Moderating Variables in the Relationship Between Self-Criticism and Depression

by

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Abstract

Self-critical individuals are at a greater risk of developing psychopathology than those who are self-compassionate and have the ability to self-reassure. Indeed, excessive self-criticism as a personality trait has been shown to be a stable and relatively intractable vulnerability factor to depression that responds slowly to treatment. It is therefore important to study moderating variables that may buffer the effects of self-criticism on depression. The purpose of the present study was to examine the relationship between self-criticism, fear of compassion from others, gender, social safeness, and depression. Self-report questionnaires were administered to undergraduate students. Regression analyses were used to test hypotheses predicting that fear of compassion from others, gender, and social safeness would moderate the relationship between self-criticism and depression. Social safeness was found to moderate the positive association between self-criticism and depression.

Preface

This thesis is an original work by Gabrielle Suzanne Desgagné. The research project, of which this thesis is a part, received research ethics approval from the University of Alberta Research Ethics Board, Project Name "MODERATING VARIABLES IN THE RELATIONSHIP BETWEEN SELF-CRITICISM AND DEPRESSION", No. Pro00073173, 7/28/2017.

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Moderating Variables in the Relationship Between Self-Criticism and Depression

Depression is on the rise globally, causing a very high level of disease burden (Cuijpers, 2015). Depression has a large negative impact at the individual level in terms of personal suffering among affected individuals and their families, as well as at societal and economic levels (Cuijpers, 2015). Depression has a debilitating effect on an individual's psychological, physical, and social functioning that makes it difficult to engage in daily activities (Lips, 2010). Moreover, depression can have serious negative consequences on an individual's physical health as it increases the risk of obesity, diabetes mellitus, heart disease, stroke, hypertension, cognitive impairment, Alzheimer's disease, and cancer (Penninx, Milaneschi, Lamers, & Vogelzangs, 2013). Major Depressive Disorder (MDD) increases an individual's mortality risk by 60-80% (Cuijpers et al., 2014; Walker, McGee, & Druss, 2015), and MDD contributes approximately 10% to all-cause mortality rates (Otte et al., 2016). As such, there is an urgent need to reduce the disease burden of depression (Cuijpers, 2015).

Individuals with high levels of self-criticism are at a greater risk of developing and maintaining depression compared to those who are self-compassionate and have the ability to self-reassure (Blatt, 2004; Blatt & Zuroff, 1992; Gilbert & Irons, 2005). Excessive self-criticism has been shown to be a stable personality vulnerability factor to depression that is difficult to target in therapy (Gilbert, 2009a; Gilbert & Procter, 2006) and responds slowly to treatment (Zuroff, Sadikaj, Kelly, & Leybman, 2016). It is therefore critical to investigate moderating variables which may buffer the effects of self-criticism on depression.

In a recent study, Hermanto and colleagues (2016) investigated the moderating effect of fear of compassion from others on the positive association between self-criticism and depression. In an effort to ensure the generalizability of their results, Hermanto et al. (2016) conducted their

research using four separate samples consisting of diverse ages and cultural backgrounds. Their samples included Canadian undergraduate students, students from the United Kingdom, and community adults from Europe. The researchers also used two different measures of self-criticism and of depression to improve the robustness of their results. Fear of compassion from others exerted a moderating effect on the positive association between self-criticism and depression. Low fear of compassion from others weakened the association between self-criticism and depression, while high fear of compassion from others strengthened the association. The researchers concluded that highly self-critical individuals who are able to be open and responsive to compassion from others are protected against depression. As part of their study limitations, Hermanto and colleagues (2016) indicated that only the Portuguese community adult sample in their study had enough male participants to test for gender differences. Since women are more susceptible to depression than men (Nolen-Hoeksema, 1990) and are more likely than men to seek emotional support from others (Tamres, Janicki, & Helgeson, 2002), Hermanto and colleagues (2016) indicated that future studies should aim to recruit a sufficient amount of male and female participants to test for gender differences. As such, the present study serves as a replication and extension of Hermanto and colleagues' (2016) study with the goal of recruiting enough women and men to test for gender differences.

The purpose of the present study was to examine the relationship between self-criticism, fear of compassion from others, gender, social safeness, and depression, and to test the moderating effects of fear of compassion from others, gender, and social safeness on the positive association between self-criticism and depression. The following central research questions guided the present research: (1) How do self-criticism, fear of compassion from others, gender,

and social safeness predict depression? (2) Do fear of compassion from others, gender, and social safeness moderate the positive association between self-criticism and depression?

This thesis is organized in four main sections. The first section reviews the literature on depression, self-criticism, self-compassion, and gender and depression. The second section describes the methodology of the current study and includes information on participants, procedure, measures, and data analysis. The third section outlines the research results, while the fourth section discusses interpretation of results, implications, limitations, and future directions.

Literature Review

Depression

Depressive disorders include disruptive mood dysregulation disorder, major depressive disorder (MDD), persistent depressive disorder, premenstrual dysphoric disorder, substance/medication-induced depressive disorder, depressive disorder due to another medical condition, other specified depressive disorder, and unspecified depressive disorder (American Psychiatric Association, 2013). These disorders are characterized by "sad, empty, or irritable mood" accompanied by somatic and cognitive impairments that significantly impact an individual's ability to function (American Psychiatric Association, 2013, p.155). Depressive disorders differ from one another in duration, timing, and etiology (American Psychiatric Association, 2013). Considering its higher prevalence (Otte et al., 2016), MDD is the focus of the present study.

Major depressive disorder. MDD is a disabling mental illness characterized by low mood, loss of interest or pleasure in previously enjoyed activities, impaired cognitive functioning, and vegetative symptoms including impaired sleep and changes in appetite (Otte et al., 2016). According to the Diagnostic and Statistical Manual of Mental Disorders 5th edition (DSM-5), a MDD diagnosis requires at least one isolated depressive episode lasting a minimum of two weeks characterized by five symptoms (American Psychiatric Association, 2013). To be diagnosed with MDD, one of the five symptoms must be either depressed mood or a significant decrease in interest or pleasure in all or almost all previously enjoyed activities. Other symptoms of MDD include a considerable increase or decrease in weight or appetite not related to dieting, insomnia or hypersomnia, psychomotor agitation or retardation, fatigue or low energy, feelings of worthlessness or guilt, reduced ability to think, concentrate, or make decisions, and frequent

suicidal thoughts, ideation, or a plan for committing suicide. The psychological and somatic symptoms must cause clinically significant functional impairment in social and occupational settings. Moreover, the depressive episode cannot be caused by the physiological effects of a substance or another medical or mental disorder. Last, the individual receiving the diagnosis cannot have experienced a previous manic or hypomanic episode (American Psychiatric Association, 2013).

Worldwide prevalence rates. MDD affects more than 300 million people and is considered the leading cause of disability worldwide (World Health Organization, 2018). The best estimate of the worldwide prevalence of MDD comes from the World Mental Health (WMH) survey (Otte et al., 2016). The WMH survey assessed 89,037 participants for DSM-IV major depressive episode (MDE) via face-to-face interviews using the World Health Organization Composite International Diagnostic Interview (CIDI; Bromet et al., 2011). The survey used representative samples from 18 high-, middle-, and low-income countries spanning every continent (Bromet et al., 2011). The survey results found the average 12-month prevalence of DSM-IV MDE to be approximately 6%, and the average lifetime prevalence to be around 20% (Bromet et al., 2011). According to these findings, an estimated one in every six adults is affected by MDD (Otte et al., 2016). The pooled MDE 12-month prevalence rates were similar in ten high-income countries (5.5%) and eight low- and middle-income countries (5.9%). Similarly, the pooled MDE lifetime prevalence rates were similar in ten high-income countries (14.6%) and eight low- and middle-income countries (11.1%). These results suggest that national income itself does not directly impact depression (Otte et al., 2016).

Canadian prevalence rates. A recent study used data from the Canadian Community Survey—Mental Health (CCHS-MH) focus content cycle 2012 to investigate prevalence rates of

depression in Canada (Knoll & MacLennan, 2017). The CCHS-MH utilizes a representative sample of the Canadian population consisting of 24, 724 participants. Using a representative sample of the Canadian population allowed for prevalence rates of depression in Canada to be more accurately determined. The overall 12-month prevalence rate of MDD in Canada was found to be 4.7. The 12-month prevalence rate of MDD was found to be 5.8% for females and 3.6% for males. The overall lifetime prevalence rate was found to be 11.2%. The lifetime prevalence rate was found to be 14.0% for females and 8.4% for males. These results suggest that females have a twofold higher risk of experiencing MDD during their lifetime compared to males (Knoll & MacLennan, 2017).

Treatment. Several efficacious psychological interventions exist for MDD (Bortolotti, Menchetti, Bellini, Montaguti, & Berardi, 2008). Since the 1970s, approximately 500 randomized trials have investigated the effects of different psychological treatments for depression (Cuijpers, 2017). Numerous psychotherapies have been investigated, including cognitive-behaviour therapy, interpersonal psychotherapy, problem-solving therapy, nondirective supportive therapy, and short-term psychodynamic therapy (Cuijpers, 2017). Research shows that all therapies for depression are effective, and there are no significant differences in terms of efficacy between treatment modalities (Cuijpers, 2017). Psychological and pharmacological treatments are approximately equally effective (Cuijpers, 2017). Combined psychological and pharmacological treatment for depression has been shown to be more effective than receiving either psychological or pharmacological treatments alone (Cuijpers, 2017).

While existing treatments for depression are considered effective, there is a strong need for treatment improvement (Cuijpers, 2015). Modelling studies have demonstrated that existing evidence-based treatments for depression can only decrease the disease burden of depression by

approximately 33% (Andrews, Issakidis, Sanderson, Corry, & Lapsley, 2004). More than 40% of individuals who receive treatment for depression only partially respond to therapy, and less than one third of patients recover completely from depression after treatment (Hollon et al., 2002). Moreover, the efficacy of psychotherapies have been overestimated due to publication bias and the poor quality of some research trials (Cuijpers, 2017). Last, therapies seem to be less effective for specific subpopulations, including individuals with chronic depression (Cuijpers, 2017).

Self-criticism is associated with poorer treatment outcomes for depression across different types of therapy, including cognitive-behavioural therapy (CBT), interpersonal therapy, and antidepressant medication (Blatt, Quinlan, Pilkonis, & Shea, 1995; Blatt & Zuroff, 2005; Rector, Bagby, Segal, Joffe, & Levitt, 2000; Scharff & Tsigounis, 2003). Rector and colleagues (2000) propose that individuals with high levels of self-criticism are less likely to do well with standard CBT compared to individuals who are not highly self-critical. Clients with high levels of self-criticism who participate in the cognitive and behavioural tasks of CBT and develop the ability to generate alternative ways of thinking and behaving still frequently do poorly in therapy (Rector et al., 2000). These clients are likely to say, “I understand the logic of my alternative thinking but it doesn’t really help me feel much better” or “I know I’m not to blame for the abuse but I still feel that I am” (Gilbert, 2009a, p.199). Clients with high levels of self-criticism may not benefit from a CBT approach because they find it challenging to develop inner feelings of contentment, safeness, and warmth (Gilbert, 2009a). Some psychodynamic therapists have also acknowledged that self-criticism is difficult to treat (Scharff & Tsigounis, 2003). Moreover, research shows that the negative effects of self-criticism persist in clinically depressed individuals beyond the course of treatment. For example, Teasdale and Cox (2001) found that dips in mood can elicit feelings of self-criticism in recovered depressed people. In other words,

self-criticism predicts relapse following treatment in recovered chronically-depressed people (Teasdale & Cox, 2001). As such, future research should focus on ways to prevent the onset of depressive disorders and treatments specifically geared toward chronic and treatment-resistant depression (Cuijpers, 2017).

Aetiology. No established mechanism can fully explain the aetiology of MDD (Otte et al., 2016). Nevertheless, several factors can increase an individual's risk of developing MDD. The aetiology of MDD can be understood through a biopsychosocial diathesis-stress model of psychopathology. Diathesis-stress models propose that all individuals are born with varying levels of biological and psychological predisposing factors (diatheses) to mental disorders (Monroe & Simons, 1991; Monroe & Hadjiyannakis, 2002). Hereditary predispositions alone do not predict the development of mental disorders. An individual's vulnerability to develop a particular mental disorder depends on the interactions between his or her predisposing factors and the degree of stressful conditions in his or her environment (Ingram & Luxton, 2005).

Adverse childhood experiences, especially when an individual has faced multiple occurrences of different types, comprise a set of strong risk factors for MDD (American Psychiatric Association, 2013). For instance, childhood physical, emotional, and/or sexual abuse are significant predisposing factors to the development of MDD (Swanston, Plunkett, O'Toole, Shrimpton, Parkinson, & Oates, 2003). Childhood sexual abuse has been linked to developing depression later in life (Swanston et al., 2003). Individuals who have experienced childhood trauma are more than twice at risk of developing MDD (Heim & Binder, 2012). Moreover, individuals with MDD who have a childhood history of trauma have more severe depressive symptoms, a poorer illness course, and more treatment non-response compared to individuals with MDD who did not experience any childhood trauma (Hovens et al., 2012).

Stressful life events can predispose individuals to developing MDD (American Psychiatric Association, 2013). These include the recent loss of a partner through death or divorce, the loss of a close relative or friend, illness, financial or social hardship, and unemployment (Bromet et al., 2011; Risch et al., 2009). Hence, low socioeconomic status and low educational attainment are known predisposing factors to the development of MDD (Lorant et al., 2003). Last, low social support can increase the risk of developing MDD (Cohen & Wills, 1985; Otte et al., 2016). According to the buffering hypothesis, social support is an important protective factor in preventing MDD (Cohen & Wills, 1985; Knoll & MacLennan, 2017). Social support may also decrease some symptoms of depression, such as social withdrawal (Cohen & Willis, 1985).

Certain genetic variants can predispose individuals to developing MDD (American Psychiatric Association, 2013). First-degree relatives of individuals with MDD have a two- to fourfold higher risk of developing MDD themselves compared to the general population (American Psychiatric Association, 2013). According to the American Psychiatric Association (2013), the heritability of MDD is approximately 40%. Other studies have estimated the heritability of MDD at 35% (Otte et al., 2016). Moreover, certain personality traits have been established as risk factors to the development of MDD. For instance, the personality trait of neuroticism is considered a heritable risk factor to the development of MDD. Individuals with high levels of neuroticism have an increased risk of experiencing depressive episodes in response to stressful life events (American Psychiatric Association, 2013). Last, excessive self-criticism has been shown to be a stable personality vulnerability factor that can lead to and maintain depression (Blatt, 2004; Blatt & Zuroff, 1992; Gilbert & Irons, 2005).

