The Role of Self-Concealment and Perfectionistic Self-Presentation in Concealment of
Psychache and Suicide Ideation

By

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Abstract

Suicide is a severe societal problem with nearly 1 million people dying by suicide each year worldwide (National Institute of Mental Health, 2009). The goal of the current research was to explore potential risk factors in order to help improve researchers’ and mental health professionals’ ability to identify high-risk individuals who are more likely to conceal their feelings and thoughts from others. The present research examined the relationship of two personality traits, self-concealment and perfectionistic self-presentation, to two suicide related concepts, psychache and suicide ideation, as well as the role of social support within this context. Results of Study 1 indicated that individuals higher on self-concealment and individuals higher on perfectionistic self-presentation were more likely to report psychache as well as concealment of psychache from others. The goal of Study 2 was to replicate and extend the finding that the two traits are significant predictors of suicide ideation, as well as to examine two potential mediators, concealment of psychache and social support, to explain this relationship. Both traits were significant predictors of suicide ideation and concealment of psychache mediated the relationship of suicide ideation with self-concealment and two subcomponents of the Perfectionistic Self-Presentation Scale. Social support mediated the relationship between one of the subcomponents of the Perfectionistic Self-Presentation Scale and suicide ideation. The goal of Study 3 was to further examine the two personality traits, social support, and concealment of psychache, using an experimental design. More specifically, participants were instructed to either describe situations in which they had social support or describe situations in which they had no social support. Results indicated significant differences between participants assigned to the high compared to the low social support
conditions in perceived social support, self-concealment, and each of the subscales of the Perfectionistic Self-Presentation Scale. A series of moderated regressions indicated that at low and moderate, but not high, levels of the perfectionistic self-promotion and nondisclosure of imperfection subscales of the Perfectionistic Self-Presentation Scale, higher levels of social support were associated with lower levels of concealment of psychache. The implications of the current research and possible recommendations are discussed.
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Chapter 1: General Introduction

Suicide is a severe societal problem and understanding potential risk factors is essential to improving researchers’ and mental health professionals’ ability to identify high-risk individuals. Nearly 1 million people die by suicide each year worldwide (National Institute of Mental Health, 2009); it is one of the ten primary causes of death in Canada (Statistics Canada, 2015), and it is estimated that over 100 individuals die by suicide every day in the United States (National Center for Health Statistics, 2014). Moreover, a recent report conducted by the National Center for Health Statistics (2016) indicates that the age-adjusted suicide rate in the United States has increased by 24% since 1999, thus suicide rates appear to be on the rise.

The rate of death by suicide does not include rates of suicide attempts, for which it is estimated that for every death by suicide, twenty suicide attempts occur (World Health Organization, 2014). Moreover, individuals experiencing pervasive suicide ideation (i.e., thoughts surrounding suicide) are also a concern because those individuals are at an increased risk of attempting suicide or death by suicide (Beck, Kovacs, & Weissman, 1979). Individuals who attempt suicide and/or experience suicidal thoughts may require medical attention, as well as counselling or therapy. In other words, not only is suicide itself a societal concern, suicide attempts and suicide ideation are as well. Identifying individuals who are at risk is the first step in preventing and reducing rates of suicide ideation, suicide attempts, and death by suicide.

Suicide is the act of self-inflicted and deliberate cessation, and according to one of the pioneers of suicide research and prevention, Edwin Shneidman (1985), it is a “conscious act of self-induced annihilation, best understood as a multidimensional
malaise in a needful individual who defines an issue for which the suicide is perceived as the best solution” (p. 203). Suicide is considered to be a multidimensional occurrence, as it involves many factors such as biological, cultural, interpersonal, and so on (Shneidman, 1997). However, at its core, the primary factor underlying suicide is psychological because suicide occurs in the mind such that it becomes a conscious decision that the individual believes to be their best or only solution (Shneidman, 1997). At the centre of this theory is the notion that perturbation or psychological pain is the motivation for suicide, and lethality prompts cessation with the belief that perturbation, or psychological pain, can be eliminated through suicide (Shneidman, 1997). Other theories of suicide focus on specific components that when present, in combination, lead to suicide. One of the most well-known suicide theories which utilizes that approach is Joiner’s (2005) interpersonal-psychological theory of suicide, which posits that suicide occurs when an individual experiences thwarted belongingness (i.e., a lack of (perceived) social support), perceived burdensomeness (i.e., the individual perceives themselves to be a burden on others), and an acquired capability for suicide (i.e., the ability to overcome fear of death and pain).

