as a function of Symptoms

	Psychological (n = 150)		Physical (n = 151)		
	No	Yes	No	Yes	$\chi^2(1)$
Medical Doctor	65	85	50	100	3.17
Psychiatrist	41	109	61	89	5.94*
Therapist/Counselor	10	140	26	125	7.96**
Prescription Medication	121	28	117	31	0.22
Hospital	147	3	138	11	4.85*
Mental Hospital	138	10	138	9	0.05

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

Correlations between depressive symptoms, support perceptions, and stigma. Consistent with the earlier studies, higher levels of depressive symptoms were related to greater self- and other-stigma of seeking help (Table 4.4). It also appeared that greater depressive symptoms were associated with higher perceived unsupport, and lower perceptions of the availability of social support. Furthermore, as observed in Studies 1 and 2, heightened perceptions of unsupport and diminished levels of support were associated with greater stigma of help-seeking for mental health concerns.

With respect to the coping strategies, as in earlier studies, greater unsupport was related to the endorsement of emotion-focused coping strategies, as was a lack of perceived support. In addition, in keeping with Study 2, perceived support, but not unsupport was related to greater problem-focused strategies. Lastly, as in Study 2, greater emotion-centered coping was associated with heightened self- and other- stigma, whereas problem-focused coping was solely related to lower self-stigma regarding help-seeking.

Finally, to determine whether gender and history of having sought therapy should be included as covariates in subsequent analyses, these variables were regressed onto both stigma outcome variables. Although these variables were not related to other-stigma of seeking help (gender: $B = .16$, $SE = .10$, *ns*; therapy: $B = .01$, $SE = .12$, *ns*, $F(2,289) = 1.24$), gender was found to significantly predict self-stigma of seeking help (gender: $B = .21$, $SE = .11$, $p<.05$; therapy: $B = -.01$, $SE = .13$, *ns*, $F(2,289) = 2.04$). Thus, gender was maintained as a covariate in the main analyses.

Table 4.4

Study 4 Bivariate Correlations depicting relations between Depressive Symptoms, Support Perceptions, Self-Stigma, and Other-Stigma of Seeking Help

	1	2	3	4	5	6	7
1. Depressive Symptoms	---						
2. Unsupport	.16**	---					
3. Support	-.38***	-.18**	---				
Coping							
4. Emotion-Focused	-.58***	.35***	-.28***	---			
5. Problem-Focused	-.22***	.07	.22***	.16**			
6. Self-Stigma	.27***	.30***	-.23***	.39***	-.15*	---	
7. Other-stigma	.18**	.24**	-.17**	.28***	-.06	.47***	---

*$p<.05$, **$p<.01$, ***$p<.001$

Main Analysis

Hypothesis 1 predictive model. A path analysis was used to test the relations between depressive symptoms, support perceptions, and the stigma outcome variables. Hypothesis 1 analyses assessed whether the findings in Study 1 replicated. Depressive symptoms were set to predict unsupport and support from peers, which in turn, were set to predict self- and other-stigma of seeking help for mental health concerns. To control for collinearity, the mediating variables, as well as the outcome variables were allowed to covary.

Examination of the fit indices suggested that this model was a relatively good fit to the data. The chi-square value was significant (χ^2 (2) = 7.62, p<.05), and although RMSEA exceeded the criteria of .08 (RMSEA = .098, 90% CI{.03; .18}) and NNFI was slightly below .90, CFI was above the test value (NNFI = .87, CFI = .97)[3]. As seen in Figure 4.3, greater depressive symptoms were related to more unsupport and diminished levels of support from peers. Thus, in line with the social selection theory (Coyne et al., 1987, Hammen, 1991; Kaniasty & Norris, 2008), this finding reinforces the notion that individuals who are experiencing distress may be lacking the resources to take advantage of their support network. Moreover, greater perceptions of unsupport and lower perceived support were subsequently associated with greater self-stigma and a preoccupation with how others would stigmatize a person for seeking mental health help.

---

[3] Though goodness of fit indices for hypothesis 1 appeared to deviate in some respects from the acceptable cut-off criteria (namely, NNFI and RMSEA), recent literature suggests that these cut-off values be applied with caution. Rather, it is suggested that more emphasis be placed on comparisons of alternative nested models by means of chi-square difference tests (Marsh, Hau, & Wen, 2004).

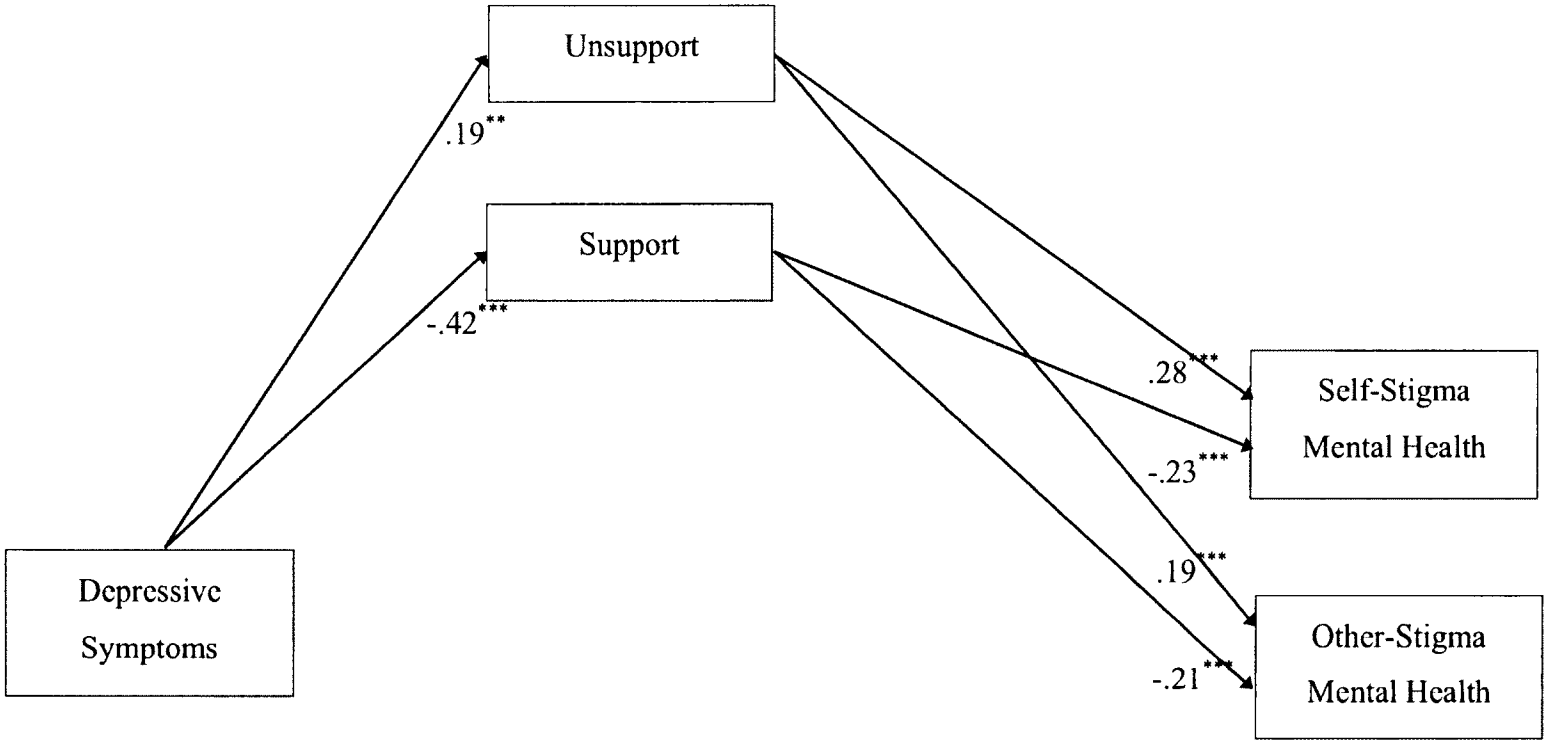

Figure 4.3. Study 4 standardized beta (β) estimates of the predictive model linking depressive symptoms, unsupport, support, and self- and other-stigma for seeking mental health help. ** $p < .01$, *** $p < .001$.

Testing indirect effects in relations between depressive symptoms and self-stigma. Examination of the indirect relations between depressive symptoms and self-stigma for mental health help-seeking revealed that, in keeping with Study 1, the confidence interval for the pathway through peer support contained zero (95% CI {-.0006; .0175} *SE* = .004). However, indirect effects for the relation between depressive symptoms and self-stigma through unsupport did not overlap with zero (95% CI {.0015; .0141} *SE* = .003), suggesting that encountering unsupport did play a role in influencing one's self-stigmatizing attitudes in seeking help for mental health concerns.

Testing indirect effects in relations between depressive symptoms and other-stigma. Examination of the confidence intervals for the relation between depressive symptoms and other-stigma for seeking help through peer support also appeared to contain zero (95% CI {-.0028; .0168} *SE* = .005). Whereas significant indirect effects were once again noted for relations through unsupport (95% CI {.0011; .0125} *SE* = .003). Such findings are consistent with the indirect effects noted in Study 1, serving to reinforce the unique influence of unsupportive interactions (Figueiredo, et al., 2004; Song & Ingram, 2002) and the role that unhelpful encounters can have, not only in undermining one's own confidence in seeking help, but also in heightening one's perceptions of how others might view the individual for the decision to seek help for mental health issues.

Essentially, these findings support the idea that elevated levels of depressive symptoms can undermine perceptions of social support, as suggested by proponents of the social selection theory (Coyne et al., 1987, Hammen, 1991; Kaniasty & Norris, 2008). Indeed others have noted that individuals contending with mental health issues do tend to

have more negative perceptions of, and negative interactions with, others (Link, Cullen, Struening, Shrout, & Dohrenwend, 1989; Mickelson, 2001). These findings reinforce the unfortunate and detrimental effect that experiencing depressive symptoms can have, not only on one's perceptions of their support network, but the ensuing consequences this can have on one's willingness to seek help[4].

Hypothesis 2. It was hypothesized that support perceptions would mediate relations between depressive symptoms and help-seeking stigma and that this mediated model would differ as a function of vignette condition (psychological or physical symptoms). In particular, it was expected that the vignette would moderate relations between support perceptions (support and unsupport) and the stigma of seeking help. Contrary to expectation, the test of the moderating effect indicated that these mediations did not appear to vary as a function of vignette condition (Tables 4.5-4.8). Thus, the presentation of symptomatology in physical rather than psychological terms did not serve to buffer against the negative attitudes associated with seeking help. Such null findings suggest that perceptions of the type of support encountered do not vary depending on the explicit salience of particular depressive symptoms (psychological vs. physical) to influence stigma.

---

[4] As in Study 1, alternative model testing was conducted in which (1) all pathways related to the mediator variables were controlled, and (2) depressive symptoms was specified as a mediator in the relations between support perceptions and stigma. Chi-square difference tests of these alternative nested models confirmed that the original hypothesized model was best suited to the data (Appendix X).

Table 4.5

Study 4 Moderating effect of Vignette Condition on the Relation between Depressive Symptoms and Self-Stigma of Seeking Mental Health Help (through Unsupport)

Relation to DV	*Coefficient*	*SE*	*t*	*p*	
Depressive Symptoms	.040	.01	3.69	.00	
Unsupport	.183	.10	1.86	.06	
Vignette Condition	-.291	.20	-1.48	.14	
Unsupport X Vignette Condition	.165	.13	1.27	.20	
Conditional indirect effect	Indirect effect Boot Indices	Boot *SE*	Boot *Z*	Boot *p*	95% CIs
Psychological (coded as 0)	.004	.00	1.26	.21	-.0006, .0117
Physical (coded as 1)	.007	.00	1.72	.09	-.0003, .0167

Table 4.6

Study 4 Moderating effect of Vignette Condition on the Relation between Depressive Symptoms and Self-Stigma of Seeking Mental Health Help (through Support)

Relation to DV	*Coefficient*	*SE*	*t*	*p*	
Depressive Symptoms	.040	.01	3.74	.00	
Support	-.378	.27	-1.40	.16	
Vignette Condition	-.717	.88	-0.81	.42	
Support X Vignette Condition	.238	.32	0.74	.46	
Conditional indirect effect	**Indirect effect Boot Indices**	**Boot *SE***	**Boot *Z***	**Boot *p***	**95% CIs**
Psychological (coded as 0)	.010	.01	1.37	.17	-.0037, .0253
Physical (coded as 1)	.004	.01	0.62	.54	-.0080, .0156

Table 4.7

Study 4 Moderating effect of Vignette Condition on the Relation between Depressive Symptoms and Other-Stigma of Seeking Mental Health Help (through Unsupport)

Relation to DV	*Coefficient*	*SE*	*t*	*p*	
Depressive Symptoms	.027	.01	2.46	.01	
Unsupport	.124	.10	1.27	.20	
Vignette Condition	-.354	.20	-1.81	.07	
Unsupport X Vignette Condition	.127	.13	0.98	.33	
Conditional indirect effect	Indirect effect Boot Indices	Boot *SE*	Boot *Z*	Boot *p*	95% CIs
Psychological (coded as 0)	.003	.00	0.88	.38	-.0021, .0102
Physical (coded as 1)	.005	.00	1.64	.10	-.0002, .0125

Table 4.8

Study 4 Moderating effect of Vignette Condition on the Relation between Depressive Symptoms and Other-Stigma of Seeking Mental Health Help (through Support)

Relation to DV	*Coefficient*	*SE*	*t*	*p*	
Depressive Symptoms	.027	.01	2.47	.01	
Support	-.149	.27	-0.55	.58	
Vignette Condition	.104	.88	0.11	.91	
Support X Vignette Condition	-.105	.32	-0.33	.74	
Conditional indirect effect	**Indirect effect**	**Boot**	**Boot**	**Boot**	**95% CIs**
	Boot Indices	***SE***	***Z***	***p***	
Psychological (coded as 0)	.003	.01	0.34	.73	-.0172, .0242
Physical (coded as 1)	.007	.01	1.22	.22	-.0029, .0182

Hypothesis 3 predictive model. Prior to testing the possibility that coping would interact with the vignette condition in predicting the stigma of seeking help, a path analysis was conducted to evaluate whether the sequential mediation model established in Study 2 between depressive symptoms, support perceptions, coping, and the stigma outcome variables was replicated. The predictive model was specified such that depressive symptoms predicted both support perceptions and coping strategies. Support perceptions were set to predict coping as well as the stigma outcome variables, and coping was set to predict only the outcome variables. As in earlier studies, related variables, including both support and coping variables, as well as the outcome variables were set to covary.

Examination of the fit indices indicated that this model was a satisfactory fit to the data. The chi-square value was significant (χ^2 (3) = 11.07, p<.05), though NNFI was slightly below .90, CFI was above .90 (NNFI = .85, CFI = .98), and RMSEA slightly exceeded the test statistic of .08 (RMSEA = .09, 90% CI{.04; .16})[3]. As illustrated in Figure 4.4, and consistent with the path model established in Study 2, levels of depressive symptoms were positively related to unsupport, whereas a negative relation was observed with social support. In turn, greater perceptions of unsupport were associated with the use of more emotion-centered coping efforts, and perceptions of positive support was associated with endorsing more problem-focused coping strategies. Once again, this is in keeping with the notion that the type of support encountered can have consequences for the way one appraises stressful events and utilizes various coping strategies (Bandura1997). Moreover, although significant relations were not observed for the

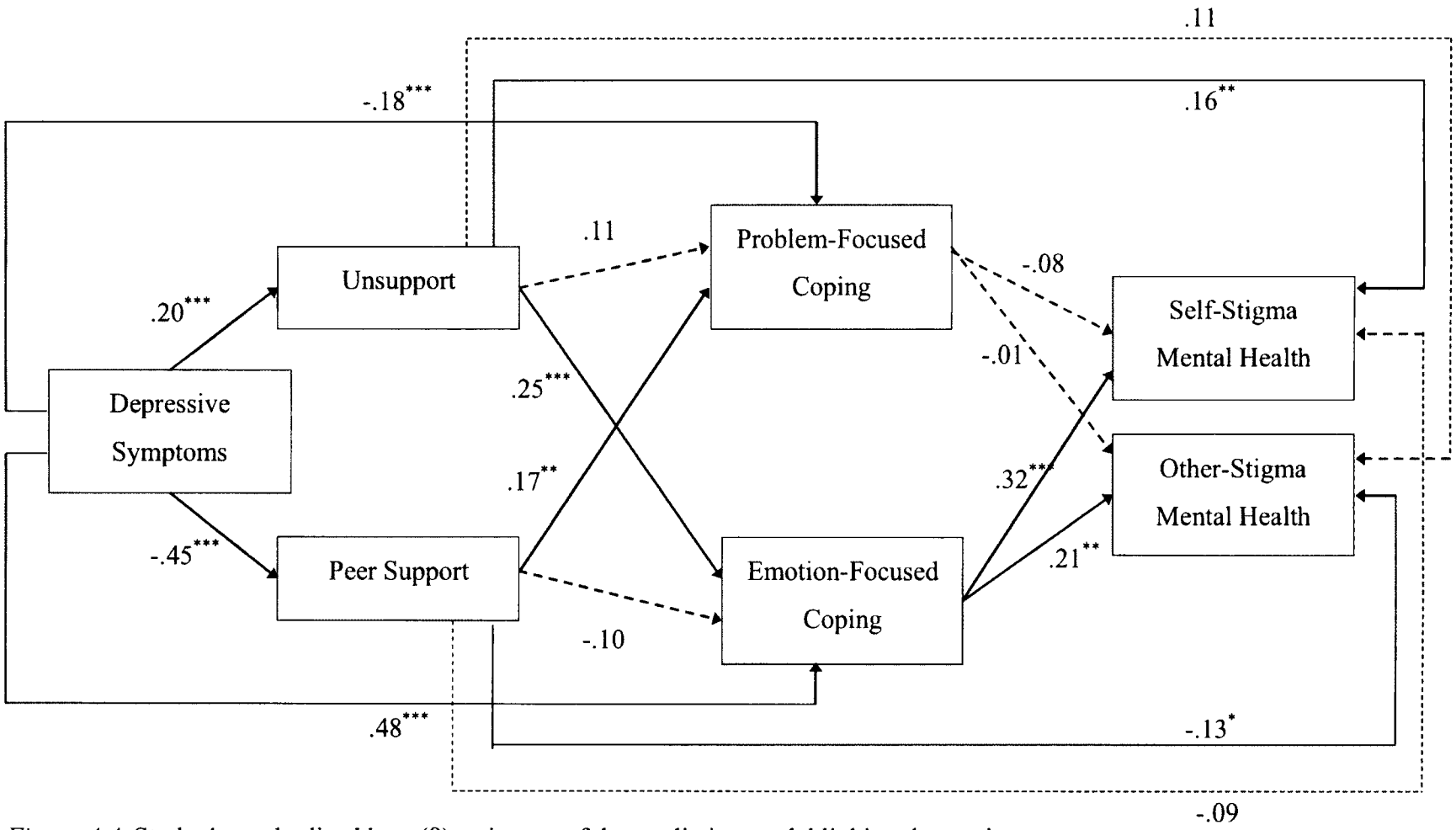

Figure 4.4. Study 4 standardized beta (β) estimates of the predictive model linking depressive symptoms, unsupport, peer support, emotion-focused and problem-focused coping and self- and other-stigma for seeking mental health help. *Dashed arrows indicate non-significant relationships.* * $p < .05$, ** $p < .01$, *** $p < .001$

pathway between problem-focused coping and self-stigma, in line with earlier findings, emotion-focused coping was associated with heightened stigmatizing perceptions of seeking mental health help.