Shame and depression. Shame is a key vulnerability factor to the development of

depression (Gilbert, 1997, 2003). Gilbert (1997, 1998b) conceptualizes shame as involving two main components: external shame and internal shame. External shame involves an individual's thoughts and feelings about how he or she is portrayed in the minds of others (Gilbert, 1997, 1998b). Specifically, external shame is characterized by an individual's thoughts and feelings that others view the self negatively or as having unattractive characteristics that increases one's vulnerably to rejection and attacks from others (Gilbert, 1997, 1998b). Internal shame is a self-conscious emotion characterised by views and feelings of the self as flawed or incompetent (Gilbert, 1997, 1998b). A central element of shame is thus self-criticism (Lewis, 1992, 2003). According to Lewis (1992, 2003), internal shame develops when an individual acquires the capacity for self-awareness, or the realization that one exists in the minds of others. An individual can experience external shame and internal shame simultaneously, a process that Lewis (1992, 2003) refers to as the "exposed self." Specifically, a person who is experiencing external shame triggered by thoughts and feelings that others view the self negatively can also become self-critical and self-persecuting. This type of threatening experience can cause an individual to become easily overwhelmed, fragmented, and to shut down, as there is no safe, soothing, or calming place either inside or outside the self (Lewis, 1992, 2003).

Self-Criticism

According to Blatt (1974), depression can develop from one of two distinct malfunctional personality vulnerabilities: the introjective (self-critical) personality and the anaclitic (dependent) personality. The introjective personality is marked by strong feelings of inferiority, guilt, worthlessness, and failure to live up to one's high expectations (Blatt, D'Afflitti, & Quinlan, 1976). Highly self-critical individuals frequently engage in relentless introspection and cruel self-appraisals in an effort to avoid failure and meet their high and frequently unattainable

personal standards (Blatt et al., 1976). They strive for perfection and are often highly competitive (Blatt, 1974). Moreover, they have an intense fear of rejection, criticism, and disapproval from others (Blatt, 1974). Research suggests that self-criticism can serve different purposes (Gilbert, Clarke, Hempel, Miles, & Irons, 2004). While some individuals engage in self-criticism to improve themselves and maintain their high standards (called self-improving/correction), others self-criticize to harm, punish or persecute the self for their failures (called self-harming/persecuting; Gilbert et al., 2004).

Extant empirical research has shown that self-criticism is a specific vulnerability factor to depression in both clinical and non-clinical populations (Blatt, Quinlan, Chevron, McDonald, & Zuroff, 1982; Blatt & Zuroff, 1992; Shahar, 2015; Zuroff, Mongrain, & Santor, 2004). In a study of responses to self-criticism, Whelton and Greenberg (2005) videotaped college students criticizing themselves and then responding to the self-criticism. Students with high levels of self-criticism showed more contempt and disgust when delivering their self-criticism and displayed more submissive and shamed postures when responding. In fact, Greenberg, Elliott, and Foerster (1991) proposed that it is the inability to defend oneself against one's own self-criticism that causes depression. Similarly, Murphy et al. (2002) found that self-disparagement and feelings of personal inadequacy are strongly associated with a lifetime risk of depression. Gilbert et al. (2001) found a significant correlation between clinical depression and the intensity with which individuals engage in self-critical thoughts and self-attacking messages. In a treatment study of patients with depression, self-critics had poorer outcomes after receiving cognitive therapy than non-critical participants. Moreover, the best predictor of successful treatment response to cognitive therapy was the degree to which self-criticism was reduced in treatment (Rector et al., 2000).

Extant research has also shown that the negative effects of self-criticism persist in clinically depressed individuals beyond the course of treatment. For example, Teasdale and Cox (2001) found that self-criticism predicted relapse following treatment in a group of recovered recurrently depressed patients. Zuroff, Moskowitz, and Cote (1999) found that self-criticism is linked to depression and poor interpersonal relationships. Cheung, Gilbert, and Irons (2004) found that feelings of shame and inferiority are common themes in rumination and are strongly associated with depressive rumination. Zuroff, Koestner, and Powers (1994) found that self-criticism in childhood is associated with adjustment difficulties later in life. Murphy et al. (2002) found that self-criticism is linked with a risk of depression throughout the lifespan. Last, Heimpel, Wood, Marshall, and Brown (2002) found that individuals with low self-esteem are less motivated to improve their negative moods following a setback compared to people with high self-esteem. The researchers propose two key explanations for this phenomenon. First, individuals with low self-esteem experience a larger loss of energy following a setback compared to individuals with high self-esteem. Second, individuals with low self-esteem are significantly more self-critical than individuals with high self-esteem. Thus, when individuals with low self-esteem experience a setback, a vicious cycle occurs: they experience a lowering in mood that triggers intense feelings of self-criticism, which further trigger an even greater lowering in mood (Heimpel et al., 2002).

Gilbert's model of self-criticism. Gilbert (2005b, 2009b) affirms that an understanding of evolutionary psychology and neuroscience informs the development of self-criticism and depression. Evolutionary psychologists propose that all living things possess three basic adaptive functions: to identify, escape, and protect themselves from threats; to obtain, control, and preserve resources required for survival and reproduction; and to regulate affect and motivation

during periods of affiliation and goal satisfaction (Gilbert, 2005b, 2007; Porges, 2007). Moreover, recent neuroscience research suggests that all living things possess specialized emotion regulation systems that promote these adaptive functions. Specifically, research in neuroscience provides evidence for the existence of evolved systems that function to detect and respond to threats (LeDoux, 1998), to search and respond to resources that are fundamental to survival such as food and mates (Depue & Collins, 1999), and to enter states of quiescence and contentment when not under immediate threat or seeking desirable resources (Depue & Morrone-Strupinsky, 2005). These emotion regulation systems impact both our feelings and our social relating behaviours (Gilbert 1989, 2005b, 2007, 2009b). Drawing from the aforementioned evolutionary principles and affective neuroscience research, Gilbert (2005b) proposes a tripartite model of affect regulation that conceptualizes the development of self-criticism and depression. The model assumes three interacting systems that are activated by signals in the environment. These interacting systems comprise the threat protection system, the drive system, and the contentment system (Gilbert, 2009a). According to Gilbert (2005b), self-criticism and depression develop when an individual experiences an imbalance of systems consisting of an over-activated threat protection system and an under-activated contentment system.

Threat protection system. Human beings are born with an evolved threat-protection system (Gilbert, 2009a). Advances in affective neuroscience research have contributed to our increasing understanding of the human threat-protection system (LeDoux, 1998; Panksepp, 1998). The function of the human threat-protection system is to quickly detect threats in our environment via attention biases by giving us spurts of anxiety, anger, or disgust. These feelings spread through our bodies and alert us to get rid of the threat in order to protect ourselves (Gilbert, 2009a). In response to a perceived threat, our sympathetic nervous system activates the

body's defensive modes, including freezing and active fight-or-flight reactions (Marks, 1987; Gilbert, 2001). As the threat-protection system is designed to adhere to the evolved adaptive heuristic of "better safe than sorry" (Gilbert, 1998a), the system is easily conditioned (Rosen & Schulkin, 1998), and underpins many psychopathologies (Gilbert, 2009a).

Drive system. Human beings require emotion and motivational systems that drive them towards essential rewards and resources (Gilbert, 2009a). These rewards and resources include food, sex, alliances, nest sites, and areas of land (Gilbert, 2009a). As such, the purpose of the drive system in humans is to provide us with positive feelings that energize us and lead us to seek out rewards and resources (Gilbert, 2009a). For instance, the drive system provides us with feelings of excitement and pleasure when we achieve rewards or resources such as winning a competition, passing an exam, or forming a relationship with a desired person (Gilbert, 2009a). In other words, the drive system is a "system of desires" that directs us towards significant life goals (Depue & Morrone-Strupinsky, 2005). When this system is activated, it triggers a corresponding feeling in the individual (Gilbert, 2005a). The drive system involves the dopamine neurotransmitter and thus has arousing and activating effects (Panksepp, 1998). In fact, cocaine and amphetamine use likely stimulates the drive system (Gilbert, 2009a).

Interaction between the threat protection and drive systems. The threat protection and drive systems interact in complex ways (Gilbert, 2009a). For instance, human beings tend to avoid negative events that they perceive as threats, which subsequently triggers thoughts of "shoulds," "oughts," and "musts" that are produced by the drive system (Gilbert, 2009a). As another example, some individuals seek power, prestige, material possessions, and accomplishments to soothe themselves and escape painful feelings of rejection, subordination, and inferiority that are triggered by the threat protection system (Gilbert, 2009a). Indeed, status-

seeking, competitiveness, and seeking to avoid rejection are all associated with the drive system (Depue & Morrone-Strupinsky, 2005). Individuals who are depressed experience a dampening of the drive system, which results in a loss of positive emotion and motivation (Gilbert, 2007). As another example, some individuals form the identity-based goal to be "nice and liked" in order to escape rejection and interpersonal conflict (Gilbert, 2009a). However, when this goal is not fulfilled, they may become self-critical (Gilbert, 2009a).

Contentment system. Human beings enter states of contentment when they are not under threat and possess a sufficient amount of necessary resources (Depue & Morrone-Strupinsky, 2005). Similarly to the drive system, the contentment system provides human beings with positive emotions (Gilbert, 2009a). However, the positive emotions of the contentment system differ from those of the drive system—contentment consists of feelings of "peacefulness, well-being, and quiescence" (Gilbert, 2009a). Contentment does not simply consist of a lack of danger or threat or of diminished activity in the threat protection system (Gilbert, 2009a). Rather, it is a standalone system that involves neurohormones such as oxytocin and opiates and is responsive to social signals of care and warmth (Carter, 1998; Depue & Morrone-Strupinsky, 2005; Gilbert & Procter, 2006; Panksepp, 1998; Uväns-Morberg, 1998). Oxytocin is a neurohormone that induces feelings of affiliation, trust, soothing, and calmness within interpersonal relationships (Carter, 1998; Uväns-Morberg, 1998; Depue & Morrone-Strupinsky, 2005; Wang, 2005). Oxytocin also plays a role in social bonding and decreases vulnerability to socially threatening stimuli in fear circuits in the amygdala (Kirsch et al., 2005). Specifically, the contentment system responds to natural stimuli that evoke care and warmth including touching, holding, voice tone, facial expressions, and social support (Uväns-Morberg, 1998; Wang, 2005). Signals of care and warmth that activate the contentment system lower stress and cortisol in the body, while signals

of shame and criticism by others produce a strong cortisol stress response (Dickerson & Kemeny, 2004; Gilbert & Procter, 2006).

The contentment system developed with the evolution of the attachment system and the provision of care for infants (Bell, 2001; Bowlby, 1969; Depue & Morrone-Strupinsky, 2005; Gilbert & Procter, 2006; Mikulincer & Shaver, 2004). Signals of care and warmth from others create feelings of safeness in human beings by activating the contentment system (Gilbert & Procter, 2006). Importantly, the act of receiving care from others stimulates the contentment system, which also soothes overarousal or threat present in the threat protection system of the individual receiving the care (Gilbert, 2009a). Healthy emotional and psychological development hinges on the activation and maturation of the contentment system during the early years of life, a period during which the parent serves as a reassuring and soothing agent to the infant (Gerhardt, 2004). Through experiences of being reassured and soothed by their caregivers, infants develop emotional memories of safeness that allow them to understand and feel safe with their own emotions (Leahy, 2005; Schore, 1994). Emotional memories of safeness, along with their neurophysiological mediators, are accessed by individuals in times of stress to reassure and soothe the individual (Brewin, 2006). Securely attached individuals form internal working models of other people as safe and supportive that provide them with an internal source of self-evaluation and self-soothing (Gilbert & Procter, 2006; Mikulincer & Shaver, 2004, 2005). On the other hand, insecurely attached individuals view others as sources of threat and, as a result, become fixated on social rank and the power of other people to control, hurt, or reject them (Gilbert, 2005a, Irons & Gilbert, 2005; Sloman, Gilbert, & Hasey, 2003).

Social safeness. In order to differentiate between different types of positive affect, Gilbert and colleagues (2008) factor analyzed a list of positive affect adjectives and found three

underlying factors: activated positive affect, relaxed positive affect, and safe/content positive affect. They found that the safe/content positive affect factor had the strongest negative correlations with depression and self-criticism (Gilbert et al., 2008). The researchers labelled this type of positive affect social safeness and proposed that it is a product of the contentment system (Gilbert et al., 2008), an affect system believed to have developed alongside the mammalian attachment system (Gilbert, 2005a). The contentment system produces feelings of social safeness in response to caring behaviours from others (Liotti & Gilbert, 2011). Activation of the contentment system dampens both the threat protection and drive systems (Kelly, Zuroff, Leybman, & Gilbert, 2012). Social safeness should not be misconstrued simply as the absence of negative affect—rather, it is a distinct emotional state characterized by feelings of warmth, connectedness, and contentment that can occur in the absence of threat or danger (Kelly et al., 2012). Social safeness can vary both between and within individuals (Kelly et al., 2012). Although some individuals inherently feel more socially safe than others, the levels of social safeness that individuals experience also depends on the extent to which their social environments are threatening versus comforting (Kelly et al., 2012).

Although received social support predicts social safeness, Kelly and colleagues (2012) found that social safeness is an operationally distinct construct from perceived social support—an individual's confidence that an adequate amount of social support will be available to them when needed—both between- and within- individuals. Importantly, Kelly and colleagues (2012) found that individuals with low mean levels of social safeness have high levels of trait self-criticism. According to Kelly and colleagues (2012), the negative correlation between self-criticism and social safeness is consistent with the fact that self-critical individuals exhibit threat-focused perceptions and behaviours. What is more, Kelly and colleagues (2012) found that low

social safeness uniquely predicts symptoms of depression.

Unbalance between the systems. The threat protection, drive, and contentment systems can become unbalanced (Gilbert, 2009a). According to Gilbert (2005b), depression develops when an individual experiences an imbalance of systems consisting of an over-activated threat protection system and an under-activated contentment system. Individuals with high levels of shame and self-criticism commonly experience heightened sensitivity and overactivity of their threat protection and/or drive systems (Gilbert, 2009a). Low activation of the contentment system, along with experiences of high threat via abuse and neglect, can influence the development of self-criticism and depression (Gilbert & Procter, 2006).

Individuals with unbalanced systems have difficulty feeling content or safe within themselves and in interpersonal relationships (Gilbert, 2009a). This is likely because they cannot adequately access their contentment systems (Gilbert, 2009a). There are many different reasons why certain individuals experience difficulty in accessing their contentment systems (Gilbert, 2009a). For instance, some individuals may have difficulty accessing their contentment systems because they were understimulated during early life (Gilbert, 2009a). According to attachment research, an individual whose parents were more threatening towards them than soothing may experience difficulty feeling soothed (Gilbert, 2009a). As a result, these individuals may develop anxious or avoidant interpersonal attachment styles (Mikulincer & Shaver, 2007).

