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Examining The Effectiveness Of Psychotherapy Provided At A Canadian University Counselling Centre : Preliminary Results

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EXAMINING THE EFFECTIVENESS OF PSYCHOTHERAPY PROVIDED AT A
CANADIAN UNIVERSITY COUNSELLING CENTRE: PRELIMINARY RESULTS

by

Jennifer Robin Rouse, B.A. Hon., Carleton University, October, 2008

A thesis

presented to Ryerson University

in partial fulfillment of the
requirements for the degree of

Master of Arts

in the Program of

Clinical Psychology

Toronto, Ontario, Canada, 2011

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Examining the Effectiveness of Psychotherapy Provided at a Canadian University Counselling

Centre: Preliminary Results

Master of Arts, 2011

Jennifer R. Rouse

Clinical Psychology

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Abstract

Psychotherapy is an effective treatment for a variety of mental illnesses. Despite this evidence, the average Canadian does not have access to psychotherapy because Medicare does not generally cover the costs. However, Canadians attending post-secondary education can generally access psychotherapy at no direct cost. Currently, there is limited Canadian research on the effectiveness of psychotherapy provided at university counselling centres (UCCs). The present study examined the effectiveness of individual counselling provided at a Toronto university counselling centre and the preliminary results are presented. Participants experienced a statistically significant decrease in mental health-related symptoms as measured by the Outcome Questionnaire 45.2 (OQ-45), overall current symptom severity, and severity of symptom interference in daily life from pre- to post-counselling. Current medication, supplement, and vitamin use and family social support were not significant predictors of OQ-45 score changes. Participants also gave general feedback indicating that counselling was effective and beneficial.

Acknowledgements

First, I would like to thank my MA thesis supervisor, Dr. Wade Pickren. As my interest in mental health research grew over the course of my first year, Dr. Pickren nurtured this interest and encouraged me to follow my passion. Without Dr. Pickren, I would not be in the Clinical Psychology program that I love so much and I would not have been able to conduct the research I am so passionate about.

I would like to thank my mentor and second reader, Dr. Diana Brecher. I had the joy of having Dr. Brecher mentor me in a number of capacities and I am richer for it. Her belief in me and her guidance will stay with me always.

I am also grateful to Dr. Alasdair Goodwill for his role as my third reader. My research has greatly benefitted from Dr. Goodwill's keen mind for methodology and statistics. I would also like to thank him for making the world of statistics and SPSS as little less confusing.

To Dr. Kelly McShane, thank you for your ongoing support. I look forward to continuing our work together.

I would like to express my most sincere appreciation and gratitude to the Counsellors at the Centre for Student Development and Counselling. Without your openness and generosity with your time, this study could not have taken place.

I would also like the participants of this study. They could have easily chosen not to participate, and I am very grateful that they did.

I would like to thank and acknowledge my parents, Dean Rouse and Lola and Paul Naylor. Thank you for listening to me, comforting me, and supporting me throughout this process. And a special thank you to Paul who bravely agreed to review and edit this paper.

To my sister, Elaine Rouse, her fiancé Tyler Stortz, and my three beautiful nephews, thank you for your continued love and support. In particular, I would like to thank my 8-year-old nephew for quipping that my thesis sounded like a lot of work, but not nearly as much work as a book, much to my angst and delight.

To my best friend Nicole Ronholm, there are not enough words to express my gratitude for your encouraging words, empathetic ear, and overall support. You have been one of my biggest cheerleaders and I cannot thank you enough for that.

I could not have gotten through this thesis or the MA program without the friends I gained at Ryerson, particularly Amy Brown-Bowers and Leanne Wilkins.

To Sunny and Miles who kept me company while I toiled away at my desk for days on end, thank you for the laughter and humility you brought me during this project.

I would also like to thank my in-laws, Lauren and John Janssen, for their continued support.

I would like to thank my husband, Greg Janssen, for his patience, reassurance, and support as I worked my way through my MA. Throughout my university career, he tirelessly edited my work, helped me to problem solve and see things from a different perspective, and helped keep me sane. I would not have been able to complete this work without the strength and love he gave me every day.

Lastly, I would like to thank anyone who will take the time to read this. Although writing this was challenging and daunting at times, I am grateful to have had the opportunity to conduct this research that has brought me so much joy.

Dedication

I would like to dedicate this work to my husband, Greg Janssen, whose love and support has made this possible. Anyone who has completed an MA knows what a massive undertaking it is and the toll it can take on the other areas of your life. I am so fortunate to have such a caring and supportive husband who ensured that over the last two years I took time out of my hectic schedule for joy, the simplicities of everyday life, and sometimes just to breathe.

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Examining the Effectiveness of Psychotherapy Provided at a Canadian University Counselling
Centre: Preliminary Results

Introduction

Mental illness is a common health concern among Canadians: approximately 1 in 5 Canadians will experience a mental illness at some point in their lifetime (Lesage, Vasiliadis, Gagne, Dudgeon, Kasman, & Hay, 2006). Having a mental illness is associated with a number of negative socioeconomic factors (Mental Health Commission of Canada, 2009) such as unemployment, housing difficulties, and low income (Government of Canada, 2006; Kirby & Keon, 2006), poorer physical health and exacerbation of chronic illnesses (Government of Canada, 2006; Moussavi et al., 2007), and long-term disability (Chrisholm, 2006; Holden, 2000). Mental illness also impacts Canada's economy, costing the public and private sectors upwards of 50 billion dollars each year (Lim, Jacobs, Ohinmaa, Schopflocher, & Dewa, 2008; Moore, Mao, Zhang, Clarke, & Laboratory Centre for Disease Control, 1997; Stephens & Joubert, 2001).

Despite the potential negative consequences associated with mental illness, the majority of Canadians, as well as Americans, living with a mental illness do not receive treatment (Eisenberg, Golberstein, & Gollust, 2007; Vasiliadis, Lesage, Adair, & Boyer, 2005; Wang et al., 2005). In a 1 to 2 year period, less than half of individuals with a mental disorder will seek treatment (Vasiliadis et al., 2005; Wang et al., 2005). Instead, individuals tend to wait years before seeking help from a mental health professional; the median delay between the onset of a mental illness and treatment is roughly 11 years (Eisenberg et al., 2007; Wang, Berglund, Olfson, & Kessler, 2004).

Research suggests that similar to the general population, the majority of university and college students who meet criteria for a mental disorder also do not receive treatment (Eisenberg

et al., 2007; Zivin, Eisenberg, Gollust, & Golberstein, 2009). One study found that upwards of 90% of post-secondary students with emotional problems do not seek help and more than 75% of students in significant distress do not receive counselling (Rosenthal & Wilson, 2008; Storrie, Ahern, & Tuckett, 2010). This is particularly problematic given that the onset of many mental disorders occurs between ages 15 and 25, a time when many young Canadians are enrolled in post-secondary education (Council of Ontario Universities [COU], 2010; Eisenberg et al., 2007; Kessler, Berglund, Demler, Jin, & Walters, 2005; McGorry, Purcell, Goldstone, & Amminger, 2011; McLean & Andrews, 1998; Mowbray et al., 2006). Furthermore, mental illness and symptom severity appear to be increasing in the student population, a trend that parallels the general population (Benton, Robertson, Tseng, Newton, & Benton, 2003; Gallagher, 2010; Storrie et al., 2010; Twenge et al., 2010).

Canada's universal health care system along with Medicare, Canada's universal health care insurance program, financially supports and promotes medication, also known as pharmacotherapy, for the treatment of mental illnesses, although other treatment options are often available in serious cases (Myer & Payne, 2006; Vasiliadis, Tempier, Lesage, & Kates, 2009). One such option is psychotherapy. Psychotherapy is an effective empirically supported treatment for several mental disorders, including depression, substance abuse, social phobia, generalized anxiety disorder, panic disorder, agoraphobia, eating disorders, specific phobias, and post-traumatic stress disorder (Chambless & Ollendick, 2001; Hunsley, 2002; Myer & Payne, 2006; United Kingdom Department of Health [UKDH], 2001). Mental health care advocates point out that psychotherapy is an underutilized tool for the treatment of mental illness in Canada (Kirby & Keon, 2006; Mental Health Commission of Canada, 2009; Myer & Payne, 2006). By and large, Medicare does not cover the costs of psychotherapy except in serious cases, meaning

that the majority of Canadians must pay out of pocket for the service, though some costs may be covered by private health insurance plans (Hunsley, 2002; Myer & Payne, 2006; Vasiliadis et al., 2009). Fortunately for post-secondary students, along with onsite medical clinics and disability services, most university and college campuses offer students counselling and psychotherapy services (Eisenberg et al., 2007; Gallagher, 2010; Storrie et al., 2010). Yet unlike the general population, students often receive psychotherapy at no direct cost (Eisenberg et al., 2007; Gallagher, 2010).

Canadian policy-makers and politicians have been hesitant to support psychotherapy for a number of reasons, including the presumed additional cost of psychotherapy to an already financially overtaxed health care system and the lack of Canadian psychotherapy effectiveness research (Hunsley, 2002). Yet, recent studies indicate that psychotherapy is a cost-effective treatment that may actually be less expensive than pharmacotherapy for some mental illnesses, including panic disorder with or without agoraphobia, generalized anxiety disorder, and depression, and can offset the medical costs of physical illness such as heart disease, hypertension, chronic pain, diabetes, chronic fatigue, and even cancer (Hunsley, 2002; Myer & Payne, 2006; Roberge, Marchand, Reinhartz, Marchand, & Cloutier, 2004). However, there is a lack of Canadian research on the effectiveness of psychotherapy — the majority of current research has been conducted in the United States of America (US). Researchers, health care providers, and government officials alike are demanding more Canadian exploratory and effectiveness research on the provision of psychotherapy (Mental Health Table Forum, 2010).

Psychotherapy and counselling effectiveness research at the post-secondary level has followed a similar pattern as general psychotherapy research with some important differences. Although a great deal of research has been conducted at university counselling centres (UCCs),

there is limited research focusing directly on the effectiveness of counselling and psychotherapy provided at UCCs; instead, the focus has been on specific aspects of counselling and psychotherapy such as help-seeking behaviours, therapeutic alliance, client factors, specific clinical treatments, assessments, and therapy mechanisms (Rosenthal & Wilson, 2008; Minami et al., 2009). Nonetheless, initial evidence examining the effectiveness of counselling and psychotherapy provided at UCCs indicates that it is an effective treatment for students' mental health and relationship problems (see Minami et al., 2009; Snell, Mallinckrodt, Hill, & Lambert, 2001; Vonk & Thyer, 1999; Wilson, Mason, & Ewing, 1997). Again, much of this research has been conducted in the US; effectiveness research at Canadian UCCs is limited and there has been a call for more Canadian research in the area (Cairns, Massfeller, & Deeth, 2010; McCormick & Paterson, 1995).

In sum, psychotherapy is an effective treatment for a wide range of mental disorders and is potentially less expensive than traditional pharmacotherapy. However, because the majority of psychotherapy efficacy and effectiveness research is conducted in the US, Canadian officials and mental health advocates are demanding more Canadian research in the field. There is a similar demand for psychotherapy effectiveness research at Canadian UCCs. Despite the substantial amount of research conducted at UCCs, there is limited Canadian data on the effectiveness of psychotherapy and counselling provided at UCCs. It is important to examine the effectiveness of psychotherapy provided at UCCs for two reasons: 1) to ensure that students are receiving a quality, effective treatment for mental health and relationship concerns; and 2) to add to the Canadian psychotherapy effectiveness literature by examining psychotherapy at one of the few institutions where Canadians can receive psychotherapy at no direct cost.

To answer the call for more direct effectiveness research at Canadian UCCs and to add

to the Canadian psychotherapy literature, a study was conducted that examined the effectiveness of the counselling services, also referred to in this paper as psychotherapy, provided at a Toronto UCC (T-UCC). However, before discussing this study in full, the relevant literature will be explored. Within this literature review, the following topics will be discussed: the definition of mental illness, mental illness in Canada, the economic burden of mental illness, mental health treatment in Canada, the effectiveness of psychotherapy and barriers to Medicare funding, post-secondary education in Canada and student mental health, mental health treatment at post-secondary institutions, research at UCCs, and the Outcome Questionnaire 45.2 (OQ-45). To begin, the terms ‘mental health,’ ‘mental illness,’ and ‘mental health problems’ will be defined.

Literature Review

Definition of Mental Illness

In much of the mental health care literature, the terms ‘mental health,’ ‘mental illness,’ ‘addiction,’ ‘mental disorders,’ and ‘mental health problems’ are often used interchangeably; however, there are differences among the terms. Mental health is defined by the World Health Organization (WHO) as “a state of well-being in which the individual” reaches her or his potential, can cope with life stressors, maintain employment, and contribute productively to her or his society (World Health Organization, 2007, para. 1). Thus, mental health is an all-encompassing term that can be applied to any individual in varying degrees from unhealthy to healthy. On the other hand, mental illness is defined by the Canadian Psychiatric Association (2010) as “behavioural, psychological, or biological dysfunction...[referring] to clinically significant patterns of behavioural or emotional functioning associated with...distress, suffering (pain, death), or impairment in one or more areas of functioning (such as school, work, social and family interactions)” (para. 5). Mental illnesses, also referred to as mental disorders, are identified by health care professionals using the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR) and includes disorders such as major depressive disorder, general anxiety disorder, schizophrenia, bipolar, and substance abuse and dependence (American Psychiatric Association, 2000; Mowbray et al., 2006). However, although the term mental illness almost always encompasses DSM-IV-TR categorized mental disorders, it can sometimes also include subthreshold mental disorders, meaning that some criteria for a mental disorder might be met but not enough to be clinically diagnosed. On the other hand, the term mental disorder strictly refers to disorders outlined in the DSM-IV-TR. Lastly, the term ‘mental health problem or concern’ includes mental illnesses that may or may

not meet criteria for a DSM-IV-TR disorder as well as general poor mental health that negatively impacts an individual's life. Mental health problems or concerns can include phenomena such as stress, sleep difficulties, digestive problems, and general life challenges as well as diagnosable mental disorders. Throughout this paper, each term will be used purposefully as described above. When discussing the study presented, the terms 'mental health problems or concerns' or 'mental illness' are used most often because not all clients of UCCs meet criteria for a mental disorder.

Mental Illness in Canada

Approximately 20% of Canadians will at some time in their life suffer from a mental illness (Lesage et al., 2006). There are a variety of negative socioeconomic, health, and interpersonal consequences that disproportionately affect Canadians living with mental illness (Mental Health Commission of Canada, 2009). These socioeconomic problems include, but are not limited to, low income, financial difficulties, low education, fewer social supports, housing difficulties, homelessness, job instability, and unemployment (Government of Canada, 2006; Kirby & Keon, 2006). Mental illness can also lead to more physical health complaints, increased rates of infection, and exacerbation of chronic diseases (Government of Canada, 2006). The link between mental illness and poor physical health is clearly exemplified in the case of depression, a common mental disorder affecting 8% of Canadians (Mood Disorders Society of Canada, 2009). Depression is the leading chronic illness causing long-term disability worldwide (Chrisholm, 2006; Holden, 2000). The World Health Surveys (WHS) found that depression, over all other chronic illnesses including angina and diabetes, leads to poorer overall health outcomes (Moussavi et al., 2007). Moreover, depression combined with any other chronic illness also is associated with poorer overall health outcomes indicating the severity to which

depression can exacerbate other chronic illnesses (Moussavi et al., 2007).

Having a mental illness is also strongly associated with stigma, shame, and discrimination. Canadians living with mental illness report that they experience stigma and discrimination at every social level including friends, family, work colleagues, and the general community (Kirby & Keon, 2006). Stigma can act as a barrier to diagnosis and treatment and impede acceptance among friends, family members, colleagues, and society (Health, 2002a). General practitioners (GPs) may also contribute to stigma; one study reports that some GPs are unsympathetic to depressed patients and see them as having deviant features, manipulative tendencies, and/or social or interpersonal problems (McPherson & Armstrong, 2009).

Individuals are not the only ones affected by the negative effects of mental illness. There are a number of negative consequences for friends and family of individuals with a mental illness and for society at large. Family and friends report that at times they feel unappreciated, overburdened, and burnt out as a result of caring for their mentally ill loved ones as well as frustrated over the lack of mental health resources in Canada (Health Canada, 2002a; Kirby & Keon, 2006). (For a more in depth look at the impact of mental illness on families, see Kirby & Keon (2006) or Mental Health Commission of Canada (2009).) The negative consequences to Canadian society are complex and wide-ranging. A full discussion on these consequences is beyond the scope of this paper, but to highlight the impact of mental illness on society, the economic burden of mental illness in Canada is presented.