Testing indirect effects in relations between depressive symptoms and self-stigma. Examination of the confidence interval for tests of sequential effects of unsupport and emotion-focused coping did not overlap with zero (95% CI{.0005; .0055} *SE* = .001). Thus, as in Study 2, this finding suggests that, particularly in the presence of emotional vulnerability, encountering unsupportive interactions can have profound implications for the use of less effective emotion-focused coping efforts. Furthermore, emotion-centered coping efforts have been implicated in more negative perceptions of self-worth (Mullis & Chapman, 2010). Thus, it is not surprising that employing more emotion-focused coping strategies was associated with greater self-stigmatizing attitudes for seeking help.

Since the zero-order correlations indicated a significant relation between problem-focused coping and self-stigma, and as a significant indirect effect was observed in Study 2, the sequential effects of support and problem-focused coping was tested here as well. Consistent with Study 2, the confidence intervals also did not appear to contain zero (95% CI{.0005; .0054} *SE* = .001), suggesting a total indirect effect. This finding reaffirms the notion that such individuals are more likely to actively engage in efforts to mitigate their situation (Miller et al., 1996), as opposed to engaging in more ruminative and avoidant coping efforts.

Testing indirect effects in relations between depressive symptoms and other-stigma. As in Study 2, significant indirect effects were observed when other-stigma for

seeking help was considered the outcome variable. More specifically, confidence intervals for the indirect effect of unsupport and emotion-focused efforts did not overlap with zero (95% CI{.0002; .0032} *SE* = .001). This reaffirms the ripple effect that affective vulnerabilities can have on, not only one's perceptions of support and coping efforts, but also the implications this can have on one's attitudes towards seeking help[1].

Hypothesis 5. It was hypothesized that encountering diminished levels of support or greater levels of unsupport would be associated with employing more emotion-focused coping efforts, which would in turn be related to greater perceptions of the stigma of seeking help. Furthermore, it was expected that the vignette condition, notably, the presentation of psychological symptoms, would exacerbate this mediated model. A series of moderated mediation analyses, controlling for depressive symptoms revealed that, for the most part, the presentation of the vignette did not yield any differences (see Tables 4.9, 4.10, 4.12 – 4.16).

In contrast to the analyses of emotion-focused coping however, it appeared that there was a significant moderated effect when problem-focused coping was considered the mediator in relations between perceptions of support and self-stigma of seeking mental health help (see Table 4.11). More specifically, the mediation effect was significant (i.e., confidence intervals did not appear to contain zero) among those

---

[1] As in Study 2, alternative model testing was conducted in which (1) all pathways related to the coping variables were controlled, (2) all pathways related to the support variables were controlled, and (3) coping strategies were specified as the first mediators and support perceptions specified as the second mediators in relations between depressive symptoms and stigma. Chi-square difference tests of these alternative nested models confirmed that the original hypothesized model was best suited to the data (Appendix Y)

individuals who were presented with the vignette condition in which psychological symptoms were emphasized, whereas the mediation effect was not significant when presented with the vignette in which physical symptoms were emphasized. This suggests that, in an environment where individuals perceived diminished support from their social network, viewing depressive symptoms as psychologically based and endorsing lower levels of problem-focused coping can serve to heighten self-stigmatizing attitudes towards seeking help. More optimistically, however, and in line with findings established in Study 3, such a sequence of relations was not found to be significant when depressive symptoms were framed as physically rooted (see Figure 4.5 for a visual representation of the vignette condition moderating relations between problem-focused coping and self-stigma of seeking help). That a significant mediation manifested only in the presence of social support and problem-focused coping suggests the critical role that positive factors can play in mitigating the stigmatizing attitudes associated with seeking help, particularly with respect to one's private preoccupations with seeking mental health help. It should be noted that alternative models were examined in which support perceptions were considered the mediator; however examination of the conditional indirect effects revealed no significant moderated mediations.

Taken together, it appears that the framing of depressive symptoms can serve a role in altering one's perceptions of seeking help. Thus, though encountering unsupportive social interactions and endorsing less effective coping efforts was related to heightened stigma of help-seeking, it seems that the role of explanatory models of mental illness might be a promising avenue to explore as efforts to diminish stigmatizing attitudes and

encourage help-seeking for mental illness continue to be important factors in facilitating the treatment of mental illness.

Table 4.9

Study 4 Moderating effect of Vignette Condition on the Relation between Support and Self-Stigma of Seeking Mental Health Help (through Emotion-focused Coping)

Relation to DV	*Coefficient*	*SE*	*t*	*p*	
Support	-.178	.16	-1.10	.27	
Emotion-focused Coping	.380	.10	3.70	.00	
Vignette Condition	-.545	.27	-2.05	.04	
Emotion-focused Coping X Vignette Condition	.227	.13	1.77	.08	
Conditional indirect effect	Indirect effect Boot Indices	Boot *SE*	Boot *Z*	Boot *p*	95% CIs
Psychological (coded as 0)	-.077	.04	-1.93	.05	-.1635, .0068
Physical (coded as 1)	.005	.00	1.64	.10	-.0002, .0125

Table 4.10

Study 4 Moderating effect of Vignette Condition on the Relation between Unsupport and Self-Stigma of Seeking Mental Health Help (through Emotion-focused Coping)

Relation to DV	*Coefficient*	*SE*	*t*	*p*	
Unsupport	.187	.07	2.84	.00	
Emotion-focused Coping	.435	.10	4.14	.00	
Vignette Condition	-.470	.26	-1.77	.08	
Emotion-focused Coping X Vignette Condition	.188	.13	1.46	.15	
Conditional indirect effect	Indirect effect Boot Indices	Boot *SE*	Boot *Z*	Boot *p*	95% CIs
Psychological (coded as 0)	.088	.03	3.31	.00	.0413, .1452
Physical (coded as 1)	.126	.03	3.61	.00	.0642, .2000

Table 4.11

Study 4 Moderating effect of Vignette Condition on the Relation between Support and Self-Stigma of Seeking Mental Health Help (through Problem-focused Coping)

Relation to DV	*Coefficient*	*SE*	*t*	*p*	
Support	-.093	.16	-0.56	.57	
Problem-focused Coping	- 424	.10	-4.10	.00	
Vignette Condition	-.805	.36	-2.24	.03	
Problem-focused Coping X Vignette Condition	.291	.14	2.01	.05	
Conditional indirect effect	Indirect effect Boot Indices	Boot *SE*	Boot *Z*	Boot *p*	95% CIs
Psychological (coded as 0)	-.152	.06	-2.41	.02	-.2893, -.0428
Physical (coded as 1)	-.050	.05	-1.04	.30	-.1566, .0328

Table 4.12

Study 4 Moderating effect of Vignette Condition on the Relation between Unsupport and Self-Stigma of Seeking Mental Health Help (through Problem-focused Coping)

Relation to DV	*Coefficient*	*SE*	*t*	*p*	
Unsupport	.194	.07	2.96	.00	
Problem-focused Coping	- 424	.10	-4.10	.00	
Vignette Condition	-.805	.36	-2.24	.03	
Problem-focused Coping X Vignette Condition	.291	.15	2.01	.05	
Conditional indirect effect	**Indirect effect Boot Indices**	**Boot *SE***	**Boot *Z***	**Boot *P***	**95% CIs**
Psychological (coded as 0)	-.011	.02	-0.56	.58	-.0561, .0270
Physical (coded as 1)	-.003	.01	-0.35	.73	-.0230, .0134

Table 4.13

Study 4 Moderating effect of Vignette Condition on the Relation between Support and Other-Stigma of Seeking Mental Health Help (through Emotion-focused Coping)

Relation to DV	*Coefficient*	*SE*	*t*	*p*	
Support	-.147	.17	-0.86	.39	
Emotion-focused Coping	-.261	.11	2.40	.02	
Vignette Condition	-.338	.27	-1.23	.22	
Emotion-focused Coping X Vignette Condition	.069	.13	0.52	.61	
Conditional indirect effect	Indirect effect Boot Indices	Boot *SE*	Boot *Z*	Boot *p*	95% CIs
Psychological (coded as 0)	-.065	.04	-1.63	.10	-.1550, -.0031
Physical (coded as 1)	-.081	.04	-1.99	.05	-.1716, -0140

Table 4.14

Study 4 Moderating effect of Vignette Condition on the Relation between Unsupport and Other-Stigma of Seeking Mental Health Help (through Emotion-focused Coping)

Relation to DV	*Coefficient*	*SE*	*t*	*p*	
Unsupport	.137	.07	2.00	.05	
Emotion-focused Coping	.261	.11	2.40	.02	
Vignette Condition	-.338	.27	-1.23	.22	
Emotion-focused Coping X Vignette Condition	.069	.13	0.52	.61	
Conditional indirect effect	**Indirect effect Boot Indices**	**Boot *SE***	**Boot *Z***	**Boot *p***	**95% CIs**
Psychological (coded as 0)	.053	.25	2.13	.03	.0075, .1043
Physical (coded as 1)	.066	.02	2.66	.01	.0229, .1199

Table 4.15

Study 4 Moderating effect of Vignette Condition on the Relation between Support and Other-Stigma of Seeking Mental Health Help (through Problem-focused Coping)

Relation to DV	*Coefficient*	*SE*	*t*	*p*	
Support	-.161	.17	-0.94	.34	
Problem-focused Coping	- 160	.11	-1.49	.14	
Vignette Condition	-.531	.37	-1.42	.16	
Problem-focused Coping X Vignette Condition	.136	.15	0.90	.37	
Conditional indirect effect	Indirect effect Boot Indices	Boot *SE*	Boot *Z*	Boot *p*	95% CIs
Psychological (coded as 0)	-.060	.05	-1.20	.23	-.1721, .0222
Physical (coded as 1)	-.007	.04	-0.21	.83	-.0767, .0668

Table 4.16

Study 4 Moderating effect of Vignette Condition on the Relation between Unsupport and Other-Stigma of Seeking Mental Health Help (through Problem-focused Coping)

Relation to DV	*Coefficient*	*SE*	*t*	*p*	
Unsupport	.140	.07	2.01	.04	
Problem-focused Coping	- 160	.11	-1.49	.14	
Vignette Condition	-.531	.37	-1.42	.16	
Problem-focused Coping X Vignette Condition	.136	.15	0.90	.37	
Conditional indirect effect	Indirect effect Boot Indices	Boot *SE*	Boot *Z*	Boot *p*	95% CIs
Psychological (coded as 0)	-.005	.01	-0.50	.62	-.0293, .0113
Physical (coded as 1)	-.001	.01	-0.10	.92	-.0121, .0104

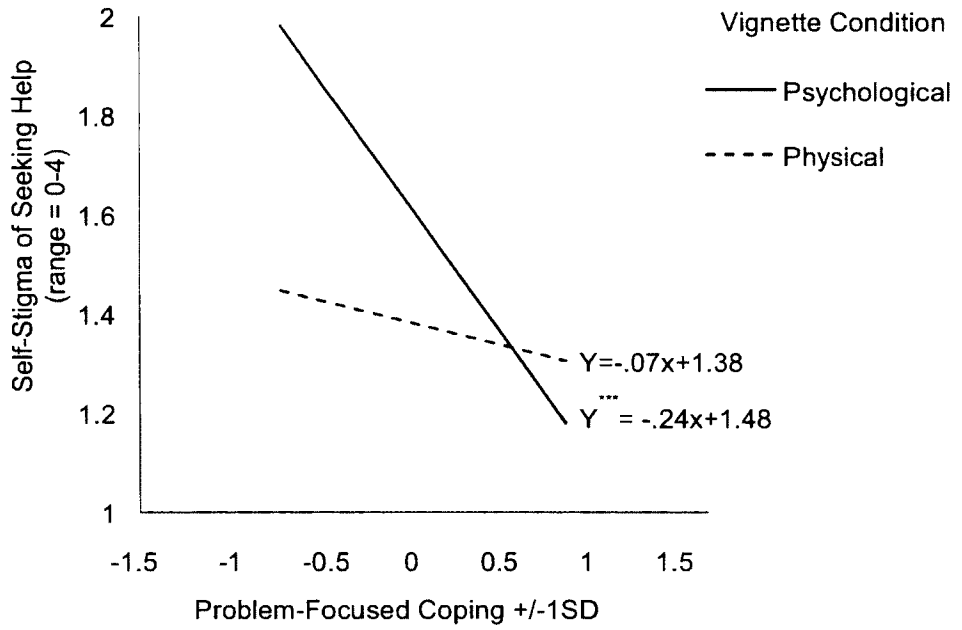

Figure 4.5. Study 4 moderating effect of vignette condition on the relation between problem-focused coping (+/-1SD) and self-stigma for seeking mental health help.

General Discussion

Stigma is an insidious phenomenon with far-reaching consequences, infringing on one's personal, social, and economic worth (Corrigan & Watson, 2002). Moreover, the pervasive stigma of mental illness, combined with the stigma of help-seeking, whether perceived as emanating from others or internalized into the self-concept, can pose barriers to access to mental health care. In light of this, it has been suggested that the courage to seek help might be the most significant challenge in contending with one's mental illness (Prior, 2011). Across a series of four studies the antecedents of the stigma associated with seeking help were investigated.

Unfortunately, experiencing psychological distress can have consequences for how such individuals view their social context, thereby leading to negative perceptions of, and interactions with, others (Coyne et al., 1987, Hammen, 1991; Kaniasty & Norris, 2008; Link, et al., 1989; Mickelson, 2001). Indeed, supporting this line of reasoning, it was established that among individuals experiencing depressive affect, encountering unsupportive interactions were more likely, and these exchanges served to exacerbate their unwillingness to seek help (Study 1, Study 4). Yet, this finding did not generalize across all support sources. As others have suggested (Helsen et al., 2000; Meadow et al., 2006), the role of different sources of support is important to consider. As the present investigation comprised first year university students it was not surprising that the role of peer support and unsupport on subsequent perceptions of the stigma associated with help-seeking surpassed that of parental support. In fact, the role of peers has been identified as a significant influence in the utilization of mental health services (Kranke, Guada, Kranke, & Floersch, 2012), thereby affirming the findings of the present research.

It will be recalled that students transitioning from high-school to university can be subject to immense stress (Berman & Sperling, 1991; Bewick et al., 2010; Gall et al., 2000), as they contend with the change in responsibilities and expectations of a university life. The high levels of stress may serve as a trigger, leaving those students who are vulnerable at greater risk for developing mental illnesses (Price et al., 2006). In this regard, if students are just as hesitant to get help when they encounter academic problems as they are for mental health issues, their success in overcoming the challenges might further contribute to the onset of depression. With this in mind, it was considered important to determine if participants would view seeking help for academic issues as equally stigmatizing as seeking help for mental health concerns. In line with initial expectations, general attitudes towards mental health help-seeking were more negative, compared to help-seeking for academic concerns (Eisenberg et al., 2009; Tinsley et al., 1982), suggesting that the problem domain does exert an influence on one's stigmatizing attitudes toward help-seeking. However, given that this was an environment in which academic goals are central and students are keen to establish their identity as young scholars, it should not be surprising that the perception of fellow students could undermine help-seeking in key areas. Indeed, depressive affect did result in decreased perceptions of social support and more encounters of unsupportive interactions. Such negative social perceptions were, in turn, found to exacerbate perceived stigma associated with either academic or mental health help-seeking.

It has been suggested that perceiving a lack of social support or encountering unsupport can evoke emotions associated with feelings of shame and self-blame when an individual is dealing with a problem (Griffiths et al., 2012), perhaps instigating less

adaptive forms of coping. In keeping with this notion that perceptions of social support can have implications for the type of coping to ensue (Bigatti et al., 2010; Dunkel-Schetter et al., 1987; Dunkley et al., 2000), coping strategies was found to subsequently account for the relations between support perceptions and the stigma towards seeking help for mental health issues (Study 2, Study 4). More specifically, in line with past research demonstrating that those who were more mentally prepared to handle stressors were also more likely to accept their prognosis and utilize active coping strategies (Miller et al., 1996), the present research established that, among individuals who presented with fewer depressive symptoms, greater perceptions of support were expressed, which in turn was linked to stronger endorsements of problem-focused coping. These coping efforts, which include information seeking, reframing the situation as one that can be managed and mobilizing support networks, were, not surprisingly associated with less stigmatizing attitudes towards seeking help. In sharp contrast, endorsing more emotion-centered coping efforts has been associated with diminished levels of self-worth (Mullis & Chapman, 2010) and a preoccupation for how others may judge oneself (Seigler-Hill et al., 2008). Indeed, in the present research, the unsupportive social encounters that were associated with depressive affect were also predictive of the propensity to engage in more emotion-focused coping strategies, entailing for example, rumination, wishful thinking, self-blame, and denial. This less constructive coping orientation was subsequently associated with heightened self- and other- stigma of mental health help-seeking (Study 2, Study 4). It is as though all of their resources and skills conspire against depressed individuals, so that their ability to get the help they need becomes an ever more remote outcome of their situation.

In addition to understanding the antecedents associated with the stigma of seeking mental health help, a focus of this research was to gain some insight into factors that might contribute to diminishing the stigma associated with help-seeking for mental health issues, and in particular, depression. It had been noted that the stigma associated with behavioral and physical disorders is not as great as that compared to disorders that are more psychologically rooted (Looper & Kirmayer, 2004; McManus, Stubbings, & Martin, 2006). Applying this line of reasoning, it was considered whether emphasizing the physical rather than affective symptoms associated with depressive symptomatology might also influence stigmatizing attitudes. In fact, when exposed to a vignette in which depressive symptoms were depicted as physically rooted, participants' depressive symptoms were *not* predictive of perceiving greater stigma of mental health help-seeking, whereas this relation was evident when the emotional aspects of depressive symptoms were made salient (Study 3; see also Ragruam et al., 1996). The heightened level of stigma to seek help, when the causal basis of depression was expressed in terms of psychological, but not physical, symptoms supports recent findings by other researchers who have noted that the public is less willing to seek out help for mental illnesses compared to medical illnesses, in spite of recognizing mental illnesses to be more burdensome (Smith, Damschroder, Kim, & Ubel, 2012). The authors further suggest that these findings mirror healthcare spending, reflecting the extent to which mental health care is neglected across public and private institutions (Smith et al., 2012). In this regard, reframing individuals' understanding of the symptoms of depression might be a key tool to redirect one's own attitudes towards mental illness and to facilitate access to healthcare.