Individuals who are frequently threatened during their early lives, such as victims of abuse, neglect, and/or unrealistic parental expectations, have an increased risk of developing mental health issues associated with self-criticism (Blatt & Zuroff, 1992; Gilbert et al., 2004; Schore, 1994). Conversely, individuals who receive warmth, love, and care in their early relationships with important others are more likely to be psychologically healthy and possess the

ability to accept and soothe themselves (Cacioppo, Berston, Sheridan, & McClintock, 2000; Schore, 1994). As such, interpersonal theorists propose that self-criticism and self-reassurance are associated to interpersonal scripts (Baldwin, 1992, 1997). In other words, individuals learn to relate to themselves based on how important others have related to them (Baldwin, 1992, 1997). Affect systems develop into self-other schemas based on how they are stimulated or activated during their development (Trevarthen & Aitken, 2001). The contentment systems of children become activated through warm interpersonal interactions with their parents characterized by soothing touch, holding, facial expressions, and tone of voice (Trevarthen & Aitken, 2001). Individuals with well-developed contentment systems have access to tacit memories and procedures stored within this system that help them form positive interpersonal relationships and self-regulate during times of stress (Gilbert, Baldwin, Irons, Baccus, & Palmer, 2006). According to Brewin (1989), the ease and degree by which individuals are able to activate schemas during particular events depend on the schema's accessibility. Indeed, research has shown that the ability of resilient individuals to recover from negative emotions produced by stressful events is associated with their capacity to generate positive emotions (Tugade & Fredrickson, 2004). Children who experience love and care from their parents or caregivers thus develop the ability to self-reassure in times of perceived setbacks or failures (Gilbert et al., 2006). On the other hand, children who are abused, neglected, or shamed frequently have difficulty reassuring themselves for one of two reasons (Gilbert et al., 2006). The first reason is that several brain pathways that are involved in the threat protection system are overstimulated and therefore more easily triggered, leading to intense and enduring negative affect (Perry, Pollard, Blakley, Baker, & Vigilante, 1995). The second reason is that their contentment systems have been understimulated, and as such have restricted interpersonal schemas of self and others as soothing

and reassuring (Gilbert et al., 2006).

Gilbert's social mentality theory. The relationship between self-criticism and depression can be further conceptualized through an understanding of Gilbert's evolutionary model of social mentality theory (Gilbert, 1989, 2000, 2005a, 2005c). Gilbert identifies three important propositions that make up this theory (Gilbert, 1989, 1992). First, human beings have evolved specific abilities that allow us to learn, understand, and carry out social roles with external others, such as attachment, friend-enemy, and dominant-subordinate roles. Second, the different role relationships that humans co-create operate via specialized brain systems (i.e., the threat protection, drive, and contentment systems) that are affected by specific hormones and neurotransmitters (Panksepp, 1998). Thus, human beings co-create role relationships by exchanging signals that activate different brain and physiological systems. For example, signals of care and affection activate oxytocin, whereas signals of aggression activate a cortisol stress response (Carter, 1998; Depue & Morrone-Strupinsky, 2005). Third, the role-forming abilities that evolved for creating social roles with external others can also be engaged during self-evaluations (Gilbert, 2000). In other words, these role-forming abilities provide human beings with the unique capacity to respond to internally generated stimuli as if they were external (Gilbert & Procter, 2006).

Thus, according to Gilbert's social mentality theory, an individual's internal thoughts operate as external stimuli in that they activate different systems in the brain (Gilbert, 2009a). The human brain interprets self-critical thoughts as if they were external social signals coming from threatening interactions with others (Gilbert & Procter, 2006). Thus, self-criticism can be viewed as an internal self-to-self dominant-subordinate response (Gilbert & Procter, 2006). As such, when individuals engage in self-criticism or think of times when they have been criticized

or put down my others, they stimulate their threat protection systems (Gilbert, 2009a). Individuals who constantly self-criticize and activate their threat-protection systems harass themselves into a depressed state (Gilbert, 2009a).

Individuals who experience abuse, neglect, and subordination at the hands of parents and caregivers learn to relate to themselves in controlling and coercive ways, and frequently engage in negative self-talk characterized by inner "hostile voices" (Gilbert & Irons 2005). Due to their negative relationships with dominant and critical caregivers, individuals form controlling and coercive self-to-self relationships characterized by hostile and critical self-talk (Gilbert & Irons, 2005). For instance, children who are verbally abused by their parents and called names such as "stupid" or "bad" are particularly vulnerable to developing excessive self-criticism by internalizing these negative labels (Sachs-Ericsson, Verona, Joiner, & Preacher, 2006). Indeed, research has found that self-criticism fully mediates the relationship between parental verbal abuse and depression (Sachs-Ericsson et al., 2006; Irons, Gilbert, Baldwin, Baccus, & Palmes, 2006).

In other words, self-criticisms are a type of internal self-harassment that can continuously trigger submissive, anxious, and depressive defenses, particularly if an individual cannot defend him or herself against them (Whelton & Greenberg, 2005). When individuals develop an internal self-dialogue that is exceedingly self-critical and evaluative, they tend to perceive themselves as low in social rank in comparison to others (Gilbert, 2010). From a phenomenological perspective, individuals who perceive themselves as subordinate and submissive experience themselves as inferior, incapable, powerless, and as personal failures (Gilbert & Irons, 2005). Indeed, the degree to which individuals experience these internal attacks as powerful and dominating is associated to depression (Gilbert et al., 2001).

Self-Compassion

According to Gilbert (2005a, 2009b), compassion is associated with a desire or willingness to be caring, empathic, and sensitive and tolerant to distress. Receiving compassion from self and/or others helps individuals cope with distress and negative emotions (Cozolino, 2007; Mikulincer & Shaver, 2007). In the last decade, the field of psychology has shown a growing interest in the mental health benefits of self-compassion in alleviating mental disorders such as depression (Gilbert, 2009a; Lockard, Hayes, Neff, & Locke, 2014). Nevertheless, researchers who specialize in the area have varying definitions of self-compassion (Gilbert, 2009a). Taking a social psychology and Buddhist perspective, Neff (2003a, 2003b) defines self-compassion as having three interacting components: self-kindness versus self-judgment, a sense of common humanity versus isolation, and mindfulness versus overidentification with painful and self-critical thoughts and emotions. Self-kindness is defined as the tendency to be caring and understanding with oneself instead of being brutally critical or judgmental (Neff, 2003a, 2003b). In times of suffering, self-kindness offers an individual soothing comfort instead of taking a cold or rude attitude towards oneself (Neff, 2003a, 2003b). Common humanity involves recognizing that all human beings are imperfect, fail, and are prone to making mistakes. Common humanity helps human beings understand that their personal inadequacies and difficulties are shared human experiences and to view their own shortcomings from a broader perspective (Neff, 2003a, 2003b). Last, mindfulness involves being aware of one's present-moment experience in a way that is clear and balanced instead of over-identifying with the negative aspects that are currently occurring in one's life (Neff, 2003a, 2003b). These three components jointly interact to form a self-compassionate state of mind (Neff, 2003a, 2003b).

Research shows that self-compassion is negatively correlated with psychopathology

(Barnard & Curry, 2011). Individuals with high self-criticism have undeveloped abilities to be self-compassionate and to self-soothe (Gilbert & Irons, 2005). A key component of self-compassion is the absence of self-criticism, and self-criticism is a significant predictor of depression (Blatt, 1995). Individuals who are self-compassionate are less likely to think deeply about their negative thoughts and emotions or to suppress them (Neff, Kirkpatrick, & Rude, 2007). Furthermore, self-compassion is directly linked to various psychological strengths including happiness, optimism, wisdom, personal initiative, and emotional intelligence (Heffernan, Griffin, McNulty, & Fitzpatrick, 2010; Hollis-Walker & Colosimo, 2011).

Fear of compassion from others and depression. Fear of compassion is characterized by discomfort or difficulty in accepting care, kindness, and empathy from others in times of difficulty (Gilbert, McEwan, Matos, & Rivis, 2011). There are different reasons why people may fear receiving compassion from others. Some individuals may fear receiving compassion because they are unfamiliar with the experience. They may be afraid that experiencing compassion will restore painful childhood memories of not receiving the compassion that they intensely desired from their caregivers (Gilbert, 2010). Other individuals may view receiving compassion from others as a sign of weakness that will make them more susceptible to experiencing pain (Gilbert & Procter, 2006). Still, others may feel like they do not deserve compassion and fear becoming dependent on emotionally unavailable others (Gilbert & Procter, 2006).

Extant research suggests that the ability to be open and responsive to compassion from others protects individuals against depression. For instance, Hirschfeld and Cross (1983) found that the absence of an intimate and supportive relationship is a precursor to depression. It has been shown that social support plays an important role in the remission of individuals diagnosed with depression (Billings & Moos, 1985). Similarly, people who perceive higher levels of social

support are less likely to experience stress due to depression than others (Wang, Cai, Qian, & Peng, 2014).

Self-criticism and fear of compassion from others. Self-criticism is associated to two key qualities (Gilbert & Procter, 2006). The first quality is the degree of self-directed feelings of hostility, contempt, and loathing that characterize self-criticism (Gilbert, 2000; Whelton & Greenberg, 2005; Zuroff, Santor, & Mongrain, 2005). The second quality is the relative inability of highly self-critical individuals to produce self-directed feelings of warmth, soothing, and reassurance (Gilbert, 2000; Gilbert et al., 2004; Neff, 2003a; Whelton & Greenberg, 2005). For instance, some individuals with high self-criticism report understanding the logic behind CBT and being able to generate alternative thoughts to replace their self-critical beliefs, but not feeling reassured by practicing these skills (Lee, 2005). These individuals have frequently experienced neglectful and/or traumatic childhoods and have rarely felt safe or soothed (Gilbert & Procter, 2006). As such, they are often frightened of experiencing feelings of warmth or reassurance, and cannot access their soothing-affect systems (Gilbert, 2000; Gilbert & Procter, 2006).

It has been shown that self-criticism is positively correlated with fear of compassion from others in both clinical and non-clinical populations (Gilbert et al., 2011). For instance, fear of compassion from others demonstrated a positive correlation with self-criticism in a self-report study of university students (Gilbert et al., 2012). Similarly, in a study by Gilbert, McEwan, Catarino, and Baião (2014), self-critical depressed patients experienced higher levels of fear of compassion from others than other depressed subjects who were not self-critical. Individuals with high levels of self-criticism are focused on maintaining a false appearance of having a positive self-image and hide their weaknesses in order to gain the approval of others (Mongrain & Zuroff, 1995). However, they are also more motivated to achieve personal success than to

nurture their interpersonal relationships, which lowers their opportunities to experience close and intimate relationships with others (Mongrain & Zuroff, 1995). Self-criticism is correlated with a fearful avoidant attachment style, which is characterized by intense fear of rejection and criticism (Zuroff & Fitzpatrick, 1995). For example, in a study examining the interpersonal behaviours of self-critical individuals, highly self-critical participants made fewer requests for social support and showed lower perceptions of support than dependent participants (Mongrain, 1998).

Fear of compassion from others as a moderator of self-criticism and depression. Individuals who are highly self-critical develop this personality vulnerability as a result of experiencing criticism and a lack of affection from important people in their lives (Kopala-Sibley & Zuroff, 2014). These negative experiences likely lead to the development of an over-developed threat system (Kopala-Sibley & Zuroff, 2014). Individuals high in self-criticism therefore persistently activate their over-developed threat system and experience high levels of negative affect, which increases their vulnerability to becoming depressed (Whelton & Greenberg, 2005).

The contentment system triggers positive emotions and is attuned to signals of support and care in relationships with others (Gilbert, 2005a). However, most self-critical individuals fear receiving compassion from others and are therefore not as attuned to feeling socially safe and secure compared to other individuals that are less self-critical (Gilbert, 2005a). Nevertheless, some self-critical individuals are more open to receiving care and support in their relationships with others, which results in the activation of their contentment system and helps to downregulate the threat system (Hermanto et al., 2016). In fact, Hermanto et al. (2016) have recently shown that low fear of compassion from others buffers the depressegenic effect of self-criticism, while high fear of compassion from others strengthens the effect.

Gender and Depression

Prevalence rates of MDD are consistently found to be significantly higher in females than in males (Oquendo et al., 2013; Patten et al., 2006; Piccinelli & Wilkinson, 2000). Compared to men, women are two times more likely to develop MDD in adolescence or post-puberty (Lips, 2010; Seedat et al., 2009). Indeed, studies of depression and gender conducted in Canada, the United States, Sweden, Germany, and New Zealand have consistently shown that women are two to three times more likely to be depressed than men (Culbertson, 1997). This gender difference has been found in developed countries, but appears to be less common in developing countries (Nolen-Hoeksema, 1990).

The increased risk of developing MDD for women is attributable to experiencing more frequent episodes of MDD, as opposed to differences in episode duration, treatment response, or recurrence rates (Eaton et al., 1997; Penninx et al., 2011). No gender differences in MDD have been identified in terms of symptoms, illness course, or functional consequences (American Psychiatric Association, 2013). Women are more likely to attempt suicide, but are less likely than men to complete a suicide (American Psychiatric Association, 2013).

Factors associated with depression in women. It is uncertain whether gender differences in MDD are attributable to social factors, biological factors, or both (Knoll & MacLennan, 2017). For instance, some research suggests that both the quantity and quality of social support have a greater impact on the mental health of women compared to men (Antonucci & Akiyama, 1987), thus increasing the susceptibility of women to experience depression. Still, other research proposes that sex differences in MDD stem from hormonal changes in women that interact with the psychosocial environment (Gordon et al., 2015).

The American Psychological Association's National Task Force on women and depression in the United States found that women who are married and/or have a high number of children are at an increased risk of developing depression (McGrath, Keita, Strickland, & Russo, 1990). Moreover, they reported that poverty is strongly positively associated with depressive symptoms, and thus described poverty as a "pathway to depression" (McGrath et al., 1990). Last, they found that stress from experiencing trauma, such as physical or sexual abuse, is a significant risk factor for depression in women (McGrath et al., 1990).

Other research has found that experiences of acculturation are related to depression (Allen, Denner, Yoshikawa, Seidman & Aber, 1996). Indeed, Allen and colleagues (1996) reported that poor urban Latina girls in early adolescence who spoke less English than Spanish were at an increased risk of developing depression, perhaps due to their diminished ability to seek social support outside of their families. Among this sample, girls who reported more daily stressors were also more likely to experience depressive symptoms (Allen et al., 1996). Poverty, inequality, and discrimination are associated with an increased susceptibility to depression among women by adding sources of stress in their lives as well as inhibiting sources of social support (Belle & Doucet, 2003). Altogether, the risk factors for depression outlined in this section indicate that stress and a lack of social support are significant components in women's probability of experiencing depression (Lips, 2010).

Theories of gender differences in depression. Lips (2010) outlines several theories explaining the gender differences in depression. These theories include the feminine-role hypothesis, the relationship difficulties hypothesis, the stress hypothesis, and the developmental hypothesis (Lips, 2010). According to Lips (2010), each theory may contain some element of the truth, although none of them have been fully supported.

The feminine-role hypothesis posits that traditionally feminine gender roles in certain cultures, including white, middle-class Western cultures, have prompted women to feel and act helpless, increasing their vulnerability to depression (Lips, 2010). In certain cultures, women are socialized to fit the feminine stereotype of being highly emotional, gentle, nurturing, and sensitive. Moreover, they are expected to suppress traits associated with masculinity, such as aggressiveness, anger, competitiveness, competence, ambition, and task orientation (Lips, 2010). The broader social environment also reinforces the feminine stereotype, and women are socialized from childhood toward powerlessness (Lips, 1994). In early childhood, girls learn that the actions of boys are more likely to be acknowledged through reward or punishment compared to their actions, that their competence is more likely to be ignored and treated with ambivalence compared to male competence, and that the work they produce is less likely to be rewarded than similar work produced by males (Lips, 1994). Depression research has shown that individuals who are conditioned to believe that their actions have no consequences develop a sense of learned helplessness that increases one's susceptibility to depression (Lips, 2010).