Alternative theories of suicide have been offered. For instance, Roseman and Kaiser (2001) hypothesized that suicide is caused by emotions, primarily feelings of distress, leading to the need to escape psychological pain (Gunn, 2015). Alternatively, Baumeister’s (1990) theory of suicide posits that suicide is a means of escaping negative self-awareness such as one’s deficiencies or weaknesses. An additional complexity in researching and understanding suicide is that some theorists, particularly in sociology, believe there are distinct types of suicide. A major proponent of this was Durkheim
(1951) who presented four types of suicide: altruistic, egoistic, anomic, and fatalistic. According to Durkheim (1951), suicide depends on integration (i.e., the extent to which members of a group or society share a worldview) and social regulation (e.g., a group or society’s control over its individuals; Johnson, 1965). Altruism involves high levels of integration and suicide occurs frequently in societies with high levels of altruism (e.g., military) because they emphasize sacrifice (Durkheim, 1951; Johnson, 1965). Alternatively, when integration is low, life is considered to be devoid of meaning and purpose, and suicide rates should also be high (Durkheim, 1951; Johnson, 1965). Anomic suicide is associated with societies in which social regulation is low, whereas fatalistic suicide is associated with societies in which social regulation is high (Durkheim, 1951; Johnson, 1965). That is, too much freedom or too much oppression can both result in higher rates of suicide (Johnson, 1965).

Others have discussed suicide types, with an emphasis on motivation and a greater focus on the individual. For instance, Baechler (1975) discussed various types of suicide, each with their own subtypes. For instance, escapist suicides may be motivated by flight (e.g., death by suicide to escape an intolerable situation), grief (e.g., death by suicide after a loss of personality or lifestyle), or punishment (i.e., death by suicide to punish the self for a crime or failing; Baechler, 1975; Gunn, 2015).

In summary, many theories regarding suicide exist, and suicide can occur for many different reasons, underscoring Shneidman’s (1998) assessment of suicide as being a multidimensional occurrence that involves multiple factors. However, the current research employs and focuses on the first two theories that were discussed: Shneidman’s theory and Joiner’s (2005) interpersonal-psychological theory of suicide. A focus on
Shneidman’s and Joiner’s theories was directly relevant to examining two core components of the current research: psychache (Shneidman) and social support (Joiner).

Over half of a century ago, researchers believed it would be possible to accurately predict which individuals would die by suicide (Beck, Lettieri, & Resnick, 1974), although it eventually became apparent that obtaining accurate predictions was very difficult, in part, due to the low base rate of suicide, with a high rate of false positives occurring (Pokorny, 1983). In fact, recent meta-analytic work examining longitudinal research indicates that predicting suicide attempts and death by suicide is only slightly greater than chance (Franklin et al., 2016). Over the past few decades, researchers have identified various risk factors of suicide, such as past behaviours, psychological factors, and personality traits that help identify high-risk individuals. Past behaviours such as prior suicidal behaviours (Moscicki, 1997), previous suicide attempts (Rudd, Joiner, & Rajad, 1996), and suicide ideation (Beck & Steer, 1993) are some of the primary risk factors of suicide. In regards to psychological risk factors, three of the primary risk factors of suicide are elevated levels of hopelessness (Brown, Beck, Steer, & Grisham, 2000), depression (Thomson, 2012), and psychache (i.e., unbearable psychological pain; Shneidman, 1993; Troister & Holden, 2012). Finally, personality traits such as self-concealment and perfectionism have been linked to suicide risk as well (Flett, Hewitt, & Heisel, 2014).