Economic Burden of Mental Illness

There is a high economic cost to mental illness in Canada (Government of Canada, 2006). The World Health Organization (WHO) calculates that depression is the fourth leading cause of social and economic burden worldwide and it is projected to become the second leading

cause by 2020, second only to heart disease (Holden, 2000; WHO, 2010). In 1993, the economic impact of mental illness in Canada was 7.8 billion dollars (Moore, Mao, Zhang, Clarke, & Laboratory Centre for Disease Control, 1997). According to a 2001 Canadian report, mental illness cost the Canadian economy and Canadian businesses approximately \$8.4-14.4 billion in 1998. This included \$6.3 billion in direct costs, such as mental health treatment, institutional care, physician care, and medications, and \$3 billion in indirect costs, such as sick days, disability, and premature death (Lim, Jacobs, Ohinmaa, Schopflocher, & Dewa, 2008; Stephens & Joubert, 2001). In 2003, the economic burden of mental illness skyrocketed to \$51 billion (Lim et al., 2008). Mental and nervous system disorders accounted for 13.4% of the economic burden of all illnesses in Canada, while cardiovascular diseases accounted for only two percent more at 15.2% (Hunsley, 2002).

A variety of costs are used in the calculation of the economic cost of mental illness. In 1998, the bulk of the direct costs were accounted for by hospital-based care (\$3.9 billion), care at other health institutions (\$887 million), physician services (\$854 million), and prescribed medications (\$642 million) (Stephens & Joubert, 2001). A reduced ability to work affects indirect costs related to the loss of productivity at work, absenteeism, under-employment, and unemployment (Hunsley, 2002). Disability claims are another contributing factor to indirect costs. The number of disability claims for depression alone, not to mention other mental illnesses, is comparable to heart disease and diabetes and is greater than hypertension (Druss, Rosenheck, & Sledge, 2000). Approximately 80% of Canadians with a mental illness note that their illness negatively affects their ability to work (Closson, 2008).

Given the high direct and indirect costs of mental illness and Canada's current financially over-burdened health care system, which accounts for approximately one-third of all tax dollars,

it is in the interest of government officials to look for ways to reduce these costs (Hunsley, 2002). Recent studies from Canada and the US indicate that psychotherapy can offset the costs related to physical illnesses such as cancer, heart disease, hypertension, diabetes, chronic pain and chronic fatigue and is often less expensive or similar in cost to pharmacotherapy for a variety of mental illnesses including panic disorder, agoraphobia, generalized anxiety disorder, and depression (see Hunsley, 2002; Myhr & Payne, 2006; Roberge et al., 2004). However, typical mental health treatment in Canada does not include psychotherapy. Rather, as noted above, Canadian health care infrastructure supports the provision of medication for the treatment of mental illnesses.

Mental Health Treatment in Canada

In general, to receive mental health treatment, Canadians must first see a GP or family doctor who will either provide treatment or refer patients to a psychiatrist or other mental health specialist for treatment (Wang & Patten, 2007). Both GPs and psychiatrists, whose services are paid for by Medicare, provide prescriptions for medication to treat mental illness (Wang & Patten, 2007). Medication costs are generally left to individuals, although two-thirds of Canadians have access to a drug plan through their place of work or post-secondary institution that typically partially or fully covers these costs depending on the drug plan and the medication prescribed (Paris & Docteur, 2006).

In general, current health care infrastructure does not support the provision of psychotherapy. Although Medicare typically covers the costs of psychotherapy provided by physicians and psychiatrists, it does not cover the costs of psychotherapy provided by social workers, counsellors, or psychologists except in serious cases and almost always through a hospital, community health centre, or family health team. Thus, Canadians must pay for these

services out of pocket or, if available, through a private health insurance company (Hunsley, 2002; Myer & Payne, 2006; Vasiliadis et al., 2009).

It is no surprise then that Canadians visit GPs more frequently for mental health treatment than any other professional (Fournier, LeSage, Toupin, & Cyr, 1997; Lesage, et al., 2006; Vasiliadis et al., 2009). In fact, for many Canadians, a GP will be the only health care provider they see for mental health concerns (Health Canada, 2002a). Mental illness represents the most commonly billed category by GPs (Health Canada, 2002b) and the consensus is that the majority of GP visits are related to stress and/or mental illness. This is in spite of the fact that only 61% of Canadians with mental health issues seek treatment during their lifetime (Lesage et al., 2006). The provision of mental health treatment solely through GPs is problematic since according to Statistics Canada, in 2009, 15% of Canadians aged 12 or older did not have access to a regular medical doctor (Statistics Canada, 2010). The current physician shortage leaves approximately 5 million Canadians without a family doctor and those with a family doctor experience longer than normal wait times, which further inhibits access to mental health care (Clatney, MacDonald, & Shah, 2008; College of Family Physicians of Canada, 2008).

Canadians living with mental illness have expressed frustration and confusion over what services are available through Medicare (Kirby & Keon, 2006). Accessibility, acceptability, and availability are reported to be the greatest barriers to receiving mental health treatment in Canada (Gagne, 2005; Kirby & Keon, 2006). Moreover, mental health services are often underfunded and vary from province to province (Kirby & Keon, 2006; Lesage et al., 2006; Mental Health Commission of Canada, 2009). Mental health care providers and advocates believe that these shortcomings are due in part to the lack of a national mental health strategy (Mental Health Table Forum, 2010). Of the G8 countries, Canada is the only one without a national strategy for

mental health (Kirby, 2008). However, the federal government and some provinces are in the process of developing a mental health and addictions strategy. For instance, Ontario recently released a comprehensive 10-Year Mental Health and Addictions Strategy (Ontario Ministry of Health and Long-Term Care [OMHLTC], 2011). Some provinces already have a mental health strategy in place. In 1999, the Mental Health Commission of New Brunswick created and implemented a 10-year mental health strategy (McKee, 2009). Quebec developed a 2005-2010 Mental Health Action Plan and, following in the steps of health care programs in Australia and the United Kingdom, is currently piloting a project whereby Quebec residents can receive government-funded cognitive behavioural therapy (CBT) as a part of their mental health strategy (see Access to Psychotherapy in the Public System: <http://mpprg.mcgill.ca/projects.html>). Quebec's pilot project to fund psychotherapy is an encouraging sign since psychotherapy is presently an underutilized treatment option for mental illness despite its well-documented effectiveness (Kirby & Keon, 2006; Myer & Payne, 2006; Smith & Glass, 1977).

The Effectiveness of Psychotherapy for Mental Illness and Barriers to Medicare Funding

The effectiveness of psychotherapy for a variety of mental health problems including depression, substance abuse, social phobia, generalized anxiety disorder, panic disorder, agoraphobia, eating disorders, specific phobias, and post-traumatic stress disorder has been well-established (see Butler, Chapman, Forman, & Beck, 2006; Chambless & Hollon, 1998; Chambless & Ollendick, 2001; Health Care, 2002a; Hunsley, 2002; Myer & Payne, 2006; Seligman, 1995; Smith & Glass, 1977; UKDH, 2001). Reports such as the Mental Health Commission of Canada's, *Toward Recovery and Well-Being* (2009) urge the funding of psychotherapists. This sentiment is echoed by Roy Romanow, author of the Commission on the Future of Health Care in Canada (see Romanow, 2002), who summarizes that psychotherapy is

an evidence-based practice that has been shown to be effective, is less costly than pharmacotherapy, would alleviate the financial pressure on the health care system, and should be incorporated into routine health care (Romanow & Marchildon, 2003). These recommendations have in some part been put into practice as there are increasingly more and more collaborative care practices between GPs, psychiatrists, social workers, occupational therapists, nutritionists, pharmacists, nurses, and other health professionals across Canada over the past decade (Gagne, 2005; Kates, Gagne, & Whyte, 2008).

It is surprising that given the evidence supporting psychotherapy, especially CBT, that Canadian health care infrastructure does not support psychotherapy. Policy-makers and politicians may be hesitant to invest in psychotherapy because of the perceived additional cost of psychotherapy. However, as noted previously, psychotherapy is a cost-effective treatment with costs equal to or less than those of pharmacotherapy (Hunsley, 2002; Myer & Payne, 2006; Roberge et al., 2004). Furthermore, the WHO reports that the modest cost of funding psychotherapy in addition to medication is offset by significant improvement in the lives of individuals with mental illness (Chrisholm, 2006). Thus, funding psychotherapy may not only ensure that Canadians receive best-practice, evidence-based treatment, it may also reduce the economic burden of mental illness in Canada. Additionally, it may reduce the burden placed on GPs as a result of the physician shortage. Family physicians have expressed a desire for more support from other health care providers, especially from mental health specialists (Mulvale, 2006). Referring patients to a psychotherapist would ensure patients are getting the specialized care they need while at the same time potentially alleviating GPs' caseloads, freeing them to see more patients with medical conditions.

Another reason that policy-makers and politicians may be hesitant to support

psychotherapy is the lack of Canadian psychotherapy efficacy and effectiveness research in real world settings. At a recent conference on mental health service access in Canada, advocates, health care providers and specialists, and government officials from across Canada acknowledged this research gap and called for further Canadian exploratory, efficacy, and effectiveness psychotherapy research (Mental Health Table Forum, 2010).

There are challenges to conducting general psychotherapy effectiveness research in real-world Canadian settings. Because Medicare does not cover psychotherapy, it is commonly provided in fee-for-service private practice settings or in hospitals with specialized clinical populations who experience high levels of symptom severity, not the general public. Thus, results may not be generalizable to the public-at-large because of the specialized patient populations and the exclusive private practice settings. There are only a few places where Canadians can receive free or paid-for psychotherapy for a range of mental illnesses and varying symptom severity. Depending on the severity of a client's symptoms and the mental illness for which treatment is needed, Canadians may receive psychotherapy at community health centres, one of twelve mental health centres across Canada (Closson, 2008), such as the Centre of Addiction and Mental Health (CAMH) in Toronto, and some local hospitals. Another place that may not be generally known to the Canadian public where Canadians can receive free or paid-for psychotherapy is at post-secondary institutions in university counselling centres. There are three reasons why this is a particularly important population and environment to examine Canadian mental health: 1) The majority of Canadians attain some level of post-secondary education (Organization for Economic Co-operation and Development, 2010); 2) Mental disorders often emerge in late adolescence or early adulthood, a time when most individuals attend post-secondary education (Eisenberg et al., 2007; Kessler et al., 2005; McGorry et al., 2011; McLean

& Andrews, 1998); and 3) Post-secondary institutions are often mandated to provide mental health services, including counselling or psychotherapy (Thompson, 2010).

Post-Secondary Education in Canada

In the past two decades, full-time student enrollment at Canadian universities, colleges, and training facilities have steadily increased (Kirby, 2007). From 2000 to 2006, full-time university enrollment alone grew by 31% and it is projected that this growth will continue with an increase of 9-18% over the next 10 years (Association of Universities and Colleges of Canada [AUCC], 2007). With approximately 50% of Canadians aged 25 to 64 having graduated from college or university, Canada ranks second in post-secondary education attainment out of the 30 countries who comprise the Organization for Economic Co-operation and Development (OECD) which includes the US, Germany, Japan, and the United Kingdom (Kirby, 2007; OECD, 2010). In 2010, close to 1.2 million students were enrolled in university undergraduate and graduate programs (AUCC, 2011). Fifty-two percent of full-time students were 21 years old or younger, 24% were aged 22 to 24, and 14% were aged 24 to 29 (AUCC, 2011).

Post-Secondary Student Mental Health

Canadian post-secondary students are more likely than the general population to suffer from a mental illness (Adlaf, Demers, & Gliksman, 2005). These results are comparable to research findings in the US, the United Kingdom, and Australia (MacKean, 2011). The onset of a number of mental disorders occurs between the ages of 15 and 24, which coincides with the time when many adolescents attend post-secondary education (Council of Ontario Universities [COU], 2010; Eisenberg et al., 2007; Kessler et al., 2005; McGorry et al., 2011; McLean & Andrews, 1998; Mowbray et al., 2006). This means that some students will begin university or college with a pre-existing or subthreshold mental disorder, while others will develop a mental

health problem over the course of earning their degree (Storrie et al., 2010). The emergence of mental illness during post-secondary education is consistent with the diathesis stress model that purports that individuals are predisposed to mental health problems, but problems do not emerge until triggered by a stressful event(s) and/or environment(s) such as attending university or college (Mowbray et al., 2006). Post-secondary students are faced with a number of challenges unique to the university and college experience such as moving away from home, first time financial planning, inadequate or irregular funding, meeting time-sensitive deadlines, public speaking, interacting with peers, heavy course loads, lack of social support, social isolation, poor grades, and academic probation (Mowbray et al., 2006; Storrie et al., 2010). Students may become overwhelmed and highly stressed if they are unprepared to meet the demands of post-secondary education; pre-existing mental health issues may become exacerbated and/or new mental health concerns may emerge (Cook, 2007).

Although debated in the past, recent evidence suggests that mental illness, case complexity, psychotropic medication use, and symptom severity has indeed increased significantly on campuses across Canada and the US in recent years (Benton et al., 2003; Cairns et al., 2010; Cook, 2007; Gallagher, 2010; Krumrei, Newton, & Kim, 2010; MacKean, 2011; Much & Swanson, 2010; Storrie et al., 2010; Twenge et al., 2010). Regardless of the debate, more students than ever are accessing mental health services at post-secondary institutions (MacKean, 2011; Mowbray et al., 2006). Mental health problems commonly seen in UCCs include anxiety, depression, eating disorders, substance misuse, suicidal and self harm behaviours, family issues, situational crises, developmental challenges, and relationship problems (Benton et al., 2003; Cairns et al., 2010; Coniglio, McLean, & Meuser, 2005; Cook, 2007). A recent study of Canadian UCCs indicates that distress is high among students seeking

help at UCCs and the most common presenting issues are: 1) relationship issues including family problems, general conflict, and end of relationship issues; 2) anxiety and/or stress management; 3) depression and grief; 4) academic concerns; 5) career counselling; and 6) sense of self (Cairns et al., 2010). Many students also present with more than one mental health problem and find that these problems interfere with academic performance, overall functioning, and social interaction (Cook, 2007; Krumrei et al., 2010). A mental health and addiction report on six post-secondary institutions in Ontario revealed that approximately 9 out of 10 Ontario students feel overwhelmed with their roles, responsibilities, and workloads while attending post-secondary education and 85% indicated that they are exhausted as a result (MacKean, 2011). Over 50% of students also indicated that they felt sad, lonely, hopeless, and anxious (MacKean, 2011). These results are similar to US data; however, Ontario students reported a greater frequency of mental health problems than their US counterparts (MacKean, 2011).

Mental Health Treatment at Post-Secondary Institutions

Despite the fact that most mental disorders emerge by the age of 30, most individuals do not seek treatment until years after onset (McGorry et al., 2011). In fact, there is a typical 11-year delay between mental illness onset and treatment (Wang et al., 2004, 2005). Post-secondary students similarly tend to delay mental health treatment (Eisenberg et al., 2007). Moreover, because of the time demands and the stressful nature of post-secondary education and the typically low income of students, it is often not feasible for students to wait on long wait lists for government-funded psychotherapy or pay for the services out of pocket (Cairns et al., 2010).

Post-secondary institutions are in a unique position to address the mental health issues of young Canadians immediately or soon after mental illness onset (Krumrei et al., 2010; Zivin et al., 2009). Most colleges and universities have policies in place to ensure the safety, welfare,

and well-being of their students, and to comply with federal or provincial mandates. For example, the Ontario Human Rights Code, similar to other provincial codes, indicates that accommodations must be made for students with physical and/or mental health disabilities; the establishment of access or disability services on campuses across Canada has met this mandate (CUO, 2010). In addition, universities and colleges are under scrutiny as to how mental illness is managed and treated on campus because of increased media attention on high profile student suicides (Mowbray et al., 2006). The suicide of Elizabeth Shin at Massachusetts Institute of Technology (MIT) in 2000 heightened awareness of student suicide; MIT's ethical and legal responsibilities to Miss Shin were, and continue to be, heavily debated in the media (see Sontag, 2002). Student suicide hit home with the recent high profile suicides in Canada of Nadia Kajouji (1990-2008) at Carleton University (see Dempsey, 2011) and Jack Windeler (1992-2010) at Queen's University (see Er-Chua, 2010). Ontario, followed closely by British Columbia, has the highest rate of psychological distress among post-secondary students in Canada (Adlaf et al., 2005). Given the severity of the issues surrounding mental health, post-secondary institutions are increasingly more responsible for students' well-being and safety. In fact, at a recent conference on post-secondary student mental health, a lawyer relayed that post-secondary institutions are now legally responsible for students' welfare and accountable for providing services that address students' mental health (Thomson, 2010).

In response to the increasing challenges of mental illness on campus and post-secondary institutions' responsibility for student mental health, many post-secondary institutions have attempted to put programs, services, and infrastructure in place to prevent mental illness from emerging, to support individuals with mental illness, to treat mental illness, and to promote general health and well-being (CUO, 2010; Davidson & Locke, 2010; MacKean, 2011). The

majority of post-secondary institutions now offer a myriad of health and support services such as medical centres, health promotion, disability or access services, and counselling centres (CUO, 2010; Eisenberg et al., 2007; Storrie et al., 2010). This wide range of services combined with Canada's Medicare system provides students with near-universal health insurance and access to mental health services at no direct cost (Eisenberg et al., 2007). Mirroring the actions of the federal and provincial governments, Canadian post-secondary institutions are in the process of creating a national mental health strategy with the establishment of the National Working Group on Post-Secondary Student Mental Health and the release of their June 2011 report entitled, *Mental Health and Well-Being in Post-Secondary Education Settings* (see MacKean, 2011). Ontario, along with other provinces, is also in the process of creating a provincial student mental health strategy (see Ontario College Health Association, 2009).