The effect of how symptoms of depression are construed was also evident in terms of its role in buffering relations between coping strategies and the stigma of seeking mental health help. More specifically, in addition to establishing the intervening role that coping played in the relations between support perceptions and the stigma associated with seeking help, there appears to be an upside to presenting depressive symptoms as physically rooted, particularly in the presence of a positive support network and employing more problem-focused coping efforts (Study 4). In other words, above and beyond their depressive symptoms, it appeared that, in a situation in which individuals felt a lack of support, perceiving depressive symptoms as psychologically rooted and utilizing diminished levels of problem-oriented coping served to intensify their self-stigmatizing attitudes towards seeking mental health help; whereas these relations were not evident when physical symptoms were made salient. This said, in the presence of emotion-focused coping and encountering unsupportive interactions, how symptoms were presented did not influence attitudes towards seeking help. Thus, a focus on physical symptoms might have elicited appropriate behaviors among those individuals with the social resources and coping skills to address them, but did not alter the negative and less function orientated individuals who appeared to be in the most vulnerable situation. This finding highlights how imperative one's social network can be in facilitating, not only the coping process, but also the amenability to accessing mental health treatment, and how difficult it is to overcome an impoverished support system (Arria et al., 2011). It has been suggested that a reconstrual of depression as a physical illness is not only "valid", but useful in facilitating society's ability to view depression

"as not an innate sign of human weakness, but part of the human experience" (p. 49, Wilson & Wilkerson, 2011).

This said, the inability to elicit any changes among those who appeared to be the most vulnerable (i.e., individuals who were highly depressed, encountered unsupport, and endorsed counter-productive coping strategies) might suggest that, irrespective of the causal basis of depressive symptoms, being confronted with such maladaptive psycho-social factors is sufficient enough to deter the very individuals most in need of help, from gaining access to it. The benefits of employing a more constructive coping orientation are evident in other research (e.g. Miller et al., 1996). In this respect, perhaps providing opportunities for individuals to adopt more positive coping skills, for example through early education initiatives, coupled with a reframing of depression, the distance between mental illness and help-seeking may be minimized.

Limitations

Although this program of research contributes to the literature in numerous ways, the findings of these studies are, of course, not without their limitations. Firstly, that these data were primarily correlational in nature deserves mention. Based on proponents of the social selection theory (Coyne et al., 1987; Hammen, 1991; Kaniasty & Norris, 2008) it was conceivable that individuals who were experiencing psychological distress (i.e., depressive symptoms) were more likely to perceive greater levels of unsupportive interactions and lower levels of support from their social network. In turn, these reduced support perceptions could have an influence on, not only one's coping efforts, but also ultimately their attitudes towards seeking mental health help. The reciprocal nature of depressive symptoms and perceptions of support, however, has been widely noted (Sacco

& Yanover, 2006; Simpson et al., 2002; Turner, 1981), giving rise to the possibility that encountering lower levels, and negative aspects, of support might be a precursor for aggravating depressive symptoms (Yang et al., 2010; Zimmerman et al., 2000), thereby influencing one's unwillingness to seek help. In an effort to disentangle some of the directional relations, alternative models were explored. Indeed, across the majority of studies, it was demonstrated that the hypothesized model was the best fit to the data, even in the presence of the moderating role of the vignette condition, thus lending support to the suggestion that elevated levels of depressive symptoms can themselves undermine perceptions of social support.

In several of the studies (Study 1, Study 2), participants were recruited and data was collected by way of the internet. Online studies have become an increasingly popular mode for participant recruitment and with this come the implication of not only a self-selected sample, but also selection bias regarding the type of person who might be more inclined to participate in online studies. While not denying that this type of study was subject to a self-selection bias, this issue is equally problematic for face-to-face studies in which participants must sign up of their own volition. In fact, as demonstrated in other research (Booth-Kewley, Edwards, & Rosenfeld, 1992; Sarrazin, Hall, Richards, & Carswell, 2002), there did not appear to be any significant differences between the first two and latter two studies in the present research.

Participants in Study 4 responded to a questionnaire in a group context and in the presence of the researcher, possibly lending to the tenuous findings regarding the vignette manipulation. It is possible that demand characteristics exerted some influence on their willingness to respond to questions candidly, thereby diminishing some of the effects of

the manipulation. Indeed, it has been suggested that in situ studies carry more social pressure and present the risk of coercion (Wilt, Condon, & Revelle, 2012). In addition, increasing media coverage and the prevalence of anti-stigma campaigns have increased the public's awareness of mental health issues, which hopefully results in positive change, but could also result in 'politically correct' behaviors when there are strong demand characteristics. In light of this, investigating issues related to stigma and mental illness ought to be examined in more subtle ways, as has been the case in other studies where effects of discrimination have been sought (e.g., Foster & Tsarfati, 2005; Singletary & Hebl, 2009). Indeed, considerations of other forms of discrimination involving for example, gender, ethnicity, sexual orientation, recognize that blatant expressions of discrimination have become relatively uncommon, and that such views are more evident through symbolic or 'modern' expression (e.g., opposition to employment accommodations, or viewing the group as too demanding).

The decision to collapse across the social support measures (between friend support and partner support) must also be acknowledged. It cannot be denied that the influence of partners can be immense, particularly among those who have been in a dedicated relationship for a substantial amount of time, entered into a relationship later in life (Katz & Beach, 1997), or in a context outside of university where individuals are not immersed among their peers. However, there is evidence to suggest that, among young adults, there exists little difference in the amount of support perceived by friends compared to that of partners (Day & Livingstone, 2003; Meeus, Branje, van der Valk, & de Wied, 2007). In this regard, for reasons of maximizing power and maintaining

consistency across other measures, it was considered appropriate to collapse across the two support resources.

The distribution of gender across the samples in the present study must also be acknowledged. Across all four studies it is clear that a gender bias was present, such that the majority of participants comprised of female students. Although it would be ideal to have received participation equally from males and females, the skewed distribution is not a phenomenon that is novel to social science research, and therefore it must be clarified that this is a bias many researchers must contend with in recruiting and collecting data from participants.

As mentioned throughout the procedure of these studies, participants who expressed thoughts of suicide ideation on the Beck Depression Inventory (Beck & Beck, 1972) were flagged and offered an additional distress debriefing. In our experience in carrying out this procedure, participants tended to express relief at the opportunity to discuss thoughts that, if it were not for our protocol to intervene, may have been repressed and perhaps escalated further. With this in mind, perhaps integrating this procedure into the initial informed consent ought to be considered, as this may be helpful in better accessing those students in the future who are contemplating harming themselves.

Lastly, recruiting from a university pool has generally been frowned upon since in many studies this is seen as a sample of convenience. However, in the present research, university students were the target sample, representing an important and vulnerable population in its own right as they transition to a developmentally challenging stage of their life (Hunt & Eisenberg, 2010). As previously noted, the majority of lifetime mental

illnesses first appear by age 24 (Kessler et al., 2005). Moreover, among young adults in Canada, and among university students, suicide is the leading cause of death (Kidder, Stein, & Fraser, 2000), perhaps owing to the increasing intensity of their depressive symptoms and the reluctance to engage in the help-seeking process. Thus, as early intervention among this population is imperative in treating mental illness, conducting research with this sample was in fact appropriate. Notwithstanding this rationale, it remains to be seen how others might perceive the stigma towards seeking mental health help who exist outside of academic institutions. Young adults who are outside of university (e.g., working) have reported more mild levels of depression (Bewick et al., 2010; Roberts et al., 2000), perhaps suggesting that it is the additive factor of being faced with multiple stressors (i.e., stress of transition, academic stress, mental illness symptoms) that is further aggravating the onset of depression. In this sense, the implementation of initiatives to preempt the onset of clinical levels of depression within the academic institution might be a critical component of facilitating these young adults to overcome their mental health (and academic) challenges.

Implications of the present research

Prior to 2007, Canada was identified as the only G8 country without a mental health strategy (Kirby, 2008). In an effort to overcome this shortcoming and to ensure that mental health issues came to the forefront of research initiatives, policy changes, and treatment resources, the Mental Health Commission of Canada was established and three strategic initiatives were subsequently devised (Kirby & Keon, 2006). The first of these consisted of building a national strategy to contend with mental health issues and establish uniform principles. The second initiative, knowledge exchange, was identified

as a platform for various individuals, ranging from consumers to policy makers, and researchers to exchange valuable information with the goal of disseminating best practice information. Finally, the third initiative comprised a strategic campaign to contend with the stigma of mental health. Stigma is a social phenomenon embedded in societal structures. Thus, the relationships between the individual and health care professionals, between family and community members, their reactions to mental illness, and attitudes toward seeking help are important factors in breaking down barriers of mental health stigma.

In light of the significant attention mental illness and stigma have garnered, the findings of the present research may have implications not only on an individual level, but also with respect to how mental health campaigns might approach anti-stigma initiatives. It seems clear that the public, and most notably young adults, is aware of the significant and detrimental consequences of untreated mental illness (Eisenberg, Speer, & Hunt, 2012), and has an understanding of the factors that are associated with mental illness (i.e., stressful circumstances, genetics; Study 3, Study 4). Thus, that the costs ($51 billion per annum in Canada, Wilson & Wilkerson, 2011) as well as the prevalence (Hunt & Eisenberg, 2010; WHO, 2004) of mental illness continue to surge is perplexing. In fact, in Canada, depression has been cited as the country's most burdensome public health crisis, said to have undermined public servants' "innovation, productivity, quality of service," and "policy-making" (May, 2010). In this regard, presenting the tools to access appropriate healthcare treatment *before* mental illness sets in could make an immense difference across the lifespan of an individual and help to deescalate the incredible financial burden associated with healthcare.

Although colleges and universities present students with a range of support domains to facilitate the help-seeking process, it remains to be seen how effective campus interventions and policies are on improving help-seeking behaviour (Hunt & Eisenberg, 2010). With this in mind, many universities are currently collaborating to combat the problem of mental illness among university students. For example the Mental Health Commission of Canada (2007) recently launched *Opening Minds,* the largest anti-stigma/anti-discrimination program in Canadian history. *Opening Minds* is collaborating with varying institutes across Canada, including universities, to identify and evaluate the effectiveness of current anti-stigma initiatives. At the University of Calgary, the 'Mind' course brings individuals living with mental illness in contact with second year medical students and provides them with the opportunity to learn about, diagnose, and manage clinical presentations. A joint program across several pharmacy schools (Dalhousie, Memorial, St. John's, Saskatchewan) has also run two phases of their program designed to increase knowledge and understanding of mental illness and provide them with skills to interact with such individuals. Moreover, at the youth level, an online 'MindYourMind' program has been initiated to grade 11 students to provide them with accurate knowledge about mental illness.

While targeting young professionals who will be working with patients of mental illness in the future offers promising outcomes, university-level initiatives to break down help-seeking barriers to *any* student who may be living with mental illness ought to be integrated. For example, the findings from the current program of research highlight the importance of peer support and coping strategies. Thus, university-funded initiatives might be implemented to support the application of these adaptive coping strategies in

concert with reshaping the causal basis of depressive symptoms to promote more optimistic attitudes towards seeking mental health help. In particular, focusing on the first year cohort would also offer opportunities to integrate such programs within a context where institutional interventions could be cautiously implemented.

Even prior to entering university, early mental health education initiatives akin to sexual education programs could have a profound influence on dispelling the stigma of mental illness. Studies have demonstrated that educational sessions can significantly improve the knowledge and attitudes about mental illness (Pinfold, Stuart, Thornicroft, Arboleda-Flórez, 2005; DeSocio, Stember, & Schrinsky, 2006). Extending these educational sessions, perhaps providing a reconstrual of the framing of mental illness symptoms, such as depression, and encouraging the use of adaptive, problem-oriented coping strategies to contend with stressful situations, could further shift the focus of the negative attitudes of mental illnesses and foster an environment where it is more acceptable to initiate the help-seeking process.

Conclusion

The present research uniquely contributes to an area of help-seeking literature by joining together the theoretical approaches of social selection (Kaniasty & Norris, 2008), stress and coping (Folkman & Lazarus, 1980), and explanatory models of mental illness to predict both the self-stigma and stigma held by others in seeking help for mental health issues. Altogether, the findings across the four studies suggest that, in spite of the negative relation that exists between heightened levels of depressive symptoms and the stigma of seeking help for mental health concerns, the presence of positive support and fostering more problem-focused coping strategies can serve to diminish the stigma

towards seeking help. Perhaps of most significance is the contribution of explanatory models of mental illness to these relations. In particular, it appeared that expressing depressive symptoms as comprising mainly physical symptoms diminished stigmatizing attitudes towards seeking help, thereby encouraging the help-seeking process. Though the manipulation presented in the present research did little to access those who are faced with the greatest obstacles in overcoming their stigma towards seeking mental health help (i.e., those who were most depressed, coupled with perceptions of negative support and less than ideal coping strategies), given that effects were elicited among others, it appears that this line of reasoning is a worthwhile avenue to pursue. Indeed, capturing those students who were at mild to moderate levels of depression, might be most beneficial as this could serve to prevent such individuals from spiraling out of control and developing clinical levels of depression. Ultimately, the relevance of the current findings ought not be undermined. That is to say, although depression is projected to be the leading cause of disability by 2030 (WHO, 2004), in an environment where a system of support facilitates effective coping, this combined with a reconstrual of mental illness symptoms, might raise the possibility that seeking out professional help to contend with mental illness becomes the norm, not the exception.

References

Alexitch, L.R. (2002). The role of help-seeking attitudes and tendencies in students' preferences for academic advising. *Journal of College Student Development, 43,* 5-19.

Alexitch, L.R. (2006). Help-seeking and the role of academic advising in higher education. In S.A. Karabenick & R.S. Newman (Eds.), *Help seeking in academic setting: Goals, groups, and contexts* (pp. 175-202). Mahwah, NH: Lawrence Erlbaum Associates Publishers.

American College Health Association. (2008). American college health association-national college health assessment spring 2008 reference group data (abridged). *Journal of American College Health, 57,* 477-488.

Andrews, G., Issakidis, C, & Carter, G. (2001). Shortfalls in mental health service utilization. *British Journal of Psychiatry, 179,* 417-425. Doi: 10.1192/bjp.179.5.417

Angermeyer ,M.C., Holzinger, A., & Matschinger, H. (2009). Mental health literacy and attitude towards people with mental illness: a trend analysis based on population surveys in the eastern part of Germany. *European Psychiatry, 24*, 225-232.

Arria, A.M., Winick, E.R., Garnier-Dykstra, L.M., Vincent, K.B., Caldeira, K.M., Wilcox, H.C., & O'Grady, K.E. (20111). Help seeking and mental health utilization among college students with a history of suicide ideation. *Psychiatric Services, 62,* 1510-1513.

Bandura, A. (1997). *Self-efficacy:The exercise of control.* New York: Freeman.

Banks, S. M. & Kerns, R. D. (1996). Explaining high rates of depression in chronic pain: A diathesis-stress framework. *Psychological Bulletin, 119*, 95-110.

Barney, L.J., Griffiths, K.M., & Banfield, M.A. (2011). Explicit and implicit information needs of people with depression: A qualitative investigation of problems reported in an online depression support forum. *BioMed Central, 11,* 88-98.

Barney, L.J., Griffiths, K.M., Christensen, H., & Jorm, A.F. (2009). Exploring the nature of stigmatizing beliefs about depression and help-seeking: Implications for reducing stigma. *BioMed Central Public Health, 9,* 61-71. Doi: 10.1186/1471-2458-9-61

Beck, A.T., & Beck, R.W. (1972). Screening depressed patients in family practice: A rapid technic. *Postgraduate Medicine, 52,* 81-85.

Ben-Porath, D.D. (2002). Stigmatization of individuals who receive psychotherapy: An interaction between help-seeking behavior and the presence of depression. *Journal of Social and Clinical Psychology, 21,* 400-413.

Berman, W.H., & Sperling, M.B. (1990). Parental attachment and emotional distress in the transition to college. *Journal of Youth and Adolescence, 20,* 427-440.

Bewick, B., Koutsopoulou, G., Miles, J., Slaa, E., & Barkham, M. (2010). Changes in undergraduate students' psychological well-being as they progress through university. *Studies in Higher Education, 35,* 633-645. Doi:10.1080/03075070903216643

Biddle, L., Donovan, J., Sharp, D. and Gunnel, D. (2007) Explaining non-help-seeking amongst young adults with mental distress: a dynamic interpretive model of illness behaviour, *Sociology of Health and Illness*, 29, 7, 983–1002.

Bigatti, S.M., Wagner, C.D., Lundon-Lam, J.R., Steiner, J.L., & Miller, K.D. (2010). Depression in husbands of breast cancer patients: Relationships to coping and

social support. *Support Care Cancer, 19,* 455-466. Doi: DOI 10.1007/s00520-010-0835-8.

Booth-Kewley, S., Edwards, J. E., & Rosenfeld, P. (1992). Impression management, social desirability, and computer administration of attitude questionnaires: Does the computer make a difference? *Journal of Applied Psychology, 77,* 562-566.

Brown, T. A. (2006). Confirmatory factor analysis for applied research. New York: Guilford Press.

Carver, C.S., Pozo, C., Harris, S.D., Noriega, V., Scheier, M.F., Robinson, D.S., ..., & Clark, K.C. (1993). How coping mediates the effect of optimism on distress: A study of women with early stage breast cancer. *Journal of Personality and Social Psychology, 65,* 375-390.

Chandra, A., & Minkowitz, C.S. (2006). Stigma starts early: Gender differences in teen willingness to use mental health services. *Journal of Adolescent Health, 38,* 754.e1-754.e8, doi: 10.1016/j.jadohealth.2005.08.011

Cohen, S., & Wills, T.A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98,* 310-357.

Cole, B., Matheson, & Anisman, H. (2007). Academic performance and well-being: The moderating role of ethnic identity and social support. *Journal of Applied Social Psychology, 37,* 592-615.

Corrigan, P.W., (2000). Mental health stigma as social attribution: Implications for research methods and attitude change. *American Psychological Association, D12,* 48-67.

Corrigan, P.W. (2004). How stigma interferes with mental health care. *American*

Psychologist, 59, 614-625, doi: 10.1037/0003-066X.59.7.614

Corrigan, P. W., Edwards, A., Green, A., Diwan, S. E., & Penn, D. L. (2001). Prejudice, social distance, and familiarity with mental illness. *Schizophrenia Bulletin, 27,* 219–225.

Corrigan, P.W., & Watson, A.C. (2002). The paradox of self-stigma and mental illness. *Clinical Psychology: Science and Practice, 9,* 35-53.