Gender roles predispose girls and boys to express their feelings of distress differently. Girls are socialized to express their negative emotions through internalizing symptoms associated with withdrawal, depression, anxiety, and somatic complaints, whereas boys learn to express their distress through externalizing symptoms characterized by delinquent and aggressive behaviour (Achenbach, 1966; Hoffman, Powlishta, & White, 2004). Men and women also respond to their feelings of depression differently in accordance with masculine and feminine gender roles: Men tend to engage in distracting activities whereas women are more likely to ruminate on the depression (Nolen-Hoeksema, 1987). According to Nolen-Hoeksema (1987), the ruminative and inactive response style of women amplifies and prolongs their depressive

episodes, whereas distracting oneself might decrease and shorten a depressive episode. In a longitudinal study examining the association between the female gender role and psychological distress, Bromberger and Matthews (1996) found that women who were highly focused on their emotions and who suppressed their anger were more likely to experience depressive symptoms three years later.

The relationship difficulties hypothesis proposes that women are more susceptible than men to relationship difficulties and consequently develop interpersonal styles that render them feeling powerless and particularly vulnerable to depression (Lips, 2010). Although losing an important relationship is a strong predisposing factor to depression for both men and women, some experts argue that relationships are more important to women than to men (Lips, 2010). As such, women are more sensitive than men to problems in relationships. Moreover, women have been socialized to believe that it is their responsibility to maintain their intimate relationships (Lips, 2010). Women have thus learned to engage in stereotypically-feminine behaviours to protect their romantic relationships, and some of these behaviours may increase their vulnerability to depression (Lips, 2010). According to the silencing the self theory (Jack, 1991), women are more vulnerable to depression because they are socialized to censor themselves, sacrifice their own needs, devalue their experience, and suppress their anger to maintain their intimate relationships. Self-silencing has been shown to be associated to depression in women in college students, residents of shelters for battered women, and mothers who used cocaine during pregnancy (Jack & Dill, 1992).

The stress hypothesis theorizes that women are at an increased risk for depression compared to men because they experience more stress (Lips, 2010). Excessive stress, especially uncontrollable stress, is a known precipitating factor to depression for both women and men

(Lips, 2010). However, research shows that women and men may respond differently to the same stressful events (Lips, 2010). Moreover, in most parts of the world, women are more likely than men to have low socioeconomic status and face chronically stressful conditions such as being poor, heading single-parent families, and being victims of domestic violence and sexual discrimination (Lips, 2010). In addition, they are more likely than men to engage in multiple social roles simultaneously, such as being a homemaker and working outside of the home (Lips, 2010). The aforementioned stressful conditions can lead women to experience feelings of helplessness and a sense of lack of control that are associated to depression (Lips, 2010; Roades, 2000). Moreover, there is evidence that individuals living in low-income households are more likely than those living in high-income households to suffer from depression and other debilitating mental health disorders (Roades, 2000).

The developmental hypothesis suggests that feminine qualities interact with environmental challenges faced in adolescence to produce a higher prevalence of depression among women than men (Lips, 2010). After the age of 15, girls are twice as likely to develop depression than boys (Nolen-Hoeksema & Girgus, 1994). Starting in childhood, girls begin to develop feminine qualities that can be risk factors to depression (Nolen-Hoeksema & Girgus, 1994). For instance, girls tend to be ruminative, self-focused, cooperative, and friendship-oriented (Lips, 2010). In addition, girls are typically less aggressive and less competitive than boys (Lips, 2010). These feminine qualities increase the vulnerability of girls to experiences of defeat and distress when faced with challenges of adolescence (Nolen-Hoeksema & Girgus, 1994). Further, female adolescents face more new challenges in adolescence than boys. For instance, they tend to experience more activity restrictions by parents, more peer pressure to limit their activities to ones that fit the feminine norm, and a significant increase in their chances of

being sexually abused and harassed (Nolen-Hoeksema & Girgus, 1994). The gender differences that begin in adolescence exacerbate the depression gender gap seen in adulthood (Lips, 2010). Depression can impair school performance, thus limiting a person's future opportunities (Lips, 2010). Moreover, depression can cause individuals to perceive events and the self more negatively, which can influence a person's decision making about relationships and careers that can affect a person's future into adulthood (Lips, 2010).

Rationale

Depression is a common mental health problem that has serious negative implications for the psychological, physical, and social well-being of affected individuals and their families (Cuijpers, 2015; Lips, 2010; Penninx et al., 2013). The consequences of depression are not limited to affected individuals—consequences have a significant impact on our society, particularly through economic costs (Cuijpers, 2015). Levels of depression are increasing worldwide (Cuijpers, 2015). Indeed, depression is projected to be the largest contributor to disease burden by the year of 2030 (Mathers & Loncar, 2006). For these aforementioned reasons, there is an urgent need to improve the treatment outcomes for depression.

Extant empirical research has demonstrated that self-criticism as a personality trait is a specific vulnerability factor to depression (Blatt et al., 1982; Blatt & Zuroff, 1992; Shahar, 2015; Zuroff, Mongrain, & Santor, 2004) that responds slowly to treatment (Zuroff, Sadikaj, Kelly, & Leybman, 2016). Knowledge of moderating variables that buffer the effects of self-criticism on depression may help clinicians to better treat individuals who experience excessive self-criticism and depression. It is therefore important to study moderating factors to identify variables that may buffer the effects of self-criticism on depression.

Previous research by Hermanto and colleagues (2016) has shown that fear of compassion from others has a moderating effect on the positive association between self-criticism and depression. In addition, the researchers assessed whether gender moderated the positive relationship between self-criticism and depression (Hermanto et al., 2016). Although their results did not reveal a moderating effect of gender, Hermanto and colleagues indicated that only one out of their four samples had enough male participants to test for gender differences. Hence, the present study serves as a replication and extension of Hermanto and colleagues' study with the

goal of recruiting a gender-balanced sample to test for gender differences. In addition, given that social safeness has been found to negatively correlate with self-criticism and to uniquely predict symptoms of depression (Kelly et al., 2012), the present study also assessed the moderating effect of social safeness on the positive association between self-criticism and depression.

The following central research questions guided the present research: (1) How do self-criticism, fear of compassion from others, gender, and social safeness predict depression? (2) Do fear of compassion from others, gender, and social safeness moderate the positive association between self-criticism and depression?

The hypotheses of the current study were as follows: First, it was proposed that self-criticism would predict depression, such that high levels of self-criticism would predict high levels of depressive symptomology. Second, it was proposed that fear of compassion from others would predict depression, such that high levels of fear of compassion from others would predict high levels of depressive symptomology. Third, it was proposed that gender would predict depression, such that females would self-report higher levels of depressive symptomology compared to males. Fourth, it was proposed that social safeness would predict depression, such that higher levels of social safeness would predict lower levels of depression. Fifth, it was proposed that there would be an interaction between self-criticism and fear of compassion from others in predicting depression such that self-criticism and depression would be more strongly associated in individuals with high fear of compassion from others and more weakly associated in those with low fear of compassion from others. Sixth, it was proposed that there would be an interaction between self-criticism and gender in predicting depression such that self-criticism and depression would be more strongly associated in females and more weakly associated in males. Last, it was proposed that there would be an interaction between self-criticism and social

safeness such that self-criticism and depression would be more strongly associated in individuals with low social safeness and more weakly associated in those with high social safeness.

Method

Participants

Participants were students enrolled in an undergraduate program through the Educational Psychology Department at the University of Alberta. The participants were recruited through the Educational Psychology Department participant pool. The final sample consisted of 202 participants between the ages of 18 to 55 years residing in Edmonton, Alberta (73.8% female, M_{age} = 25.14, *SD* = 6.65). The participants were 72.8% White/Caucasian, 14.9% Asian, 2.5% Aboriginal/Métis, 1.5% Black/African-Canadian, 1% Hispanic/Latino, 6.7% other racial groups, and 1% "preferred not to answer." The degree programs of the participants were as follows: 55.5% were in the After Degree Program, 18.3% were in the Four-Year Secondary Program, 15.8% were in the Four-Year Elementary Program, 7.9% were in the Five-Year Combined Degrees Program, 2% were in Open Studies, and .5% were enrolled in university for re-certification.

Procedure

Ethics approval was obtained from the Research Board at the University of Alberta. Interested individuals were directed to a secure website (SurveyMonkey) to complete a web-based questionnaire. Demographic questions including age and gender were also administered in order to characterize the sample. Electronic informed consent was obtained from each participant before they began the study. Eligible participants received one course credit for their participation.

Measures

Participants completed 5 measures to evaluate the following variables: self-criticism, fear of compassion from others, social safeness, and depression.

Self-criticism. Self-criticism was assessed using two measures: (a) the Inadequate Self subscale of the Forms of Self-Criticism/Self-Reassurance Scale (FSCRS; Gilbert et al., 2004) and (b) the Self-Criticism scale of the McGill Version of the Depressive Experiences Questionnaire (McGill DEQ; Santor, Zuroff, & Fielding, 1997a). In their study assessing the moderating effects of fear of compassion from others on the positive association between self-criticism and depression, Hermanto and colleagues (2016) utilized two measures of self-criticism in an effort to improve the robustness of their results. As such, the present research also used two measures of self-criticism for the same purpose.

Forms of Self-Criticism/Attacking & Self-Reassurance Scale (FSCRS; Gilbert et al., 2004). The FSCRS is a 22-item self-report measure that assesses an individual's tendency to be self-critical and/or self-reassuring in the context of perceived setbacks or failures. The FSCRS is rated on a five-point Likert scale ranging from 0 (*not at all like me*) to 4 (*extremely like me*). The scale was developed based on Gilbert's clinical experience working with individuals who experience depression. Gilbert recorded the negative and self-critical thoughts that his clients with depression typically expressed (Gilbert et al., 2004). The original scale consisted of 24 items that assessed how self-critical/self-attacking or how self-supportive/self-reassuring people are when they are faced with difficulties. In the original study, the 24 items were administered to 246 female psychology undergraduate students. A principle-components analysis with direct oblimin rotation produced a three-factor solution with 22 items loading on these factors. The resulting three factors correspond to the measure's three subscales. Items 11 and 12 were excluded during the analyses as they did not correlate with other items. The final scale is composed of two subscales that measure forms of self-criticism (Inadequate Self and Hated Self) and a tendency to be self-reassuring when faced with setbacks or failures (Reassured Self). The

Inadequate Self subscale consists of 9 items (α = .90; e.g., "I think I deserve my self-criticism"). The Hated Self subscale consists of 5 items (α = .86; e.g., "I have become so angry with myself that I want to hurt or injure myself"). Last, the Reassured Self subscale consists of 8 items (α = .86; e.g., "I still like being me"). All three subscales were correlated with depression as measured by the Centre for Epidemiological Studies Depression Scale (CES-D; Radloff, 1977). The full measure demonstrated concurrent validity by correlating with scores from the Levels of Self-Criticism Scale (Thompson & Zuroff, 2004). The two self-criticism subscales relate to psychopathology in distinctive ways, with the Hated Self subscale constituting a more pathological type of self-criticism that is associated with self-harm and borderline personality disorder phenomenology (Gilbert et al., 2010). The Hated Self subscale has also displayed a floor effect in non-clinical populations (Gilbert et al., 2012; Longe et al., 2010). Therefore, only the Inadequate Self subscale was retained for the present study due to its full range of scores and the robust relationship between this type of self-criticism and depression (Gilbert et al., 2012). Cronbach's alpha for the Inadequate Self subscale in the present study was .91.

McGill Version of the Depressive Experiences Questionnaire (McGill DEQ; Santor et al., 1997a). The Depressive Experiences Questionnaire (DEQ; Blatt et al., 1976) is a 66-item measure that assesses dependency and self-criticism, two personality traits that make individuals more vulnerable to experiencing depression (Blatt, 1974; Blatt et al., 1982). Although the original DEQ is extensively used to measure dependency and self-criticism, researchers have expressed concern regarding its psychometric properties, and many revisions of the original 66-item DEQ have been developed (Bagby, Parker, Joffe, & Buis, 1994; Viglione, Lovette, & Gottlieb, 1995; Welkowitz, Lish, & Bond, 1985). The most extensively reported issue regarding the original 66-item DEQ is that it uses factor-derived scale scores (Santor et al., 1997a). As

such, many revisions of the original DEQ have adopted unit-weighted composite scale scores instead (Santor et al., 1997a). However, the unit-weighted revisions of the DEQ have not been able to replicate the degree of between-scale orthogonality obtained between the original Dependency and Self-Criticism scales (Santor et al., 1997a). According to Santor and colleagues (1997a), revisions of the original 66-item DEQ that do not demonstrate between-scale orthogonality are problematic because they are different scales and therefore cannot accurately test the nomological network for which the original DEQ was designed.

As such, Santor and colleagues (1997a) developed the McGill DEQ with the aim of developing unit-weighed measures of dependency and self-criticism that preserve the psychometric properties—especially the between-scale orthogonality—of the original DEQ. The McGill DEQ is a 48-item version of the original 66-item DEQ (Blatt et al., 1976). Santor and colleagues (1997a) constructed the McGill DEQ by selecting 48 items (18 dependency items, 18 self-criticism items, and 12 items that assess both dependency and self-criticism, but in the opposite direction) that showed high correlations with factor scores on dependency and self-criticism and that preserved the between-scale orthogonality of the original sale. Santor and colleagues (1997a) found that the McGill DEQ had increased between-scale orthogonality compared to the original DEQ. The 48 items are rated on a seven-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Items on the scale include “I often find that I don’t live up to my own standards or ideals” and “Without support from others who are close to me, I would be helpless.” Higher scores indicate higher levels of dependence and self-criticism. The psychometric properties of the McGill DEQ were cross-validated in a heterogeneous clinical sample and a nonclinical student sample (Santor et al., 1997a).

The clinical sample was composed of 56 male and 27 female adult outpatients who were either diagnosed with major depression, schizophrenia, or bipolar depression. The internal consistency reliability for the clinical sample was reasonable. Specifically, the reliability coefficients for the males were .64 for the Dependency scale and .69 for the Self-Criticism scale. On the other hand, the reliability coefficients for the females were .69 for the Dependency scale and .71 for the Self-Criticism scale. The student sample consisted of undergraduate students from McGill University. The internal consistency reliability for the student sample was also reasonable. Specifically, the reliability coefficients for the males were .65 for the Dependency scale and .72 for the Self-Criticism scale. On the other hand, the reliability coefficients for the females were .78 for the Dependency scale and .76 for the Self-Criticism scale. Research on the McGill DEQ has consistently demonstrated the presence of three stable factors with high internal consistency and test-retest reliability (Zuroff, Quinlan, & Blatt, 1990). The Self-Criticism scale of the McGill DEQ has highly correlated with the original DEQ Self-Criticism scale in a nonclinical student sample (Santor, Zuroff, Mongrain, & Fielding, 1997b). Evidence exists for the construct validity of the McGill DEQ in both clinical and non-clinical populations (Santor et al., 1997b). Only the Self-Criticism scale was retained for the present study. Cronbach's alpha for the Self-Criticism scale in the present study was .83.