Counselling centres have long been a staple of student health and wellness. Although initially established to counsel students on academic, career, and developmental issues and school-related stress, UCCs have evolved to treat a wide range of academic, relationship, and mental health concerns (Mowbray et al., 2006). Though a component of academic and career counselling remains, there is a greater emphasis on diagnosing mental disorders and treating psychopathology (Coniglio et al., 2005). Despite UCCs' increased role in student mental health management, increased mental health severity on campus, increased service usage, and the documented benefits of UCCs on student retention (see Turner & Berry, 2000; Wilson, Mason, & Ewing, 1997), UCCs have historically been and continue to be underfunded and understaffed (Benton et al., 2003; Gallagher, 2010; Mowbray et al., 2006). This has led some UCCs to introduce brief forms of psychotherapy, put a session limit policy in place, and/or implement triage services to identify whether students are in need of crisis, short term, or long term

treatment (Benton et al., 2003; Gallagher, 2010; Mowbray et al., 2006). Furthermore, post-secondary institutions have placed UCCs and other student services under increasing accountability and scrutiny (Coniglio et al., 2005). In reaction to this scrutiny and to ensure students are receiving quality care, UCCs have undertaken program evaluations and conducted other research to document the effectiveness of their services.

Research at University Counselling Centres

A variety of clinical treatments, assessments, processes, and mechanisms have been researched at UCCs (e.g. Davies, Burlingame, Gleave, & Barlow, 2008; Lambert et al., 2001; Owen, Smith, & Rodolfa, 2009; Tracey, Sherry, & Albright, 1999; Wolfgast, Rader, Roche, Thompson, von Zuben, & Goldgerg, 2005). However, only a handful of studies have been conducted that directly investigate the effectiveness of the general counselling services at UCCs, and the majority of research has been conducted in the US (Cairns et al., 2010; see Minami et al., 2009; Snell, Mallinckrodt, Hill, & Lambert, 2001; Vonk & Thyer, 1999; Wilson, Mason, & Ewing, 1997). Research on the effectiveness of psychotherapy at UCCs in the US can likely be applied to Canadian UCCs as there are many similarities between UCCs in each country. However, it is important to gather Canadian research as Canadian UCCs have been uniquely affected by an increase of socio-culturally diverse clients along with budget cuts despite a steady growth in university enrollment (McCormick & Paterson, 1995). In fact, there is a call for more Canadian research on the effectiveness of the psychotherapy provided at UCCs (McCormick & Paterson, 1995).

To be certain, a great deal of research has been conducted at Canadian UCCs, including Dr. Les Greenberg's emotion-focused research and other psychotherapy research at York University (for more information see <http://www.psych.yorku.ca/greenberg/index.html>),

psychotherapy research at McGill University (see <http://mpprg.mcgill.ca>) and the University of British Columbia (see <http://www.psychotherapyprogram.ca/research.html>), and counselling research at the University of Calgary (see Cairns, Massfeller, & Deeth, 2010 and <http://www.calgarycounselling.com/research.htm>). However, direct psychotherapy efficacy and effectiveness research at UCCs in Canada is still in its infancy. There are several reasons for this lack of research. First, there are ethical reasons for not conducting research in UCCs foremost of which is to protect the privacy of students who access the UCC due to continued stigma associated with accessing these services (Martin, 2010; Storrie et al., 2010). Second, the shift from academic and career counselling at UCCs to counselling for mental health problems is relatively recent (Mowbray et al., 2006; COU, 2010). Lastly, although in the US, documenting and assessing student mental health on an ongoing basis is common, this is a relatively new practice at Canadian UCCs (Cairns et al., 2010). As a result of these and other historical factors, there are very few published studies on the effectiveness of counselling at Canadian UCCs. Future Canadian UCC research would benefit from building on standards established from years of US UCC research including typical measures used to track students' mental health changes.

Outcome Questionnaire 45.2

The Outcome Questionnaire 45.2 (OQ-45) (Lambert et al., 1996, 2004) has been consistently used as an outcome measure at UCCs throughout the US (Minami et al., 2009; Vermeersch, Whipple, Hawkins, Burchfield, & Okiishi, 2004) as well as counselling centres in Canada (see Calgary Counselling Centre <http://www.calgarycounselling.com/research.htm>). The OQ-45 is the third most commonly used outcome measure in the world (Hatfield & Ogles, 2004; Lambert, 2010). The OQ-45 is used to assess a range of common mental health symptoms, such as depression, anxiety, and substance use, as well as social role and interpersonal problems.

Since 1996, the psychometric properties of the OQ-45 have been tested substantially, with results indicating that the OQ-45 is an internally consistent, valid, and reliable outcome measure with high test-retest reliability (Chapman, 2003; Lambert et al., 1996, 2004; Miller, Duncan, Brown, Sparks, & Claud, 2003; Mueller, Lambert, & Burlingame, 1998; Umphress, Lambert, Smart, Barlow, & Clouse, 1997). The measure is also sensitive to UCC client changes over time (Chapman, 2003; Vermeersch, Lambert, & Burlingame, 2000; Vermeersch et al., 2004). The OQ-45 has also been validated in a number of countries including the Netherlands (Wenneburg, Philips, & de Jong, 2010), Italy (Lo Coco et al., 2008), and Chile (Correa, Florenzano, Rojas, Labra, Del Río, & Pastén, 2006) and other culturally diverse populations (Lambert, Smart, Campbell, Hawkins, Harmon, & Slade, 2006). It has also been translated into several different languages including German (Lambert, Hannover, Nisslmuller, Richard, & Kordey, 2002) and Chinese (Li & Luo, 2009). In sum, the psychometric properties of the OQ-45 are sound, it has been validated in a wide range of culturally diverse populations, and it is the gold standard for UCC research.

The Present Study

To respond to the need for more Canadian psychotherapy effectiveness research in general, the need for more direct effectiveness research at Canadian UCCs, and to ensure that students are receiving a quality, effective treatment for mental health concerns, a study was conducted to examine the effectiveness of the counselling services provided at a Toronto UCC (T-UCC) during the 2010-2011 academic year. In keeping with the UCC research gold standard, this pre-post study employed the OQ-45 as the main outcome measure for this study (See Appendix F). Although the OQ-45 is often administered to UCC clients at each counselling visit, for the purposes of this study, participants only filled out the OQ-45 at their first and last counselling sessions. Information was also gathered from an intake questionnaire (IQ) that assessed demographics, external factors such as medication use and family support, and pre-counselling symptom severity, and an experience of counselling questionnaire (ECQ) that assessed participants' counselling experience and post-symptom severity.

Hypotheses

Hypothesis 1: There would be a statistically significant decrease in participants' mental health symptoms as measured by the OQ-45 after receiving counselling at the T-UCC. Specifically, it is hypothesized that: 1) Participants' total OQ-45 score at the beginning of counselling would be higher than the OQ-45 total score at the end of counselling, indicating an overall improvement in symptoms; and 2) There would be a statistically significant difference in total OQ-45 scores from pre to post.

Hypothesis 2: It was predicted that participants' would indicate a reduction in overall symptom severity and daily life symptom interference as reported on the intake questionnaire (IQ) prior to counselling and the experience of counselling questionnaire (ECQ) after

counselling.

Hypothesis 3: It was hypothesized that participants would indicate on the ECQ that they found the counselling they received from the T-UCC to be effective and/or beneficial.

Method

The Toronto University Counselling Centre

The Toronto university counselling centre (T-UCC) examined in this study is comprised of one main set of offices as well as satellite offices located in five of the university's faculties. Though there are permanent counsellors on staff, the T-UCC is also a training clinic with counselling practicum and internship positions open to clinical psychology, counselling psychology, and social work students at various stages of their M.A. or Ph.D. The T-UCC routinely employs 11 part-time and full-time staff counsellors plus six to eight practicum students during each academic year. The counselling services at the T-UCC are accessed by approximately 9% of the university's student population, which is on par with other post-secondary institutions (Rosenthal & Wilson, 2008) and the general population (Vasiliadis et al., 2009). Based on annual statistics collected by the T-UCC, and similar to other UCCs, the most frequent primary issues for which clients seek counselling are depression and anxiety followed by career counselling, family problems, and relationship issues.

Clients of the T-UCC may receive up to 10 individual counselling sessions each year, though clients may receive more sessions when it is clinically relevant or necessary. The duration of sessions and termination of counselling usually comes about in one of three ways: 1) It is mutually agreed upon by clients and their counsellor, which is the most commonly identified course of action at the T-UCC; 2) Clients inform their counsellor that they wish to terminate; or 3) Clients simply stop attending sessions, without informing their counsellor that they are ceasing counselling. In sum, treatment duration is typically a collaborative decision between counsellor and client; however, clients are free to end sessions whenever they wish, similar to other forms of psychotherapy treatment in real-world settings.

Counsellors

T-UCC counsellors were recruited to complete a brief questionnaire about their background in counselling (see Appendix G). Eight counsellors consented (see Appendix C for the informed consent for counsellors) and completed the Counsellor Questionnaire (CQ).

Counsellors held a range of credentials including Ph.D./Clinical Psychologist (37.5%), M.A. in Clinical Psychology student (25%), M.A. Sc. in Human Relations and Counselling (12.5%), M.Ed. in Counselling Psychology (12.5%), and Ed.D. in Counselling Psychology (12.5%).

Because the T-UCC is a training clinic, two of the participating counsellors were first time M.A. clinical practicum students and one was a Ph.D. intern. Counsellors' theoretical orientation was, for the most part, cognitive behavioural (87.5%), followed by client-centred (50.0%), and eclectic (37.5%) (see Table 1). Number of months or years spent working as a counsellor ranged from two months to 33 years ($M=10.79$, $SD=13.35$) and the number of months or years spent working at the T-UCC range from two months to 31 years ($M=8.31$, $SD=11.40$).

Table 1

Theoretical Orientation of T-UCC Counsellors

Theoretical Orientation	Percentage (%)
Cognitive Behavioural	87.5
Client-Centred	50.0
Eclectic	37.5
Emotion-Focused	12.5
Humanistic/Existential	12.5
Integrative	12.5
Expressive Arts	12.5
Career Development	12.5

Note. No counsellor identified dialectical behavioural or psychodynamic/psychoanalytic.

Participants

T-UCC counsellors indirectly recruited clients who accessed the T-UCC after said clients completed a brief initial consultation (BIC) or during an individual counselling intake session (see *Description for Recruitment* in Appendix A). For more information about BICs and intake sessions, please see *Procedure*. Participants were also recruited via posters in the T-UCC waiting rooms. Participants who completed the study were entered into a draw for one cash prize of \$150, which was drawn after all participants had completed the study.

All participants were current students at a downtown Toronto university who underwent counselling at the T-UCC during the 2010-2011 academic year. A number of participants indicated that when the study began, it was not their first time accessing the T-UCC (59%), indicating that they were likely repeat users of the T-UCC, continuing clients who had returned after the summer break, or who began therapy shortly before this study's commencement. It is also possible that students did not recognize their intake session as their first initial session, but instead counted the BIC as their first time at the T-UCC.

Twenty-eight students began the study by completing the first part of the study, but only 17 students went on to complete the second part of the study and two participants completed only the second part. Data from participants who did not complete either the first or second part of the study were discarded and not analyzed. At follow-up, participants indicated three main reasons for not completing Package 2: 1) Left Toronto before completing Package 2; 2) Too busy at the end of the school term to fill out Package 2; and 3) Forgot to fill out Package 2 at the end of counselling. It is possible that some participants did not complete Package 2 because they terminated counselling or found counselling at the T-UCC to be ineffective; however, participants did not identify this to the researchers.

Participant recruitment was lower than initially anticipated. In general, the T-UCC lacks infrastructure for external researchers to conduct research at the T-UCC, which leads to a number of ethical and logistical challenges that may have impacted participant recruitment. First, to ensure the anonymity of general T-UCC users, researchers could not actively recruit T-UCC users for this study. To protect clients from potentially feeling pressured by counsellors to participate in this study, counsellors could not recruit participants. Thus, clients themselves were responsible for participating in the study. Secondly, although the T-UCC routinely collects client data and clients routinely complete an outcome measure, this information is not accessible to external researchers. Third, some counsellors were located in satellite offices at the Toronto university where study-related materials could not be left. The lack of study materials in these offices may have deterred T-UCC clients from participating. Another potential obstacle to participant recruitment may have been the waitlist that was implemented near the start of this study. It is possible that participants were missed during the lag time between clients' initial contact and the start of counselling.

Of the 17 participants who completed, 12 were female and 5 were male. Participants ranged from 19-28 years of age ($M= 23.35$, $SD= 2.344$). Approximately half of participants were White/Caucasian (52.9 %), followed by those who were Asian/Island Pacific (23.5%), Black/African American (11.8%), East Indian (5.9%), and Half White/Caucasian-Half Black/African American (5.9%). The majority of participants were in some form of romantic relationship (29.4% in a relationship, 29.4% in a long term relationship, and 11.8% married) and 29.4% of participants were single.

The majority of participants were undergraduate students ($N=14$) though three graduate students also participated. Only one student identified as an international student. Year of study

was relatively evenly divided among participants with 23.5% in their first year, 17.6% in second year, 23.5% in third year, and 29.4% in fourth year and one participant indicated not applicable (5.9%). Participants represented 10 different programs of study with five participants in Business Management, two in Psychology, two in Early Childhood Education, and one participant in each of the following programs: Environmental Science, Fashion Design, Interior Design, Architecture, Nursing, Nutrition and Food, and Public Health. It should be noted that the higher number of participants in business management is likely due, at least in part, to the program's high rate of enrollment at the Toronto university.

Number of Individual Counselling Sessions

Participants attended an average number of 6-7 individual counselling sessions ($M=3.71$, $Mdn=4$, $SD=1.863$ (see Figure 1). All participants indicated satisfied ($N=11$) or somewhat satisfied ($N=6$) in relation to the number of individual counselling sessions received. A number of participants would have either preferred (35.3%) or somewhat preferred (23.5%) to have more sessions. In addition, 35.3% of participants indicated that they are planning to attend more counselling sessions at the T-UCC at some point in the future, 41.2% may attend future sessions, and 23.5% are not planning to attend any future sessions at the T-UCC. It is possible that some of the 35.3% of participants who indicated that they are planning to attend more counselling sessions in the future were still ongoing clients at the time this study ended.

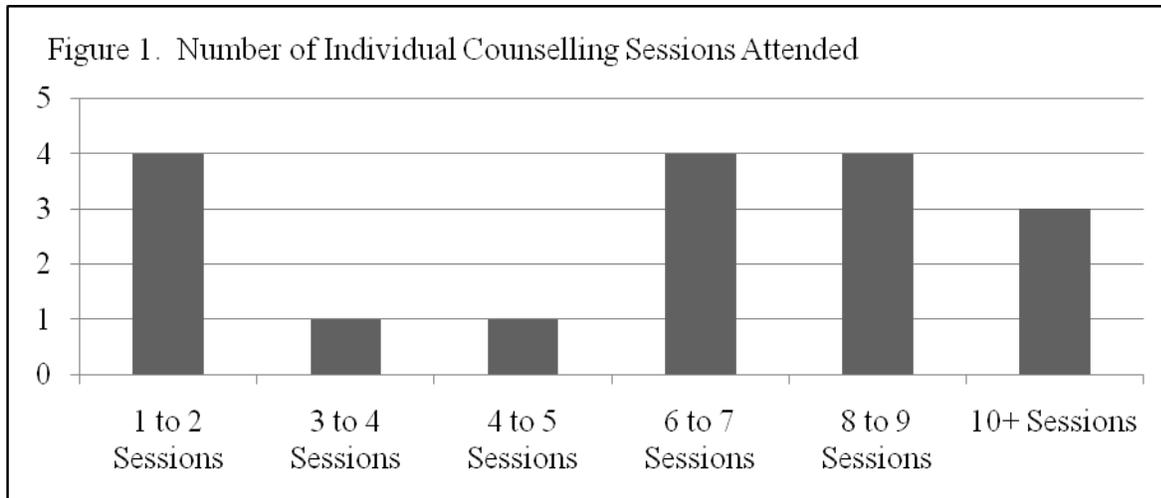


Figure 1. Graph indicates the number of individual counselling sessions that participants attended.