Coyne, J. C, Kessler, R., Tal, M., Turnbull, J., Wortman, C, & Greden, J. (1987). Living with a depressed person. *Journal of Consulting and Clinical Psychology, 55,* 347-352.

Cruza-Guet, M.C., Spokane, A.R., Caskie, G.I.L., Brown, S.C., Szapocznik, J. (2008). The relationship between social support and psychological distress among Hispanic elders in Miami, Florida. *Journal of Counseling Psychology, 55,* 427-441, doi: 10.1037/a0013501

Cutrona, C.E., & Russell, D.W. (1987). The provisions of social relationship and adaptation to stress. *Advances in Personal Relationships, 1,* 37-67.

Day, A.L., & Livingstone, H.A. (2003). Gender differences in perceptions of stressors and utilization of social support among university students. *Canadian Journal of Behavioral Science, 35,* 73-83

Dakof, G.A., & Taylor, S.E. (1990). Victims' perception of social support: What is helpful from whom? *Journal of Personality and Social Psychology, 58,* 80-89.

DeSocio, J., Stember, L., & Schrinsky, J. (2006). Teaching children about mental health and illness: A school nurse health education program. *The Journal of School Nursing, 22,* 81-86. Doi: 10.1177/105984050602200204

Dunkel-Schetter, C., Feinstein, L.G., Taylor, S.E., & Falke, R.L. (2000). Patterns of coping with cancer. Reprinted in R.M Suinn and G.R. VandenBos (Eds.) *Cancer Patients and Their Families: Readings on Disease Course, Coping, and Psychological Interventions*. (pp. 35-51). Washington D.C.: American Psychological Association.

Dunkel-Schetter, C., Folkman, S., & Lazarus, R. (1987). Correlates of social support receipt. *Journal of Personality and Social Psychology, 53*, 71-80.

Dunkley, D.M., Blankstein, K.R., Halsall, J., Williams, M., & Winkworth, G. (2000). Therelation between perfectionism and distress: Hassles, coping, and perceived social support as mediators and moderators. *Journal of Counseling Psychology, 47,* 437-453.

Eckenrode, J., & Wethington, E. (1990). The process and outcome of mobilizing social support. In S. Duck (Ed.), *Personal relationships and social support* (pp.83-103). Newbury Park, CA: Sage.

Eisenberg, D., Downs, M.F., Golberstein, E., & Zivin, K. (2009). Stigma and help seeking for mental health among college students. *Medical Care Research and Review,* doi: 10.1177/1077558709335173.

Eisenberg, D., Speer, N., & Hunt, J.B. (2012). Attitudes and beliefs about treatment among college students with untreated mental health problems. *Psychiatric Services, 63,* 711-713.

Figueiredo, M.I., Fries, E., & Ingram, K.M. (2004). The role of disclosure patterns and unsupportive social interactions in the well-being of breast cancer patients. *Psycho-Oncology, 13,* 96-105. Doi: 10.1002/pon.717

Folkman, S and Lazarus, R S, (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior, 21*, 219–239.

Foster, M.D., & Tsarfati, E.M. (2005). The effects of meritocracy beliefs on women's well-being after first time gender discrimination. *Personality and Social Psychology Bulletin, 31,* 1730-1738. Doi: 10.1177/0146167205278709

Gall, T.L., Evans, D.R., & Bellerose, S. (2000). Transition to first-year university: Patterns of change in adjustment across life domains and time. *Journal of Social and Clinical Psychology, 19,* 544-567.

Goffman, E. (1963). *Stigma: the Management of Spoiled Identity.* Harmondsworth: Penguin.

Griffiths, K.M., Crisp, D.A., Barney, L., & Reid, R. (2012). Seeking help for depression from family and friends: A qualitative analysis of perceived advantages and disadvantages. *BioMed Central Psychiatry, 11,* 196-208.

Hamilton, D. L., & Sherman, J. W. (1994). Stereotypes. In R. S. Wyer & T. K. Srull (Eds.), *Handbook of social cognition* (2nd ed., Vol. 2, pp. 1–68). Hillsdale, NJ: Erlbaum.

Hammen, C. (1991). Generation of stress in the course of unipolar depression. *Journal of Abnormal Psychology, 100,* 555-561.

Harrington, R. (2001). Depression, suicide and deliberate self-harm in adolescence. *British Medical Bulletin, 57,* 47–60.

Haslam, N. (2005). Dimensions of Folk Psychiatry. *Review of General Psychology, 9,* 35-47. Doi: 10.1037/1089-2680.9.1.35

Hayes, A.F., & Preacher, K.J. (in press). Conditional process modeling: Using structural equation modeling to examine contingent causal processes. In G.R. Hancock & R.O. Mueller (Eds.), *Structural equation modeling: A second course (2nd Ed.).* Greenwich, CT: Information Age Publishing.

Hayes, A. F., Preacher, K. J., & Myers, T. A. (2010). Mediation and the estimation of indirect effects in political communication research. In E. P., & R. Lance Holbert (Eds), *Sourcebook for political communication research: Methods, measures, and analytical techniques.* New York: Routledge.

Helsen, M., Vollebergh, W., & Meeus, W., (2000). Social support from parents and friends and emotional problems in adolescence. *Journal of Youth and Adolescence, 29,* 319–335.

Herman-Stahl, M., & Petersen, A. C. (1996). The protective role of coping and social resources for depressive symptoms among young adolescents. *Journal of Youth and Adolescence, 25,* 733–753.

Hernan, A., Philpot, B., Edmonds, A., & Reddy, P. (2010). Healthy minds for country youth: Help-seeking for depression among rural adolescents. *Australian Journal of Rural Health, 18,* 118-124.

Hinshaw, S.P., & Stier, A. (2008). Stigma as related to mental disorders. *Annual Review of Clinical Psychology, 4,* 367-393. Doi: 10.1146/annurev.clinpsy.4.022007.141245

Hirschfeld, R.M., Keller, M.B. Panico, S., Arons, B.S., Barlow, D., Davidoff, F., ..., & Wyatt, R.J. (1997). The National Depressive and Manic-Depression Association Conensus statement on the undertreatment of depression. *Journal of the American Medication Association, 277,* 333-340.

Hoge, E.A., Austin, E.D., & Pollack, M.H. (2007). Resilience: Research evidence and conceptual considerations for posttraumatice stress disorder. *Depression and Anxiety, 24,* 139-152.

Hollingshead, A., & Redlich, F. (1958). *Social Class and Mental Illness.* New York, NY: John Wiley & Sons Inc.

Hu, Y., Fix, M.L., Hevelone, N.D., Lipsitz, S.R., Greenberg, C.C., Weissman, J.S., & Shapiro, J. (2012). Physicians' needs in coping with emotional stressors: The case for peer support. *Archives of Surgery, 147,* 212-217. Doi: 10.1001/archsurg.2011.312

Hunt, J. & Eisenberg, D. (2010). Mental health problems and help-seeking behavior among college students. *Journal of Adolescent Health, 46,* 3-10. Doi: doi:10.1016/j.jadohealth.2009.08.008

Husaini, B. A., & Von Frank, A. (1985). Life events, coping resources, and depression: A longitudinal study of direct, buffering, and reciprocal effects. In J. R. Greenley (Ed.), *Research in Community and Mental Health* (Vol. 5, pp. 111-136). Greenwich, *CT:* JAI Press.

Ingram, K.M., Betz, N.E., Mindes, E.J., Schmitt, M.M., & Smith, M.G. (2001). Unsupportive responses from others concerning a stressful life event: Development of the unsupportive social interactions inventory. *Journal of Social and Clinical Psychology, 20,* 173-207.

Ingram, K.M., Jones, D.A., Fass, R.J., Neidig, J.L., & Song, Y.S. (1999). Social support and unsupportive social interactions: Their association with depression among people living with HIV. *Aids Care, 11,* 313-329.

Insel, T.R., & Wang, P.S. (2010). Rethinking mental illness. *The Journal of the American Medical Association, 303,* 1970-1971. Doi: 10.1001/jama.2010.555.

Jorm, A.F., Barney, L.J., Christensen, H., Highet, N.J., Kelly, C.M., & Kitchener, B.A. Research on mental health literacy: What we know and what we still need to know. *The Australian and New Zealand Journal of Psychiatry, 40*, 3–5.

Jost, J.T., Banaji, M.R., & Nosek, B.A. (2004). A decade of system justification theory: accumulated evidence of conscious and unconscious bolstering of the status quo. *Political Psychology, 25*, 881–919.

Johnson, T. P. (1991). Mental health, social relations, and social selection: A longitudinal analysis. *Journal of Health and Social Behavior, 32,* 408- 423.

Kaniasty, K., & Norris, F.H. (2008). Longitudinal linkages between perceived social support and posttraumatic stress symptoms: Sequential roles of social causation and social selection. *Journal of Traumatic Stress, 21,* 274-281. Doi: 10.1002/jts.20334

Karabenick, S.A. (2004). Perceived achievement goal structure and college student help seeking. *Journal of Educational Psychology, 96,* 569-581.

Katz, J., & Beach, S. (1997). Self-verification and depressive symptoms in marriage and courtship: A multiple pathway model. Journal of Marriage and the Family, 59, 903–914.

Kessler, R.C., Berglund, P., Demier, O., Jin, R, Merikangas, K.R., & Walters, E.E. (2005a). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the national comorbidity survey replication. *Archives of General Psychiatry, 62,* 593-602.

Kessler, R.C., Demler, O., Frank, R.G., ... & Zaslavsky, A.M. (2005b). Prevalence and treatment of mental disorders, 1990 to 2003. *New England Journal of Medicine, 352,* 2515-2523.

Kidder, K., Stein, J., & Fraser, J. (2000). The Mental Health of Children & Youth. In *The Health of Canada's Children: A CICH Profile. Third Edition* (pp. 199-226). Ottawa: Canadian Institute of Child Health.

Kirby, M. (2008). Commentary: Mental health in Canada: Out of the shadows forever. *Canadian Medical Association Journal, 178,* 1320-1322.

Kirby, M. J. & Keon, W.J. (2006). *Out of the shadows at last: Transforming mental health, mental illness, and addiction services in Canada.* Ottawa, ON: The Standing Senate Committee on Social Affairs, Science and Technology.

Kranke, D., Guada, J., Kranke, B., & Floersch, J. (2012). What do African American youth with a mental illness think about help-seeking and psychiatric medication?: Origins of stigmatizing attitudes. *Social Work in Mental Health, 10,* 53-71. Doi: 10.1080/15332985.2011.618076

Lazarus, R. & Folkman, S. (1984). *Stress appraisal, and coping*. New York: Springer.

Lindsey, M.A., Joe, S., & Nebbitt, V. (2010). Family matters: The role of mental health stigma and social support on depressive symptoms and subsequent help seeking among African American boys. *Journal of Black Psychology, 36,* 458-482. Doi: 10.1177/0095798409355796

Link, B.G., Cullen, F.T., Struening, E., Shrout, P.E., & Dohrenwend, B.P. (1989). A modified labelling theory approach to mental disorders: An empirical assessment. *American Sociological Review, 54,* 400-423.

Link, B.G., Mirotznik, J., & Cullen, F.T. (1991). The effectiveness of stigma coping orientations: Can negative consequences of stigma labelling be avoided? *Journal of Health and Social Behavior, 32,* 302-320

Link, B.G., Phelan, J.C., Bresnahan, M., Stueve, A., & Pescosolido, B.A. (1999). Public conceptions of mental illness: Labels, causes, dangerousness, and social distance. *American Journal of Public Health, 89,* 1328-1333.

Looper, K. J. & Kirmayer, L. J. (2004). Perceived stigma in functional somatic syndromes and comparable medical conditions. *Journal of Psychosomatic Research, 57,* 373-378.

Lyons, C., Hopley, P., & Horrocks, J. (2009). A decade of stigma and discrimination in mental health: plus ça change, plus c'est la même chose (the more things change, the more they stay the same). *Journal of Psychiatric and Mental Health Nursing, 16,* 501–507. Doi: 10.1111/j.1365-2850.2009.01390.x

McManus, I. C., Stubbings, G. F., & Martin, N. (2006). Stigmatization, physical illness and mental health in primary ciliary dyskinesia. *Journal of Health Psychology, 11,* 3, 467-482. doi: 10.1177/1359105306063320

Manne, S.L., & Glassman, M. (2000). Perceived control, coping efficacy, and avoidance coping as mediators between spouses' unsupportive behaviors and cancer patients' psychological distress. *Health Psychology, 19,* 155-164.

Manne, S.L., Ostroff, J., Winkel, G., Grana, G., & Fox, K. (2005). Partner unsupportive responses, avoidant coping, and distress among women with early stage breast cancer: Patient and partner perspectives. *Health Psychology, 24*(6), 635-641.

Marsh, H.W., Hau, K., & Wen, Z. (2004). In search of golden rules: Comment on hypothesis-testing approaches to setting cutoff values for fit indexes and dangers in overgeneralizing Hu and Bentler's (1999) findings. *Structural Equation Modeling: A Multidisciplinary Journal, 11,* 320-341.

Matheson, K., & Anisman, H., (2003). Systems of coping associated with dysphoria, anxiety, and depressive illness: A multivariate profile perspective. *Stress, 6,* 223-234. Doi:10.1080/1025389031000159448 7

Matheson, K., & Anisman, H. (2011). Biological and psychosocial responses to discrimination. In J. Jetten, C. Haslam, & A. Haslam (Eds.), *The Social Cure: Identity, Health & Well-being* (133-153). East Sussex: Psychology Press.

May, K. (2010, January 11). Depression among public servants Canada's biggest 'public health crisis': Expert. *Ottawa Citizen.* Retrieved on December 1, 2010 from: http://www2.canada.com/ottawacitizen/story.html?id=ed5df3cf-2cfc-4053-8714-40e2fca7d6f6

Meadows, S.O., Brown, J.S., & Elder Jr., G.H. (2006). Depressive Symptoms, Stress, and Support: Gendered Trajectories from adolescence to young adulthood. *Journal of Youth and Adolescence, 35,* 93-103. Doi: 10.1007/s10964-005-9021-6

Meeus, W.H.J., Branje, S.J.T., van der Valk, I., & de Wied, M. (2007). Relationships with intimate partner, best friend, and parents in adolescence and early adulthood: A study of the saliency of the intimate partnership. *Journal of Behavioral Development, 31,* 569-580. Doi: 10.1177/0165025407080584

Megivern, D., Pellerito, S., & Mowbray, C. (2003). Barriers to higher education for individuals with psychiatric disabilities. *Psychiatric Rehabilitation Journal, 26,* 217-231. Doi: 10.2975/26.2003.217.231

Mental Health Commission of Canada (2007). Retrieved March 11, 2012 from: www.mentalhealthcommission.ca

Mickelson, K.D. (2001). Perceived stigma, social support, and depression. *Personality and Social Psychology Bulletin, 27,* 1046-1056. Doi: 10.1177/0146167201278011

Midtgaard, M., Ekeberg, Ø., Vaglum, P., & Tyssen, R. (2008). Mental health treatment needs for medical students: A national longitudinal study. *European Psychiatry, 23,* 505-511. Doi:10.1016/j.eurpsy.2008.04.006

Miller, D.L., Manne, S.L., Taylor, K., Keates, J., & Dougherty, J. (1996) Psychological distress and well-being in advanced cancer: The effects of optimism and coping. *Journal of Clinical Psychology in Medical Settings, 3,* 115-130.

Moses, T. (2009). Stigma and self-concept among adolescents receiving mental health treatment. *American Journal of Orthopsychiatry, 79,* 261-274.

Moses, T. (2010). Being treated differently: Stigma experiences with family, peers, and school staff among adolescents with mental health disorders. *Social Science & Medicine, 70,* 985-993.

Mueller, B., Nordt, C., Lauber, C., Rueesch, P., Meyer, P.C., & Roessler, W. (2006). Social support modifies perceived stigmatization in the first years of mental illness: A longitudinal approach. *Social Science & Medicine, 62,* 39-49. Doi: doi:10.1016/j.socscimed.2005.05.014

Mullis, R.L., & Chapman, P. (2010). Age, gender, and self-esteem differences in adolescent coping styles. *The Journal of Social Psychology, 140,* 539-541.

Nathan, P.E., & Gorman, J.G., Eds. (2007). *A Guide to Treatments that Work.* New York: Oxford University Press. 3rd Ed.

Nelson-Le Gall, S., & Jones, E. (1991). Classroom help-seeking behaviours of African-American children. *Education and Urban Society, 24,* 27-40, doi: 10.1177/0013124591024001003

Newman, R.S. (2006). Students' adaptive and nonadaptive help seeking in the classroom: Implications for the context of peer harassment. In S.A. Karabernick, & R.S. Newman (Eds.), *Help-seeking in Academic Settings: Goals, groups, and contexts* (225-258). USA: Lawrence Erlbaum Associates, Inc.

Nieuwsma, J.A., & Pepper, C.M. (2010). How etiological explanations for depression impact perceptions of stigma, treatment effectiveness, and controllability of depression. *Journal of Mental Health, 19,* 52-61.Doi: 10.3109/09638230903469095

Nock, M.K., & Kazdin, A.E., (2005). Randomized controlled trial of a brief intervention for increasing participation in parent management training. *Journal of Consulting and clinical Psychology, 73,* 872-879. Doi: 10.1037/0022-006X.73.5.872

Offer D., & Spiro, R.P. (1987). The disturbed adolescent goes to college. *Journal of American College of Health.* 35, 209-214.

Pedhazur, E. J., & Schmelkin, L. P. (1991). Measurement, design, and analysis: An integrated approach. Hillsdale, N.J.: Lawrence Erlbaum Associates.

Penn, D.L., & Martin, J. (1998). The stigma of severe mental illness: Some potential solutions for a recalcitrant problem. *Psychiatric Quarterly, 69,* 235-47.

Pescosolido, B. and Boyer, C. (1999) How do people come to use mental health services? Current knowledge and changing perspectives. In Horwitz, A. and Scheid, T. (eds) *A Handbook for the Study of Mental Health: Social Context, Theories and Systems.* (pp. 392-411). Cambridge: Cambridge University Press.

Phelan, J.C., Lawrence, H.Y., & Cruz-Rojas, R. (2006). Effects of attributing serious mental illnesses to genetic causes on orientations to treatment. *Psychiatric Services, 57*, 382-387.

Pinfold, V. Thornicroft, G., & Arboleda-Flórez, J. (2005). Working with young people: The impact of mental health awareness programmes in schools in the UK and Canada. *World Psychiatry, 4,* 48-52.

Post, R.M., & Leverich, G.S. (2006). The role of psychosocial stress in the onset and progression of bipolar disorder and its comorbidities: The need for earlier and alternative modes of therapeutic intervention. *Developmental Psychopathology, 18,* 1181.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*, 879-891.