Fears of Compassion Scales (FOCS; Gilbert et al., 2011). The FOCS is a self-report measure composed of three subscales that measure fear of compassion for self (compassion that individuals experience for themselves when they make mistakes or experience difficulty), fear of compassion from others (compassion that individuals receive from others), and fear of compassion for others (compassion that individuals feel towards other people; Gilbert et al., 2011). In order to develop this measure, Gilbert and colleagues (2011) created a series of 20

items for each subscale that were largely based on Gilbert's discussions with patients as well as concepts from the psychotherapy literature (e.g., Arieti & Bemporad, 1980) and the attachment literature (Bowlby, 1969, 1973, 1980). The items were subsequently ranked according to face validity by experts. Gilbert et al. (2011) then selected the items rated as most valid by the experts, removing items judged to have poor face validity or to be difficult to comprehend. The measure consequently consisted of three subscales: Fear of Compassion for Self (17 items), Fear of Compassion from Others (15 items), and Fear of Compassion for Others (13 items).

These items were then administered to students from the Universities of Derby and Nottingham ($N = 222$) and therapists ($N = 59$). The items were subjected to exploratory factor analysis using maximum-likelihood extraction and oblique rotation (Gilbert et al., 2011). The final measure is composed of three subscales. The Fear of Compassion for Self subscale consists of 15 items ($\alpha = .92$ for students and .85 for therapists; e.g., "I worry that if I start to develop compassion for myself I will become dependent on it"). The Fear of Compassion from Others subscale consists of 13 items ($\alpha = .85$ for students and .87 for therapists; e.g., "When people are kind and compassionate towards me I feel anxious or embarrassed"). Last, the Fear of Compassion for Others subscale consists of 10 items ($\alpha = .85$ for students and .78 for therapists; e.g., "I worry that if I am compassionate, vulnerable people can be drawn to me and drain my emotional resources"). Higher scores indicate higher levels of fear of compassion for self, from others, and for others. In the student sample, the FOCS displayed discriminant validity when compared to the positive self-compassion subfactor of the Neff (2003a; 2003b) Self-Compassion Scale (SCS), which measures three positive factors of self-compassion: Self-kindness, Common humanity, and Mindfulness. Specifically, the positive self-compassion subscale of the SCS displayed small negative correlations with the FOCS (Gilbert et al., 2011). The Fear of

Compassion for Self and Fear of Compassion from Others subscales of the FOCS demonstrated concurrent validity with the FSCRS, as Fear of Compassion for Self and Fear of Compassion from Others showed a positive correlation with the subscales which measure self-criticism (Inadequate Self and Hated Self), and a negative correlation with the subscale which measures one's propensity to be self-reassuring in instances of perceived failures (Reassured Self) in both the student and therapist samples (Gilbert et al., 2011).

In the student sample, the FOCS displayed concurrently validity with a measure of attachment, the Adult Attachment Scale (Collins & Read, 1990). Specifically, the three attachment styles measured by the Adult Attachment Scale were associated with Fear of Compassion for Self, Fear of Compassion from Others, and Fear of Compassion for Others (Gilbert et al., 2011). Moreover, within the therapist group, Fear of Compassion for Self and Fear of Compassion from Others were "very highly correlated" with anxious attachment style as measured by the Adult Attachment Scale, demonstrating its concurrent validity. Last, in the student sample, fear of compassion was correlated with depression, anxiety, and stress, as measured by the Depression, Anxiety, and Stress Scale-21 (DASS-21; Antony, Bieling, Cox, Enns, & Swinson, 1998). In the therapist sample, Fear of Compassion for Self was correlated with depression, and Fear of Compassion from Others was correlated with both depression and stress (Gilbert et al., 2011). For the purpose of the present study, only the Fear of Compassion from Others subscale was retained. Cronbach's alpha for the Fear of Compassion from Others subscale in the present study was .91.

Social Safeness and Pleasure Scale (SSPS; Gilbert et al., 2009). Social safeness was measured using the SSPS. The SSPS is an 11-item self-report measure that assesses the degree to which individuals perceive their social world as safe, warm, and soothing (Gilbert et al., 2009).

The items measure feelings of belonging, acceptance, and warmth that individuals experience in social situations (e.g., "I feel a sense of warmth in my relationships with people"). The SSPS is rated on a 5-point Likert scale ranging from 0 (*Almost never*) to 4 (*Almost all the time*). Higher scores indicate higher levels of social safeness. The items were administered to undergraduate psychology students ($N = 202$), and patients diagnosed with bipolar depression ($N = 49$). Data from the student population were subjected to maximum likelihood exploratory factor analysis using promax rotation that produced a one-factor solution. Cronbach's alpha for both the student and patient populations was .91. Evidence exists for the construct and discriminant validity of the SPSS. In Gilbert and colleagues' (2009) study, scores on the SPSS were positively correlated with contentment and joy in both the student and patient samples and were negatively correlated with cyclothymia and dysthymia in the student sample. Last, the scores on the SPSS were negatively correlated with irritability in the student sample. In Kelly and colleagues' (2012) study, social support emerged as operationally distinct from positive affect, negative affect, and perceived social support through both correlations and multilevel modelling. Moreover, low mean social safeness negatively correlated with self-criticism, preoccupied attachment, fearful attachment, depression, avoidant traits, paranoid traits, and borderline traits, and positively correlated to self-esteem and secure attachment. Cronbach's alpha for the SSPS in the present study was .95.

Depression, Anxiety, and Stress Scales-21 (DASS-21; Lovibond &Lovibond, 1995). Depressive symptoms were measured using the DASS-21. The DASS-21 is a short version of the original 42-item DASS (Lovibond & Lovibond, 1995), a self-report measure that is designed to assess symptoms of depression, anxiety, and stress in both clinical and research settings. The DASS-21 consists of three 7-item scales. The depression scale assesses symptoms of dysphoria

(e.g., “I felt that life was meaningless”). The anxiety scale assesses symptoms associated with physiological hyperarousal (e.g., “I experienced breathing difficulty”). The stress scale assesses symptoms related to negative affect (e.g., “I found it hard to wind down”). Participants rate the extent to which they have experienced each item over the past week on a 4-point Likert scale ranging from 0 (*Not at all*) to 3 (*Most of the time*). Higher scores on the DASS-21 indicate more severe symptoms of psychological distress (Lovibond & Lovibond, 1995). The DASS-21 has demonstrated high internal reliability, a sound factor structure, and high convergent validity with other measures of anxiety and depression in a large non-clinical sample (Henry & Crawford, 2005). Moreover, it has demonstrated an excellent factor structure and high internal consistency in a clinical patient group (Antony et al., 1998). Specifically, the DASS-21 reliability coefficients were .94 for the depression scale, .87 for the anxiety scale, and .91 for the stress scale in the clinical sample (Antony et al., 1998). The DASS-21 has demonstrated concurrent validity in a clinical sample as it was shown to correlate with other measures of depression and anxiety (Antony et al., 1998). For the purpose of the present study, only the depression scale was retained. It is important to note that this depression scale is measuring symptoms of depression and in no way is it being used to measure actual clinical depression. Cronbach’s alpha for the depression scale in the present study was .88.

Data Analysis

An a priori statistical power analysis was conducted using the software package G*Power 3.1 (Faul, Erdfelder, Buchner, & Lang, 2009) to determine how many participants would be needed to achieve 80% power for three predictors in a hierarchical multiple regression. A sample size of 77 is sufficient to detect a statistically significant relationship with an effect size of 0.15 and an alpha of .05. Data analysis were conducted using SPSS Statistics 25.

Prior to analysis, all measures were examined for accuracy of data entry, missing values, and the presence of outliers. Missing data ranged from 1.5% for social safeness to 7.9% for self-criticism (DEQ). Listwise deletion was used to handle missing data. The data were visually examined for univariate outliers on the outcome measure (depression) and all continuous predictor measures (self-criticism [IS], self-criticism [DEQ], fear of compassion from others, and social safeness and pleasure) using boxplots and histograms. In addition, all variables were examined for univariate outliers through inspection of standardized scores (*z*-scores). There were no cases with standardized scores (*z*-scores) that exceeded 3.29 standard deviation units from the mean ($p < .001$, two-tailed test; Tabachnik & Fidell, 2013). No extreme univariate outliers were identified. Two cases were identified through Mahalanobis distance as multivariate outliers ($p < .001$). Given the small number of multivariate outliers, these two cases were retained.

Introduction to Analyses

First, all predictor variables were entered at once through direct entry to evaluate the predictive contribution of each predictor variable. In other words, direct entry was used to assess how self-criticism, fear of compassion from others, gender, and social safeness each predict depression. Second, the predictor variables were entered hierarchically to assess whether they each moderate the relationship between self-criticism and depression. That is to say, hierarchical entry was used to assess whether fear of compassion from others, gender, and social safeness each moderate the relationship between self-criticism and depression using interaction terms created between self-criticism and each other predictor variable. A moderator is a third variable that affects the direction and/or strength of the relationship between a dependent and independent variable. Put differently, a moderator is a variable that specifies the conditions under which a specific predictor variable is related to an outcome variable. As such, hierarchical entry was used

to assess whether fear of compassion from others, gender, and social safeness each affect the direction and/or strength between self-criticism (a predictor variable) and depression (the outcome variable).

Results

Descriptive Statistics

Means, standard deviations, Cronbach's alphas, and missing data are reported for all variables in Table 1. Cronbach's alphas for all variables ranged from good to excellent (α = .83 – .95; see George & Mallery, 2003).

To check the assumption of normality, all continuous variables were examined through histograms, normal Q-Q plots, and box plots via SPSS Explore. Visual inspection of histograms, normal Q-Q plots, and box plots showed that participants' scores on both measures of self-criticism (IS and DEQ), fear of compassion from others, and social safeness were approximately normally distributed around their means and the curves were bell-shaped. Scores for the two measures of self-criticism (IS and DEQ), fear of compassion from others, and social safeness were within acceptable ranges for skewness (i.e., from -1 to 1; Hildebrand, 1986) and kurtosis (i.e., from -2 to 2; George & Mallery, 2010; see Table 2). However, depression was positively skewed, which was expected because most participants had relatively low depression scores.

The assumption of the statistical independence of observations was met as all values of the outcome variables were collected from different participants. An examination of correlations showed that the predictor variables were moderately correlated (see Table 3), suggesting no undue multicollinearity between predictor variables. The largest correlation was between the two measures of self-criticism (IS and DEQ), which is to be expected as both measures are evaluating the same construct. Moreover, the collinearity statistics were within acceptable ranges for Tolerance (i.e., values less than 10; Myers, 1990) and the Variance Inflation Factor (i.e., values above 0.2; Menard, 1995). An examination of residual plots, normality plots, and histograms

from the regression analyses showed that the assumptions of normality, linearity, and homoscedasticity were all satisfied.

Direct Entry Regression Analyses

Multiple linear regressions were conducted to test our hypothesis that self-criticism, fear of compassion from others, gender, and social safeness would predict depression. A multiple linear regression was conducted for each measure of self-criticism (IS and DEQ). First, a multiple linear regression was conducted using the "Inadequate Self" variable and the other predictors to explain depression. The regression model explained 44.3% of the variance in depression and that the model was statistically significant, F (4, 180) = 35.82, $p < .001$. While self-criticism (IS) ($b = .239$, $p < .001$) and social safeness ($b = -.119$, $p = .002$) contributed to the model, gender ($b = 1.18$, $p = .053$) and fear of compassion from others ($b = .03$, $p = .411$) did not (see Table 4).

Second, a multiple linear regression was conducted to predict depression based on self-criticism, fear of compassion from others, gender, and social safeness using the "DEQ" variable. The results of the regression indicated that the model explained 41.2% of the variance in depression and that the model was statistically significant, F (4, 184) = 32.19, $p < .001$. While self-criticism (DEQ) ($b = .089$, $p < .001$) and social safeness ($b = -.103$, $p = .014$) contributed to the model, gender ($b = 1.152$, $p = .064$) and fear of compassion from others ($b = .029$, $p = .441$) did not (see Table 4).

Table 1

Means, Standard Deviations, Cronbach's Alpha Levels, and Missing Data for Study Measures

	M	*SD*	α	Missing data (%)
Self-criticism (IS)	16.75	8.19	.91	2.5%
Self-criticism (DEQ)	110.98	20.43	.83	7.9%
Fear of compassion from others	13.37	10.01	.91	3.5%
Social safeness	42.10	9.32	.95	1.5%
Depression	4.32	4.60	.88	2.5%

Table 2

Skewness and Kurtosis Values for Study Measures

	Skewness	*SE*	Kurtosis	*SE*
Self-criticism (IS)	.203	.173	-.671	.345
Self-criticism (DEQ)	.100	.172	-.428	.341
Fear of compassion from others	.574	.174	-.483	.346
Social safeness	-.674	.172	-.008	.343
Depression	1.318	.173	1.017	.345

Table 3

Correlations Between Variables

Variable	1	2	3	4	5
1. Self-criticism (IS)	—	.756**	.593**	-.569**	.617**
2. Self-criticism (DEQ)		—	.683**	-.695**	.609**
3. Fear of compassion from others			—	-.625**	.496**
4. Social safeness				—	-.561**
5. Depression					—

Note. **, $p < 0.01$

Table 4

Results of Multiple Linear Regression of Self-Criticism (IS and DEQ), Fear of Compassion from Others (FCO), Gender (GEN), and Social Safeness (SS) on Depression

Model	**Predictor variables**	**b**	**SE**	**β**	***t***	***p***	R^2
1	(Constant)	3.43	2.40		1.43	.155	.443
	IS	.24	.04	.42	5.79	.001***	
	FCO	.03	.04	.06	.82	.411	
	GEN	1.18	.61	.11	1.95	.053	
	SS	-.12	.04	-.24	-3.09	.002**	
2	(Constant)	-3.13	3.48		-.90	.369	.412
	DEQ	.09	.02	.40	4.60	.001***	
	FCO	.03	.04	.06	.77	.441	
	GEN	1.15	.62	.11	1.87	.064	
	SS	-.10	.04	-.21	-2.49	.014*	

Note. b, unstandardized regression coefficient; SE, standard error; β, standardized regression coefficient; *t*, obtained *t*-value; *p*, probability; R^2, proportion variance explained.
Gender: females coded as 1; males coded as 2.
*, $p < 0.05$; **, $p < 0.01$; ***, $p < 0.001$.

Hierarchical Regression Analyses

Next, a series of hierarchical multiple regression analyses were conducted to test our hypothesis that fear of compassion from others, gender, and social safeness moderate a positive association between self-criticism and depression. For each measure of self-criticism (IS and DEQ), three hierarchical multiple regression analyses were conducted with depression as the dependent variable. Self-criticism (IS or DEQ) was entered in the first block of each regression to control for the impact of self-criticism on depression. One of the predictor variables (i.e. fear of compassion from others, gender, or social safeness) was entered in the second block of each regression. Last, a two-way interaction term between self-criticism and the predictor variable entered in block two was entered in the third block.