Measures

Outcome questionnaire 45.2 (OQ-45). (Lambert, Burlingame, Umphress, Hansen, Vermeersch, Clouse, & Yancher, 1996; Lambert, Morton, Hatfield, Harmon, Hamilton, Reid, Shimokawa, Christopherson, & Burlingame, 2004). The OQ-45 is comprised of 45 statements that are rated on a 5-point Likert scale ranging from 0 to 4 where 0 indicates “Never,” 2 indicates “Sometimes,” and 4 indicates “Almost Always,” though there are nine reversed scored items (see Appendix F). The clinical cutoff score determined by Lambert et al. (1998, 2001, 2004) is 63; however, since the T-UCC’s clientele is not a strictly clinical population, participants who fall below the cut-off score of 63 were included in this study. The OQ-45 takes approximately 5-7 minutes to complete.

The OQ-45 comprises three subscales: Symptom Distress (SD), Interpersonal Relations (IR), and Social Role (SR). The SD subscale includes symptoms from common the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) disorders such as anxiety, mood, and substance abuse disorders. It includes items such as “I have difficulty concentrating,” “I feel

worthless,” and “I have trouble at work/school because of my drinking or drug use.” The IR subscale comprises items related to relationships, which have been shown to impact life satisfaction (Lambert, 1996). The IR subscale includes statements such as “I feel satisfied with my relationships with others” and “I feel lonely.” The items for the SR subscale relate to work and leisure. Statements for the SR subscale include “I feel that I am not doing well in work/school” and “I enjoy my spare time.”

Intake questionnaire (IQ). The IQ is a brief measure created to gather participant demographics and information about past and present mental health treatment, social support, and academic satisfaction. The demographic portion of the IQ included questions about participants’ age, gender, year and program of study, international student status, and ethnicity. To gain a clear picture of participants’ mental health concerns at baseline, questions were posed regarding participants’ overall symptom severity, the impact of these symptoms on participants’ daily lives, and the treatments participants’ currently accessed for mental health purposes, which might influence changes in participants’ mental health symptoms. To capture this, the IQ included questions such as, “In general, please rate the severity of your current symptoms,” “In general, please rate the severity of how your symptoms are currently interfering with your daily life,” “Are you currently taking any prescribed medication for mental health reasons?” and “Are you currently taking any supplements or vitamins for mental health reasons (e.g. 5-Hydroxytryptophan (5-HTP), St. John’s Wort, S-Adenosylmethionine (S-AMe), B12)?” To capture participants’ past mental health treatments, the IQ included questions such as “Have you ever received psychotherapy or counselling?” and “Have you ever sought mental health treatment from a health professional (e.g. a psychologist, social worker, psychiatrist, family doctor, etc.)?” The last section of the IQ included questions about participants’ social support

and one question about academic satisfaction. The positive effects of social support as a coping resource for individuals with a mental illness have been well documented. As social support has been shown to positively influence changes in mental health (Mallinckrodt, 1989), it might be a confounding factor when investigating the effectiveness of psychotherapy at the T-UCC. Thus, participants were asked social support questions such as, “Do you have family members that you can talk to about your current mental health concerns?” and “Do you feel that you can talk to your partner about your current mental health concerns?” Lastly, as academic performance can play a key role in a participant’s mental health, participants were asked, “Are you currently satisfied with your academic performance?” For many of the IQ questions, participants responded by choosing “Yes” or “No,” although there was also a “Somewhat” option for a few questions. (See *Intake Questionnaire* in Appendix D for further details.)

Experience of counselling questionnaire (ECQ). On the ECQ, participants were asked directly about the individual counselling they received, including questions about the services provided by counsellors and the T-UCC, as well as the number of individual counselling sessions attended. Participants were asked to rate how much they endorse eight statements relating to the individual counselling they received using a 5-point Likert scale where 1 indicated “Strongly Agree,” 3 indicated “Somewhat Agree,” and 5 indicated “Strongly Disagree.” Participants were asked to rate statements such as “Individual psychotherapy/counselling was effective in reducing the negative symptoms I experienced due to my mental health concern(s) (e.g. low mood, anxiety)” and “I would recommend individual psychotherapy/counselling to a close friend or relative.” Reverse-scored items were also included, such as “My mental health-related symptoms are just as severe as when I first began psychotherapy/counselling” (see Appendix E). Questions in the intake regarding symptom severity and daily interference were

repeated in the ECQ in order to capture changes from pre to post. Questions were also included to gauge participants' experience with other T-UCC services including group counselling, career counselling and academic advisement, crisis management, outside referrals, and consultation with a primary care physician. Finally, space was allotted for participants to provide further comments or feedback regarding the counselling they received at the T-UCC.

The ECQ also included one question related to future research. In the future, qualitative research may be conducted to examine Canadians' experiences with the Canadian mental health care system. Participants were asked whether they would be open to participate in such future research.

Counsellor Questionnaire (CQ). This brief questionnaire consisted of three open-ended questions and one close-ended question aimed at gathering information about the T-UCC counsellors' counselling backgrounds. Counsellors were asked to identify the following: 1) their theoretical orientation (e.g. eclectic, cognitive behavioural, emotion-focused, humanistic-existential, client-centred, dialectical behavioural, and psychodynamic/psychoanalytic); 2) the number of months or years they have worked as counsellor, counselling practicum student, or intern; 3) the number of months or years they have worked at the T-UCC as an intern/counsellor; and 4) their counselling credentials (e.g. M.S.W., Ed.D., Ph.D., C. Psych., M.Ed., M.A.).

Procedure

Participant recruitment occurred over the course of the university's 2010-2011 academic year. Counsellors referred clients of the T-UCC to the study at the end of a BIC, which is a brief intake session used to assess the appropriateness of counselling and identify which counsellor and/or services would best suit clients' needs. Clients were also referred to the study at the beginning or end of an individual counselling intake session. Counsellors provided clients with a

brief verbal and/or written explanation of the study and informed clients that further information and study-related materials could be found in one of three T-UCC waiting rooms: the main T-UCC waiting room and two satellite office waiting rooms (see *Research Description* in Appendix A). Participants were also recruited via posters located in T-UCC waiting rooms. At each stage, it was made clear to T-UCC clients that their decision to participate or not participate in the study would not in any way affect their treatment, that participation in the study would be kept confidential, and that their counsellor would be blind to their participation.

Potential participants picked up Package 1, which included a copy of the informed consent (see *Informed Consent* in Appendix B), the IQ, and the initial copy of the OQ-45, from one of three T-UCC waiting rooms or from the principal investigator's research lab on the university's campus. Completed packages were placed in one of two locked boxes (one located in the main T-UCC waiting room and the other located in one of the satellite office waiting rooms) or returned directly to the principal investigator. When individual counselling was terminated, participants who wanted to continue their participation in the study completed Package 2, which included the ECQ, the second OQ-45, a written debriefing (see *Written Debriefing* in Appendix H), and a *Safety Nets* pamphlet that listed a number of community resources (see Appendix I). Similar to Package 1, Package 2 could be picked up from one of three T-UCC waiting rooms or from the principal investigator. Additionally, because counselling termination can occur sporadically if the client simply stops attending counselling sessions, two data collection campaigns were held at the end of the Fall 2010 and Winter 2011 terms. During these campaigns, posters were put up reminding participants who were about to terminate counselling to complete Package 2. At the end of the study, the principal investigator followed up with participants who completed Package 1, but did not complete Package 2 who

indicated on the informed consent that they could be contacted for that purpose. There were instances where participants had left Toronto before completing Package 2 and requested that an electronic version be made available. An encrypted, password-protected version of Package 2 was provided as requested along with an electronic version of the 'Safety Nets' pamphlet and an electronic version of the T-UCC's service pamphlet. Participants who completed both Package 1 and 2 at the end of the study were entered into a draw for a cash prize of \$150 and the winner of the draw was awarded their prize.

Results

Mental Health and Well-Being Treatment History

Past and present mental health treatment. Participants were asked about their mental health and well-being treatment history (see Table 2). The majority of participants indicated that the most frequently accessed treatment for mental health concerns was individual psychotherapy or counselling (82.4%), followed by medication provided by a family doctor or GP (52.9%), medication provided by a psychiatrist (23.5%), and group psychotherapy or counselling (23.5%). Ten participants (58.8%) indicated that they previously received psychotherapy/counselling prior to accessing the T-UCC. Of the 10, six indicated that it was effective, one indicated that it was somewhat effective, and three indicated that it was not effective. The seven participants who had not previously undergone psychotherapy endorsed the following reasons for not previously seeking psychotherapy/counselling: financial barriers/cost (57.1%), lack of access (57.1%), medical professional did not tell me about it as a treatment option (57.1%), did not think it would work for me (57.1%), did not need it before now (57.1%), family told me it would not be effective (28.6%), other treatment was effective (14.3%), and stigma from parents (14.3%). All participants were asked directly whether they would have sought psychotherapy/counselling earlier if the cost was not an issue; approximately one-third of participants said yes (35.3%), one-third said maybe (35.3%), 11.8% said they did not know, 11.8% not applicable, and one participant indicated no (5.9%).

Table 2

Previous Mental Health and Well-Being Treatment

Treatment	N (%)
Individual Psychotherapy/Counselling	10 (82.4%)
Medication from a Family Doctor/General Practitioner	9 (52.9%)
Group Psychotherapy/Counselling	4 (23.5%)
Medication from a Psychiatrist	4 (23.5%)
Naturopathy/Homeopathy	2 (11.8%)

Four participants (23.5%) indicated that they had never sought treatment from a health professional for well-being or mental health purposes. The majority of the remaining 13 participants received mental health treatment from a family doctor or GP ($N=10$) followed by treatment received from psychologists ($N=7$) and psychiatrists ($N=6$) (see Table 3). No participant indicated that she/he received mental health treatment from a social worker.

Table 3

Health Professionals Accessed for Previous Mental Health and Well-Being Treatment

Health Professional	Yes (%)
Family Doctor/General Practitioner	58.8
Psychologist	41.2
Psychiatrist	35.3
Guidance Counsellor	11.8
Psychiatric Nurse	5.9
Naturopath	5.9
Social Worker	0.0

Note. Three participants (17.6%) indicated not applicable for all items because they did not previously seek mental health-related treatment.

Medication use. Ten participants indicated that they had previously taken medication to reduce mental health-related symptoms. Most participants found medication to be effective or beneficial (70.0%), one-fifth found it somewhat effective (20.0%), and 10.0% did not find it

effective. Seven participants reported currently taking medication for mental health or well-being purposes and most reported that medication was effective or beneficial (85.7%), though one participant reported that it was not effective (14.3%).

Supplement and vitamin use. Most participants had previously taken supplements or vitamins for mental health or well-being purposes (N=11). However, only six of the eleven participants indicated that taking vitamins or supplements was effective or beneficial; three indicated that it was somewhat effective and two indicated it was not effective. Five participants reported that they are currently taking supplements or vitamins for mental health reasons. Two participants reported that the supplements were effective or beneficial and three reported that they were somewhat effective.

Social Support and Academics

The majority of participants received social support for their mental health or well-being concerns from their family (70.6%), friends (82.4%), and spouse/romantic partner (52.9%). Conversely, several participants did not receive social support from their family (23.5%), friends (11.8%), and spouse/romantic partner (17.6%). One participant indicated only somewhat receiving social support from family (5.9%) and friends (5.9%).

Only 29.4% of participants were satisfied with their academic performance. The remaining participants reported feeling unsatisfied (47.1%) or somewhat satisfied (23.5%) with their academic performance.

Hypothesis 1:

It was hypothesized that participants' OQ-45 total scores at the beginning of counselling would be higher than their OQ-45 total scores at the end of counselling, indicating an overall improvement in symptoms. It was also hypothesized that there would be a statistically

significant difference between participants' OQ-45 total pre and post scores.

Initial histograms and P-P plots indicated normal distributions for pre and post OQ-45 scores and OQ-45 difference scores. This was confirmed with a Kolmogorov-Smirnov test, which was non-significant indicating that the sample was not significantly different than normal (see Table 4). Participants' pre OQ-45 scores ranged from 49 to 122 ($M=77.40$, $SD=18.66$) and participants' post OQ-45 scores ranged from 33 to 106 ($M=64.71$, $SD=21.55$). Although five participants' pre-post OQ-45 scores indicated an increase in mental health symptoms over time (see Figure 2), on average, participants' OQ-45 total scores decreased from pre to post counselling (see Figure 3). A paired samples t-test revealed that there was a statistically significant difference between pre and post OQ-45 scores, $t(16)= 2.59$, $p=.020$. A medium effect size was calculated, $d=0.63$, using G*Power 3.1 software (see Faul, Erdfelder, Lang, & Buchner, 2007; Faul, Erdfelder, Buchner, & Lang, 2009).

Table 4
Test of Normality for Pre, Post, and Difference OQ-45 Scores

	Kolmogorov-Smirnov		
	<i>D</i>	df	<i>p</i> value
Pre OQ-45 Final Score	0.10	17	0.200*
Post OQ-45 Final Score	0.15	17	0.200*
OQ-45 Difference Score	0.10	17	0.200*

Note. * $p>0.05$ indicating non-significance.

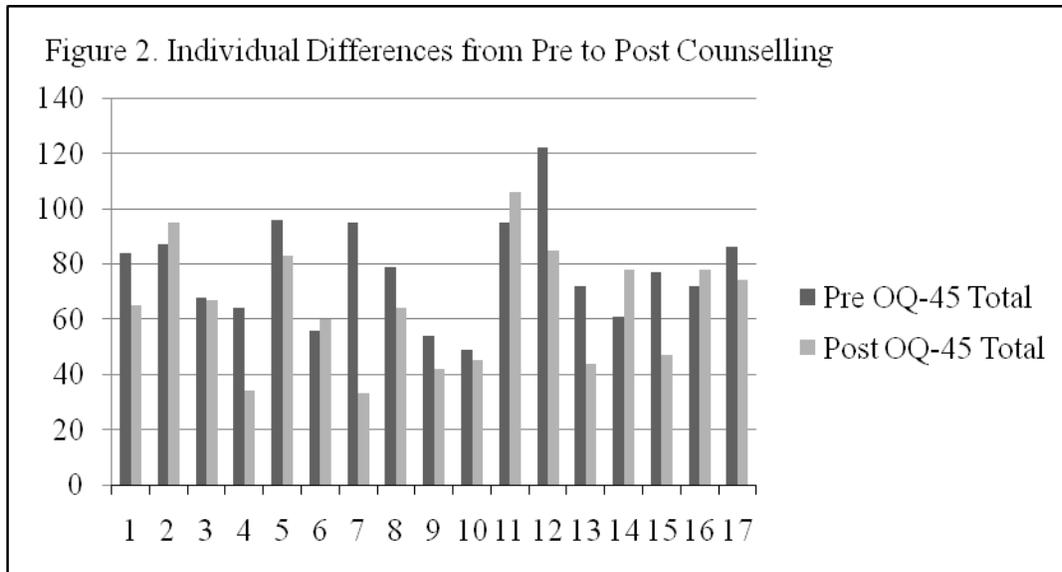


Figure 2. Participants' individual OQ-45 total scores pre-counselling and post-counselling. A general decline in OQ-45 total scores can be noted from pre to post counselling.

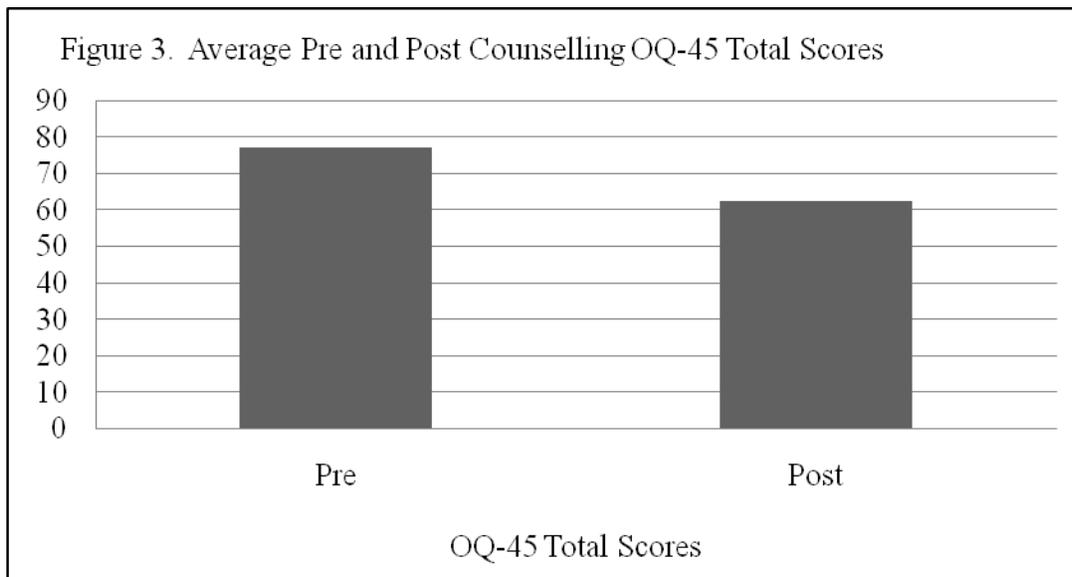


Figure 3. Participants' average pre-counselling and post-counselling OQ-45 scores. Participants experienced a reduction in OQ-45 total scores from pre to post counselling.