Preacher, K. J., Rucker, D. D., & Hayes, A. F. (2007). Assessing moderated mediation hypotheses: Theory, methods, and prescriptions. *Multivariate Behavioral Research, 42*, 185-227.

Price, E.L., McLeod, P.J., Gleich, S.S., & Hand, D. (2006). One-year prevalence rates of major depressive disorder in first-year university students. *Canadian Journal of Counseling, 40,* 68-81

Prior, S. (2011). Overcoming stigma: How young people position themselves as counseling service users. *Sociology of Health and Illness, online first,* 1-17. Doi: 10.1111/j.1467-9566.2011.01430.x

Raguram, R., Weiss, M. G., Channabasavanna, S. M., Devins, G. M. (1996). Stigma, Depression, and Somatization in South India. *The American Journal of Psychiatry, 153*, (8), 1043-1049.

Raviv, A., Sills, R., Raviv, A. & Wilansky, P. (2000). Adolescents' help-seeking behaviour: the difference between self- and other-referral. *Journal of Adolescence, 23*, 721–40.

Rickinson, B., & Rutherford, D. (1996). Systematic monitoring of the adjustment to university of undegraduates: A strategy for reducing withdrawal rates. *British Journal of Guidance and Counseling, 24,* 213-225. Doi: 10.1080/03069889608260410

Roberts, R., J. Golding, T. Towell, S. Reid, S. Woodford, A. Vetere, & I. Weinreb. 2000. Mental and physical health in students: The role of economic circumstances. *British Journal of Health Psychology 5*, 289–97.

Roberts, R., Golding, J., Towell, T., & Weinreb, I. (1999). The effects of economic circumstances on British students' mental and physical health. *College Health, 48,* 103-109.

Rodgers, L.S., & Tennison, L.R. (2009). A preliminary assessment of adjustment disorder among first-year college students. *Archives of Psychiatric Nursing, 23,* 220-230. Doi: doi:10.1016/j.apnu.2008.05.007

Royal College of Psychiatrists (2011). *The mental health in students in higher education.*

London: Royal College of Psychiatrists. Retrieved December 15th, 2011, from http://www.rcpsych.ac.uk/files/pdfversion/CR166.pdf

Sarrazin, M. S. V., Hall, J. A., Richards, C., & Carswell, C. (2002). A comparison of computer-based versus pencil-and-paper assessment of drug use. *Research on Social Work Practice, 12*, 669-683.

Sacco, W.P., & Yanover, T. (2006). Diabetes & depression: The role of social support and medical symptoms. *Journal of Behavioral Medicine, 29,* 523-531.doi: 10.1007/s10865-006-9072-5

Scheffield, J.K., Fiorenza, E, Sofronoff, K. (2004). Adolescents' willingness to seek psychological help: Promoting and preventing factors. *Journal of Youth and Adolescence, 33,* 495-507.

Schomerus, G., & Angermeyer, M.C. (2008). Stigma and its impact on help-seeking for mental disorders: What do we know? *Epidemiologia e Psichiatria Sociale, 17,* 13-37.

Schomerus, G., Schwahn, C., Holzinger, A., Corrigan, P.W., Grabe, H.J., Carta, M.G., & Angermeyer, M.C. (2012). Evolution of public attitudes about mental illness: A systematic review and meta-analysis. *Acta Psychiatrica Scandinavica, 2012,* 1-13. Doi: 10.1111/j.1600-0447.2012.01826.x

Schonert-Reichl, K.A., & Muller, J.R. (1996). Correlates of help-seeking in adolescence. *Journal of Youth and Adolescence. 25,* 705-729.

Simpson, J.S.A., Carlson, L.E., Beck, C.A., Patten, S. (2002). Effects of a brief intervention on social support and psychiatric morbidity in breast cancer patients, *Psycho-oncology, 11,* 282-294. Doi: 10.1002/pon.565

Singletary, S.L., & Hebl, M.R. (2009). Compensatory strategies for reducing interpersonal discrimination: The effectiveness of acknowledgements, increased positivity, and individuating information. *Journal of Applied Psychology, 94,* 979-805. Doi: 10.1037/a0014185

Smith, M., Damschroder, L.J., Kim, S.Y.H., & Ubel, P.A. (2012). What's it worth? Public willingness to pay to avoid mental illnesses compared with general medical illnesses. *Psychiatric Services, 63,* 319-324. Doi: 10.1176/appi.ps.201000036

Song, Y., & Ingram, K. (2002). Unsupportive social interactions, availability of social support, and coping: Their relationship to mood disturbance among African Americans living with HIV. *Journal of Social and Personal Relationships, 19,* 67-85.

Stewart-Brown, S., Evans, J., Patterson, J., Petersen, S, Doll, H., Balding, J., & Regis, D. (2000). The health of students in institutes of higher education: An important and neglected public health problem? *Journal of Public Health Medicine, 22,* 482-499.

Tata, S.P. & Leong, F.T.L. (1994). Individualism-collectivism, social-network orientation, and acculturation as predictors of attitudes toward seeking professional psychological help among Chinese Americans. *Journal of Counseling Psychology, 41,* 280-287.

Tinsley, H.E.A., St. Aubin, T.M., & Brown, M.T. (1982). College students' help-seeking preferences. *Journal of Counseling Psychology, 29,* 523-533.

Thomspon, A., Issakidis, C., & Hunt, C. (2008). Delay to seek treatment for anxiety and mood disorders in an Australian clinical sample. *Behavior Change, 25,* 71-84.

Thornicroft, G. (2008). Stigma and discrmination limit access to mental health care. *Epidemiologia e Psichiatria Sociale, 17,* 14-19.

Turner, R.J. (1981). Social support as a contingency in psychological well-being. *Journal of Health and Social Behavior, 22,* 357-367.

Vogel, D.L., Wade, N.G., & Ascheman, P.L. (2009). Measuring perception of stigmatization by others for seeking psychological help: Reliability and Validity of a new stigma scale with college students. *Journal of Counseling Psychology, 56,* 301-308, doi: 10.1037/a0014903

Vogel, D.L., Wade, N.G., & Haake, S. (2006). Measuring the self-stigma associated with seeking psychological help. *Journal of Counseling Psychology, 53,* 325-337, doi: 10.1037/00220167.53.3.325

Vogel, D.L., Wade, N.G., & Hackler, A.H. (2007). Perceived public stigma and the willingness to seek counseling: The mediating roles of self-stigma and attitudes toward counseling. *Journal of Counseling Psychology, 54,* 40-50. Doi: 10.1037/0022-0167.54.1.40

Wang, P.S., Berglund, P., Olfson, M., Pincus, H.A.,Wells, K.B., & Kessler, R.C. (2005). Failure and delay in initial treatment contact in the National Comorbidity Survey replication. *Archives of General Psychiatry, 62,* 603–613.

Weiner, B., Perry, R.P., & Magnusson, J. (1988). An attributional analysis of reactions to stigmas. *Journal of Personality and Social Psychology, 55,* 738-748.

Weiss, R. S. (1974). The provisions of social relationships. In Z. Rubin (Ed.), *Doing unto others* (pp. 17-26). Englewood Cliffs, NJ: Prentice-Hall.

Wilson, M., & Wilkerson, B. (2011). *Final report: Global business and economic roundtable on addiction and mental health 2011,* retrieved on May 20th, 2012 from: www.mentalhealthroundtable.ca

Windle, M., (1992). A longitudinal study of stress buffering for adolescent problem behaviours. *Developmental Psychology, 28*, 522–530.

World Health Organization (2004). *Burden of disease: DALY.* In: The global burden of disease: 2004 update. Geneva (Switzerland): WHO; retrieved from www.who.int/healthinfo/global_burden_disease/GBD_report_2004update_part4.pdf.

Yakunina, E.S., Rogers, J.R., Waehler, C.A., & Werth, J.L. (2010). College students' intentions to seek help for suicidal ideation: Accounting for the help-negation effect. *Suicide and Life-Threatening Behavior, 40,* 438-450.

Yang, J., Yao, S., Zhu, X., Zhang, C., Ling, Y., Abela, et al. (2010). The impact of stress on depressive symptoms is moderated by social support in Chinese adolescents with subthreshold depression: a multi-wave longitudinal study. *Journal of Affective Disorders, 127,* 113-121. Doi: doi:10.1016/j.jad.2010.04.023

Young, J.F., Berenson, K., Cohen, P., & Garcia, J. (2005). The role of parent and peer support in predicting adolescent depression: A longitudinal community study. *Journal of Research on Adolescence, 15,* 407-423.

Zeigler-Hill, V., Clark, C.B., & Pickard, J.D. (2008). Narcissistic subtypes and contingent self-esteem: Do all narcissists base their self-esteem on the same domains? *Journal of Personality, 76,* 753-774. Doi: 10.1111/j.1467-6494.2008.00503.x

Zimmerman, M.A., Ramirez-Valles, J., Zapert, K.M., & Maton, K.I., (2000). A longitudinal study of stress-buffering effects for urban African-American male adolescent problem behaviors and mental health. *Journal of Community Psychology, 28*, 17–33.

Appendix A

Study 1 & 2 Informed Consent

The purpose of an informed consent is to ensure that you understand the purpose of the study and the nature of your involvement. The informed consent has to provide sufficient information such that you have the opportunity to determine whether you wish to participate in the study.

Study Title: Predictors of Help-seeking Among First-Year Students

Study Personnel: Miki Talebi (Doctoral Researcher, 520-2600 ext. 4199)
Sheila Antl (Doctoral Researcher, 520-2600 ext. 4199)
Heather Hogan (Graduate Researcher, 520-2600 ext. 4199)
Julie Oehring (Undergraduate Researcher, 520-2600 ext. 4199)
Rachel Oommen (Research Assistant, 520-2600 ext. 2683)
Dr. Hymie Anisman (Faculty Investigator, 520-2699)
Dr. Kim Matheson (Faculty Investigator, 520-2648)

If you have any ethical concerns about this study please contact Dr. Monique Sénéchal, Chair of the Department of Psychology Research Ethics Committee at Carleton University at 613 520-2600 ext. 1155.

If you have any other concerns about the study please contact Dr. Janet. Mantler, Chair, Department of Psychology, 520-2600 ext. 4173

Purpose and Task Requirements: The purpose of this study is to assess how your individual characteristics along with your social environment and personal resources affect your quality of life and academic performance. We are asking you to fill out a number of questionnaires regarding how you feel about yourself, how you cope with things in your life, physical and mental health, personal goals, past experiences (including prior trauma, such as loss of a loved one or assault), social support and help-seeking. We will eventually be looking at how these factors relate to your success in your first year at Carleton. The questionnaire should take approximately one hour to complete. You will be awarded a .5% experimental credit in your Introductory Psychology Course or a gift certificate for $10 to Tim Hortons or Starbucks.

Potential Risk and Discomfort: There are no physical risks in this study. There may be some discomfort or anxiety experienced when responding to some of the questions in this study or thinking about various stressors or difficulties in your life. If this is the case, the Debriefing form at the end of the study contains contact information for people who are available to help.

Anonymity/Confidentiality: The data collected in this study will be kept confidential. Because we will want to keep track of your answers in this questionnaire in relation to how you do in your first year, we will have to be able identify who you are on your

questionnaire. However, we take special precautions to make sure that no-one else will be able to identify you and what your responses were. Your userID and password will be separated from your questionnaire data and kept in a separate and secured file by one of the research investigators who will keep this information confidential. Should you choose to participate in a follow-up study, additional consent will be obtained for the follow-up component of this study.

Right to Withdraw: Your participation in this study is entirely voluntary. At any point during the study you have the right to not complete certain questions or to withdraw with no penalty whatsoever.

I have read the above description of the study concerning how psychological and social factors may influence my quality of life and my academic performance. The data collected will be used in research publications. My signature indicates that I agree to participate in the study, and this in no way constitutes a waiver of my rights.

ACCEPT **DECLINE**

In order to complete the study, you will need to create a user ID. To keep things simple, we ask that you use the three first letters of your father's first name, and the last three digits of your phone number to make your user ID. Your password can be anything that you choose as long as it's a minimum of 4 characters, but please make sure that it will be easy for you to remember!

Please enter the following information:

First three letters of your father's first name: _____
Last three digits of your social insurance number: _____

Please fill out any of the following options (in case you forget your user ID):
Last name: _____
Birth date: _____
Carleton ID number: _____

Appendix B

Demographic Information

Sex: Female/ Male (please select one)
Age: _____

Course this questionnaire is being completed in: Course #_____ Section _____

ACADEMIC DECISIONS AND EXPERIENCES
What was your average mark in your last grade of high school? _____

What average do you think you will realistically achieve in your first year at Carleton?
_____

What mark do you expect to get in your best course? _____

When you applied to universities, was Carleton your (check one)
_____ 1st choice _____2nd choice _____ 3rd choice _____ other

Why did you choose to come to Carleton? (if more than one apply, rank in order of importance (1= most important reason, etc.)
_____To stay close to my family
_____ I wanted to stay in Ottawa
_____ No one else accepted me
_____ Has a program I'm interested in
_____ Parental/family pressure
_____ My friend(s) came here
_____ Other (please specify) _____

Are you a full-time_____ or part-time_____ student? (please check one)

What is your academic major (or most likely major if undecided)?
_____

Where do you currently live? (please check one)

_____Carleton University residence
_____Off campus housing shared with other student(s) from Carleton University
_____Off campus housing shared with other(s) who do not attend Carleton University
_____Off campus housing by myself
_____Off campus housing with a spouse
_____Off campus with family members (parents)
_____Other (please describe)
_____

What is your citizenship status?
_____ Canadian citizen
_____ Landed immigrant Since what year? _____ Country of origin _____
_____ Student visa Since what year? _____ Country of origin _____

What is your first language? _____

What is your ethnic/racial background? (Please check one)
____Asian (e.g., Chinese, Japanese, Korean)
____South Asian (e.g., East Indian, Pakistani, Punjabi, Sri Lankan)
____South East Asian (e.g., Cambodian, Indonesian, Laotian)
____Arab/West Asian (e.g., Armenian, Egyptian, Iranian, Lebanese, Moroccan)
____Black (e.g., African, Haitian, Jamaican, Somali)
____Latin American/Hispanic
____Aboriginal
____White/Euro-Caucasian
____Other (Please specify): _____

What is your religious affiliation? (Please check one)
____None—Atheist (e.g., belief that there is NO God)
____None—Agnostic (e.g., belief that the existence of God cannot be known)
____Protestant (e.g., United, Anglican, Baptist, Presbyterian, Lutheran, Pentecostal, Mennonite, "Christian")
____Catholic (e.g., Roman Catholic, Ukrainian Catholic)
____Jewish
____Muslim
____Buddhist
____Hindu
____Sikh
____Bahá'í
____Other (Please specify):_____

Do you have any visible physical disability?
No_____ Yes_____ If so, please specify _____
Do you have any learning disability?
No_____ Yes_____ If so, please specify _____

HEALTH BEHAVIORS

Are you currently being treated for any physical condition?
No_____ Yes_____ If yes, please specify _____

Have you ever been in psychological therapy or counseling? (please check the one that best applies)

_____ No, I have never been in therapy

_____ Yes, but I am no longer

_____ Yes, and still am

If yes, how long ago were you in, or have you been in therapy?

Began _____ month/year and continued until _____ month/year

Appendix C

Beck Depression Inventory

On this questionnaire are groups of statements. For each group of statements please select the ONE that best describes the way you feel.

---

1. ___ 0 = I do not feel sad
   ___ 1 = I feel sad or blue
   ___ 2 = I am blue or sad all of the time and I can't snap out of it
   ___ 3 = I am so sad or unhappy that I can't stand it

2. ___ 0 = I am not particularly pessimistic or discouraged about the future
   ___ 1 = I feel discouraged about the future
   ___ 2 = I feel I have nothing to look forward to
   ___ 3 = I feel that the future is hopeless and things cannot improve

3. ___ 0 = I do not feel like a failure
   ___ 1 = I feel I have failed more than the average person
   ___ 2 = As I look back on my life, all I can see is a lot of failures
   ___ 3 = I feel I am a complete failure as a person

4. ___ 0 = I am not particularly dissatisfied
   ___ 1 = I don't enjoy things the way I used to
   ___ 2 = I don't get satisfaction out of anything anymore
   ___ 3 = I am dissatisfied with everything

5. ___ 0 = I don't feel particularly guilty
   ___ 1 = I feel bad or unworthy a good part of the time
   ___ 2 = I feel quite guilty
   ___ 3 = I feel as though I am very bad or worthless

6. ___ 0 = I don't feel disappointed in myself
   ___ 1 = I am disappointed in myself
   ___ 2 = I am disgusted with myself
   ___ 3 = I hate myself

7. ___ 0 = I don't have thoughts of harming myself
   ___ 1 = I feel I would be better off dead
   ___ 2 = I have definite plans about committing suicide
   ___ 3 = I would kill myself if I had the chance

8. ___ 0 = I have not lost interest in other people
   ___ 1 = I am less interested in other people than I used to be
   ___ 2 = I have lost most of my interest in other people and I have little feeling for them
   ___ 3 = I have lost all my interest in other people and don't care about them at all

9. ___ 0 = I make decisions about as well as ever
___ 1 = I try to put off making decisions
___ 2 = I have great difficulty in making decisions
___ 3 = I can't make decisions at all anymore

10. ___ 0 = I don't feel I look any worse than I used to
___ 1 = I am worried that I am looking old or unattractive
___ 2 = I feel that there are permanent changes in my appearance and they make me look unattractive
___ 3 = I feel that I am ugly or repulsive looking

11. ___ 0 = I can work about as well as before
___ 1 = It takes extra effort to get started at doing something
___ 2 = I have to push myself very hard to do anything
___ 3 = I can't do any work at all

12. ___ 0 = I don't get any more tired than usual
___ 1 = I get tired more easily than I used to
___ 2 = I get tired from doing anything
___ 3 = I get too tired to do anything

13. ___ 0 = My appetite is no worse than usual
___ 1 = My appetite is not as good as it used to be
___ 2 = My appetite is much worse now
___ 3 = I have no appetite at all any more

Appendix D

Social Provisions

In answering the next set of questions, please think about your current relationships with your **friends.** If you feel a question accurately describes your relationships with your friends, you would say "yes". If the question does not describe your relationships, you would say "no". If you cannot decide whether the question describes your relationships with your friends, you may say "not sure".