Dissembling

Suicide risk is commonly assessed by way of suicide ideation, which is defined as thoughts, intentions, and plans surrounding suicide (Beck & Steer, 1993). Much research has focused on examining the role of past behaviours and psychological factors in suicide
ideation, but, less attention has been paid to the role of certain personality traits in suicide ideation. One of the reasons identifying individuals who are at risk for suicide is challenging is because some individuals who are at risk conceal their negative and painful feelings, thoughts, and behaviours from others (Friedlander, Nazem, Fiske, Nadorff, & Smith, 2012), while many feel a need to present an image of themselves as flawless to others (Roxborough et al., 2012). In fact, Shneidman (1994) believed that some individuals, approximately 10%, who die by suicide fail to display clues of their intention to attempt suicide, or the clues are misleading, guarded or masked; and he described such individuals as living a secret life. Shneidman (1994) termed such actions as ‘dissembling’, which refers to the concealment of feelings and intentions from others. Interview research with parents who have had a son who died by suicide refer to such concealment, as they commonly report that the son “concealed problems and hid behind a mask” (Törnblom, Werbart, & Rydelius, 2013, p. 251). Moreover, interviews with individuals who had had a family member die by suicide indicate that nearly 50% of interviewees were completely surprised by the suicide, only 25% of interviewees reported warning signs, and 28% of them were not surprised by the suicide (Rudestam, 1977). In other words, there is a large proportion of individuals who report that the family member who died by suicide did not exhibit any warning signs. Furthermore, Shneidman’s (1994) estimates of individuals who engage in dissembling may have been underestimated. Ultimately, much research is still needed to understand individuals who engage in dissembling because they are exceptionally difficult to identify because of their continued effort to disguise, mask, or conceal clues of suicide from those around them. One potential approach to identifying individuals who dissemble is to examine personality
traits that encompass tendencies to disguise, mask, and conceal information from others.

There are two personality traits that align strongly with Shneidman’s (1994) theory surrounding individuals who dissemble. First, self-concealment refers to individuals who possess a tendency to conceal negative personal information from others (Larson & Chastain, 1990). Such individuals likely mask their intentions from others because, to reveal it, would be counter to their disposition to conceal negative personal information from those around them. Second, perfectionistic self-presentation refers to individuals who hold a disposition towards presenting a flawless image to others (Hewitt et al., 2003). Revealing suicide intention or thoughts to others would interfere with displaying a flawless image to others, thus it would likely be important to individuals high on the trait to conceal such intentions and thoughts from others to maintain that “pristine” image. Research has identified a link between both traits and suicide behaviours as well as suicide ideation (Flett et al. 2014; Friedlander et al., 2012; Roxborough et al., 2012), however, the research to date is quite limited.

**Self-Concealment & its Relationship to Suicide**

Self-concealment involves actively hiding distressing and negative personal information, including feelings, actions, and events that are perceived as distressing, intimate, and/or negative (Larson & Chastain, 1990). Typically these feelings and events are traumatic or painful in nature, such as childhood abuse, sexual assault, severe medical conditions, stigmatized conditions, and so on (Larson & Chastain, 1990). Although self-concealment is conceptualized as an individual difference, it has been posited that there may be situational factors that impact the consistency of utilizing concealment strategies, although what those specific situational factors may be remains unclear (Larson,
Chastain, Hoyt, & Ayzenberg, 2015). It is worth noting that it differs from low self-disclosure in that self-concealment is the active attempt to conceal information, whereas low self-disclosure refers to the inaction of not revealing private information (Fisher, 1984).

Recently, Larson and colleagues (2015) developed a working model of self-concealment identifying insecure attachment, trauma incidence, and social-evaluative concerns (e.g., concerns surrounding being evaluated by others) as antecedents to self-concealment. As a result, self-concealment can lead to decreases in social well-being through secret-keeping behaviours and maladaptive emotion regulation (Larson et al., 2015). The authors posit that pathological outcomes result when the desire to disclose to others in order to reduce distress is at odds with the desire to conceal from others (Larson et al., 2015).

Essentially, individuals higher in self-concealment are often confronted with an approach-avoidance conflict: they are more likely to seek help because they experience higher levels of distress but they also tend to hold negative attitudes towards counselling (Cramer, 1999; Larson et al., 2015). Subsequently, elevated levels of distress combined with negative attitudes toward counselling reduces help-seeking behaviours in individuals who are high on self-concealment (Cramer, 1999; Larson et al., 2015). Self-concealment is positively associated with maladaptive emotion regulation (Uysal & Lu, 2011) and secret-keeping (Larson & Chastain, 1990), whereas it is negatively associated with authenticity (Larson et al., 2015), disclosure (Lopez & Rice, 2006), and social support (Cepeda-Benito & Short, 1998; Larson & Chastain, 1990; Larson et al., 2015). According to self-determination theory, self-concealment is believed to negatively affect well-being
because autonomy, competence, and relatedness needs remain unfulfilled (Uysal, Lin, & Knee, 2009).