An enter method linear regression was conducted to examine the impact of current medication and supplement use and family support on changes in participants' OQ-45 scores. Medication use ($\beta = -.013, p = .970$), supplement use ($\beta = .227, p = .496$), and family support ($\beta = -.013, p = .966$) were not significant predictors of OQ-45 score changes from pre to post, $R^2 = .049$, $F(3, 13) = 0.22, p = .877$ (see Table 5). A negligible effect size was calculated using G*Power, $f^2 = 0.05$.

Table 5
Summary of Logistic Regression Analysis on the Influence of Current Medication Use, Current Supplement Use, and Family Support on OQ-45 Total Scores

	<i>b</i>	<i>SE</i>	β
Constant	-2.62	24.82	
Current Medication	-0.51	13.60	-.01
Current Supplement Use	9.84	14.04	.23
Family Support	-0.43	9.08	.01

Note. All factors were non-significant, $p > 0.05$.

OQ-45 cutoff scores. An examination of participants' OQ-45 total scores in relation to the OQ-45 cutoff was initially excluded from this study's hypotheses, and consequently was not examined. Given that clients access the T-UCC for a variety of reasons, including mental health problems, relationship concerns, academic issues, and learning disabilities, and experience varying levels of symptom severity, it was predicted that: 1) Many participants would not begin counselling with OQ-45 scores of 63 or greater; and 2) The small sample size combined with a potentially wide range of pre and post OQ-45 total scores would not yield meaningful results. However, all but four participants had an OQ-45 score of 63 or higher at the start of counselling with a mean score of 77.47, indicating that participants' scores are more similar to a clinical sample rather than a community sample (Lambert et al., 2004). Moreover, participants' average

post OQ-45 score were nearly below the 63 score cut off ($M=64.71$). Yet, there was a wide range of OQ-45 total scores. The minimum score of the OQ-45 is 0 and the maximum score is 135. The range found in this study was 33 to 122 for only 17 participants. Nonetheless, based on initial evidence found in this study, if more data is collected in the future, an additional hypothesis regarding OQ-45 cut off scores will be included.

Hypothesis 2

The secondary hypothesis was that participants would indicate a reduction in overall symptom severity and severity of daily life symptom interference as reported on the IQ prior to counselling and the ECQ after counselling. A Kolmogorov-Smirnov test of normality revealed that data for overall symptom severity at pre, $D(17)=.34, p=.000$, and post, $D(17)=.23, p=.017$, were not normal and were in fact negatively skewed. Severity of daily life symptom interference was also negatively skewed at pre, $D(17)=.38, p=.000$, and post, $D(17)=.236, p=.013$. Thus, pre and post overall severity and daily interference scores were analyzed using a non-parametric test, the related-samples Wilcoxon signed ranks test (see Table 6).

The related-samples Wilcoxon signed ranks test indicated that overall current symptom severity significantly decreased from pre ($Mdn=2, SD=0.60$) to post ($Mdn=2, SD=0.72$), $z=-2.64, p=.008, d=0.84$ (see Figure 4). Similarly, scores for severity of current daily interference of symptoms decreased significantly from pre ($Mdn=2, SD=0.71$) to post ($Mdn=1, SD=0.93$), $z=-2.495, p=.013, d=0.75$ (see Figure 5). Cohen's d was computed using G*Power 3.1 software.

Table 6

Level of Severity for Current Symptoms and Daily Symptom Interference Pre and Post Counselling

Pre-Post Current Daily Interference of Symptoms		
Level of Severity	Pre N (%)	Post N (%)
No Interference	1 (5.9%)	3 (17.6%)
Mild	1 (5.9%)	7 (41.2%)
Moderate	12 (70.6%)	5 (29.4%)
Severe	3 (17.6%)	2 (11.8%)
Pre-Post Current Overall Symptom Severity		
No Interference	0 (0.0%)	1 (5.9%)
Mild	2 (11.8%)	7 (41.2%)
Moderate	11 (64.7%)	8 (47.1%)
Severe	4 (23.5%)	1 (5.9%)

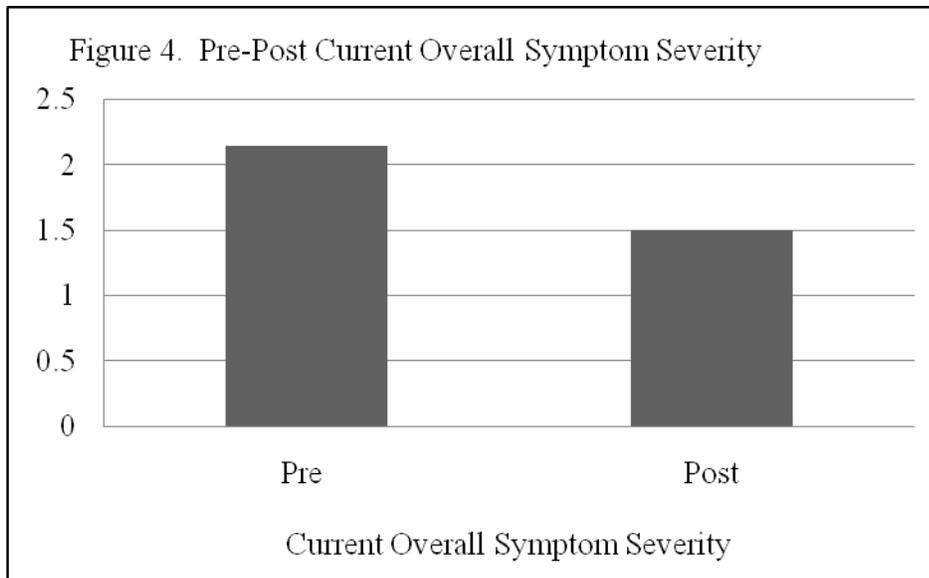


Figure 4. Participants’ average overall current symptom severity pre and post counselling.

Participants experienced a reduction in overall current symptom severity from pre to post counselling.

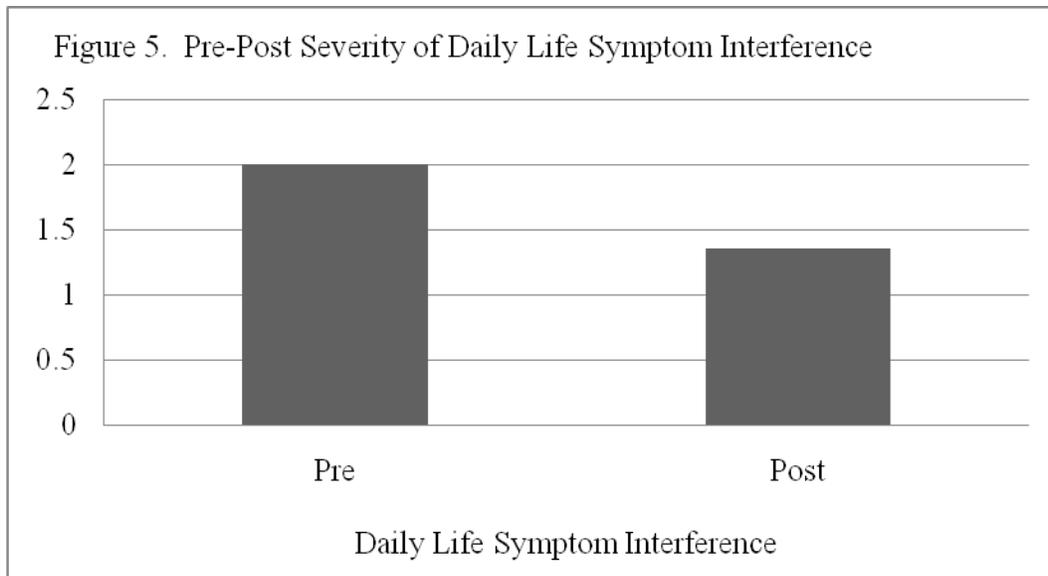


Figure 5. The average severity of daily life symptom interference experienced by participants pre-counselling and post-counselling. Participants experienced a reduction in severity of daily life symptom interference from pre to post counselling.

Hypothesis 3

It was predicted that participants would indicate on the ECQ that they found the counselling provided at the T-UCC to be effective or beneficial. Participants either strongly agreed or agreed that: 1) They had a good therapeutic relationship with counsellor (100%); 2) Counselling effectively reduced negative mental health-related symptoms (94.1%); 3) They felt better as a result of attending counselling (94.1%); 4) Attending counselling was helpful (94.1%); 5) Mental health-related symptoms were not as severe as when they first began counselling (100%); and 6) They would recommend counselling to a close friend or relative (100%) (see Table 7). Thus, it appears that participants found counselling at the T-UCC to be an overall beneficial and effective experience.

Table 7
Experience of Counselling at the T-UCC

Statement	Strongly Agree (%)	Agree (%)	Somewhat Agree (%)	Disagree (%)	Strongly Disagree (%)	<i>M</i>	<i>SD</i>
I feel that I had a good therapeutic relationship with my counsellor(s)	64.7	35.3	0.0	0.0	0.0	1.35	0.49
Individual psychotherapy/ counselling was effective in reducing the negative symptoms I experienced due to my mental health concern(s) (e.g. low mood, anxiety)	47.1	47.1	0.0	5.9	0	1.65	0.79
I feel better as a result of going to individual psychotherapy/counselling	52.9	41.2	0.0	5.9	0.0	1.59	0.79
My mental health-related symptoms are just as severe as when I first began psychotherapy/counselling*	0.0	0.0	0.0	41.2	47.1	1.65	0.70
Attending individual psychotherapy/counselling sessions was not helpful at all*	0.0	0.0	5.9	11.8	82.4	1.24	0.56
I would recommend individual psychotherapy/counselling to a close friend or relative	76.5	23.5	0.0	0.0	0.0	1.24	0.43

Note. *Items were reverse scored.

Group Counselling Sessions

Eight participants attended group counselling sessions at the T-UCC in addition to receiving individual counselling. Six participants took part in one group and two participants took part in two groups. Participants attended the following counselling groups offered at the T-

UCC: Mindfulness Meditation for Stress Reduction (for clients with general or clinical depression and anxiety), Family Relationships (for clients with a history of family abuse, neglect, and/or trauma), Shyness Clinic (for clients with mild to moderate social anxiety), and Worry Wart (for clients with generalized anxiety disorder). All participants found the group(s) they attended to be beneficial or effective (100%) (see Figure 6).

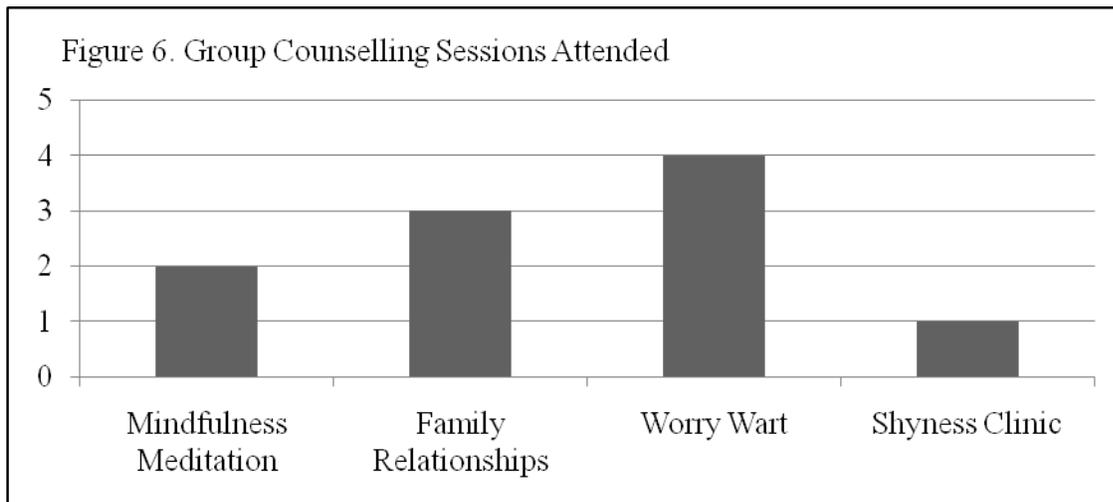


Figure 6. The group counselling sessions attended including the number of participants who attended each group.

Career Counselling and Academic Advisement

Along with individual counselling, there were five participants who received career counselling or academic advisement sessions at the T-UCC. Two of the five participants found career counselling to be beneficial or effective while the other three found it to be somewhat beneficial or effective.

T-UCC Services Accessed by Participants

While in counselling, an assortment of programs and services were provided to

participants by the T-UCC and its counsellors. Besides individual counselling, participants most frequently received a referral for a service outside of the T-UCC (47.1%), attended group counselling (41.2%), a counsellor advocated on their behalf (35.3%), and/or a counsellor consulted with their family doctor or GP (35.3%) (see Table #). No participant reported attending T-UCC workshops or training sessions or accessing the Toronto university's Safe House.

Table 8
Services Accessed at T-UCC by Participants

T-UCC Service	<i>N</i>	Percentage (%)
Individual Counselling	17	100.0
Provided you with a referral for a service outside of the T-UCC/off campus	8	47.1
Group Counselling	7	41.2
Advocated on your behalf to university staff or faculty	6	35.3
Counsellor consulted with your family doctor, psychiatrist, or the Medical Centre	6	35.3
Career Counselling/Academic Advising	5	29.4
Referred you to other university services on campus (e.g. Access Centre, Learning Services, etc.)	5	29.4
Counsellor wrote a letter on your behalf	2	11.8
Crisis Management/Provided aid during a crisis	1	5.9
On-Call Session	1	5.9

Participant Feedback

Participants were provided a space on the ECQ to write specific feedback on their individual counselling experience. Though not all participants provided written feedback, of those that did, the majority of participants provided positive feedback and were appreciative of the counselling services at the T-UCC.

Counselling was very helpful and I'm very grateful this service is available within the university. I wish [Toronto university] alumni could still use this service to stay with the same therapist.

(Participant 7)

I'm very appreciative of the counselling services at [Toronto university] ...I was able to improve...my issues to live and cope better with my anxiety academically, socially, and in my day-to-day life.

(Participant 10)

I don't know how I would have coped with everything without [my counsellor's] help and support. I might have dropped out of university because I was struggling to cope with certain issues in my life. Now I look forward to graduation. Thank You!

(Participant 1)

Overall, my first counselling experience was positive, effective, practical, helpful and relevant to my individual needs and personality.

(Participant 11)

In contrast, one participant provided constructive criticism regarding wait times, while another participant acknowledged that her/his experience at the T-UCC was not as beneficial as previous psychotherapy experiences.

More availability would be appreciated. Less wait time for booking an appointment.

(Participant 6)

I strongly believe in the benefits that individual counselling has to offer; however, I have learnt [sic] that in the state that I am currently in mentally, it has not been as beneficial as in other periods of my life.

(Participant 5)

Discussion

This study was conducted to expand upon Canadian psychotherapy and UCC research literature by evaluating the effectiveness of the individual counselling provided to post-secondary students at a Toronto-based UCC. Specifically, changes in students' mental health-related symptoms as measured by the OQ-45 before and after counselling were examined. Changes in the severity of participants' overall mental health symptoms and the interference of symptoms on daily life were explored. Participants' past and present mental health treatment history was also investigated, as were factors that could influence changes in participants' current mental health, including medication use, supplement or vitamin use, and social support. Lastly, information was collected on participants' overall counselling experience at the T-UCC as well as general demographic information.

Participants

Toronto is a culturally diverse city where approximately 47% of residents identify as members of a racialized group and 50% identify as immigrants (Ontario Trillium Foundation, n.d.). The cultural diversity of Toronto was reflected in this study as almost 50% of participants identified as Asian/Island Pacific, Black/African American, East Indian, or half Black/African American-half White/Caucasian. Additionally, participants were relatively evenly divided with regards to year of study and represented 10 different programs of study. The majority of participants were undergraduates and few graduate students took part in the study. However, this was not surprising given that graduate students make up approximately 1% of the full-time student population at the Toronto university (AUCC, 2011).

Effectiveness of Counselling Provided at the T-UCC

At present, there is limited direct Canadian research on the effectiveness of counselling

provided to post-secondary students (Cairns et al., 2010; Minami et al., 2009; Vonk & Thyer, 1999). Research that is available indicates that counselling is an effective mental health treatment (see Cairns et al., 2010; Minami et al., 2009; Snell et al., 2001; Vonk & Thyer, 1999; Wilson et al., 1997). Based on this research, it was hypothesized that participants would experience a decrease in mental health-related symptoms as measured by the OQ-45, overall current symptom severity, and severity of the interference of symptoms on daily life from pre to post counselling. Study results indicated that participants experienced a statistically significant decrease in mental health-related symptoms as measured by the OQ-45 from pre to post counselling. They also experienced a statistically significant decrease in current symptom severity and severity of symptom interference in daily life. In sum, individual counselling provided at the T-UCC was effective and lead to a statistically significant reduction in participants' mental health-related symptoms, current symptom severity, and severity of symptom interference in daily life. With only 17 participants, medium to large effect sizes were achieved for pre-post OQ-45 scores ($d=0.63$), overall current symptom severity ($d= 0.84$), and severity of symptom interference in daily life ($d= 0.75$). Moreover, these results were achieved over a relatively brief period of time as participants attended an average of 6 to 7 sessions.