	No	Not sure	Yes
1. Are there friends you can depend on to help you, if you really need it?	1	2	3
2. Do you feel you could not turn to your friends for guidance in times of stress?	1	2	3
3. Are there friends who enjoy the same social activities that you do?	1	2	3
4. Do you feel personally responsible for the well-being of your friends?	1	2	3
5. Do you feel your friends do not respect your skills and abilities?	1	2	3
6. If something went wrong, do you feel that none of your friends would come to your assistance?	1	2	3
7. Do your relationships with your friends provide you with a sense of emotional security and well being?	1	2	3
8. Do you feel your competence and skill are recognized by your friends?	1	2	3
9. Do you feel none of your friends share your interests and concerns?	1	2	3
10. Do you feel none of your friends really rely on you for their well-being?	1	2	3
11. Is there a trustworthy friend you could turn to for advise, if you were having problems?	1	2	3
12. Do you feel you lack emotional closeness with your friends?	1	2	3

In answering the next set of questions, please think about your current relationships with your **intimate partner** (spouse or boyfriend/girlfriend). (YOU CAN SKIP THIS PAGE IF YOU ARE NOT CURRENTLY IN ANY RELATIONSHIP.)

	No	**Not sure**	**Yes**
1. Can you depend on your partner to help you, if you really need it?	1	2	3
2. Do you feel you could not turn to your partner for guidance in times of stress?	1	2	3
3. Does your partner enjoy the same social activities that you do?	1	2	3
4. Do you feel personally responsible for the well-being of your partner?	1	2	3
5. Do you feel your partner does not respect your skills and abilities?	1	2	3
6. If something went wrong, do you feel that your partner would not come to your assistance?	1	2	3
7. Does your relationship with your partner provide you with a sense of emotional security and well-being?	1	2	3
8. Do you feel your competence and skill are recognized by your partner?	1	2	3
9. Do you feel your partner does not share your interests and concerns?	1	2	3
10. Do you feel your partner does not really rely on you for his or her well-being?	1	2	3
11. Could your turn to your partner for advise, if you were having problems?	1	2	3
12. Do you feel you lack emotional closeness with your partner?	1	2	3

In answering the next set of questions, please think about your current relationships with your **parents.**

	No	Not sure	Yes
1. Can you depend on your parents to help you, if you really need it?	1	2	3
2. Do you feel you could not turn to your parents for guidance in times of stress?	1	2	3
3. Do your parents enjoy the same social activities that you do?	1	2	3
4. Do you feel personally responsible for the well-being of your parents?	1	2	3
5. Do you feel your parents do not respect your skills and abilities?	1	2	3
6. If something went wrong, do you feel that your parents would not come to your assistance?	1	2	3
7. Does your relationship with your parents provide you with a sense of emotional security and well-being?	1	2	3
8. Do you feel your competence and skill are recognized by your parents?	1	2	3
9. Do you feel your parents do not share your interests and concerns?	1	2	3
10. Do you feel your parents do not really rely on you for their well-being?	1	2	3
11. Could you turn to your parents for advise, if you were having problems?	1	2	3
12. Do you feel you lack emotional closeness with your parents?	1	2	3

Appendix E

Unsupportive Social Interactions Inventory

Please think about times when you've turned to **your partner or close friend** for support in regards to a situation that was bothering you (i.e. frustrations or disappointments with friends, family, school, health, work or anything else that is important to you). For each of the statements below, **please circle the number that indicates how frequently your partner or close friend responded in this way when you went to him/her for support.**

	None				A lot
1. My partner/close friend thought I was over-reacting to the situation	0	1	2	3	4
2. When I was talking about the issue/situation with my partner/close friend, s/he did not give me enough of his/her time, or made me feel like I should hurry	0	1	2	3	4
3. My partner/close friend made "should/shouldn't have" comments about my role in the situation, such as, "You shouldn't have ...."	0	1	2	3	4
4. My partner/close friend didn't seem to know what to say, or seemed afraid of saying/doing the "wrong" thing	0	1	2	3	4
5. My partner/close friend refused to provide the type of help or support I was looking for	0	1	2	3	4
6. After becoming aware that I was dealing with something that I found difficult or distressing, my partner/close friend responded with uninvited physical touching, such as hugging	0	1	2	3	4
7. My partner/close friend said I should look on the bright side	0	1	2	3	4
8. My partner/close friend said "I told you so" or made some similar comment to me about my situation	0	1	2	3	4
9. My partner/close friend seemed to be telling me what he thought I wanted to hear	0	1	2	3	4
10. In responding to me about my situation, my partner/close friend seemed disappointed in me	0	1	2	3	4
11. When I was talking to my partner/close friend about my situation, s/he changed the subject before I wanted to	0	1	2	3	4
12. My partner/close friend felt that I should stop worrying about the situation and just forget about it	0	1	2	3	4
13. My partner/close friend asked me "why" questions, such as, "Why did/didn't you ..."	0	1	2	3	4
14. My partner/close friend felt that I should focus on the present and/or future, and that I should forget about what's happened and get on with my life.	0	1	2	3	4

15. My partner/close friend tried to cheer me up when I was not ready to cheer up about the situation	0	1	2	3	4
16. My partner/close friend refused to take me seriously	0	1	2	3	4
17. My partner/close friend told me to be strong, to keep my chin up, or that I shouldn't let it bother me	0	1	2	3	4
18. When I was talking to my partner/close friend about what was bothering me, s/he did not seem to want to hear about it	0	1	2	3	4
19. My partner/close friend told me that I had gotten myself into the situation in the first place, and that now I must deal with the consequences	0	1	2	3	4
20. My partner/close friend did something for me that I wanted to do and could have done for myself, as if s/he thought I was no longer capable	0	1	2	3	4
21. My partner/close friend discouraged me from expressing feelings about my situation, such as anger, hurt or sadness	0	1	2	3	4
22. My partner/close friend felt that 'it could have been worse' or that 'it was not as bad as I thought'	0	1	2	3	4
23. From my partner/close friend's tone of voice, expression, or body language, I got the feeling that s/he was uncomfortable talking with me about my problem	0	1	2	3	4
24. My partner/close friend made comments which blamed me or tried to make me feel responsible	0	1	2	3	4

Appendix F

Self-Stigma of Mental Health Help-Seeking

If you were experiencing a great deal of stress, were feeling overwhelmed and depressed, or extremely anxious, and the best source of help were the counselors at Health and Counseling Services, how would you feel about going to them for help? Please indicate how strongly you agree or disagree with the following statements:

1. I would feel inadequate if I went to a mental health counselor for help.

-3	-2	-1	0	1	2	3
Strongly Disagree	Moderately Disagree	Mildly Disagree	Neither Agree nor Disagree	Mildly Agree	Moderately Agree	Strongly Agree

2. My self-confidence would NOT be threatened if I sought help from a mental health counselor.

-3	-2	-1	0	1	2	3
Strongly Disagree	Moderately Disagree	Mildly Disagree	Neither Agree nor Disagree	Mildly Agree	Moderately Agree	Strongly Agree

3. Seeking help from a mental health counselor would make me feel less intelligent.

-3	-2	-1	0	1	2	3
Strongly Disagree	Moderately Disagree	Mildly Disagree	Neither Agree nor Disagree	Mildly Agree	Moderately Agree	Strongly Agree

4. It would make me feel inferior to ask a mental health counselor for help.

-3	-2	-1	0	1	2	3
Strongly Disagree	Moderately Disagree	Mildly Disagree	Neither Agree nor Disagree	Mildly Agree	Moderately Agree	Strongly Agree

5. My self-confidence would remain the same if I sought help from a mental health counselor for a problem I could not solve.

-3	-2	-1	0	1	2	3
Strongly Disagree	Moderately Disagree	Mildly Disagree	Neither Agree nor Disagree	Mildly Agree	Moderately Agree	Strongly Agree

6. I would feel worse about myself if I could not solve my own emotional problems.

-3	-2	-1	0	1	2	3
Strongly Disagree	Moderately Disagree	Mildly Disagree	Neither Agree nor Disagree	Mildly Agree	Moderately Agree	Strongly Agree

Other-Stigma of Mental Health Help-Seeking

If you were to get help from a mental health counselor, to what degree do you believe that the people you interact with would:

		1	2	3	4	5
1.	React negatively to you	Not at all	A little	Somewhat	A lot	A great deal
2.	Think bad things of you	Not at all	A little	Somewhat	A lot	A great deal
3.	See you as seriously disturbed	Not at all	A little	Somewhat	A lot	A great deal
4.	Think of you in a less favorable way	Not at all	A little	Somewhat	A lot	A great deal
5.	Think you posed a risk to others	Not at all	A little	Somewhat	A lot	A great deal
6.	Think you were emotionally weak	Not at all	A little	Somewhat	A lot	A great deal

Appendix G

Self-Stigma of Academic Help-Seeking

We are interested in your thoughts about seeking help from various services that are offered on campus. Whereas some people frequently look for help, others never seem to ask for assistance. If you were to encounter difficulties in meeting your academic goals, and the best source of help were the academic advisors at the Student Academic Success Centre, how would you feel about going to them for help. Please indicate how strongly you agree or disagree with the following statements:

1. I would feel inadequate if I went to an academic counselor for help.

-3	-2	-1	0	1	2	3
Strongly Disagree	Moderately Disagree	Mildly Disagree	Neither Agree nor Disagree	Mildly Agree	Moderately Agree	Strongly Agree

2. My self-confidence would NOT be threatened if I sought help from an academic counselor.

-3	-2	-1	0	1	2	3
Strongly Disagree	Moderately Disagree	Mildly Disagree	Neither Agree nor Disagree	Mildly Agree	Moderately Agree	Strongly Agree

3. Seeking help from an academic counselor would make me feel less intelligent.

-3	-2	-1	0	1	2	3
Strongly Disagree	Moderately Disagree	Mildly Disagree	Neither Agree nor Disagree	Mildly Agree	Moderately Agree	Strongly Agree

4. It would make me feel inferior to ask an academic counselor for help.

-3	-2	-1	0	1	2	3
Strongly Disagree	Moderately Disagree	Mildly Disagree	Neither Agree nor Disagree	Mildly Agree	Moderately Agree	Strongly Agree

5. My self-confidence would remain the same if I sought help from an academic counselor for a problem I could not solve.

-3	-2	-1	0	1	2	3
Strongly Disagree	Moderately Disagree	Mildly Disagree	Neither Agree nor Disagree	Mildly Agree	Moderately Agree	Strongly Agree

6. I would feel worse about myself if I could not solve my own academic problems.

-3	-2	-1	0	1	2	3
Strongly Disagree	Moderately Disagree	Mildly Disagree	Neither Agree nor Disagree	Mildly Agree	Moderately Agree	Strongly Agree

Other-Stigma of Academic Help-Seeking

If you were to get help from an academic advisor, to what degree do you believe that the people you interact with would:

1. React negatively to you

1	2	3	4	5
Not at all	A little	Somewhat	A lot	A great deal

2. Think bad things of you

1	2	3	4	5
Not at all	A little	Somewhat	A lot	A great deal

3. See you as having serious problems

1	2	3	4	5
Not at all	A little	Somewhat	A lot	A great deal

4. Think of you in a less favourable way

1	2	3	4	5
Not at all	A little	Somewhat	A lot	A great deal

5. Think you might be a bad influence on others

1	2	3	4	5
Not at all	A little	Somewhat	A lot	A great deal

6. Think you are a failure

1	2	3	4	5
Not at all	A little	Somewhat	A lot	A great deal

Appendix H

Debriefing Form

Adolescence and early adulthood are particularly vulnerable periods for young people, who are attempting to gain social, economic, and emotional independence from their families. For those individuals who choose to pursue post-secondary studies during this period, the transition to adulthood may be further complicated by additional stressors of university life, such as separation from family and friends, unfamiliar people and surroundings, financial concerns, and the demands of their academic programs. Even students who have never suffered from emotional problems may develop them in response to the new stressors of university life, if they don't have adequate resources to help them to cope with these demands. As a result, they may feel unable to keep up, and they may do more poorly than they should, or perhaps don't even complete their academic year.

Carleton University is very concerned about the welfare of its students. It is therefore supporting this study so that we can gain an understanding of the factors that may be important for students' academic success and their ability to maintain a quality of life and well-being that allows them to do well and feel good about themselves. To this end, we have asked you to complete various questionnaires that assessed how you think and feel about yourself and how you feel about being at Carleton University. We also asked about how much financial and social support you have, your willingness to seek professional support (i.e., counseling) for mental illnesses, your perceptions about mental illness, and about any events going on in your life that may affect how well you're able to cope. Later in the year, we will determine whether any of these variables are associated with students' academic performance and well-being. If we do find that some dimensions of students' lives are particularly important in how they affect academic life, we will be in a position to make recommendations to the university on how to improve students' lives to help them maximize their performance and satisfaction with their university experience. Your participation will therefore be useful in letting Carleton find ways to help students do as well as possible.

Contact Information

The following people are involved in this research project and may be contacted at any time if you have any further questions about the project, what it means, or concerns about how it was conducted:

Dr. Hymie Anisman, Faculty Member, Department of Psychology
Phone: 520-2699
Email: Hanisman@ccs.carleton.ca
Dr. Kimberly Matheson, Faculty Member, Department of Psychology
Phone: 520-2684
Email: Kim_Matheson@carleton.ca
Miki Talebi, Doctoral Researcher, Department of Psychology
Phone: 520-2600 ext. 4199
Email: Mtalebi2@connect.carleton.ca
Sheila Antl, Doctoral Researcher, Department of Psychology
Phone: 520-2600 ext. 4199
Heather Hogan, Graduate Researcher, Department of Psychology
Phone: 520-2600 ext. 4199
Email: Hromanow@connect.carleton.ca
Julie Oehring, Undergraduate Researcher, Department of Psychology
Phone: 520-2600 ext. 4199
Rachel Oommen, Research Assistant, Department of Psychology
Phone: 520-2600 ext. 2683
Email: Roommen@connect.carleton.ca

If you have any ethical concerns about how this study was conducted, please contact either of the following:

Dr. Monique Sénéchal, Department of Psychology Ethics Committee at Carleton University, 613 520-2600 ext. 1155

Dr. Janet. Mantler, Chair, Department of Psychology, 520-2600 ext. 4173

If you have any worries or concerns about your personal well-being, or study skills, you can contact the following services:

Carleton University Health and Counseling Services 520-6674

Student Services 520-3663

Student Academic Success Centre 520-7850

International Student Services Office 520-6600

First in Family Peer Mentor Program 520-7595

Appendix I

Additional Distress Debriefing

Depression is a condition that can occur for many reasons, including workplace, school, or relationship stressors, traumatic life events, discrimination, as well as physical/biological imbalances. Approximately 10-15% of people will suffer some degree of depression during their lifetime. With advances in modern medicine, most people can readily be treated for this illness, which if unattended can be long lasting and affect many aspects of one's life. The symptoms of depression comprise:

- Poor or depressed mood, or a reduction in the pleasure gained from otherwise positive experiences
- Sleep disturbances
- Eating disturbances (loss of appetite, or overeating despite not being hungry), which may be linked to weight changes
- Lack of sexual interest
- Fatigue and lethargy (you don't feel like doing anything)
- An inability to focus (e.g., you have a hard time reading)
- Reduced interactions with family and friends
- Thoughts of suicide

Someone who is depressed may experience several (3-4), but not necessarily all of the above symptoms. It is likewise the case that 60% of individuals will encounter a severe traumatic event in their lives and of these people, a fair number will develop symptoms that cause severe anxiety. Illnesses of this nature, including posttraumatic stress disorder (PTSD) can be treated. Once again, if unattended, the repercussions can be severe. Symptoms include:

- Hyperarousal (e.g., feelings of anxiety and reactivity even to minor situations)
- Intrusive thoughts (memories of the event come into your head frequently)
- Avoiding thoughts or stimuli related to the event

These symptoms can persist for more than a month following the event, and influence your day-to-day functioning. If you feel that you are experiencing any of the above disorders and you are not already receiving attention for this problem, it is suggested that you contact your family physician. It is not a good idea to allow problems to fester, as ruminating over these problems will typically not make them go away. Your family physician or counselor will usually be able to help you or to refer you to someone who can. If you do not have a family physician, then you can contact either of the following:

Mental Health Crisis Line: within Ottawa (613) 722-6914, outside Ottawa 1-866-996-0991, Web Site: http://www.crisisline.ca/

Ottawa Distress Centre: (613) 238 1089, Web Site: www.dcottawa.on.ca

Appendix J

Survey of Coping Profiles Endorsed

We are interested in how you cope with various stressful situations that might arise. In particular, we are interested in how you cope with difficult issues or events relating directly to your ***physical health*** (e.g., physical injuries, flu, cold, etc.)/***psychological health*** (e.g., feeling stressed, happy, sad, anxious, etc.). These issues may be relatively minor, or could be quite serious; may have been going on for a long time, or may be something you're worried about happening in the near future. Please try to think of an event or aspect of your life directly pertaining to your ***physical health/psychological health*** that you have experienced some stress about within the past 2 weeks.

Ordinarily, in recent weeks have you:	*Never*	*Seldom*	*Some times*	*Often*	*Almost always*
1. accepted that there was nothing you could do to change your situation?	0	1	2	3	4
2. tried to just take whatever came your way?	0	1	2	3	4
3. talked with friends or relatives about your problems?	0	1	2	3	4
4. tried to do things which you typically enjoy?	0	1	2	3	4
5. sought out information that would help you resolve your problems?	0	1	2	3	4
6. blamed others for creating your problems or making them worse?	0	1	2	3	4
7. sought the advice of others to resolve your problems?	0	1	2	3	4
8. blamed yourself for your problems?	0	1	2	3	4
9. exercised?	0	1	2	3	4
10. fantasized or thought about unreal things (eg., the perfect revenge, or winning a million dollars) to feel better?	0	1	2	3	4
11. been very emotional compared to your usual self?	0	1	2	3	4
12. gone over your problem in your mind over and over again?	0	1	2	3	4
13. asked others for help?	0	1	2	3	4
14. thought about your problem a lot?	0	1	2	3	4
15. became involved in recreation or pleasure activities?	0	1	2	3	4
16. worried about your problem a lot?	0	1	2	3	4
17. tried to keep your mind off things that are upsetting you?	0	1	2	3	4
18. tried to distract yourself from your troubles?	0	1	2	3	4
19. avoided thinking about your problems?	0	1	2	3	4
20. made plans to overcome your problems?	0	1	2	3	4
21. told jokes about your situation?	0	1	2	3	4
22. thought a lot about who is responsible for your problem (besides yourself)?	0	1	2	3	4
23. shared humorous stories etc. to cheer yourself and others up?	0	1	2	3	4
24. told yourself that other people have dealt with problems such as yours?	0	1	2	3	4
25. thought a lot about how you have brought your problem on yourself?	0	1	2	3	4
26. decided to wait and see how things turn out?	0	1	2	3	4
27. wished the situation would go away or be over with?	0	1	2	3	4

28. decided that your current problems are a result of your own past actions?	0	1	2	3	4
29. gone shopping?	0	1	2	3	4
30. asserted yourself and taken positive action on problems that are getting you down?	0	1	2	3	4
31. sought reassurance and moral support from others?	0	1	2	3	4
32. resigned yourself to your problem?	0	1	2	3	4
33. thought about how your problems have been caused by other people?	0	1	2	3	4
34. daydreamed about how things may turn out?	0	1	2	3	4
35. been very emotional in how you react, even to little things?	0	1	2	3	4
36. decided that you can grow and learn through your problem?	0	1	2	3	4
37. told yourself that other people have problems like your own?	0	1	2	3	4
38. wished you were a stronger person or better at dealing with problems?	0	1	2	3	4
39. looked for how you could learn something out of your bad situation?	0	1	2	3	4
40. asked for God's guidance?	0	1	2	3	4
41. kept your feelings bottled up inside?	0	1	2	3	4
42. found yourself crying more than usual?	0	1	2	3	4
43. tried to act as if you were not upset?	0	1	2	3	4
44. prayed for help?	0	1	2	3	4
45. gone out?	0	1	2	3	4
46. held in your feelings?	0	1	2	3	4
47. tried to act as if you weren't feeling bad?	0	1	2	3	4
48. taken steps to overcome your problems?	0	1	2	3	4
49. made humorous comments or wise cracks?	0	1	2	3	4
50. told others that you were depressed or emotionally upset?	0	1	2	3	4

Appendix K

Study 3 Informed Consent

The purpose of an informed consent is to ensure that you understand the purpose of the study and the nature of your involvement. The informed consent has to provide sufficient information such that you have the opportunity to determine whether you wish to participate in the study.