Self-concealment is also associated with various physical health and psychological concerns such as early onset of smoking (Engels, Finkenauer, Kerr, & Stattin, 2005); cardiovascular reactivity (Vogele & Steptoe, 1992); physical pain (Uysal & Lu, 2011); depression (Larson & Chastain, 1990); and, disordered eating cognitions and symptoms (Masuda, Boone, & Timko, 2011; Masuda & Latzman, 2012). Furthermore, self-concealment is related to suicide, which is perhaps the most severe form of distress. Limited research exists in this area, however, Friedlander and colleagues (2012) found that self-concealment was significantly associated with suicidal behaviours, such as thoughts surrounding suicide and previous attempts, in an undergraduate student population. The relationship between self-concealment and suicidal behaviours was non-significant in an adult sample aged 65 or older; however, self-concealment was significantly related to depression (Friedlander et al., 2012), which aligns with prior research (Larson & Chastain, 1990).

Perfectionism & its Relationship to Suicide

Perfectionism has been linked to suicide ideation and behaviours, however, it has been argued that insufficient attention has been given to this relationship (for a review, see Flett et al., 2014). Some dimensions of perfectionism can lead to positive outcomes such as perceiving oneself as an organized individual, maintaining high personal standards, and striving for achievement (Blatt, 1995; Frost, Marten, Lahart, & Rosenblate, 1990). However, when individuals who are high in specific forms of perfectionism (e.g., self-oriented perfectionism, socially prescribed perfectionism) are
exposed to failure, neurotic perfectionism can manifest itself (Hamachek, 1978). Neurotic perfectionism is associated with many mental health concerns such as eating disorders, depression, suicide, personality disorders, obsessive-compulsive disorders, anxiety, panic disorder, psychosomatic disorders, and so on (for a review, see Blatt, 1995). In other words, maladaptive perfectionism is positively associated with suicide ideation, whereas adaptive perfectionism is negatively related (Abdollahi & Carlbring, 2016). Moreover, individuals who feel that they are not achieving their desired level of perfectionism are at risk of experiencing higher levels of suicide ideation (Abdollahi & Carlbring, 2016).

One established approach to examining the link between perfectionism and suicide is the use of the Multidimensional Perfectionism Scale (Hewitt, Flett, Turnbull-Donovan, & Mikail, 1991) which examines self-oriented perfectionism (i.e., a continuous effort to achieve and maintain high personal standards), other-oriented perfectionism (i.e., an expectation of perfection from others), and socially prescribed perfectionism (i.e., perceiving that others demand perfection from oneself). Self-oriented perfectionism is a vulnerability for suicide potential, because of the tendency to place unrealistic expectations on oneself for success, viewing events as either a complete failure or a complete success, with nothing in between (Hewitt et al., 1991). In terms of socially prescribed perfectionism, there is a lack of control over the expectations others have of the self, and when it is perceived that these expectations are not being met, it can create feelings of hopelessness (Beck, Brown, Berchick, Stewart, & Steer, 1990; Hewitt, Flett, & Weber, 1994). Self-oriented and socially prescribed perfectionism are strong predictors of suicide ideation in clinical and non-clinical samples (Hewitt et al., 1994). Additionally, both traits are associated with self-reported future intentions to die by suicide in clinical
patients (Hewitt et al., 1994).

**Perfectionistic Self-Presentation**

One form of perfectionism that is currently understudied in the context of suicide ideation is perfectionistic self-presentation, which is defined as a stylistic personality trait of self-presentation. According to Buss and Finn (1987), a stylistic personality trait is defined as “the how, not the what, of behaviour” (p. 438), with an emphasis placed on how a behaviour is conveyed rather than its content. Perfectionistic self-presentation reflects social pressures to appear perfect and it is considered to be a deceptive and maladaptive form of self-presentation (Hewitt et al., 2003). It is divided into three components. The first, perfectionistic self-promotion, refers to an individual’s tendency to display an image of being flawless (e.g., morally, socially, etc.) and successful, with the desire to appear perfect to others (Hewitt et al., 2003). The second component, nondisplay of imperfection, involves actively avoiding behavioural displays of imperfection, or any signs of weakness or flaws, to avoid disapproval from others (Hewitt et al., 2003). Similarly, the third component, nondisclosure of imperfection, involves avoiding verbal disclosure of imperfection, such as admitting to making a mistake or disclosing negative self-attributes to others (Hewitt et al., 2003).