As noted previously, there is some debate as to whether post-secondary students' symptom severity has increased, though at present it appears that this perceived trend is accurate (Benton et al., 2003; Cairns et al., 2010; Cook, 2007; Gallagher, 2010; Krumrei et al., 2010; MacKean, 2011; Much & Swanson, 2010; Storrie et al., 2010; Twenge et al., 2010). Although the results of this study cannot speak to long-term changes in post-secondary students' symptom severity, at the start of this study, participants indicated that their symptoms as moderate to severe. And, on average, participants' total OQ-45 scores fell into the clinical rather than the

community range of scores. Future research should continue to examine symptom severity and the impact of symptoms on daily life as well as explore symptom changes in relation to the OQ-45 cutoff scores. Future research should also include data collection using the OQ-45 at each session to track client changes over time and to more easily capture data from participants who sporadically cease counselling. This may also reduce participant self-selection into the study, as was the case with the present study. Self-selection in this study may have led to the inclusion of participants who viewed counselling more positively than the average T-UCC client and/or participants who opted to continue counselling as opposed to those who quit spontaneously. However, a handful of students' OQ-45 score increased from pre to post and almost a quarter of participants attended only 1-2 sessions. Thus, the sample included participants with a range of mental health symptom changes from pre to post and individuals who terminated counselling early as indicated by the low number of sessions attended.

Feedback from Participants

Matching the data obtained from the OQ-45, participants indicated that the counselling they received at the T-UCC effectively reduced negative symptoms related to mental health concerns. In addition, the majority of participants felt better, experienced a reduction in mental health-related symptoms severity, found individual counselling to be helpful, had a good therapeutic relationship with their counsellor, and would recommend individual counselling to a close friend or relative. Participants also provided voluntary feedback regarding their counselling experience. On the whole, participants were appreciative and grateful for the counselling services at the T-UCC and stated that counselling was helpful, positive, effective, and relevant. One participant stated that he/she would have likely dropped out of university had it not been for counselling at the T-UCC. This is in line with research that indicates post-

secondary student retention rates are higher for post-secondary students who engage in counselling (Turner & Berry, 2000; Wilson, Mason, & Ewing, 1997). On the other hand, one student indicated that given his/her current situation, he/she was unable to benefit from counselling at this time.

Other T-UCC Services

While clients of the T-UCC, participants also accessed the following services: received a referral for a service outside of the T-UCC, attended group counselling, attended career counselling or academic advisement, had a counsellor advocate on their behalf, were referred to other university services, had a counsellor consult with their family doctor or GP, had a counsellor write a letter on their behalf, and/or was provided aid during a crisis. All participants who underwent group counselling indicated that it was effective. Those who attended career counselling or academic advisement sessions found the services to be either effective or somewhat effective. Future research should examine that effectiveness of career counselling, academic advising, and group counselling separately and in greater detail.

Medication Use, Supplement and Vitamin Use, and Social Support

It was predicted that three factors would influence changes in participants' OQ-45 scores: current medication use, current supplement or vitamin use, and social support. Overall, participants reported that medication use was an effective mental health treatment. The majority of participants indicated that the use of supplements or vitamins for mental health purposes to be effective or somewhat effective. However, it should be noted that specific inquiries were not made regarding the ways in which medication, supplements, or vitamins were effective. Future research should include more direct questioning to examine the ways in which these treatments were effective. Because social support has been shown to positively influence changes in mental

health (Mallinckrodt, 1989), information was gathered on the social support participants received with regards to their mental health concerns. High levels of social support for mental health concerns from friends, family, and romantic partners were reported. However, despite these positive self-reports for each of the three predicted factors, current medication use, supplement use, and social support were not significant predictors of OQ-45 score change. This surprising finding indicates that changes in participants' OQ-45 scores are attributable to the counselling provided at the T-UCC.

Mental Health Service Use

Family doctors and GPs are the most frequently visited health professional for mental health purposes and they are often the only professional accessed by Canadians for mental health treatment (Fournier et al., 1997; Health Canada, 2002a; Lesage, et al., 2006; Vasiliadis et al., 2009). In the past, participants most frequently accessed GPs or family doctors for mental health concerns and half of the participants were prescribed medication by a GP or family doctor. Psychiatrists were accessed less frequently and fewer participants were prescribed medication by a psychiatrist. Canadian mental health service use data indicates that individuals with higher levels of education and individuals with higher incomes or from high-income families are more likely to access a psychologist for psychotherapy (Steele, Dewa, Lin, & Lee, 2007; Vasiliadis et al., 2009). This trend was reflected in participants' past treatment experiences as most participants received individual psychotherapy or counselling in the past and 41% indicated receiving treatment from a psychologist. However, participants who may have previously received individual counselling at the T-UCC could have inflated this number.

The lack of Medicare coverage for the cost of psychotherapy has been identified as a barrier to treatment (Hunsley, 2002; Myer & Payne, 2006; Vasiliadis et al., 2009). Participants

indicated that the cost was indeed a major barrier to accessing psychotherapy. Several participants noted that they would have or might have sought psychotherapy earlier if cost was not an issue. Participants also noted that stigma was a barrier to accessing psychotherapy. Stigma occurs at every social level including friends, colleagues, and family members and is one of the greatest barriers to accessing mental health treatment in general (Health, 2002a; Kirby & Keon, 2006). In this case, participants noted that they experienced stigma at home as with family members, particularly parents, who said that psychotherapy would not be effective. Furthermore, over half of participants indicated that a medical professional did not mention psychotherapy as a treatment option despite the fact that psychotherapy is a well-established treatment for a number of mental disorders, has far fewer side effects than medication, and may actually be less expensive than medication for some common mental disorders including anxiety and depression (Chambless & Ollendick, 2001; Hunsley, 2002; Myer & Payne, 2006; UKDH, 2001). Given the high rate at which GPs and family doctors are accessed for mental health treatment, this is a troublesome finding. It is possible that physicians may be unaware of the psychological resources generally available and of the effectiveness of psychotherapy as a treatment for mental illnesses (Witko, 2003). Another possibility is that physicians, on average, may not be provided with enough of a background in psychology (Witko, 2003). Family physicians have identified that they would like more support in this area from mental health specialists (Mulvale, 2006). Improved collaboration among mental health providers may be one way to increase accessibility and awareness of psychological services (Witko, 2003). Evidence suggests that the inclusion of mental health specialists in a family or primary care settings leads to higher satisfaction among doctors and mental health care workers as well as patients (Goosen, Staley, & Pearson, 2008).

Limitations

The generalizability of these results is greatly limited by the small sample size. There were many challenges in recruiting for this study. For reasons of confidentiality, researchers could not directly recruit clients of the T-UCC. Thus, the responsibility for recruitment fell to T-UCC counsellors and participants themselves. Since ethical reasons inhibited counsellors and researchers to actively recruit participants for this study, the onus to participate in the study fell to the T-UCC clients who learned of the study by way of counsellors or posters hung in the T-UCC waiting rooms. It is possible that the offer of an entry into a \$150 cash draw was not enough to entice participation. Lack of participation may also be due to clients' reluctance to divulge mental health-related information due to the personal nature and stigma associated with receiving counselling at the T-UCC. More participants will need to be recruited for this study in order to provide more meaningful results and increase the study's statistical power.

As noted earlier, UCCs are often understaffed and counsellors frequently report being overworked (Benton et al., 2003; Gallagher, 2010; Mowbray et al., 2006). The counsellors of the T-UCC are dedicated workers who must meet many demands and face challenges similar to other UCCs. For example, in the Fall of 2010, around the same time this study began, the T-UCC experienced an increase in students accessing the T-UCC for counselling. This led to the implementation of a wait list as staff were unable to meet the increased demand. The lag time between students' initial contact and the start of counselling was identified by one participant as problematic and may have impacted participant recruitment. Also, counsellors' time constraints and other responsibilities may not have afforded counsellors the time to promote the study to each new client of the T-UCC.

Although the T-UCC regularly collects statistical information regarding T-UCC use and

conducts bi-annual satisfaction surveys, the T-UCC does not have infrastructure in place to conduct ongoing research accessible by outside researchers. This led to a number of structural and procedural challenges including the self-directed nature of this study. Because researchers could not directly gather data in the T-UCC, the responsibility to fill out Packages 1 and 2 at the correct points in time before and after counselling fell to participants. It is possible that participants did not complete Packages 1 and 2 directly at the start or end of counselling.

Lastly, another potential limitation of this study may be the use of self-reports. It is possible that participants provided responses that placed themselves in a better light or were influenced by the desire to please counsellors or the researchers by indicating positive changes over the course of counselling (Hanita, 2000). Evidence suggests that discrepancies can exist between clients' perception of symptom severity and therapist ratings and standardized assessment measures (Cairns et al., 2010). However, self-reports in the field of mental health are seen as invaluable tools that provide insight into mental health-related symptoms and characteristics that may not be readily apparent to clinicians (Trauer, 2010). For example, the OQ-45 has been shown to accurately identify and predict treatment outcomes (Lambert, 2010). In addition, the OQ-45 has been thoroughly reviewed and determined to be a reliable and valid measure for use in UCCs that is sensitive to client changes over time (Chapman, 2003; Lambert et al., 1996, 2004; Miller et al., 2003; Mueller et al., 1998; Umphress et al., 1997; Vermeersch et al., 2000; Vermeersch et al., 2004). Finally, objective measures of health, including mental health, are often poorly correlated with actual illness (Pedersen, Zacharie, & Mainz, 2005). In fact, self-report measures tend to more accurately predict mortality (Jylha, 2009).

Conclusion

Evidence suggests that psychotherapy is not only an effective treatment option for a variety of mental illnesses, including anxiety disorders, substance abuse, eating disorders, and major depressive disorder, it is also cost-effective and can offset the health care costs associated with some physical illnesses, including hypertension, diabetes, chronic fatigue, cancer, and heart disease (Chambless & Ollendick, 2001; Hunsley, 2002; Myer & Payne, 2006; Roberge et al., 2004; UKDH, 2001). Despite the evidence for the effectiveness of psychotherapy, most of which is conducted in the US, the average Canadian does not have access to psychotherapy as a treatment for mental illness because Canadian Medicare does not typically cover these costs (Hunsley, 2002; Myer & Payne, 2006; Vasiliadis et al., 2009). However, there is one population of Canadians that can generally access psychotherapy at no direct cost: post-secondary students.

The majority of Canadians attend some form of post-secondary education (OECD, 2010). Post-secondary institutions are often mandated to provide mental health services (Thompson, 2010), which often includes counselling or psychotherapy. This is fortunate for post-secondary students because many mental illnesses emerge during the time when Canadians are attending post-secondary education (Eisenberg et al., 2007; Kessler et al., 2005; McGorry et al., 2011; McLean & Andrews, 1998). Yet, similar to general psychotherapy research, the bulk of research evaluating the effectiveness of UCC counselling is conducted in the US (Cairns et al., 2010). In addition, although a great deal of research has been conducted in UCCs, the majority of research has focused on components of psychotherapy rather than the effectiveness of the therapy itself (Rosenthal & Wilson, 2008; Minami et al., 2009). The limited research that is available indicates that counselling provided at UCCs is effective (see Minami et al., 2009; Snell, Mallinckrodt, Hill, & Lambert, 2001; Vonk & Thyer, 1999; Wilson, Mason, & Ewing, 1997).

To add to the psychotherapy and counselling effectiveness literature, and to ensure that students were receiving an effective treatment for mental health concerns, a pre-post effectiveness study was conducted at a Toronto UCC.

Preliminary evidence from this study indicates that the psychotherapy provided to students at the T-UCC is effective, leads to reduced mental health-related symptoms, reduced overall current symptom severity, and severity of symptom interference in daily life.

Participants indicated that the individual counselling provided at the T-UCC was effective and helpful; they felt better as a result of counselling; they experienced a reduction in symptom severity; they had a good therapeutic relationship with their counsellor; and would recommend counselling to a close friend or relative. Contrary to what was predicted, medication use, supplement or vitamin use, and social support, were not significant predictors of OQ-45 score change.

Unlike randomized control trials conducted under strict control with specific populations, this study took place in a real world setting. Participants varied in symptom severity and specific mental health concerns. Counsellors were at different stages in their career and had different credentials and theoretical backgrounds. Regardless of these factors, this study found that clients of the T-UCC received an effective treatment for mental health problems. Moreover, these effects were achieved in an average of 6-7 sessions with medium to high effect sizes. Given the preliminary nature of this research and the small sample size, a continuation of this study is planned for the following year.

Participants identified that one of the major barriers to accessing psychotherapy was that a medical professional, any medical professional, did not tell them that psychotherapy was a treatment option. This is particularly problematic given that for most Canadians, a GP or family

doctor will be the only health professional they see for a mental health concern (Fournier et al., 1997; Health Canada, 2002a; Lesage, et al., 2006; Vasiliadis et al., 2009). Some have suggested that the high rates at which GPs and family doctors are accessed for mental health services is an indication that they should provide the bulk of mental health treatment (Vasiliadis et al., 2009). However, to do so would put up another barrier to accessing psychotherapy, a valid and effective treatment with fewer side effects than typical medication. This may also place undue stress on family doctors, who are at present in high demand due to Canada's physician shortage; Canadians are already experiencing long wait times to see their family physician and the current average work load for doctors is 75 hours per week (Clatney et al., 2008; College of Family Physicians of Canada, 2008; Scalon, 2006). Furthermore, family physicians are requesting increased support from other mental health service providers (Mulvale, 2006). The routine provision of psychotherapy and the addition of mental health care workers to collaborative care teams could improve patient care, alleviate financial pressure the health care system, and should be incorporated into routine health care (Romanow & Marchildon, 2003).

These recommendations have in some part been put into practice. Across Canada, there has been an increase in collaborative care practices between GPs and other health professionals, including psychiatrists, social workers, pharmacists, nurses, and other health professionals over the past decade (Gagne, 2005; Kates, Gagne, & Whyte, 2008). This sentiment is echoed in the newly released *Ontario Comprehensive Mental Health and Addictions Strategy* that emphasizes an integrated, collaborative approach to mental health care (OMHLTC, 2011). Not surprisingly along with a collaborative care focus, the main and immediate focus of this strategy is on child and adolescent care. This report acknowledges the importance of early intervention given that the majority of mental illnesses emerge during this period of time (OMHLTC, 2011). The case

for adolescent and young adult mental health care is also made in the recently released report by the National Working Group on Post-Secondary Student Mental Health that emphasizes the utilization of evidence-based practices for the treatment of post-secondary students' mental health issues (MacKean, 2011). Building upon previous research, results from this study indicate that psychotherapy or counselling provided at Canadian UCCs is one such effective, evidence-based treatment for post-secondary student mental health problems. Future Canadian research exploring the effects of counselling on post-secondary students' mental health will provide further evidence on the effectiveness of counselling for post-secondary students at a time when Canada and its provinces are surveying evidence-based treatment options for adolescents and post-secondary students.

Appendix A

Research Description

The following is the description of Jen Rouse's Master's Thesis research to be used when recruiting clients for her study.

A Master's student in Ryerson's Clinical Psychology program is conducting a research study at the [Toronto university] investigating the effectiveness of the individual and group counselling services provided at the centre. To do this, participants who are starting counselling are being recruited to complete two approximately 10-15 minute questionnaire packages at the beginning and end of their counselling experience. This study is voluntary and participation in this study will not in any way affect the treatment you receive at the [Toronto university] and the information that you share with your counsellor will not at all be connected to the study. Alternatively, your counsellor will not be privy to the information you provide for this study. Would you be interested in taking part in this study? (If yes, provide the participant with a copy of package 1).

Appendix B

Informed Consent for Student Participants

Ryerson University Informed Consent Agreement

Examining the Effectiveness of Psychotherapy at a University Counselling Centre

You are being asked to participate in a research study. The Principle Investigator, Jen Rouse, is conducting this research for her Master of Arts in Clinical Psychology at Ryerson. Before you give your consent to be a volunteer, it is important that you read the following information and ask as many questions as necessary to be sure you understand what you will be asked to do.

Investigators:

Jen Rouse, B.A. Hon., Graduate Student, Department of Psychology, Ryerson University
Wade Pickren, Ph.D., Professor, Department of Psychology, Ryerson University
Diana Brecher, Ph.D., C.Psych., Clinical Co-ordinator, Centre for Student Development and Counselling, Ryerson University.

Purpose of the Study: The purpose of this study is to examine the effectiveness of the counselling services provided at the Centre for Student Development and Counselling (CSDC). It is our hope that 150-200 Ryerson University students will participate in this study. All current Ryerson University students 18 years of age or older who are receiving counselling from Ryerson University's Centre for Student Development and Counselling will be eligible to participate excepting those who are enrolled in the Continuing Education program.