Hierarchical regression analyses using the self-criticism (IS) variable. First, a hierarchical regression was conducted with self-criticism (IS) in the first block, fear of compassion from others in the second block, and self-criticism (IS) X fear of compassion from others in the third block all predicting depression. The first block was statistically significant, F (1, 186) = 113.42, $p < .001$, $R^2 = .38$, as was the second block, F (2, 185) = 61.96, $p < .001$, $R^2 = .40$, and the third block, F (3, 184) = 42.29, $p < .001$, $R^2 = .41$. The change from the first block to the second block was statistically significant, ΔF (1, 185) = 6.90, $p = .009$, $\Delta R^2 = .02$. However, the change from the second block to the third block was not statistically significant, ΔF (1, 184) = 2.16, $p = .143$, $\Delta R^2 = .01$. The zero order correlations were comparable in size to the standardized beta coefficients. The results show that self-criticism (IS) and fear of compassion from others each predict depression. However, self-criticism (IS) and fear of compassion from others do not interact to affect the relationship between self-criticism and depression. In other

words, fear of compassion from others did not moderate the positive association between self-criticism and depression.

Next, a hierarchical regression was conducted with self-criticism (IS) in the first block, gender in the second block, and self-criticism (IS) X gender in the third block all predicting depression. The first block was statistically significant, F (1, 189) = 110.55, $p < .001$, $R^2 = .37$, as was the second block, F (2, 188) = 59.72, $p < .001$, $R^2 = .39$, and the third block, F (3, 187) = 39.94, $p < .001$, $R^2 = .39$. The change from the first block to the second block was statistically significant, ΔF (1, 188) = 5.98, $p = .015$, $\Delta R^2 = .02$. The change from the second block to the third block was not statistically significant, ΔF (1, 187) = .63, $p = .429$, $\Delta R^2 = .00$. The zero order correlations were comparable in size to the standardized beta coefficients. The results show that self-criticism (IS) and gender each predict depression. However, self-criticism (IS) and gender do not interact to affect the relationship between self-criticism and depression. In other words, gender did not moderate the positive association between self-criticism and depression.

Last, a hierarchical regression was conducted with self-criticism (IS) in the first block, social safeness in the second block, and self-criticism (IS) X social safeness in the third block all predicting depression. The first block was statistically significant, F (1, 190) = 119.14, $p < .001$, $R^2 = .39$, as was the second block, F (2, 189) = 75.11, $p < .001$, $R^2 = .44$, and the third block, F (3, 188) = 52.02, $p < .001$, $R^2 = .45$. The change from the first block to the second block was statistically significant, ΔF (1, 189) = 19.48, $p < .001$, $\Delta R^2 = .06$. The change from the second block to the third block was marginally not statistically significant, ΔF (1, 188) = 3.70, $p = .056$, $\Delta R^2 = .01$. Statistically significant predictors in the second block ($p < .001$) were self-criticism ($\beta = .447$) and social safeness ($\beta = -.296$). The zero order correlations were comparable in size to the standardized beta coefficients. Thus, the results show that self-criticism (IS) and social

safeness each predict depression. Moreover, self-criticism (IS) and social safeness interact to affect the relationship between self-criticism and depression ($\beta = -.40$, $p < .056$). In other words, social safeness moderated the positive association between self-criticism and depression. Individuals with low social safeness and low self-criticism are likely to experience low levels of depression, whereas those with low social safeness and high self-criticism are more likely to experience high levels of depression. Conversely, individuals with high social safeness and low self-criticism are likely to experience low levels of depression, whereas those with high social safeness and high self-criticism are likely to experience moderate levels of depression (see Figure 1). Results of the hierarchical regression analyses using the self-criticism (IS) variable are summarized in Table 5.

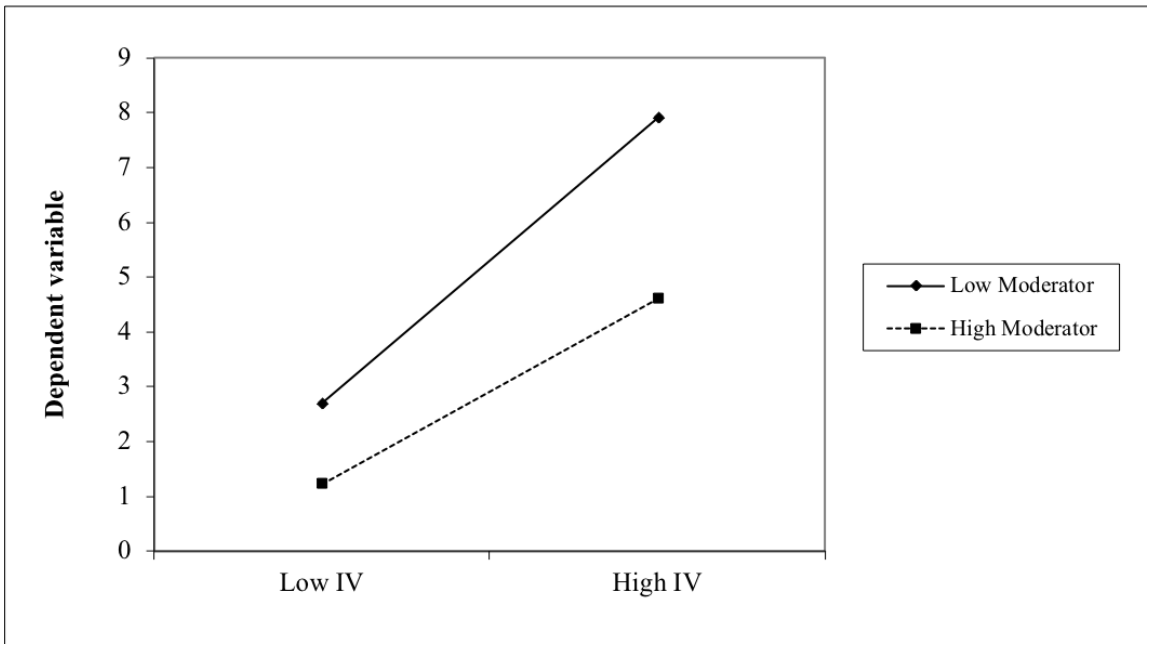

Figure 1. Relationship Between Self-Criticism (Inadequate Self) and Depression with Low and High Social Safeness.

Table 5

Results of Hierarchical Regression of Fear of Compassion from Others (FCO), Gender (GEN), and Social Safeness (SS) on the Relationship between Self-Criticism (IS) and Depression

Regression	**Predictor variables**	**b**	**SE**	**β**	***t***	***p***	**ΔR^2**
1	**Block 1**						
	(Constant)	-1.50	.61		-2.44	.02*	
	IS	.35	.03	.62	10.65	.001***	.38
	Block 2						
	(Constant)	-1.58	.61		-2.62	.01**	
	IS	.29	.04	.50	7.02	.001***	
	FCO	.09	.03	.19	2.63	.01**	.02
	Block 3						
	(Constant)	-.68	.86		-.78	.44	
	IS	.22	.06	.40	3.90	.00***	
	FCO	.00	.07	.01	.04	.97	
	IS X FCO	.01	.00	.27	1.47	.14	.01
2	**Block 1**						
	(Constant)	-1.45	.61		-2.38	.02*	
	IS	.35	.03	.61	10.51	.001***	.02
	Block 2						
	(Constant)	-3.19	.93		-3.42	.001***	
	IS	.34	.03	.60	10.44	.001***	

GEN	1.46	.60	.14	2.45	.02*	.02
Block 3						
(Constant)	-1.95	1.82		-1.07	.29	
IS	.27	.10	.47	2.73	.01**	
GEN	.50	1.35	.05	.37	.71	
IS X GEN	.06	.07	.17	.79	.43	.00
3 **Block 1**						
(Constant)	-1.54	.60		-2.59	.01**	
IS	.35	.03	.62	10.92	.0***	.06
Block 2						
(Constant)	6.26	1.86		3.37	.001***	
IS	.25	.04	.45	6.66	.001***	
SS	-.15	.03	-.30	-4.41	.001***	.06
Block 3						
(Constant)	.89	3.34		.27	.79	
IS	.52	.14	.92	3.62	.00***	
SS	-.03	.07	-.06	-.40	.69	
IS X SS	-.01	.00	-.40	-1.92	.056	.01

Note. b, unstandardized regression coefficient; SE, standard error; β, standardized regression coefficient; *t*, obtained *t*-value; *p*, probability; R^2, proportion variance explained.
Gender: females coded as 1; males coded as 2.
*, $p < 0.05$; **, $p < 0.01$; ***, $p < 0.001$.

Hierarchical regression analyses using the self-criticism (DEQ) variable. First, a hierarchical regression was conducted with self-criticism (DEQ) in the first block, fear of compassion from others in the second block, and self-criticism (DEQ) X fear of compassion from others in the third block all predicting depression. The first block was statistically significant, F (1, 190) = 111.30, $p < .001$, $R^2 = .37$, as was the second block, F (2, 189) = 58.05, $p < .001$, $R^2 = .38$, and the third block, F (3, 188) = 39.49, $p < .001$, $R^2 = .39$. The change from the first block to the second block was not statistically significant, ΔF (1, 189) = 3.39, $p = .067$, $\Delta R^2 = .01$. The change from the second block to the third block was also not statistically significant, ΔF (1, 188) = 1.84, $p = .176$, $\Delta R^2 = .01$. The zero order correlations were comparable in size to the standardized beta coefficients. The results show that self-criticism (DEQ) and fear of compassion from others each predict depression. However, self-criticism (DEQ) and fear of compassion from others do not interact to affect the relationship between self-criticism and depression. In other words, fear of compassion from others did not moderate the positive association between self-criticism and depression.

Next, a hierarchical regression was conducted with self-criticism (DEQ) in the first block, gender in the second block, and self-criticism (DEQ) X gender in the third block all predicting depression. The first block was statistically significant, F (1, 193) = 111.48, $p < .001$, $R^2 = .37$, as was the second block, F (2, 192) = 59.08, $p < .001$, $R^2 = .38$, and the third block, F (3, 191) = 39.48, $p < .001$, $R^2 = .38$. The change from the first block to the second block was statistically significant, ΔF (1, 192) = 4.60, $p = .033$, $\Delta R^2 = .02$. The change from the second block to the third block was not statistically significant, ΔF (1, 191) = .56, $p = .455$, $\Delta R^2 = .00$. The zero order correlations were comparable in size to the standardized beta coefficients. The results show that self-criticism (DEQ) and gender each predict depression. However, self-criticism (DEQ) and

gender do not interact to affect the relationship between self-criticism and depression. In other words, gender did not moderate the positive association between self-criticism and depression.

Last, a hierarchical regression was conducted with self-criticism (DEQ) in the first block, social safeness in the second block, and self-criticism (DEQ) X social safeness in the third block all predicting depression. The first block was statistically significant, F (1, 194) = 114.76, $p <$ .001, $R^2 = .37$, as was the second block, F (2, 193) = 66.56, $p < .001$, $R^2 = .41$, and the third block, F (3, 192) = 47.91, $p < .001$, $R^2 = .43$. The change from the first block to the second block was statistically significant, ΔF (1, 193) = 11.92, $p = .001$, $\Delta R^2 = .04$. The change from the second block to the third block was also statistically significant, ΔF (1, 192) = 6.68, $p = .01$, $\Delta R^2 = .02$. The zero order correlations were comparable in size to the standardized beta coefficients. Thus, the results show that self-criticism (DEQ) and social safeness each predict depression. Moreover, self-criticism (DEQ) and social safeness interact to affect the relationship between self-criticism and depression. In other words, social safeness moderated the positive association between self-criticism and depression. Individuals with low social safeness and low self-criticism are likely to experience low levels of depression, whereas those with low social safeness and high self-criticism are more likely to experience high levels of depression. Conversely, individuals with high social safeness and low self-criticism are likely to experience low levels of depression, whereas those with high social safeness and high self-criticism are likely to experience moderate levels of depression (see Figure 2). Results of the hierarchical regression analyses using the self-criticism (DEQ) variable are summarized in Table 6.

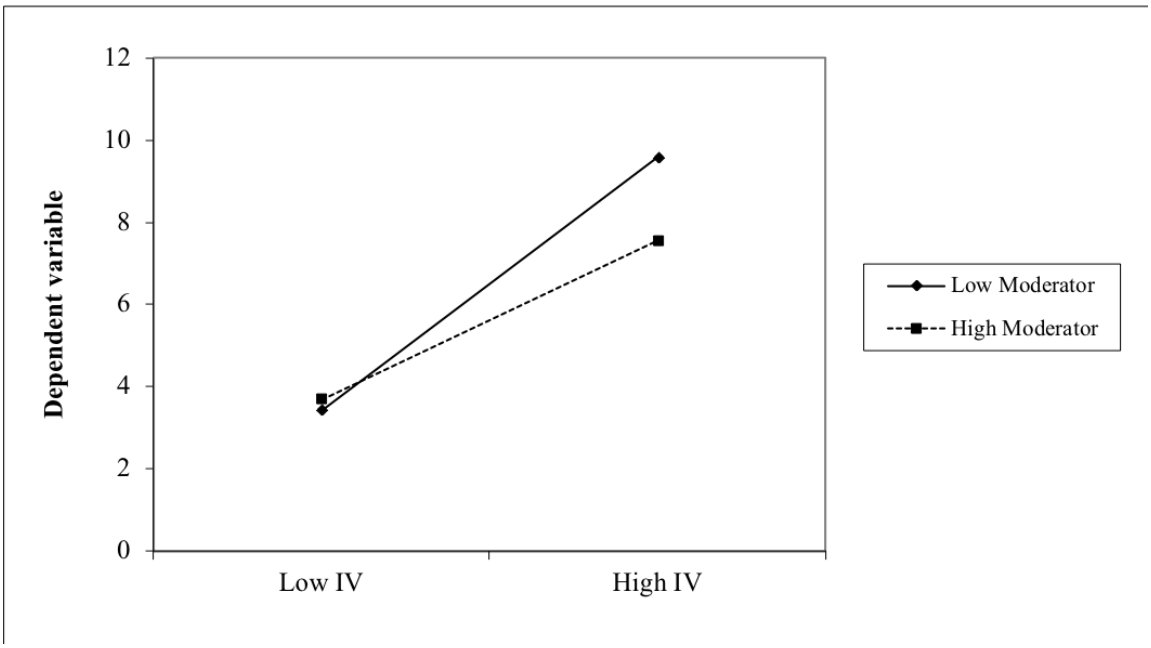

Figure 2. Relationship Between Self-Criticism (DEQ) and Depression with Low and High Social Safeness.