Although perfectionistic self-presentation is associated with self-oriented perfectionism, socially prescribed perfectionism, and self-concealment, it is considered to be a distinct construct (Hewitt et al., 2003). For instance, self-concealment and the nondisclosure of imperfection subscale of the Perfectionistic Self-Presentation Scale both involve an active avoidance of discussing negative personal information with other individuals. However, the traits differ in that perfectionistic self-presentation involves a
motivation to appear perfect to others while self-concealment focuses on guarding negative personal information, not to appear perfect to others, but because, in general, the information is painful or traumatic.

Perfectionistic self-presentation has been conceptualized as a form of personality pathology, including, but not limited to, odd and eccentric traits; dramatic emotional and erratic traits; and, anxious and fearful traits (Sherry, Hewitt, Flett, Lee-Bagley, & Hall, 2007). Similarly to neurotic perfectionism and self-concealment, perfectionistic self-presentation is associated with a variety of negative outcomes, such as anxiety (Flett, Greene, & Hewitt, 2004; MacKinnon, Battista, Sherry, & Stewart, 2014), self-esteem deficits, and depression (Hewitt et al., 2003).

From a theoretical perspective, perfectionistic self-presentation is believed to be a vulnerability factor for suicide ideation (Flett et al., 2014). Feelings of inauthenticity, commonly experienced by individuals higher in perfectionistic self-presentation, increase feelings of despair and negative self-views, continuously reminding the individual of his or her imperfection (Flett et al., 2014). Additionally, individuals higher in perfectionistic self-presentation are less likely to disclose feelings of distress to others for fear of appearing imperfect, increasing their feelings of isolation and disconnect from others (Flett et al., 2014). From an empirical perspective, published research is lacking; indeed, to my knowledge, only one published research paper currently exists. The researchers used a sample of psychiatric outpatient children and adolescents, and found that all three components of perfectionistic self-presentation were significantly associated with suicide risk (Roxborough et al., 2012). Moreover, nondisplay of imperfection and nondisclosure of imperfection were significantly associated with future likelihood of suicide.
(Roxborough et al., 2012). Finally, being bullied was found to significantly mediate the relationship between each component of perfectionistic self-presentation and suicide risk, suggesting that the trait increases the likelihood that an individual will be bullied, which subsequently leads to an increase in suicide risk (Roxborough et al., 2012).