Description of the Study: If you decide to participate in this study, you will be asked to do the following: 1) Complete a questionnaire package (Package 1, this questionnaire package) at the start of your counselling; and 2) Complete a second questionnaire package (Package 2) at the end of your counselling or at one of two times throughout the 2010-2011 school year (December 2010 or April 2011) depending on the duration of your counselling. Packages 1 and 2 will be available from your Counsellor or at the CSDC reception desk and can be completed in waiting area of the CSDC or at any place that is convenient for you. In Package 1, you will be asked questions about demographics such as your age and gender, treatment for mental health concerns, stress, or overall well-being such as psychotherapy or visiting your family doctor, social support, and academics. Package 2 will ask about your counselling experience at the Centre of Student Development and Counselling. Each package will also include a questionnaire called the Outcome Questionnaire 45.2 that will ask you to choose statements that to represent how you are feeling. Each questionnaire package will take approximately 15-20 minutes to complete. If you choose to participate in this study and have completed Package 1, but do not complete Package 2 by April 2011, the researchers may contact you to ask you to complete Package 2. However, if at this time you have decided to drop out of the study, you are free to deny this request.

What is Experimental in this Study: None of the procedures or questionnaires used in this study are experimental in nature. The only experimental aspect of this study is the gathering of information for the purpose of analysis.

Risks or Discomforts: Occasionally people feel uncomfortable when answering questions about their mental health, stress, or well-being or about past treatment. If you feel uncomfortable answering certain questions, you may choose not to answer those questions. Also, you are free to withdraw from this study either temporarily or permanently at any time. If you choose to participate, you should also be aware that participation in this study will not in any way affect the treatment you receive at the CSDC and the information that you share with your counsellor will not at all be connected to the study. In addition, your

counsellor will not have access to the information you provide for this study. Lastly, non-participation or withdrawal from this study will not in any way affect the counselling that you receive at the CSDC.

Benefits of the Study: It is important that Ryerson University students are being provided with an effective service. The information gathered in this study will indicate whether or not students are receiving effective counselling from the CSDC. Completing the questionnaires may also allow you to reflect on your time in counselling and make you aware of any changes in since starting counselling. This may not only help guide university policy and funding at Ryerson University, but may also provide guidance to other Canadian university counselling centres across Canada. In general, this research may add to the body of Canadian research on counselling and psychotherapy.

Confidentiality: The information you provide in this study will be kept confidential. To ensure your confidentiality, your questionnaire packages will be kept in a locked storage facility to which only investigators and associated personnel will have access. In addition, your questionnaires will not contain any identifying information such as your name and will only contain your participant number. Your informed consent will be removed from Package 1 and kept in a separate locked location from your questionnaires. Only aggregate data will be analyzed and single cases will not be individually reported, except if you provide specific comments regarding the services at the CSDC. If individual comments are used for exemplification purposes, all identifying information will be removed. All questionnaires and contact information from this study will be confidentially shredded three years after the completion of this study and aggregate data will be destroyed seven years after the findings from this study are published. Electronic documents associated with this study will be password protected.

Incentives to Participate: Participants who complete BOTH PACKAGE 1 AND PACKAGE 2 for this study will be entered into a draw for \$150. Also, you MUST COMPLETE PACKAGE 2 BY APRIL 30, 2011 to qualify for the draw. A participant's name will be randomly drawn at the end of this study. If you win, you will be contacted via the contact information you provide at the bottom of this form.

Voluntary Nature of Participation: Participation in this study is voluntary. Your choice of whether or not to participate will not influence your future relations with Ryerson University or the CSDC. At any particular point in the study you MAY REFUSE to answer any particular questions. For example, if for any reason YOU FEEL PSYCHOLOGICAL DISCOMFORT, you have the right to discontinue participation either temporarily or permanently, at any time. YOU CAN CHOOSE NOT TO ANSWER A PARTICULAR QUESTION IF YOU DO NOT WISH TO DO SO. You have the right to withdraw from the study at anytime without explaining your reasons. IF YOU CHOOSE TO COMPLETE THE SURVEY YOUR VOLUNTARY PARTICIPATION IS APPRECIATED. If you choose to withdraw from this study, your initial data may be used for demographic purposes but will be removed from the data set and not used for analysis purposes.

Questions about the Study: If you have any questions about the research now, please ask. If you have questions later about the research, you may contact.

Jen Rouse, Principle Investigator, 416-979-5000 Ext. 2187, jrouse@psych.ryerson.ca
Dr. Wade Pickren, Co-Investigator, 416-979-5000, Ext. 2632
Dr. Diana Brecher, C.Psych., Co-Investigator, 416-979-5000 Ext. 6631

If you have questions regarding your rights as a human subject and participant in this study, you may contact the Ryerson University Research Ethics Board for information.

Research Ethics Board
c/o Office of the Vice President, Research and Innovation
Ryerson University
350 Victoria Street
Toronto, ON M5B 2K3
416-979-5042

Agreement: Your signature below indicates that you have read the information in this agreement and have had a chance to ask any questions you have about the study. Your signature also indicates that you agree to be in the study and have been told that you can change your mind and withdraw your consent to participate at any time.

You have been told that by signing this consent agreement you are not giving up any of your legal rights.

Name of Participant (please print)

Signature of Participant _____ Date

Signature of Investigator _____ Date

Contact Information: To be entered into the draw for \$150, please check how you prefer to be contacted (email, phone, or both) if you win the draw and list the contact information below. If you win, you will be contacted in Spring 2011 after all data is collected. Please note that you will only be entered into the draw if you complete BOTH PACKAGE 1 AND 2 for this study.

Email Phone Either Email or Phone (Both)

Email: _____

Day-Time Phone Number/Cell Phone: _____

Are researchers free to contact you in April 2011 if you have filled out Package 1 but have yet to fill out Package 2 using the contact information above?

Yes No

Appendix C

Informed Consent for Counsellors

Ryerson University
Informed Consent Agreement

Examining the Effectiveness of Psychotherapy at a University Counselling Centre

You are being asked to participate in a research study. The Principle Investigator, Jen Rouse, is conducting this research for her Master of Arts in Clinical Psychology at Ryerson. Before you give your consent to be a volunteer, it is important that you read the following information and ask as many questions as necessary to be sure you understand what you will be asked to do.

Investigators:

Jen Rouse, B.A. Hon., Graduate Student, Department of Psychology, Ryerson University
Wade Pickren, Ph.D., Professor, Department of Psychology, Ryerson University
Diana Brecher, Ph.D., C.Psych., Clinical Co-ordinator, Centre for Student Development and Counselling, Ryerson University.

Purpose of the Study: The purpose of this study is to examine the effectiveness of the counselling services provided at the Centre for Student Development and Counselling (CSDC). It is our hope that 150-200 Ryerson University students will participate in this study. All current Ryerson University students 18 years of age or older who are receiving counselling from Ryerson University's Centre for Student Development and Counselling will be eligible to participate excepting those who are enrolled in the Continuing Education program.

Description of the Study: At the start of this study, if you decide to participate, you will be asked to complete a brief questionnaire that will take approximately 5 minutes to complete. The questionnaire is aimed at gathering general information about CSDC counsellors' counselling background including questions about theoretical orientation, how many months or years worked as an intern/counsellor, how many months or years worked at the CSDC as an intern/counsellor, and counselling credentials.

What is Experimental in this Study: None of the procedures or questionnaires used in this study are experimental in nature. The only experimental aspect of this study is the gathering of information for the purpose of analysis.

Discomfort and Withdrawal: You may feel uncomfortable participating in this study as the effectiveness of the services at the CSDC is being evaluated. Participation in this study is VOLUNTARY. At any particular point in the study you MAY REFUSE to answer any particular questions. For example, if for any reason YOU FEEL PSYCHOLOGICAL DISCOMFORT, you have the right to discontinue participation either temporarily or permanently, at any time. YOU CAN CHOOSE NOT TO ANSWER A PARTICULAR QUESTION

IF YOU DO NOT WISH TO DO SO. You have the right to withdraw from the study at anytime without explaining your reasons. IF YOU CHOOSE TO COMPLETE THE SURVEY YOUR VOLUNTARY PARTICIPATION IS APPRECIATED. Also, if you decide to withdraw from this study, your information will be removed from the dataset and will not be analyzed.

Benefits of the Study: NO DIRECT BENEFITS OR COMPENSATION will be received from participating in this study. However, the results of the study may provide information regarding the effectiveness of the services provided at the CSDC. This may not only help guide university policy and funding at Ryerson University, but may also provide guidance to other Canadian university counselling centres across Canada. In general, this research may add to the body of Canadian research on counselling and psychotherapy.

Confidentiality: The information you provide in this study will be kept confidential. To ensure your confidentiality, your questionnaire will be kept in a locked storage facility to which only investigators and associated personnel will have access. In addition, your questionnaires will not contain any identifying information such as your name and will only contain your participant number. Your informed consent will be kept in a separate locked location from your questionnaire. Only aggregate data will be analyzed and single cases will not be individually reported. All questionnaires and contact information from this study will be confidentially shred three years after the completion of this study and aggregate data will be destroyed seven years after the findings from this study are published. Electronic documents associated with this study will be password protected.

Voluntary Nature of Participation: Participation in this study is voluntary. Your choice of whether or not to participate will not influence your future relations with Ryerson University. If you decide to participate, you are free to withdraw your consent and to stop your participation at any time without penalty or loss of benefits to which you are allowed.

Questions about the Study: If you have any questions about the research now, please ask. If you have questions later about the research, you may contact.

Jen Rouse, Principle Investigator, 416-979-5000 Ext. 2187, jrouse@psych.ryerson.ca
Dr. Wade Pickren, Co-Investigator, 416-979-5000, Ext. 2632
Dr. Diana Brecher, C.Psych., Co-Investigator, 416-979-5000 Ext. 6631

If you have questions regarding your rights as a human subject and participant in this study, you may contact the Ryerson University Research Ethics Board for information.

Research Ethics Board
c/o Office of the Vice President, Research and Innovation
Ryerson University
350 Victoria Street
Toronto, ON M5B 2K3
416-979-5042

Agreement: Your signature below indicates that you have read the information in this agreement and have had a chance to ask any questions you have about the study. Your

signature also indicates that you agree to be in the study and have been told that you can change your mind and withdraw your consent to participate at any time.

You have been told that by signing this consent agreement you are not giving up any of your legal rights.

Name of Participant (please print)

Signature of Participant

Date

Signature of Investigator

Date

Appendix D

Intake Questionnaire

The following questionnaire is made up of three parts. The first part of this questionnaire will ask you demographic questions such as your age and gender. The second part will include questions about your present and past mental health treatment. The last section will ask you questions regarding social support and one question about your academic performance. If you feel uncomfortable answering certain questions, you may choose not to answer those questions. The questionnaire should take approximately 5 to 10 minutes to complete. The Outcome Questionnaire following this survey will take approximately 5-7 minutes to complete.

Demographics

1. Age in Years: _____
2. Gender: Female _____ Male _____ Transgender _____ Transexual _____
3. What is your program of study?

4. What is your year of study? (Please check one).

1st _____ 2nd _____ 3rd _____ 4th _____ 5th _____ Not Applicable _____
5. Are you an undergraduate or graduate student?

Undergraduate _____ Graduate _____
6. Ethnicity:
White/Caucasian _____ Black/African American _____
Aboriginal/Native American _____ Asian/Island Pacific _____
Hispanic/Latin American _____ Middle Eastern/Arab _____
Other: _____
7. Are you an International Student on a visa?

Yes _____ No _____

Mental Health and Well-Being Treatment History

1. In general, please rate the severity of your current symptoms:

Severe _____ Moderate _____ Mild _____ No Symptoms _____

2. In general, please rate the severity of how your symptoms are currently interfering with your daily life:

Severe_____ Moderate_____ Mild_____ No Interference_____

3. In general, please rate the severity of how your symptoms are currently interfering with your academic or work life:

Severe_____ Moderate_____ Mild_____ No Interference_____

4. In general, please rate the severity of how your symptoms are currently interfering with your social interactions:

Severe_____ Moderate_____ Mild_____ No Interference_____

Throughout this questionnaire, the terms psychotherapy and counselling will be used to indicate the same type of treatment.

5. Have you **ever** received the following types of treatments? (Please check all that apply).

Individual Psychotherapy/Counselling _____
Group Psychotherapy/Counselling _____
Medication from a Family Doctor/General Practitioner _____
Medication from a Psychiatrist _____
Other (Please list):_____ _____

6. Is this your first time at the [Toronto university] (T-UCC)?

Yes_____ No_____

7. Have you **ever** received psychotherapy or counselling prior to coming to the [Toronto university] (T-UCC)?

Yes_____ No_____

(If yes, proceed to question 7a-b. If no, please proceed to question 7c)

a. **If Yes**, how long ago did you last see a mental health professional (other than the counsellor with the [Toronto university] who conducted the 30 minute brief initial consultation)?

b. **If Yes**, did you find your previous psychotherapy or counselling to be effective?

Yes _____ No _____ Somewhat _____

- c. **If No**, what were your reasons for **not** seeking psychotherapy or counselling as a treatment for a mental health concern before now? (Please check all that apply).

Financial Barriers/Cost _____

Lack of access to psychotherapy/counselling _____

A medical professional did not tell me about psychotherapy/counselling as a treatment option _____

My family told me that psychotherapy/counselling would not be effective _____

I did not think therapy would work for me _____

I did not need to seek therapy before now _____

Other treatments were effective and I did not need psychotherapy/counselling _____

Other (Please list): _____

8. Regardless of whether you have or have not sought psychotherapy or counselling before, would you have sought psychotherapy or counselling earlier if the cost of treatment was not an issue?

Yes _____ No _____ Maybe _____ Don't Know _____ Not Applicable _____

9. Have you **ever** sought treatment from a health professional for well-being or mental health purposes (e.g. a psychologist, social worker, psychiatrist, family doctor, etc.)?

Yes _____ No _____

(**If yes**, please proceed to question 9a. **If no**, please proceed to question 10).

- a. **If Yes**, what type of health professional did you see? (Please check all that apply):

Family Doctor/General Practitioner _____

Psychiatrist _____

Psychologist _____

Social Worker _____

Guidance Counsellor _____

Psychiatric Nurse _____
Other: _____
Unsure/Don't Know _____

- b. How long ago did you last see a health professional for well-being or mental health purposes (other than the therapist who conducted the 30 minute brief initial consultation at the [Toronto university])?

10. Have you **ever** taken prescribed medication for well-being or mental health purposes?

Yes_____ No_____

- a. **If Yes**, did you find taking the prescribed medication to be beneficial or effective?

Yes_____ No_____ Somewhat_____

11. Are you **currently** taking any prescribed medication for well-being or mental health purposes?

Yes_____ No_____

- a. **If Yes**, do you find taking the prescribed medication to be beneficial or effective?

Yes_____ No_____ Somewhat_____

12. Have you **ever** taken any supplements or vitamins for well-being or mental health purposes?

Yes_____ No_____

- a. **If Yes**, did you find taking the supplements or vitamins to be beneficial or effective?

Yes_____ No_____ Somewhat_____

13. Are you **currently** taking any supplements or vitamins for well-being or mental health purposes such as stress, anxiety, or depression (e.g. 5-Hydroxytryptophan (5-HTP), St. John's Wort, S-Adenosylmethionine (SAME), B12)?

Yes_____ No_____

- a. **If Yes**, do you find taking the supplements or vitamins to be beneficial or effective?

Yes _____ No _____ Somewhat _____

14. Are you **currently** receiving any other sort of treatment for your current mental health or well-being concerns (other than individual or group therapy you will be receiving at the T-UCC or prescribed medication, supplements, or vitamins that you may have indicated above)?

Yes _____ No _____

- a. **If Yes**, please list any other treatment you are currently receiving for your mental health concerns below:

Social Support and Academics

1. Do you have family members that you can talk to about your current well-being or mental health concerns?

Yes _____ No _____ Somewhat _____

2. Do you have friends that you can talk to about your current well-being or mental health concerns?

Yes _____ No _____ Somewhat _____

3. What is your current relationship status:

Single _____ In a Relationship _____ Long-term relationship _____
Married _____ Divorced _____ Other: _____

4. If you are currently in a romantic relationship, do you feel that you can talk to your partner about your current well-being or mental health concerns?

Yes _____ No _____ Somewhat _____ Not Applicable _____

5. Are you currently satisfied with your academic performance?

Yes _____ No _____ Somewhat _____ Not Applicable _____

**You have now completed the survey.
Thank you very much for
participating!**



Appendix E

Experience of Counselling Questionnaire

The following sheet will be removed from the questionnaire in order to ensure your confidentiality. This sheet will be stored separately from your questionnaire and will only be used to match your intake questionnaire with your exit questionnaire.

Name (printed): _____

Date: _____

In the future, the researcher of this study may be conducting interviews to ask Canadians about their experiences with the Canadian mental health care system such as their experiences with family doctors, psychiatrists, or mental health programs, the treatment of mental illness by psychotherapy or medication, or possibly the lack of mental health services that were available to them. Are you open to being contacted by this researcher for this purpose?