Table 6

Results of Hierarchical Regression of Fear of Compassion from Others (FCO), Gender (GEN), and Social Safeness (SS) on the Relationship between Self-Criticism (DEQ) and Depression

Regression	**Predictor variables**	**b**	**SE**	**β**	***t***	***p***	**ΔR^2**
1	**Block 1**						
	(Constant)	-10.77	1.46		-7.39	.001***	
	DEQ	.14	.01	.61	10.55	.001***	.37
	Block 2						
	(Constant)	-9.17	1.69		-5.43	.001***	
	DEQ	.11	.02	.51	6.41	.001***	
	FCO	.07	.04	.15	1.84	.07	.01
	Block 3						
	(Constant)	-6.97	2.34		-2.98	.003**	
	DEQ	.09	.02	.42	4.00	.001***	
	FCO	-.15	.16	-.32	-.91	.37	
	DEQ X FCO	.00	.00	.54	1.36	.18	.01
2	**Block 1**						
	(Constant)	-10.68	1.44		-7.42	.001***	
	DEQ	.14	.01	.61	10.56	.001***	.37
	Block 2						

(Constant)	-11.96	1.55		-7.73	.001***	
DEQ	.13	.01	.59	10.36	.001***	
GEN	1.28	.60	.12	2.14	.03*	.02
Block 3						
(Constant)	-8.91	4.36		-2.04	.04*	
DEQ	.00	.04	.47	2.73	.01**	
GEN	-1.11	3.25	-.11	-.34	.73	
DEQ X GEN	.02	.03	.27	.75	.46	.00
3 **Block 1**						
(Constant)	-10.74	1.43		-7.53	.001***	
DEQ	.14	.01	.61	10.71	.001***	.37
Block 2						
(Constant)	-.69	3.23		-.21	.83	
DEQ	.09	.02	.43	5.53	.001***	
SS	-.13	.04	-.27	-3.45	.001***	.04
Block 3						
(Constant)	-19.43	7.92		-2.45	.02*	
DEQ	.25	.06	1.12	4.02	.001***	
SS	.29	.17	.58	1.73	.09	
DEQ X SS	-.00	.00	-.63	-2.59	.01**	.02

Note. b, unstandardized regression coefficient; SE, standard error; β, standardized regression coefficient; *t*, obtained *t*-value; *p*, probability; R^2, proportion variance explained.
Gender: females coded as 1; males coded as 2.
*, $p < 0.05$; **, $p < 0.01$; ***, $p < 0.001$.

Discussion

The current study investigated the moderating effects of fear of compassion from others, gender, and social safeness on the positive association between self-criticism and depression among a sample of undergraduate students. First, it was hypothesized that self-criticism, fear of compassion from others, gender, and social safeness would each predict depression. Second, it was hypothesized that fear of compassion from others, gender, and social safeness would each moderate the positive association between self-criticism and depression. The current section interprets the results of the study in relation to the existing literature. Implications for the field of psychology and counselling, limitations, and future directions will be discussed.

Interpretation of Results

Self-criticism and depression. Results confirmed the first hypothesis, as self-criticism was found to predict depression among the undergraduate student sample. The IS variable and the DEQ variable, the two measures of self-criticism used in the current study, were each statistically significant predictors of depression. These results are consistent with previous literature that shows that self-criticism is a vulnerability factor to depression (Zuroff et al., 2016) in both clinical and non-clinical populations (Blatt et al., 1982; Blatt & Zuroff, 1992; Shahar, 2015; Zuroff et al., 2004). Indeed, research shows that it is the incapacity to defend oneself against one's own self-critical thoughts that causes depression (Greenberg et al., 1990; Whelton & Greenberg, 2005). These findings (including the current study) are consistent with Blatt's theoretical understanding of the introjective dimension of depression (1974).

Fear of compassion from others and depression. Results confirmed the second hypothesis, as fear of compassion from others was found to predict depression. This finding supports extant research that demonstrates that an individual's capability to receive compassion

from others protects them against depression. For instance, research shows that individuals who perceive receiving higher levels of social support are less likely to experience depression (Wang et al., 2014), and that social support plays an important role in remission from depression (Billings & Moos, 1985). Last, Hirschfeld and Cross (1983) found that the lack of an intimate, supportive relationship is a precursor to the development of depression.

Gender and depression. Results did not confirm the third hypothesis, as males self-reported higher levels of depressive symptomology compared to females. This result is not consistent with prevalence rates of MDD that are consistently higher in females than males, although it is important to highlight that the depression scale used in this study, the DASS-21, measured symptoms of depression and in no way assessed for clinical depression (Lovibond & Lovibond, 1995; Oquendo et al., 2013; Patten et al., 2006; Piccinelli & Wilkinson, 2000). Indeed, most of the participants in this study had relatively low depression scores on the DASS-21 (Lovibond & Lovibond, 1995). Still, the finding that males reported higher levels of depressive symptomology compared to females is a surprising and puzzling finding. It is important to note that the sample was composed of 73.8% females. Moreover, the small group of males in the sample were all students pursuing undergraduate degrees in education, a largely female dominated occupation. A possible explanation for this surprising finding is that the males who chose to participate in this study represent a subgroup of the male population that is more likely to self-report symptoms of depressions. Thus, it is possible that some males who pursue education degrees are more likely to self-report experiencing symptoms of depression compared to other males. On the other hand, males who pursue education degrees may represent a subgroup of the male population that is more likely to experience symptoms of depression compared to other males, perhaps due to the psychological tension and conflict that they

experience in trying to reconcile the perception of their occupation as feminine with widespread societal discourses about the nature of masculinity (Simpson, 2004).

Social safeness and depression. Results confirmed the fourth hypothesis, such that higher levels of social safeness were found to predict lower levels of depression. This result is consistent with previous research that has demonstrated that social safeness, a type of positive affect that is believed to be an output from the contentment system (Gilbert et al., 2008), dampens both the threat protection and drive systems (Kelly et al., 2012) and is strongly negatively correlated with both depression and self-criticism (Gilbert et al., 2008; Kelly et al., 2012).

Self-criticism, fear of compassion from others, and depression. The results of this study did not support the fifth hypothesis that there would be an interaction between self-criticism and fear of compassion from others in predicting depression. In other words, fear of compassion from others did not moderate the positive association between self-criticism (IS and DEQ) and depression in this study. This result is surprising given that extant research has demonstrated that the ability to receive support and compassion from others protects individuals against depression (Billings & Moos, 1985; Hirschfeld & Cross, 1983; Wang et al., 2014), and that most self-critical individuals fear receiving compassion from others (Gilbert, 2005a) because it may trigger painful childhood memories of not receiving the compassion that they longed for from their caregivers (Gilbert, 2010). Indeed, Hermanto and colleagues (2016) recently found that fear of compassion from others buffered the depressogenic effects of self-criticism (2016). Nevertheless, this result may be explained by the fact that some individuals with high levels of self-criticism are more open to receiving care and support in their relationships with others

(Hermanto et al., 2016). Indeed, Hermanto and colleagues (2016) have proposed that there may be a subgroup of self-critical individuals who are able to receive compassion from others.

Other researchers such as Thompson and Zuroff (2004) have discriminated between two different types of self-criticism, namely comparative self-criticism and internalized self-criticism. Comparative self-criticism consists of a negative view of the self in comparison to others who are perceived as superior, hostile, and critical. Importantly, individuals with comparative self-criticism view others as untrustworthy, fear being exposed to others, and thus feel as though they need to protect themselves from exposure to others. Moreover, comparative self-criticism has shown a negative correlation with secure attachment and a positive correlation with fearful-avoidant attachment. On the other hand, internalized self-criticism is characterized as a negative view of the self that stems from persistent failure to live up to one's own very high personal standards and expectations. Internalized self-criticism is not associated with insecure attachment, and psychological distress is more strongly associated with comparative self-criticism than internalized self-criticism. As such, internalized self-criticism may be less maladaptive than comparative self-criticism (Hermanto et al., 2016). As previously mentioned, fear of compassion from others is highly correlated with anxious attachment (Gilbert et al., 2011). In fact, some individuals fear receiving compassion from others because they are frightened that it will bring back painful childhood memories of not receiving the care, support, and compassion from caregivers that they deeply longed for (Gilbert, 2010). Thus, it is possible that the undergraduate students in the sample recruited for the current study experienced a type of self-criticism that is more consistent with Thompson and Zuroff's (2004) internalized self-criticism as opposed to comparative self-criticism. As such, the participants in the present study

may not have experienced high enough levels of fear of compassion from others for it to moderate the positive association between self-criticism (IS and DEQ) and depression.

Self-criticism, gender, and depression. The results of this study did not support the sixth hypothesis that there would be an interaction between self-criticism and gender in predicting depression. In other words, gender did not moderate the positive association between self-criticism (IS and DEQ) and depression in the present study. It was hypothesized that self-criticism and depression would be more strongly associated in females and more weakly associated in males.

This was hypothesized based on literature examining the gender differences in depression that states that women are twice as likely to develop depression because of their tendency to ruminate (Nolen-Hoeksema, 1987) and co-ruminate with others (Rose, 2002). Ruminating about one's depression activates a storehouse of negative memories of past failures (Bower, 1981; Teasdale, 1983, 1985), which most likely exacerbates feelings of self-criticism. As such, it follows that self-criticism and depression should be more strongly associated in females and more weakly associated in males. It is possible that the present study's sample did not have an adequate number of men to allow gender to emerge as a moderating variable between self-criticism and depression. On the other hand, the finding that gender did not moderate the positive association between self-criticism (IS and DEQ) and depression could be explained by the fact that men and women are often found to be as likely to experience self-criticism (Blatt, 2004; Leadbeater, Blatt, & Quinlan, 1995).

Self-criticism, social safeness, and depression. The results of this study did support the sixth hypothesis that there would be an interaction between self-criticism and social safeness in predicting depression. In other words, social safeness did moderate the positive association

between self-criticism (IS and DEQ) and depression in this study. This result is not surprising given that social safeness has been found to strongly negatively correlate with self-criticism (Gilbert et al., 2008; Kelly et al., 2012), and to uniquely predict symptoms of depression (Kelly et al., 2012).

This result is also consistent with Gilbert's (2005b) model of self-criticism which states that individuals with over-activated threat protection systems and under-activated contentment systems are more likely to develop self-criticism and depression. Individuals with high levels of self-criticism commonly develop overactive threat protection systems due to having experienced frequent threat, abuse, and neglect (Gilbert, 2009a). Due to growing up in threatening environments, self-critical individuals also frequently develop underactive contentment systems (Gilbert, 2009a). Low activation of the contentment system, along with experiences of high threat via abuse and neglect, can lead to the development of self-criticism and depression (Gilbert & Procter, 2006). However, activation of the contentment system dampens the threat protection system (Kelly et al., 2012). As such, it follows that individuals with active contentment systems who experience feelings social safeness are less likely to experience depression. This result also supports the buffering hypothesis, which states that social support is a protective factor for depression (Cohen & Wills, 1985; Knoll & MacLennan, 2017). In fact, Kelly and colleagues (2012) found that received social support predicts social safeness. Thus, self-critical individuals who cultivate feelings of social safeness, either through the caring behaviours of others or through fostering self-compassion, are less likely to develop depression.

Implications for the Field of Psychology

The findings of this study have some important implications for the field of psychology. Specifically, the present study provides support for interventions that target social safeness for

the treatment of self-critical depression. Given that feelings of social safeness are produced in response to the caring and comforting behaviours of others (Kelly et al., 2012; Liotti & Gilbert, 2011), mental health professionals should aim to educate parents, caregivers, and teachers about the mental health benefits of providing children with warm, caring, and supportive environments that promote feelings of social safeness (Southwick & Charney, 2012).

Research shows that prevention strategies could help reduce the disease burden of MDD (Otte et al., 2016). Indeed, a meta-analysis examining the effects of preventative psychological interventions for depression found that prevention groups reduced MDD incidence by 21% (Zoonen et al., 2014). Mental health professionals should aim to develop and implement depression prevention programs that seek to foster feelings of social safeness in children. Given that social support predicts feelings social safeness (Kelly et al., 2012), schools should implement social-emotional training programs that teach children social competence skills required to establish and sustain social support networks (Southwick & Charney, 2012).

From a biopsychosocial perspective, preventative interventions that help caregivers create comforting and soothing relationships with their children will increase the protective resources for the next generation, which may help to prevent the intergenerational transmission of self-critical depression (Larkin, Felitti, & Anda, 2014). Although there is general consensus surrounding the importance of parent-child relationships on the psychological well-being of children, many parents are not adequately prepared for parenthood (Sanders, Markie-Dadds, & Turner, 2003). Parenting programs may help to address this deficiency (Bunting, 2004). Indeed, positive significant changes associated with parenting groups include decreases in parental abuse, parental criticism, and maternal isolation, as well as increases in the maternal support network (Bunting, 2004). For these aforementioned reasons, the present study provides support

for parenting programs that teach caregivers effective skills in fostering healthy bonds with their children, thus stimulating feelings of social safeness.

Interventions aimed at increasing caregiving skills in building warm, caring relationships with children need to be widely accessible in the community. The media provides a relatively inexpensive platform to share effective educational strategies to increase caregiving skills and social support for families (Bensley et al., 2004; Foster, Prinz, Sanders, & Shapiro, 2008; Sanders, Cann, & Markie-Dadds, 2003a, 2003b). The mental health community needs to work in collaboration with other professionals to normalize and destigmatize caregiving programs (Sanders et al., 2003b). Media interventions portraying evidence-based caregiving programs may help to normalize the process of participating in parenting education by decreasing parents' sense of social isolation, increasing social and emotional support from others in the community, and openly validating the difficulty of parenting (Sanders et al., 2003a, 2003b).

Implications for Counselling

The findings of this study have some important implications for the counselling profession. Self-criticism as a personality vulnerability factor to depression responds slowly to treatment (Zuroff et al., 2016). As such, clinicians may experience difficulty treating self-critical depression. Nevertheless, social safeness was found to buffer the effects of self-criticism on depression in the present study. Hence, the findings of this study provide support for counselling interventions that aim to increase feelings of social safeness in individuals who experience self-critical depression.

Clients with excessive self-criticism who enter counselling for depression may have experienced abuse and threats during their childhoods (Blatt & Zuroff, 1992; Gilbert et al., 2004; Schore, 1994), and have thus learned to relate to themselves in controlling and coercive ways

(Gilbert & Irons, 2005). In order to promote feelings of social safeness within these clients, clinicians should place a particular emphasis on forming a safe, warm, and soothing therapeutic relationship in therapy (Kelly et al., 2012). As such, it is recommended that clinicians treating clients with self-critical depression take special care to embody the core conditions of therapeutic change identified by Rogers (1957): genuineness, unconditional positive regard, and empathy. Clinicians who effectively embody and communicate these core conditions in therapy will create a safe, warm, and soothing therapeutic relationship with their clients that is conducive to the development of feelings of social safeness. As clients internalize these core conditions, they will gradually replace their feelings of excessive self-criticism (Greenberg et al., 1991).

Individuals who receive high levels of social support experience higher levels of social safeness compared to those who receive lower levels of social support (Kelly et al., 2012). Moreover, the amount of social support that an individual receives both in general and on a daily basis uniquely predicts the levels of social safeness that they experience, regardless of their perceptions of available social support (Kelly et el., 2012). For these aforementioned reasons, it is recommended that clinicians treating individuals with self-critical depression provide their clients with psychoeducation regarding the importance of regularly engaging in positive social interactions. In addition, clinicians should provide their clients with strategies to help them seek out and engage in supportive social interactions on a regular basis (Kelly et al., 2012). For instance, clinicians could help their clients strengthen their existing support networks consisting of close family and friends, or encourage them to identify and participate in various appropriate support groups.