**Psychache**

Psychache is considered to be the cause of suicide and is defined as unbearable, internal states of psychological pain such as shame, loneliness, guilt, fear, and, angst (Shneidman, 1993). Psychological pain is caused by a failure of psychological needs being met, which are sought continuously throughout life (Shneidman, 1993). Psychological needs include the need for achievement, to affiliate with others, to possess power, to avoid harm, to be independent and self-sufficient, and to be loved by others (Shneidman, 1997). The weight allocated to the different psychological needs varies widely across individuals, and in some ways is reflective of their personality (Shneidman, 1997). According to Shneidman (1993), suicide is the method of reducing this unbearable pain, and thus effective interventions aimed at high-risk individuals would involve diminishing their psychache. Psychache, or mental or psychological pain, is a strong vulnerability for suicide behaviours and thoughts and is tantamount to understanding suicide (for a review, see Verrocchio, Carrozzino, Marchetti, Andreasson, Fulcheri, & Bech, 2016). Meta-analytic work indicates that psychological pain is higher for individuals with prior suicide attempts compared to individuals who have never attempted suicide (Ducasse et al., in press). Moreover, psychological pain is also elevated in individuals with a history of suicide ideation compared to individuals with no history of suicide ideation (Ducasse et al., in press).
Research has been conducted to conceptualize and test Shneidman’s theory. First, the Psychological Pain Assessment Scale (Shneidman, 1999) asks participants to rate their own psychological pain, assess their feelings surrounding their worst pain, respond to an open-ended question about their worst psychological pain, and rate the psychological pain of individuals presented in photographs. Second, the Orbach and Mikulincer Mental Pain Scale (Orbach, Mikulincer, Sorato, & Gilboa-Schechtman, 2003) measures psychache using an 81-item scale with three subscales: experiential aspects, painful emotions, and recurrent cognitions surrounding mental pain. Third, the Psychache Scale is a 13-item scale that was developed to measure and assess psychache using Shneidman’s definition of psychological pain (Holden, Mehta, Cunningham, & McLeod, 2001). Research comparing the three measures indicates that the Psychache Scale is the only one that contributes unique variance in predicting suicide ideation (Davie, 2005), and issues with test-retest reliability and validity of the Psychological Pain Assessment Scale have been reported (Leenaars & Lester, 2005). The Psychache Scale is now widely used, and the scale has high internal consistency and demonstrates a medium effect size for distinguishing between attempters and non-attempters in an undergraduate sample (Holden et al., 2001). Interestingly, the Psychache Scale makes no mention of suicide-related concepts (Troister, D’Agata, & Holden, 2015). The scale offers significantly more predictive power to identify at risk individuals, and unique explanatory information regarding suicide ideation that simply is not captured in measuring psychological constructs of suicide such as hopelessness or depression (DeLisle & Holden, 2009; Holden et al., 2001). In fact, the psychometric properties of the Psychache Scale display superior predictive ability in identifying suicide risk above the Beck Depression
Inventory-II and the Beck Hopelessness Scale (Troister et al., 2015). Moreover, research has shown that psychache is a stronger predictor of suicide ideation than depression and hopelessness using both cross-sectional (Troister & Holden, 2010) and longitudinal designs (Troister, Davis, Lowndes, & Holden, 2013; Troister & Holden, 2012). Additionally this pattern holds for healthier, lower risk populations (Troister & Holden, 2010), as well as for higher risk populations (Patterson & Holden, 2012; Troister et al., 2013). Furthermore, psychache is a strong predictor of distinct measures of suicide ideation as well as self-harming ideation and self-harming action in undergraduate samples and federal inmate populations (Pereira, Kroner, Holden, & Flamenbaum, 2010). Additionally, research supports psychache as a mediator, which aligns with Shneidman’s (1999) theory of psychache as the cause of suicide. For example, psychache mediates the relationship between depression and suicidality (Campos et al., 2016) and between alexithymia and suicidality (Keefer, Holden, & Gillis, 2009).

Self-Concealment & its Relationship to Psychache

To my knowledge, no published research on self-concealment and psychache exists, however, two leading experts in this area of research, Flett and Hewitt (2013), posit that individuals high in self-concealment, as well as those higher in perfectionistic self-presentation, should be less likely to disclose psychache to others.

Perfectionism & its Relationship to Psychache

Similarly to self-concealment, research on perfectionistic self-presentation and psychache is warranted. However, research with another form of maladaptive perfectionism indicates that psychache mediates the relationship between socially prescribed perfectionism and suicide ideation, indicating that this form of perfectionism
may be associated with unfulfilled needs, a core component of psychache (Flamenbaum & Holden, 2007; Friedman & Holden, 2014).

**Social Support**

Social support refers to the perception of feeling loved, cared for, and valued by friends and family (Wills, 1991). It is associated with a variety of positive outcomes such as reducing stress and depressive symptoms (Cohen & Hoberman, 1983) and promoting psychological adjustment to health conditions such as heart disease (Holahan, Moos, Holahan, & Brennan, 1997), diabetes, HIV (Turner-Cobb et al., 2002), and, cancer (Stone, Mezzacappa, Donatone, & Gonder, 1999). Moreover, longitudinal research suggests that possessing strong social support networks can impact longevity, even after controlling for socio-economic status, health status, and lifestyle habits (Berkman & Syme, 1979).