Yes_____ No_____

If Yes, please provide your contact information below. **If No**, please proceed to question 1:

Please check how you prefer to be contacted (email, phone, or both).

_____ Email _____ Phone _____ Either Email or Phone (Both)

Email: _____

Day-Time Phone Number/Cell Phone: _____

The following questionnaire will ask about your counselling experience at the [Toronto university]. The questionnaire should take approximately 5 to 10 minutes to complete. If you feel uncomfortable answering certain questions, you may choose not to answer those questions. The Outcome Questionnaire following this survey will take approximately 5-7 minutes to complete.

1. This academic year, how many individual psychotherapy sessions have you attended at s [Toronto university] (T-UCC) not including the first 30-minute brief initial consultation at the T-UCC?

1-2 _____ 3-4 _____ 4-5 _____ 6-7 _____ 8-9 _____ 10+ _____

- a. Are you satisfied with the number of sessions you have had with your counsellor(s)?

Yes _____ No _____ Somewhat _____

- b. Are you planning on attending more individual sessions at the T-UCC this school year (2010/2011)?

Yes _____ No _____ Maybe _____

- c. Would you have preferred to have more individual sessions with your counsellor(s)?

Yes _____ No _____ Somewhat _____

2. What is the name of the counsellor(s) you have been seeing at the T-UCC?

3. Please rate how much you endorse the following statements based on a scale from 1 to 5 where 1 indicates “Strongly Agree” and 5 indicates “Strongly Disagree”.

Statement	1 Strongly Agree	2 Agree	3 Somewhat Agree	4 Disagree	5 Strongly Disagree
I feel that I had a good therapeutic relationship with my counsellor(s)					
I am satisfied with the number of individual psychotherapy/counselling sessions that I received					
Individual psychotherapy/counselling was effective in reducing the negative symptoms I experienced due to my mental health concern(s) (e.g. low					

mood, anxiety)					
I feel better as a result of going to individual psychotherapy/counselling					
My mental health-related symptoms are just as severe as when I first began psychotherapy/counselling					
My mental health-related symptoms are no longer interfering with my daily life, academics, work, social interactions, etc.					
Attending individual psychotherapy/counselling sessions was not helpful at all					
I would recommend individual psychotherapy/counselling to a close friend or relative					

4. In general, please rate the severity of your current symptoms:

Severe _____ Moderate _____ Mild _____ No Symptoms _____

5. In general, please rate the severity of how your symptoms are currently interfering with your daily life:

Severe _____ Moderate _____ Mild _____ No Interference _____

6. In general, please rate the severity of how your symptoms are currently interfering with your academic or work life:

Severe _____ Moderate _____ Mild _____ No Interference _____

7. In general, please rate the severity of how your symptoms are currently interfering with your social interactions:

Severe _____ Moderate _____ Mild _____ No Interference _____

8. Have you participated in **group counselling** at the T-UCC?

Yes _____ No _____

(If yes, please proceed to question 8a. If no, please proceed to question 9).

a. If Yes, how many groups did you attend?

b. **If Yes**, which group or groups did you attend?

c. **If Yes**, how many group counselling sessions have you attended?

1-2 _____ 3-4 _____ 4-5 _____ 6-7 _____ 8-9 _____ 10+ _____

d. **If Yes**, did you find group therapy to be beneficial or effective?

Yes _____ No _____ Somewhat _____ I don't know _____

9. Did you participate in **career counselling/academic advising** as well as individual therapy?

Yes _____ No _____

a. **If Yes**, did you find **career counselling/academic advising** to be beneficial or effective?

Yes _____ No _____ Somewhat _____ I don't know _____

10. While in counselling, there are a variety of services that you may have participated in or services that the counsellors at the T-UCC may have provided you with. Please check the services that were provided for you or that you participated in since your first individual counselling session until your last session during the 2010/2011 academic year. (Please check all that apply):

Individual Counselling _____

Group Counselling _____

Career Counselling/Academic Advising _____

Crisis Management/Provided aid during a crisis _____

On-Call Session _____

[Toronto university]'s Safe House _____

A [Toronto university] Workshop/Lecture/Training _____

Counsellor wrote a letter on your behalf _____

Advocated on your behalf to university staff or faculty _____

Provided you with a referral for a service outside of the [Toronto university] off campus _____

Counsellor consulted with your family doctor, psychiatrist, or the [Toronto university] Medical Centre _____

Referred you to other [Toronto university] services on campus (e.g. Access Centre, Learning Services, etc.) _____

Other: _____

11. Is there anything else that you would like to add about the individual psychotherapy/counselling that you received at the T-UCC? (Please write your comments below).

**You have now completed the questionnaire.
Thank you very much for
participating!**



Appendix G

Counsellor Questionnaire

Please choose the options that best describe your theoretical orientation.

- Eclectic _____
- Cognitive Behavioural _____
- Emotion-Focused _____
- Humanistic/Existential _____
- Client-Centred _____
- Dialectical Behavioural _____
- Psychodynamic/ Psychoanalytic _____
- Other (Please list): _____

How many months or years have you been practicing as an intern/counsellor?

Months _____ Years _____

How many months or years have you worked at the Centre for Student Development and Counselling as an intern/counsellor?

Months _____ Years _____

What are your counselling credentials? (e.g. M.S.W., Ed.D., Ph.D., C.Psych., M.Ed., M.A.)

**You have now completed the survey.
Thank you very much for
participating!**



Appendix H

Written Debriefing

Examining the Effectiveness of Psychotherapy at a University Counselling Centre

Background of the Study: A great deal of research indicates that counselling, also known as psychotherapy, is an effective treatment for a variety of well-being and mental health concerns. However, there is a need for more Canadian psychotherapy research as the bulk of psychotherapy research comes from the United States. One area where more psychotherapy research is needed at Canadian university counselling centres such as the Centre for Student Development and Counselling (CSDC) at Ryerson University because university counselling centres are one of the few places that Canadians, as well as international students, can receive counselling at no direct cost. The purpose of this study was to examine the effectiveness of the counselling services provided at the CSDC.

It is important that Ryerson University students are being provided with an effective service. The information gathered in this study will indicate whether or not students are receiving effective counselling from the CSDC. Completing the questionnaires may also allow you to reflect on your time in counselling and make you aware of any symptom changes since starting counselling. In addition, this study may help guide university policy and funding at [Toronto university] with regards to counselling as well as mental health and well-being promotion on campus. It may also provide guidance to other Canadian university counselling centres across Canada. In general, this research may add to the body of Canadian research on counselling and psychotherapy.

Contact Information: If you have any questions or concerns about this experiment or your participation in this study you may contact:

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If you would like any information about the results of the study once it is completed, please contact Jen Rouse.

Resources: We provide all those who complete this study with an up-to-date copy of the CSDC's Safety Nets pamphlet that includes a list of mental health and other community resources in Toronto. If you are experiencing distress as a result of participating in this study, you are welcome to return to the CSDC for

further counselling if you are still eligible or use the resources listed in the Safety Nets pamphlet. Please ensure that you take this form and the Safety Nets pamphlet with you and do not place it in the Package 2 envelope.

In order to maintain the integrity of this research, please do not disclose the purpose of this experiment to others who may be interested in taking part in this study. When participants have too much prior knowledge about the purpose of an experiment, this can affect how they respond to the questionnaires and the data for that person may not be usable.

**Thank you very much for
participating!**



Appendix I

Safety Nets Brochure

SELF-HARM/SELF-INJURY

Self Abuse Finally Ends (SAFE)
1-800-366-8288 www.selfinjury.com

Support services for individuals who self-injure and services for their families and friends.

PREGNANCY AND BIRTH CONTROL, HIV/AIDS, STDs, STIs

Planned Parenthood Toronto
416-961-0113 www.ppton.ca

Information on sexual and reproductive health issues including birth control, pregnancy options, STDs, STIs and HIV/AIDS.

Hassle Free Clinic
416-922-0566 www.hasslefreeclinic.org

Confidential counselling and medical services including testing and treatment for birth control, STDs and STIs. Separate hours for men and women. Trans women, trans men, two-spirited people and people of trans experiences are welcome at both the women's and the men's clinic. OHIP not required.

Toronto Public Health
416-338-7600 www.toronto.ca/health

AIDS and Sexual Health InfoLine
416-392-2437 **1-800-668-2437 (toll free)**

LEGAL RESOURCES

Barbara Schliifer Clinic
416-323-9149 www.schliiferclinic.com

Legal services for women who are survivors of violence and sexual abuse. Areas of law include criminal, family and immigration. Legal services also include summary legal advice, representation and third party advocacy.

Community and Legal Aid Services Program
416-736-5029 www.osgoode.yorku.ca/d.asp

Provides legal services in the areas of community support, criminal justice and women's issues, immigration, and youth and education issues.

OTHER SERVICES

Credit Counselling Service of Toronto
416-228-3328 www.creditcanada.com **1-800-267-2272 (toll free)**
 Offers money management counselling for individuals.

The Federation of Metro Tenants' Associations
416-921-9494 www.torontotenants.org
 Telephone information on tenants' legal rights.

RYERSON RESOURCES

Aboriginal Student Services
416-979-5000 ext. 7699 www.ryerson.ca/aboriginal

A culturally supportive environment where all First Nations, Aboriginal, Inuit, Metis, status and non-status students can balance academic learning with traditional teachings.

Security and Emergency Services

416-979-5040 www.ryerson.ca/security
 Crime prevention, personal safety and physical security awareness/education provided. Twenty-four hour emergency response, including crisis intervention/emergency management and referral.

Centre for Student Development and Counselling

416-979-5195 www.ryerson.ca/counselling
 Free and confidential personal, career and academic counselling along with crisis intervention services including Ryerson Safe House and Ryerson Crisis Team.

Discrimination and Harassment Prevention Services

416-979-5349 www.ryerson.ca/equity
 Support for the Ryerson community, promoting a study, work, and living environment free of discrimination and harassment based on prohibited grounds (e.g. race, age, sex, sexual orientation, disability, religion etc.).

Medical Centre

416-979-5070 www.ryerson.ca/student-services/medicalcentre
 Open year-round to treat illnesses or accidents not requiring hospitalization. If necessary, referrals to local hospitals or specialists can be arranged. Payment through OHIP or a similar out-of-province insurance plan is required.

International Services for Students

416-979-5000 ext. 4189 www.ryerson.ca/internationalservices
 Orientation, information, workshops, advocacy and support provided for international students.

Ombudsperson Office

416-979-5000 ext. 7450 www.ryerson.ca/ombuds
 A confidential information, advice and assistance resource for those who wish to address what they believe to be unfair treatment at the University.

Ryerson Safe House

416-979-5195 www.ryerson.ca/counselling/safehouse
 Free short-term emergency accommodation, advocacy, and support for students who are financially in need and are at immediate risk of physical or sexual harm, or are fleeing unsafe or unendurable living conditions.

Ryerson Women's Centre

416-979-5255 ext. 2350 www.ryewomenscentre.ca
 A safe and inclusive place for all self-identified women on campus. Provides educational pamphlets, referrals and resources on issues that include racism, sexism, homophobia, transphobia, eating disorders, housing, sexual assault, pro-choice resources, violent relationships, support programs, women's health and many more. Men are welcome to use the resources, but need to be let in.

Ryerson Students' Union Legal Advice and Referral Services

416-979-5255
 Legal advice related to family and criminal law, debt, landlord and tenant conflicts, corporate law, real estate, intellectual property, legal procedures and documents, dealings with lawyers, immigration, and difficulties with government agencies.

Ryerson University, 350 Victoria Street, Toronto, Ontario M5B 2K3. (70730)

416-979-5195
**The Centre for Student
 Development and Counselling**
www.ryerson.ca/counselling/crisis

SafetyNets

Your confidential support network

Centre for Student Development & Counselling
DEPARTMENT OF STUDENT SERVICES
www.ryerson.ca/student-services

**RYERSON
 UNIVERSITY**

Everyone Makes a Mark

Safety Nets

Your confidential support network

The following services are available for you to use – no matter what your issue, no matter how big or small.

Don't hesitate to call. We're here for you.

If you're concerned about confidentiality, use *67 (dial * then 67 before the number you are calling).

*67 blocks your name and number so that the person on the other end can't identify you as the caller.

EMOTIONAL CRISIS

Distress Centre of Toronto

416-408-HELP (4357) www.torontodistresscentre.com

Immediate emotional support, crisis intervention, suicide prevention and referrals by phone.

Distress Lines by Region

Toronto: 416-929-5200 www.gersteincentre.org

North York/Etobicoke: 416-498-0043

Durham: 905-666-0483

Peel: 905-278-9036

Twenty-four hour crisis intervention services including phone line and mobile unit. Staff provide short-term supportive counselling and referral.

St. Michael's Hospital Mobile Crisis Intervention Team

Emergencies: 911 Non-emergencies: 416-808-2222

Mobile crisis intervention team responds to 911 emergency and police dispatch calls involving emotionally disturbed individuals, from 1 p.m. to 11 p.m., seven days a week. (Bloor to the Lakeshore and Spadina to the Don Valley area)

North Halton Distress and Information Centre

905-877-1211

Crisis line providing intervention, information and referrals for issues related to isolation, suicide or distress.

Police/Ambulance Emergency

911

Guide to Community, Social, Health and Government Services

211 www.211toronto.ca

A list of all Toronto resources including housing, and daily vacancies in emergency shelters and hostels.

EMERGENCY SHELTER

Central Family Intake

416-397-5637

Phone line geared to help find emergency shelter (within the city limits) for families, refugees, and women and children of violence.

ABORIGINAL SERVICES

Anduhyaan

416-920-1492, ext. 221 www.anduhyaan.org

Crisis intervention for aboriginal men, women and children. Services include mobile crisis team and emergency shelter.

Anishnawbe Health Toronto

416-360-0486 www.aht.ca

Culture-based and traditional health care provided by traditional healers, elders and medicine people. Call 416-891-8606 for twenty-four hour access to mental health crisis management.

ASSAULT

Assaulted Women's Helpline

416-863-0511 www.awhl.org 1-866-863-0511 (toll free)

Twenty-four hour telephone service providing crisis counselling, emotional support, legal services and other community resources.

Toronto Rape Crisis Centre/Multicultural Women

Against Rape

416-597-8808 www.trccmwar.ca

Twenty-four hour crisis intervention line, counselling and referral for survivors of rape/sexual assault.

The Scarborough Hospital (Grace Campus): Domestic Violence and Sexual Assault Care Centre

416-495-2555 www.sacc.to

Twenty-four hour assessment and treatment for sexually assaulted males and females, through emergency department. Domestic violence program offers immediate and follow-up care.

Springtide Resources: Ending Violence Against Women

416-968-3422 www.springtideresources.com

Engages with diverse communities to prevent violence against women and the effect it has on children.

Sexual Assault/Rape Crisis Centre of Peel

905-273-9442 www.sarccp.org

Twenty-four hour crisis and support line, information, referrals, one-on-one counselling and group support. Accompaniment to hospital, court or police.

Women's Support Network of York Region

905-895-7313 www.womensupportnetwork.ca

Offers a twenty-four hour support line, information, individual counselling for sexual assault victims, as well as community outreach and cross-cultural programs.

Children's Aid Society of Toronto

416-924-4646 www.torontocas.ca

Protecting children and youth from abuse and neglect.

GAY, LESBIAN, BISEXUAL

Lesbian Gay Bi Trans Youthline

416-962-9688 www.youthline.ca 1-800-268-9688 (toll free)

Peer support for lesbian, gay, bisexual, transgendered, two-spirited, and questioning youth.

Sherbourne Health Centre

416-324-4180 www.sherbourne.on.ca

Provides comprehensive health care for lesbian, gay, bisexual, transgender, transsexual, two-spirited, intersex, queer or questioning individuals.

gaycanada.com

Database of services across Canada.

ADDICTION, DRUGS, NEEDLES

Jean Tweed Centre

416-255-7359 www.jeantweed.com

Assisting women and their families who are dealing with substance abuse and gambling problems.

Centre for Addiction and Mental Health

www.camh.net

- Metro Addiction Assessment Referral Service (MAARS)

416-599-1448

Provides assessment, treatment service matching and referrals for individuals.

- Brief Treatment Service

416-535-8501 ext. 6616

Brief intervention to help people abstain from or moderately use substances at a non-harmful level. Group or individual settings.

- Youth Addiction and Youth Outreach Services

416-535-8501 ext. 1730

Assessment and counselling for people 16 to 24 who have substance abuse problems.

The Works – Needle Exchange Program

416-392-0520

Program partners with other agencies across Toronto to provide needle exchange services.

EATING DISORDERS

National Eating Disorder Information Centre

416-340-4156 www.nedic.ca 1-866-633-4220 (toll free)

Telephone information and support for eating disorders and weight preoccupation. Referrals to treatment services and resources.

Sheena's Place

416-927-8900 www.sheenasplace.org

Community support centre, telephone and peer support, and resource library for people with eating disorders and/or issues with food and body shape or size.

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