Last, it is highly recommended that clinicians treating clients with self-critical depression incorporate compassion-focused interventions in therapy in order to stimulate feelings of social

safeness within their clients. Research has proven that highly self-critical individuals can develop self-compassion through compassionate mind training (CMT; Gilbert & Procter, 2006). CMT teaches clients to direct the compassion that they cultivate inwards to regulate their own feelings of distress (Kelly et al., 2012). Through developing self-compassion, clients activate their own contentment systems by creating their own feelings of inner warmth, thus stimulating feelings of social safeness (Kelly et al., 2012). Indeed, research has shown that CMT can help clients feel socially safer and thus expand their social support networks (Mayhew & Gilbert, 2008).

Limitations and Future Directions

The present study has some limitations. First, our sample was not gender balanced. While every effort was taken to recruit enough male participants to test for gender differences, the final sample consisted primarily of females. University participant pools are often overrepresented by females, likely due to the fact that the majority of university students in Canada are female (Sharpe & Poets, 2017). Future studies should aim to recruit a gender-balanced sample to test for gender differences. Second, as our sample was composed solely of undergraduate university students, the findings cannot be generalized to the general population. Future investigations should aim to replicate our results in other populations, including clinical samples. Third, the data were obtained through self-report questionnaires. Self-report methods may affect the validity of the research results through inaccurate self-reporting caused by recall bias, social desirability bias, or poor recollection. Future studies should seek to replicate these results using alternative measurement tools, such as projective tests, interviews, and direct observation.

Conclusion

The present study assessed moderating variables that may buffer the effects of self-criticism on depression. Regression analyses were used to test hypotheses predicting that fear of compassion from others, gender, and social safeness would moderate the positive relationship between self-criticism and depression. The results showed that social safeness moderated the positive association between self-criticism and depression. As such, the findings of this study provide support for the implementation of interventions that increase feelings of social safeness for the treatment of self-critical depression.

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Appendix A

Information and Consent Form

Study Title: Moderating Variables in the Relationship Between Self-Criticism and Depression

Principal Researcher:
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Supervising Researcher:
Dr. William Whelton, Ph.D.
Associate Professor
University of Alberta
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You are invited to participate in a web-based online survey examining the relationship between self-criticism and depression and possible risk factors for depression. It should take approximately 40-60 minutes to complete.

PARTICIPATION
Your participation in this survey is entirely voluntary. You may refuse to take part in this study at any time before submitting your survey responses by simply exiting the survey. You are not required to answer any questions that make you feel uncomfortable. If you do not wish to participate in the proposed study, you may take another study through the Educational Psychology participant pool or complete an alternative assignment in order to receive your course credit.

There is a possibility that some partial data may be used for data analysis. If you wish to withdraw your responses from the study, please contact the principle researcher, Gabrielle Desgagne, via email at desgagn@ualberta.ca. Please note that you must withdraw your responses no later than a week after taking the survey. Participants will receive course credit if they have completed at least 50% of the items on the survey.

BENEFITS
There is a potential personal benefit of doing this research which is the possibility of increased self-awareness. There is also a possibility that you will not receive any personal benefit by participating in this study. Your responses may help us learn more about the relationship between self-criticism and depression and ways in which to better treat individuals who experience excessive self-criticism and depression.

RISKS
There are no known or anticipated risks or discomforts associated with participating in this research. Any increased emotionality that you experience should be no greater than what you experience on a day-to-day basis. However, if filling out the survey causes you to experience any uncomfortable thoughts or emotions, you are encouraged to contact psychological support services available on campus for support (Counselling & Clinical Services at 780-492-5205 or Clinical Services at the Faculty of Education at 780-492-3746).

CONFIDENTIALITY
Your survey answers will be private and confidential. Please note that we are collecting participants' names and student ID numbers solely for the purpose of ensuring that students who complete the study receive course credit. As soon as participants have received their course credit, we will delete this information from the survey responses and proceed with participant codes. The only people that will have access to the data that you submit are Gabrielle Desgagne and William Whelton. In addition, all electronic data will be encrypted. Electronic data will be stored in a password protected file on the principle researcher's computer. You should know that while we will keep the information you give us confidential—in the United States under US privacy laws, the government has the right to access all information held in electronic databases. As per university policy, the data will be kept for 5 years following completion of the study. After 5 years, all electronic data will be deleted and destroyed.

CONTACT
If you have questions at any time about the study, you may contact the principle researcher, Gabrielle Desgagne, via email at desgagn@ualberta.ca. Please note that this study is being conducted to support the principle researcher's master's degree. If you wish to obtain a summary of the research results, please email your request to the principle researcher.

The plan for this study has been reviewed for its adherence to ethical guidelines by a Research Ethics Board at the University of Alberta. For questions regarding participant rights and ethical conduct of research, contact the Research Ethics Office at (780) 492-2615.

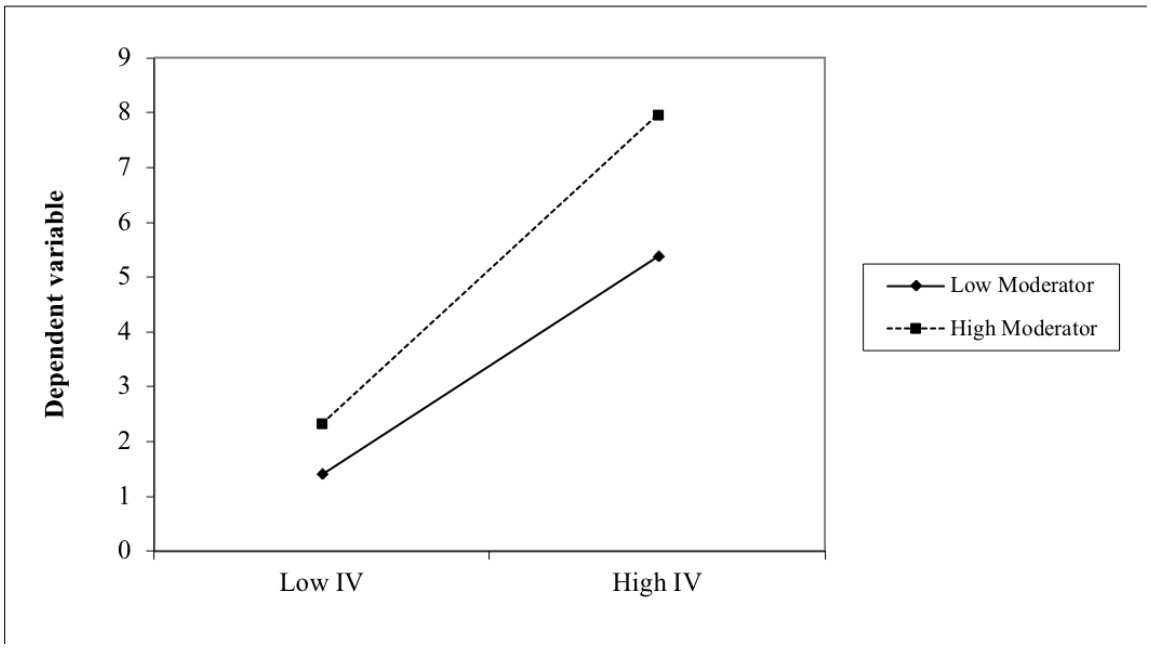
ELECTRONIC CONSENT: Please select your choice below. You may print a copy of this consent form for your records. Clicking on the "Agree" button indicates that:

- You have read the above information
- You voluntarily agree to participate
- You are 18 years of age or older
- You identify as female or male

☐ Agree
☐ Disagree

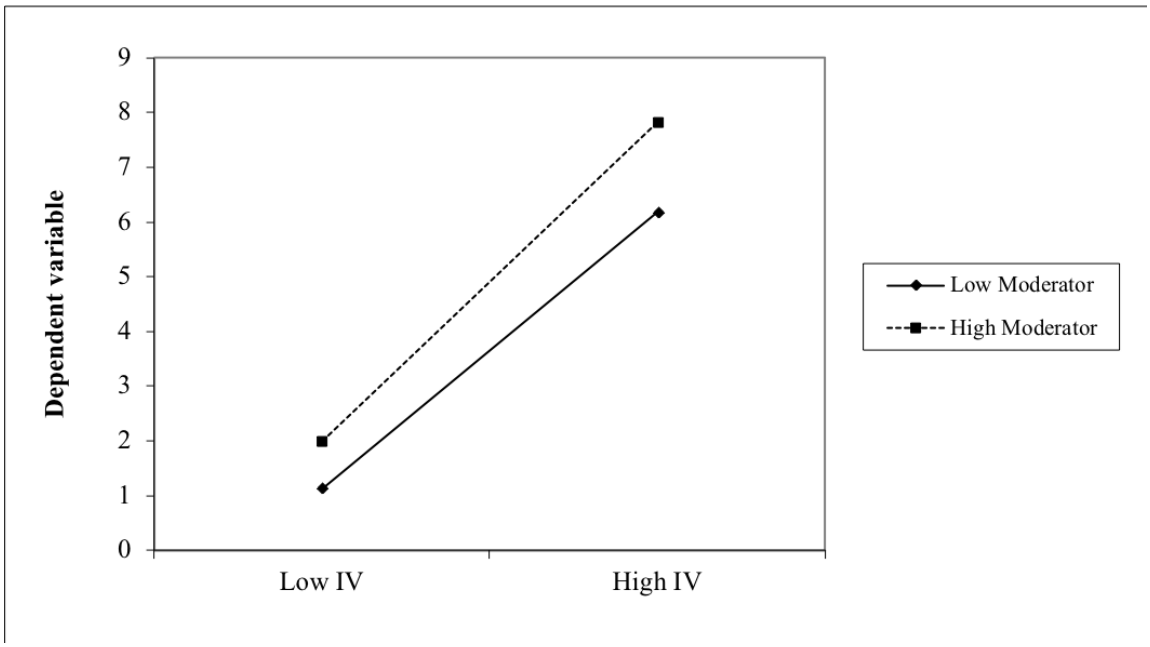
Appendix B

Relationship Between Self-Criticism (Inadequate Self) and Depression with Low and High Fear of Compassion from Others



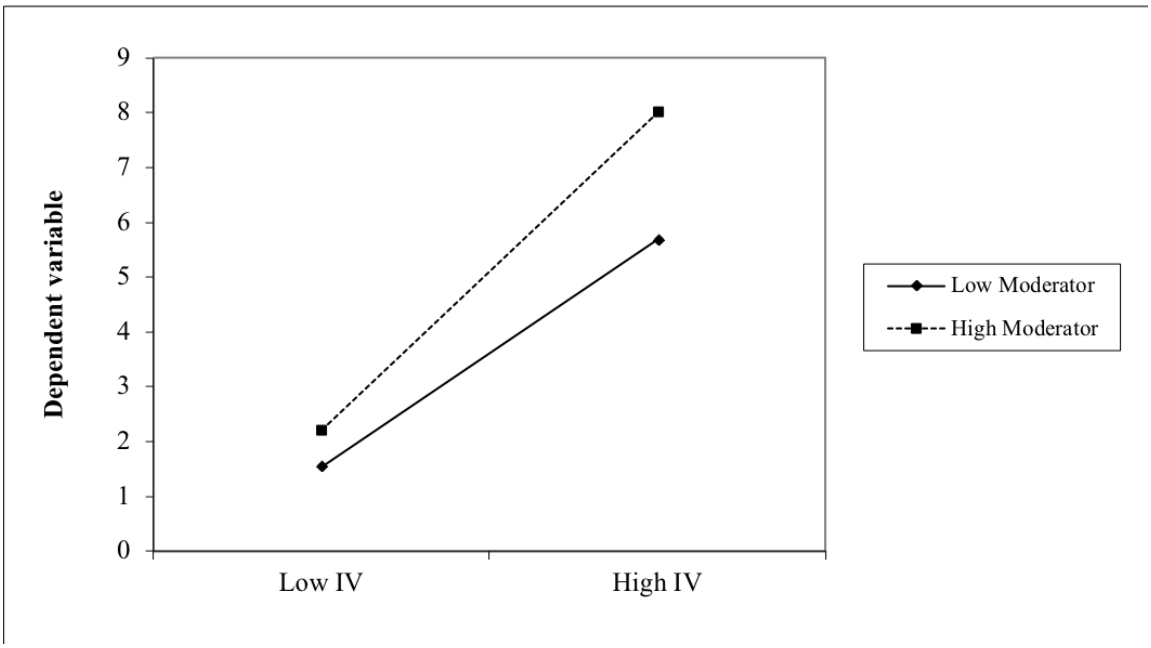
Appendix C

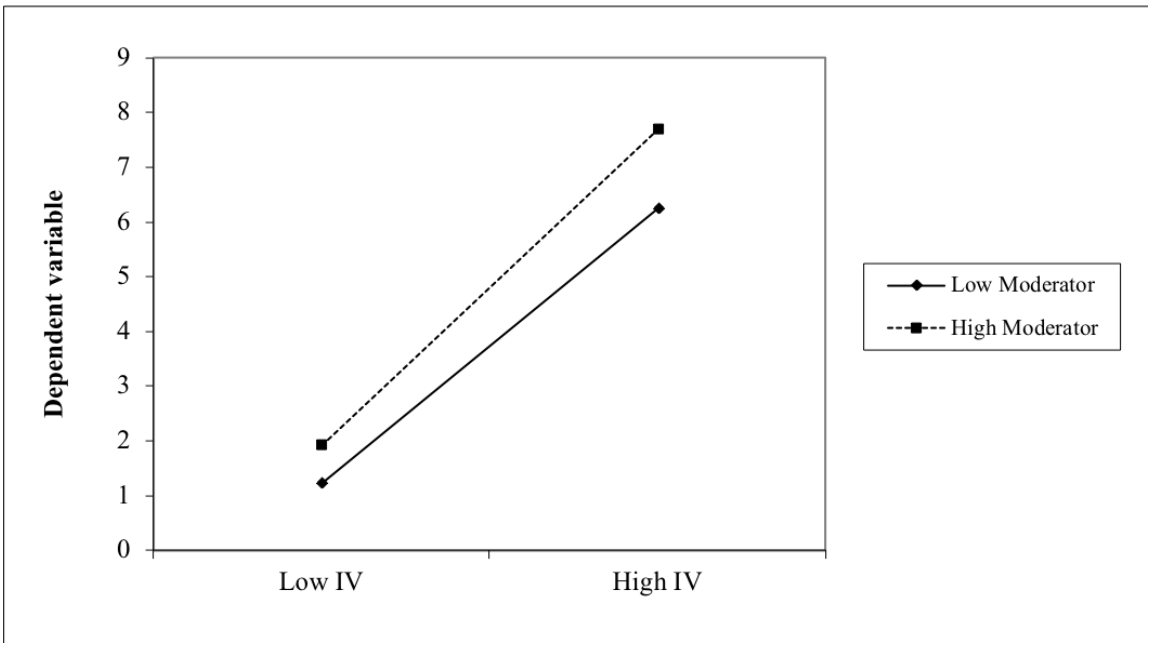
Relationship Between Self-Criticism (Inadequate Self) and Depression with Gender



Appendix D

Relationship Between Self-Criticism (DEQ) and Depression with Low and High Fear of Compassion from Others



Appendix E

Relationship Between Self-Criticism (DEQ) and Depression with Gender