Study Title: Environmental and Social Factors Influencing First-Year Experience

Research Personnel: The following people are involved in this research project, and may be contacted at any time if you have questions or concerns:

Miki Talebi (email: mtalebi2@connect.carleton.ca, phone: 520-2600 ext. 4199)
Rachel Oommen (email: rachel_oommen@carleton.ca, phone: 520-2600 ext. 2683)
Andrea Perna (email: aperna@connect.carleton.ca, phone: 520-2600 ext. 4199)
Dr. Hymie Anisman (email: hanisman@ccs.carleton.ca, phone: 520-2699)
Dr. Kim Matheson (email: kim_matheson@carleton.ca, phone: 520-2648)

Ethical concerns: Should you have any ethical concerns about this study please contact Dr. Monique Sénéchal, Chair of the Department of Psychology Research Ethics Committee at Carleton University at 613 520-2600 ext. 1155.

Other concerns: Should you have any other concerns about the study please contact Dr. Anne Bowker, Chair, Department of Psychology, 520-2600 ext. 8218

Purpose: The purpose of this study is to assess how your individual characteristics along with your social environment and personal resources affect your quality of life and academic performance.

Task requirements: We are asking you to fill out a number of questionnaires regarding information about yourself (e.g., ethnicity, religion, health status), how you feel about yourself, how you cope with things in your life, physical and mental health, personal goals, social support and help-seeking, as well as how you may respond to different types of experiences. We will eventually be looking at how these factors relate to your success in your first year at Carleton. The questionnaire should take approximately one hour to complete. You will be awarded a 1% experimental credit in your Introductory Psychology Course or a gift certificate for $10 to Tim Hortons or Starbucks.

Potential Risk and Discomfort: There are no physical risks in this study. There may be some discomfort or anxiety experienced when responding to some of the questions in this study or thinking about various stressors or difficulties in your life. If this is the case, the Debriefing form at the end of the study contains contact information for people who are available to help.

Anonymity/Confidentiality: The data collected in this study will be kept confidential. Your informed consent form will be separated from your questionnaires by the research investigators and kept in a secured file. The data will also be stored in a secured data file that is only accessible by the researcher and research assistants. All information provided will be kept anonymous. Should the findings from this study be reported, only aggregate data (findings from the overall group) will be reported, and no personally identifiable information. The questionnaire booklet will be associated with a randomly assigned code, and only this code will identify your questionnaires. Should you choose to participate in a follow-up study, additional consent will be obtained for any follow-up components of this study.

Right to Withdraw: Your participation in this study is entirely voluntary. At any point during the study you have the right to not complete certain questions or to withdraw with no penalty whatsoever.

This study has received clearance by the Carleton University Psychology Research Ethics Board (Reference #11-011).

Signatures

I have read the above form and understand the conditions of my participation. My participation in this study is voluntary, and I understand that if at any time I wish to leave the experiment, I may do so without having to give an explanation and with no penalty whatsoever. Furthermore, I am also aware that the data gathered in this study are confidential and anonymous with respect to my personal identity. My signature indicates that I agree to participate in this study.

Participant's Name: _____ Participant's Signature: _____

Researcher's Name: _____ Researcher's Signature: _____

Date_____

Appendix L

Demographic Information

Sex: Female / Male (please circle one)

Age: _____

Course this questionnaire is being completed in: _____Course # _____ Section

ACADEMIC DECISIONS AND EXPERIENCES

What was your average mark in your last grade of high school? _____

What average do you think you will realistically achieve in your first year at Carleton? _____

What mark do you expect to get in your best course? _____

When you applied to universities, was Carleton your (check one)

_____ 1st choice _____2nd choice _____ 3rd choice _____ other

Why did you choose to come to Carleton? (if more than one apply, rank in order of importance (1= most important reason, etc.)

_____ To stay close to my family
_____ I wanted to stay in Ottawa
_____ No one else accepted me
_____ Has a program I'm interested in
_____ Parental/family pressure
_____ My friend(s) came here
_____ Other (please specify) _____

Are you a full-time_____ or part-time_____ student? (please check one)

What is your academic major (or most likely major if undecided)? _____

Where do you currently live? (please check one)

_____ Carleton University residence
_____ Off campus housing shared with other student(s) from Carleton University
_____ Off campus housing shared with other(s) who do not attend Carleton University
_____ Off campus housing by myself
_____ Off campus housing with a spouse
_____ Off campus with family members (parents)
_____ Other (please describe)
_____

What city and country does your parental family live in? _____

What is your citizenship status?

_____ Canadian citizen

_____ Landed immigrant Since what year?_____ Country of origin _____

_____ Student visa Since what year?_____ Country of origin _____

What is your first language? _____

What is your ethnic/racial background? We realize that selecting a broad racial/ethnic category can be difficult for some people. Please select the **ONE** category that **best identifies** how you would describe yourself.

Asian (i.e., Chinese, Japanese, Korean)

South Asian (i.e., East Indian, Pakistani, Punjabi, Sri Lankan)

South East Asian (e.g., Vietnamese, Phillipino, Thai, Burmese, Cambodian, Indonesian, Laotian, Malaysian)

Arab/West Asian (e.g., Armenian, Egyptian, Iranian, Lebanese, Moroccan)

Black (e.g., African, Haitian, Jamaican, Somali, African-American, African-Caribbean)

Latin American/Hispanic

Aboriginal (e.g., First Nations, Inuit, Métis)

White/Euro-Caucasian

Other *Please specify* _____

What is your religious affiliation? Please select the **ONE** that **best applies** to you

None – Atheist (e.g., belief that there is NO god)

None – Agnostic (e.g., belief that the existence of God cannot be known)

Protestant (e.g., United, Anglican, Baptist, Presbyterian, Lutheran, Pentecostal, Mennonite, "Christian")

Catholic (e.g., Roman Catholic, Ukranian Catholic)

Jewish

Muslim

Buddhist

Hindu

Sikh

Baha'i

Other *Please specify*_____

HEALTH BEHAVIORS AND ATTITUDES

Do you have any visible physical disability?

No_____ Yes_____ If yes, please specify _____

Do you have any learning disability?

No_____ Yes_____ If yes, please specify _____

Have you ever been diagnosed with a mental illness?

No_____ Yes_____ If yes, please specify _____

Have you ever been treated for a mental illness?

No_____ Yes_____ If yes, please specify who provided the treatment (e.g., psychiatrist, family physician)

_____

Do you have a family history of mental illness?

No_____ Yes_____ If yes, please specify

_____

_____

_____

_____

_____

_____

_____

Are you currently being treated for any physical condition?

No_____ Yes_____ If yes, please specify _____

Have you ever been in psychological therapy or counseling? (please check the one that best applies)

_____ No, I have never been in therapy

_____ Yes, but I am no longer

_____ Yes, and still am

If yes, how long ago were you in, or have you been in therapy?

Began _____ month/year and continued until _____ month/year

Appendix M

Depressive Vignettes

Depressive Vignette Emphasizing *Psychological* Symptoms

Anne/Bill is a first year undergraduate university student. For the past few weeks Anne/Bill has been feeling really down. S/he wakes up in the morning with a flat heavy feeling that sticks with her/him all day long. S/he isn't enjoying things the way s/he normally would. In fact, nothing gives her/him pleasure. Even when good things happen, they don't seem to make Anne/Bill happy. S/he pushes on through her/his days, but can't help but feel 'what's the point'. The smallest tasks are difficult to face. S/he finds it hard to concentrate on anything. Anne/Bill feels pretty worthless and very discouraged. Anne's/Bill's friends have noticed that s/he hasn't been joining in with them much for about a month and that s/he has pulled away from them. She just doesn't feel like talking, and feels like it's a show to look like s/he's having fun.

Depressive Vignette Emphasizing *Physical* Symptoms

Anne/Bill is a first year undergraduate university student. For the past few weeks Anne/Bill has been feeling really drained. Even though s/he feels tired, when night time comes s/he can't go to sleep. S/he wakes up in the morning feeling like s/he has slept badly, and s/he is tired all day. S/he just isn't up to doing things the way s/he normally would. In fact, s/he feels like s/he is dragging her/his feet all day. The smallest tasks are difficult to accomplish. S/he feels out of energy and out of steam. S/he knows s/he isn't eating properly either. S/he just isn't up to making proper meals, and so has been picking up junk food. Despite her/his fatigue, s/he feels hungry, and so is inclined to snack constantly, which means s/he's also starting to put on weight. Anne/Bill knows that her/his family is worried about her/him, but s/he just doesn't feel up to going over to visit with them.

Appendix N

Treatment Recommendations

Do you think that Anne/Bill should:

1. Go to a general medical doctor for help? No_____ Yes_____
2. Go to a psychiatrist for help? No_____ Yes_____
3. Go to a therapist or counselor, such as a psychologist, social worker, or other mental health professional, for help? No_____ Yes_____
4. Take prescription medication? No_____ Yes_____
5. Check into a hospital? No_____ Yes_____
6. Check into a mental hospital? No_____ Yes_____
7. In your opinion, how likely is it that Anne/Bill's situation will improve with treatment?

1	2	3	4	5
Not likely at all				Very likely

Appendix O

Self-Stigma of Mental Health Help-Seeking – Revised

If you were the person described in the story above, and the best source of help was the **counselors** at Health and Counseling Services, how would you feel about going to them for help. Please indicate how strongly you agree or disagree with the following statements:

	Not at all	A little	Somewhat	A lot	A great deal
1. I would feel inadequate if I went to a mental health counselor for help	0	1	2	3	4
2. My self-confidence would NOT be threatened if I sought help from a mental health counselor	0	1	2	3	4
3. Seeking help from a mental health counselor would make me feel less intelligent	0	1	2	3	4
4. It would make me feel inferior to ask a mental health counselor for help	0	1	2	3	4
5. My self-confidence would remain the same if I sought help from a mental health counselor for a problem I could not solve	0	1	2	3	4
6. I would feel worse about myself if I could not solve my own emotional problems	0	1	2	3	4

Other-Stigma of Mental Health Help-Seeking

If you were the person described in the story above, and you were to get help from a **mental health counselor**, to what degree do you believe that the people you interact with would:

	Not at all	A little	Somewhat	A lot	A great deal
1. React negatively to you	0	1	2	3	4
2. Think bad things of you	0	1	2	3	4
3. See you as having serious problems	0	1	2	3	4
4. Think of you in a less favourable way	0	1	2	3	4
5. Think you might be a bad influence on others	0	1	2	3	4
6. Think you are a failure	0	1	2	3	4

Appendix P

Public Perceptions of Causes

In your opinion, how likely is it that Anne/Bill's situation might be caused by…

	Not at all				Very likely
1. the person's own bad character?	0	1	2	3	4
2. a chemical imbalance in the brain?	0	1	2	3	4
3. the way the person was raised?	0	1	2	3	4
4. stressful circumstances in the person's life?	0	1	2	3	4
5. a genetic or inherited problem?	0	1	2	3	4
6. "God's will"?	0	1	2	3	4

Appendix Q

Debriefing Form

What are we trying to learn in this research? Adolescence and early adulthood are particularly vulnerable periods for young people who are attempting to gain social, economic, and emotional independence from their families. For those individuals who choose to pursue post-secondary studies during this period, the transition to adulthood may be further complicated by additional stressors of university life, such as separation from family and friends, unfamiliar people and surroundings, financial concerns, and the demands of their academic programs. Even students who have never suffered from emotional problems may develop them in response to the new stressors of university life if they don't have adequate resources to help them to cope with these demands. Despite the university offering many resources to students to deal with academic and emotional stresses, research has demonstrated that oftentimes, and for various reasons, such as the stigma towards help-seeking, students choose not to seek help. In this study we are trying to determine what factors (e.g., support/unsupport, perceptions of mental health, culture) are associated with students' willingness to seek help.

Why is this important to scientists or the general public? Previous research has demonstrated that the reason individuals may not want to seek help, especially from professional sources (e.g., doctors, psychologists) is because of the stigma attached mental illnesses. However it is still unclear what the specific reasons are that keep people from seeking help. Investigating students' understanding of mental health as well as environmental (e.g., family history of mental illness) and social factors (e.g., social support) may help us gain a better understanding of how these variables are associated with overall well-being and willingness to seek help.

What are our hypotheses and predictions? We predict that unsupport (negative social support) will be related to a reduction in the willingness to seek help from mental health professionals (such as health and counseling services on campus). In addition, the cultural values that we grow up in are also anticipated to have an association with individuals' willingness to seek help.

Where can I learn more? If you are interested in learning more about this research topic, see:

Chandra, A., & Minkovitz, C.S. (2006). Stigma starts early: Gender differences in teen willingness to use mental health services. *Journal of Adolescent Health, 38,* 754.e1-754.e8. doi: 10.1016/j.jadohealth.2005.08.011

Alexitch, L.R. (2002). The role of help-seeking attitudes and tendencies in students' preferences for academic advising. *Journal of College Student Development, 43,* 5-19. Retrieved from: http://www.jcsdonline.org/

Is there anything I can do if I found this experiment to be emotionally upsetting? Yes, if you have any worries or concerns about your personal well-being, or study skills, please feel free to contact the following services:

Carleton University Health and Counseling Services 520-6674
Student Services 520-3663
Student Academic Success Centre 520-7850
International Student Services Office 520-6600
First in Family Peer Mentor Program 520-7595

What if I have questions later? If you have any remaining concerns, questions, or comments about the experiment, please feel free to contact Miki Talebi (Principal Investigator), at

mtalebi2@connect.carleton.ca (613-520-2600, ext. 4199), Dr. Kim Matheson (Faculty Sponsor), at kim_matheson@carleton.ca (520-2648). Should you have any ethical concerns about this research, please contact Dr. Monique Sénéchal (Chair, Psychology Ethics Board) at monique_senechal@carleton.ca, 613-520-2600 ext 1155. For other concerns, please contact Dr. Anne Bowker (Chair, Department of Psychology) at psychchair@carleton.ca, 613-520-2600, ext. 8218).

This study has received clearance by the Carleton University Psychology Research Ethics Board (Reference #11-011).

Appendix R

Suicide Ideation Protocol

IN-PERSON/TELEPHONE SITUATIONS

Check the Beck item 7 immediately (e.g., while getting credit information and debriefing ready).

If the Beck item 7 is 0, nothing is done except to give credit and debriefing. The debriefing includes a summary of the goals of the study, as well as a list of contact numbers (e.g., health and counseling services, etc.).

If the Beck item 7 is a 1, the participant is reminded of counseling services available at Carleton, and in the community. Credit and debriefing are subsequently given. If there are many participants (group questionnaire setting) and it is not feasible to remind the participant privately in the study room of services, then the participant will be taken to a private room, with the researcher saying that they are being taken to be debriefed, and they will be reminded of services available there. Credit and debriefing sheet are provided.

If the BECK item 7 is 2 or 3, if possible, the participant is spoken to privately. If speaking with the participant privately in the study room is not feasible (group setting), then the participant will be taken to a private room, with the researcher saying they are being taken to be debriefed. The researcher will state that they have noticed the Beck item, and that they are concerned about their welfare. The summarized seven-step protocol (below) is then implemented.

The following will be assessed:

1. The length of time that participant has had suicidal thoughts.
2. Whether the participant has talked to anyone regarding these thoughts.
3. Whether the participant is currently seeing a therapist.
4. Whether the participant has a plan and the means to carry out their plan
5. Whether the thought to carry out their plan is imminent
6. If plan is imminent then the protocol outlined below will be followed.

NOTE: Keep a written record documenting the assessment.

ADDITIONAL DETAILS:

The plan and means. The participant is questioned about the plan and the means to carry out this plan. Examples of plans are such things as taking large amounts of painkillers, and means are having lots of painkillers available. You don't have to give examples of plans, just ask whether they have thought about how they would do it.

If there are no plans, or there are plans but no means (e.g., take painkillers but none around), remind the participant of counseling services available in the community and also the ER at the hospital. If the participant is also seeing a therapist, it is suggested that the participant speak with the therapist about this. Then the credit and debriefing are given.

If there are both plans and means, the participant is asked whether thoughts to carry out this plan are imminent (that is, are they thinking of doing this very soon? For example, within the next day).

If not imminent, OR have plans and means but don't think they would carry them out (e.g., yes, I've thought about doing it occasionally and have the meds but realize I could not go through with it), the participant is reminded of counseling services available in the community, and also the ER at the hospital. If also seeing a therapist, it is suggested that the participant speak with their therapist about this. Then the credit and debriefing are given.

If means are available and plan is imminent, and there is good reason to believe that then individual may in fact carry out the suicidal thoughts soon, then the participant is informed that you will be calling 911 because you are very concerned that they will harm themselves. During the 911 call, the police are informed of the individual's imminent intent to commit suicide. The person's name and phone are given to the police. This step involves breaking confidentiality, but the welfare of the participant takes priority (APA and CPA and Tri-Council guideline 3.1). 911 will take it from there. **The situation is documented, and your supervisor and ethics chair are contacted.**

Things NOT TO DO in both in-person and telephone situations
Do not *give out your lab number as a resource for somewhere to call for help.*

Do not *give out home phone numbers of research personnel.*

Do not intervene directly with the participant. That is, **do not** escort the person to the hospital or health services. If a participant does call the lab for help, refer them again to the resources, such as Health Services or the Distress Centre or hospital. Assess for immediacy of suicidal intention, and follow the steps outlined above, such as finding out if there is someone else there, calling 911 directly if there is imminent suicidal intent, etc.

Do not engage in a helping relationship with the person. Provide the information about resources, but, for example, **do not** make follow-up calls to check up on the person and see how they are doing.

Do not do any of this assessment and suicidal screening if you do not feel confident about it. Refer it to your supervisor.

BDI item 7

7. ___ 0 = I don't have thoughts of harming myself
   ___ 1 = I feel I would be better off dead
   ___ 2 = I have definite plans about committing suicide
   ___ 3 = I would kill myself if I had the chance

Appendix S

Study 4 Informed Consent

The purpose of an informed consent is to ensure that you understand the purpose of the study and the nature of your involvement. The informed consent has to provide sufficient information such that you have the opportunity to determine whether you wish to participate in the study.

Study Title: Environmental and Social Factors Influencing First-Year Experience

Research Personnel: The following people are involved in this research project, and may be contacted at any time if you have questions or concerns:

Miki Talebi (email: mtalebi2@connect.carleton.ca, phone: 520-2600 ext. 4199)
Lisa Emberley (email: lemberle@connect.carleton.ca, phone: 520-2600 ext. 4199)
Deema Koudieh (email: dkoudieh@connect.carleton.ca, phone 520-2600 ext. 4199)
Dr. Hymie Anisman (email: hanisman@ccs.carleton.ca, phone: 520-2699)
Dr. Kim Matheson (email: kim_matheson@carleton.ca, phone: 520-2648)

Ethical concerns: Should you have any ethical concerns about this study please contact Dr. Monique Sénéchal, Chair of the Department of Psychology Research Ethics Committee at Carleton University at 613 520-2600 ext. 1155.

Other concerns: Should you have any other concerns about the study please contact Dr. Anne Bowker, Chair, Department of Psychology, 520-2600 ext. 8218

Purpose: The purpose of this study is to assess how your individual characteristics along with your social environment and personal resources affect your quality of life and academic performance.

Task requirements: We are asking you to fill out a number of questionnaires regarding information about yourself (e.g., ethnicity, religion, health status), how you feel about yourself, how you cope with things in your life, physical and mental health, personal goals, social support and help-seeking, as well as how you may respond to different types of experiences. We will eventually be looking at how these factors relate to your success in your first year at Carleton. The questionnaire should take approximately one hour to complete. You will be awarded a 1% experimental credit in your Introductory Psychology Course or a gift certificate for $10 to Tim Hortons or Starbucks.

Potential Risk and Discomfort: There are no physical risks in this study. There may be some discomfort or anxiety experienced when responding to some of the questions in this study or thinking about various stressors or difficulties in your life. If this is the case, the Debriefing form at the end of the study contains contact information for people who are available to help.

Anonymity/Confidentiality: The data collected in this study will be kept confidential. Your informed consent form will be separated from your questionnaires by the research investigators and kept in a secured file. The data will also be stored in a secured data file that is only accessible by the researcher and research assistants. All information provided will be kept anonymous. Should the findings from this study be reported, only aggregate data (findings from the overall group) will be reported, and no personally identifiable information. The questionnaire booklet will be associated with a randomly assigned code, and only this code will identify your questionnaires. Should you choose to participate in a follow-up study, additional consent will be obtained for any follow-up components of this study.

Right to Withdraw: Your participation in this study is entirely voluntary. At any point during the study you have the right to not complete certain questions or to withdraw with no penalty whatsoever.

This study has received clearance by the Carleton University Psychology Research Ethics Board (Reference #11-011).

Signatures

I have read the above form and understand the conditions of my participation. My participation in this study is voluntary, and I understand that if at any time I wish to leave the experiment, I may do so without having to give an explanation and with no penalty whatsoever. Furthermore, I am also aware that the data gathered in this study are confidential and anonymous with respect to my personal identity. My signature indicates that I agree to participate in this study.

Participant's Name: _____ Participant's Signature: _____

Researcher's Name: _____ Researcher's Signature: _____

Date_____

Appendix T

Unsupport Social Interactions Inventory - Revised

Please think about times when you've turned to a **close Carleton friend** for support in regards to a situation that has made you feel down or anxious (i.e., frustrations or disappointments with friends, family, school, health, work, or anything else that is important to you). For each of the statements below, **please circle the number that indicates how frequently at least one of your close Carleton friends has responded to you in this way when you went to him/her for support.**

	None				A lot
1. When I was talking to a close Carleton friend about my situation he or she changed the subject before I wanted to	0	1	2	3	4
2. A close Carleton friend didn't seem to know what to say, or seemed afraid of saying/doing the wrong thing	0	1	2	3	4
3. A close Carleton friend has told me to be strong, to keep my chin up, or that I shouldn't have let the issue/situation bother me	0	1	2	3	4
4. A close Carleton friend asked me "why" questions, such as "why did/didn't you..."	0	1	2	3	4
5. When I was talking to a close Carleton friend about what was bothering me, he or she did not want to hear about it	0	1	2	3	4
6. A close Carleton friend seemed to be telling me what he or she thought I wanted to hear	0	1	2	3	4
7. A close Carleton friend felt that I should stop worrying about the situation and just forget about it	0	1	2	3	4
8. A close Carleton friend made "should/shouldn't have" comments about my role in the situation, such as, "you shouldn't have..."	0	1	2	3	4

Please think about times when you've turned to a **close non-Carleton friend** for support in regards to a situation that has made you feel down or anxious (i.e., frustrations or disappointments with friends, family, school, health, work, or anything else that is important to you). For each of the statements below, **please circle the number that indicates how frequently at least one of your close Carleton non-friend has responded to you in this way when you went to him/her for support.**

	None				A lot
1. When I was talking to a close non-Carleton friend about my situation he or she changed the subject before I wanted to	0	1	2	3	4
2. A close non-Carleton friend didn't seem to know what to say, or seemed afraid of saying/doing the wrong thing	0	1	2	3	4
3. A close non-Carleton friend has told me to be strong, to keep my chin up, or that I shouldn't have let the issue/situation bother me	0	1	2	3	4
4. A close non-Carleton friend asked me "why" questions, such as "why did/didn't you..."	0	1	2	3	4
5. When I was talking to a close non-Carleton friend about what was bothering me, he or she did not want to hear about it	0	1	2	3	4
6. A close non-Carleton friend seemed to be telling me what he or she thought I wanted to hear	0	1	2	3	4
7. A close non-Carleton friend felt that I should stop worrying about the situation and just forget about it	0	1	2	3	4
8. A close non-Carleton friend made "should/shouldn't have" comments about my role in the situation, such as, "you shouldn't have..."	0	1	2	3	4

Appendix U

Social Provisions - Revised

In answering the next set of questions, please think about how your current relationships with your **friends** would be if you were experiencing depressive symptoms. If you feel a question accurately describes how your relationships with your friends would be if you were experiencing depressive symptoms, you would say "yes". If the question does not describe how your relationships, would be you would say "no". If you cannot decide whether the question describes how your relationships with your friends would be, you may say "not sure".

	No	Not sure	Yes
1. Are there friends you can depend on to help you, if you really need it?	1	2	3
2. Do you feel you could not turn to your friends for guidance in times of stress?	1	2	3
3. Are there friends who enjoy the same social activities that you do?	1	2	3
4. Do you feel personally responsible for the well-being of your friends?	1	2	3
5. Do you feel your friends do not respect your skills and abilities?	1	2	3
6. If something went wrong, do you feel that none of your friends would come to your assistance?	1	2	3
7. Do your relationships with your friends provide you with a sense of emotional security and well being?	1	2	3
8. Do you feel your competence and skill are recognized by your friends?	1	2	3
9. Do you feel none of your friends share your interests and concerns?	1	2	3
10. Do you feel none of your friends really rely on you for their well-being?	1	2	3
11. Is there a trustworthy friend you could turn to for advise, if you were having problems?	1	2	3
12. Do you feel you lack emotional closeness with your friends?	1	2	3

In answering the next set of questions, please think about your current relationships how your **intimate partner** would be if you were experiencing depressive symptoms (spouse or boyfriend/girlfriend). (YOU CAN SKIP THIS PAGE IF YOU ARE NOT CURRENTLY IN ANY RELATIONSHIP.)

	No	**Not sure**	**Yes**
1. Can you depend on your partner to help you, if you really need it?	1	2	3
2. Do you feel you could not turn to your partner for guidance in times of stress?	1	2	3
3. Does your partner enjoy the same social activities that you do?	1	2	3
4. Do you feel personally responsible for the well-being of your partner?	1	2	3
5. Do you feel your partner does not respect your skills and abilities?	1	2	3
6. If something went wrong, do you feel that your partner would not come to your assistance?	1	2	3
7. Does your relationship with your partner provide you with a sense of emotional security and well-being?	1	2	3
8. Do you feel your competence and skill are recognized by your partner?	1	2	3
9. Do you feel your partner does not share your interests and concerns?	1	2	3
10. Do you feel your partner does not really rely on you for his or her well-being?	1	2	3
11. Could your turn to your partner for advise, if you were having problems?	1	2	3
12. Do you feel you lack emotional closeness with your partner?	1	2	3

Appendix V

Unsupportive Social Interactions Inventory – Revised II

If you were experiencing depressive symptoms, how do you think your **close Carleton friend** would react to you if you turned to h/she for support in regards to this. For each of the statements below, **please circle the number that indicates how frequently at least one of your close Carleton friends would to you in this way if you were to seek him/her for support.**

	None				A lot
1. When I was talking/If I were to talk to a close Carleton friend about my situation he or she changed the subject before I wanted to	0	1	2	3	4
2. A close Carleton friend didn't /wouldn't seem to know what to say, or seemed afraid of saying/doing the wrong thing	0	1	2	3	4
3. A close Carleton friend has/would have told me to be strong, to keep my chin up, or that I shouldn't have let the issue/situation bother me	0	1	2	3	4
4. A close Carleton friend asked/would ask me "why" questions, such as "why did/didn't you..."	0	1	2	3	4
5. When I was talking/If I talked to a close Carleton friend about what was bothering me, he or she did not want to hear about it	0	1	2	3	4
6. A close Carleton friend seemed to/would be telling me what he or she thought I wanted to hear	0	1	2	3	4
7. A close Carleton friend felt/would feel that I should stop worrying about the situation and just forget about it	0	1	2	3	4
8. A close Carleton friend made/would make "should/shouldn't have" comments about my role in the situation, such as, "you shouldn't have..."	0	1	2	3	4

If you were experiencing depressive symptoms, how do you think your **close non-Carleton friend** would react to you if you turned to h/she for support in regards to this. For each of the statements below, **please circle the number that indicates how frequently at least one of your close non-Carleton friends would to you in this way if you were to seek him/her for support.**

	None				A lot
1. When I was talking to a close non-Carleton friend about my situation he or she changed the subject before I wanted to	0	1	2	3	4
2. A close non-Carleton friend didn't seem to know what to say, or seemed afraid of saying/doing the wrong thing	0	1	2	3	4
3. A close non-Carleton friend has told me to be strong, to keep my chin up, or that I shouldn't have let the issue/situation bother me	0	1	2	3	4
4. A close non-Carleton friend asked me "why" questions, such as "why did/didn't you..."	0	1	2	3	4
5. When I was talking to a close non-Carleton friend about what was bothering me, he or she did not want to hear about it	0	1	2	3	4
6. A close non-Carleton friend seemed to be telling me what he or she thought I wanted to hear	0	1	2	3	4
7. A close non-Carleton friend felt that I should stop worrying about the situation and just forget about it	0	1	2	3	4
8. A close non-Carleton friend made "should/shouldn't have" comments about my role in the situation, such as, "you shouldn't have..."	0	1	2	3	4

Appendix W

Survey of Coping Profiles Endorsed - Revised

The purpose of this questionnaire is to find out how people deal with the stress of experiencing depressive symptoms. The following are activities that you may have done. After each activity, please indicate the extent to which you would use this as a way of dealing with the stress of experiencing depressive symptoms in recent weeks.

Ordinarily, in recent weeks have you:	*Never*	*Seldom*	*Sometimes*	*Often*	*Almost always*
1. accepted that there was nothing you could do to change your situation?	0	1	2	3	4
2. tried to just take whatever came your way?	0	1	2	3	4
3. talked with friends or relatives about your problems?	0	1	2	3	4
4. tried to do things which you typically enjoy?	0	1	2	3	4
5. sought out information that would help you resolve your problems?	0	1	2	3	4
6. blamed others for creating your problems or making them worse?	0	1	2	3	4
7. sought the advice of others to resolve your problems?	0	1	2	3	4
8. blamed yourself for your problems?	0	1	2	3	4
9. exercised?	0	1	2	3	4
10. fantasized or thought about unreal things (eg., the perfect revenge, or winning a million dollars) to feel better?	0	1	2	3	4
11. been very emotional compared to your usual self?	0	1	2	3	4
13. gone over your problem in your mind over and over again?	0	1	2	3	4
13. asked others for help?	0	1	2	3	4
14. thought about your problem a lot?	0	1	2	3	4
15. became involved in recreation or pleasure activities?	0	1	2	3	4
16. worried about your problem a lot?	0	1	2	3	4
17. tried to keep your mind off things that are upsetting you?	0	1	2	3	4
18. tried to distract yourself from your troubles?	0	1	2	3	4
19. avoided thinking about your problems?	0	1	2	3	4
20. made plans to overcome your problems?	0	1	2	3	4
21. told jokes about your situation?	0	1	2	3	4
22. thought a lot about who is responsible for your problem (besides yourself)?	0	1	2	3	4
23. shared humorous stories etc. to cheer yourself and others up?	0	1	2	3	4

Ordi*narily, in recent weeks have you:*	*Never*	*Seldom*	*Sometimes*	*Often*	*Almost always*
26. told yourself that other people have dealt with problems such as yours?	0	1	2	3	4
27. thought a lot about how you have brought your problem on yourself?	0	1	2	3	4
26. decided to wait and see how things turn out?	0	1	2	3	4
27. wished the situation would go away or be over with?	0	1	2	3	4
28. decided that your current problems are a result of your own past actions?	0	1	2	3	4
29. gone shopping?	0	1	2	3	4
30. asserted yourself and taken positive action on problems that are getting you down?	0	1	2	3	4
31. sought reassurance and moral support from others?	0	1	2	3	4
32. resigned yourself to your problem?	0	1	2	3	4
33. thought about how your problems have been caused by other people?	0	1	2	3	4
34. daydreamed about how things may turn out?	0	1	2	3	4
35. been very emotional in how you react, even to little things?	0	1	2	3	4
36. decided that you can grow and learn through your problem?	0	1	2	3	4
37. told yourself that other people have problems like your own?	0	1	2	3	4
38. wished I was a stronger person or better at dealing with problems?	0	1	2	3	4
39. looked for how you can learn something out of your bad situation?	0	1	2	3	4
40. asked for God's guidance?	0	1	2	3	4
41. kept your feelings bottled up inside?	0	1	2	3	4
42. found yourself crying more than usual?	0	1	2	3	4
43. tried to act as if you were not upset?	0	1	2	3	4
44. prayed for help?	0	1	2	3	4
45. gone out?	0	1	2	3	4
46. held in your feelings?	0	1	2	3	4
47. tried to act as if you weren't feeling bad?	0	1	2	3	4
48. taken steps to overcome your problems?	0	1	2	3	4
49. made humorous comments or wise cracks?	0	1	2	3	4
50. told others that you were depressed or emotionally upset?	0	1	2	3	4

Appendix X

Study 4 Hypothesis 1 Alternative Model Testing

Alternative model 1. In the first alternative model *all pathways related to the mediator variables were set to equal zero.* Model fit indices were then evaluated with depressive symptoms predicting each of the outcome variables. Fit indices suggested a significant chi square, (χ^2 (6) = 82.24, p< .001), both NNFI and CFI were below the minimum criteria of .90 (NNFI = .43, CFI = .66), and RMSEA yielded a value greater than .10 (RMSEA = .20, 90% CI{.16; .24}). Furthermore, a chi square difference test indicated that this model was a poorer fit to the data, $\chi^2_{difference}$ (4) = 74.62, p < .001, demonstrating that the original predictive model, in which the mediators were included was a better fit to the data.

Alternative model 2. In the second alternative model, the directionality of the variables was tested to determine if *depressive symptoms as a mediator in the relations between support perceptions and stigma* would be better suited to the data. Model fit indices revealed a significant chi square (χ^2 (4) = 25.26, p< .001), NNFI was below the minimum desired value of .90, whereas CFI was equal to .90 (NNFI = .76, CFI = .90), and RMSEA exceeded the desired value of .08 (RMSEA = .13, 90% CI{.08; .18}). Additionally, a test of the chi square difference indicated that this model was a significantly worse fit to the data ($\chi^2_{difference}$ (2) = 17.64, p<.001), once again suggesting that the hypothesized predictive model was better suited to the data compared to the original predictive model.

Appendix Y

Study 4 Hypothesis 3 Alternative Model Testing

Alternative model 1. In this first alternative model, *all pathways related to the coping variables were set to zero* and fit indices for this model were compared against those of the predictive model. Model fit indices indicated a significant chi square (χ^2 (13) = 263.77, p< .001), NNFI and CFI were well below .90 (NNFI = -.04, CFI = .52), and RMSEA exceeded the desired value of .08 (RMSEA = .22, 90% CI{.20; .25}). Furthermore, a test of the chi square difference indicated that this alternative model was a poorer fit to the data compared to the initially established predictive model ($\chi^2_{difference}$ (10) = 252.70, p<.001).

Alternative model 2. In the second alternative model, *all pathways related to the support and unsupport variables were set to equal zero.* Once again, fit indices appeared to be less than ideal, whereby chi square was significant (χ^2 (13) = 134.56, p< .001), NNFI and CFI were below .90 (NNFI = .49, CFI = .76), and RMSEA exceeded the desired value of .08 (RMSEA = .17, 90% CI{.14; .19}). Additionally, a chi square difference test revealed that this alternative model was a worse fit to the data compared to our original hypothesized model ($\chi^2_{difference}$ (10) = 123.49, p<.001).

Alternative model 3. In the third alternative model the possibility of alternative directions was explored to determine if the type of *coping strategy endorsed would be predictive of perceptions of support and unsupport* would be better suited to the data. Examination of the fit indices for this model revealed a significant chi square, (χ^2 (3) = 11.13, p< .001), both NNFI was slightly below .90 and CFI was above the minimum criteria of .90 (NNFI = .85, CFI = .98), and RMSEA yielded a value greater than .08,

though less than .10 (RMSEA = .95, 90% CI{.04; .16}). Furthermore, a chi square difference test to this alternative model indicated that this model was also a significantly worse fit to the data, $\chi^2_{difference}(0) = .06, p < .001$, suggesting that the predictive model in which the support and coping mediators were included, was better fitted to the data. Thus, though the fit statistics suggested that this model was a relatively suitable fit to the data, it seems that the original hypothesized model was better suited to the data, thereby adding credibility to the directionality of the data. Taken together, the findings from these data reaffirm the intervening role that coping can serve to diminish or heighten one's stigmatizing attitudes towards seeking help for mental health concerns.