The relationship between social support and suicide is rooted in both theory and research. As mentioned prior, according to Joiner’s (2005) interpersonal-psychological theory of suicide, feeling a lack of belongingness and feeling like a burden on others are the two primary risk factors for suicide ideation. In other words, a perceived or actual lack of social support and perceiving oneself as a burden on others increases suicide ideation (Joiner et al., 2009; Van Orden, Witte, Gordon, Bender, & Joiner, 2008). Indeed, social isolation is considered to be one of the strongest predictors of suicide ideation (for a review, see Van Orden et al., 2010). Alternatively, social support can serve as a protective factor against suicide risk (for a review, see Johnson, Wood, Gooding, Taylor, & Tarrier, 2011). In fact, suicide rates are lower on days where large sports-related “pulling together” events occur, such as Super Bowl Sunday, that are believed to fulfill
individuals’ need to belong (Joiner, Hollar, & Van Orden, 2006). Moreover, suicidal ideation is higher in university students during the summer, compared to the fall and spring, when their feelings of belongingness are typically reduced (Van Orden, Witte, James et al., 2008).

A large body of research exists demonstrating the link between social support and suicide ideation in nonclinical and clinical populations, as well as in undergraduate students, elderly adults, and even adolescent samples (Johnson et al., 2011). For instance, in undergraduate student populations, positive social support and negative social exchanges are associated with lower and higher levels of suicidal behaviours, respectively (Hirsch & Barton, 2011). Additionally, research indicates that social support moderates the relationship between impulsivity and suicide risk, such that undergraduate students who are highly impulsive but perceive that they possess high levels of social support are at a lower risk of suicide (Kleiman, Riskind, Schaefer, & Weingarden, 2012). Elderly adults who report high levels of suicide ideation and/or have recently attempted suicide report lower levels of perceived social support (Harrison et al., 2010), and similar patterns emerge in adolescents such that adolescent psychiatric inpatients with low levels of close friendship support and high levels of perceived peer rejection display higher levels of suicide ideation (Prinstein, Boergers, Spirito, Little, & Grapentine, 2000).

Finally, research with two large nationally representative adult samples, ranging from young to elderly adults, indicates that higher levels of social support are associated with a lower likelihood of a lifetime suicide attempt, even after controlling for other variables such as age, gender, and mental illness (Kleiman & Liu, 2013).

As discussed above, in many studies, social support is conceptualized as a
predictor of suicide ideation. However, some researchers have conceptualized it as a moderator, as discussed above, or as a mediator. For instance, Kleiman and Riskind (2012) outlined a multi-step mediation model in which use of social support in times of distress and self-esteem mediate the relationship between perceived social support and suicide ideation. Additionally, research with adolescents indicates that social support mediates the relationship between parental displacement (i.e., parental death, divorce, etc.) and suicide attempts (Timmons, Selby, Lewinsohn, & Joiner, 2011). Moreover, a similar conceptualization can be seen in research on maladaptive forms of perfectionism and suicide ideation, as discussed below.

Concealment & its Relationship to Social Support & Suicide

Low self-disclosure, although distinct, is similar to self-concealment in that personal information is not being communicated to others. Research indicates that self-disclosure significantly differentiates suicide attempters from healthy individuals as well as medically serious from medically-not-serious suicide attempters (Levi, Horesh, Fischel, Treves, Or, & Apter, 2008). Individuals lower on self-disclosure may be less likely to ask others for help, and thus fail to receive assistance (Levi et al., 2008). Additionally, individuals who experience difficulties in communicating to others may not acquire adequate perspective on or an introspective understanding of their current situation (Brown & Heimberg, 2001; Levi et al., 2008). Furthermore, a lack of effective communication with others also presupposes a thwarted social support system, contributing to feelings of isolation and loneliness that may exacerbate psychopathological tendencies that subsequently may increase suicide risk (Levi et al., 2008; Wei, Heppner, & Mallinckrodt, 2003). This suggests that there may be strong links
between concealment, social support, and suicide ideation.

**Perfectionism & its Relationship to Social Support and Suicide**

Roxborough and colleagues (2012) found that social hopelessness (i.e., negative thoughts about current and future relationships) mediated the relationship between perfectionism and suicide risk in adolescents. Additionally, research indicates that social support buffers the relationship between self-oriented perfectionism and suicide ideation in females (Blankstein, Lumley, & Crawford, 2007). Finally, social support mediates the relationship between maladaptive forms of perfectionism and psychological distress (e.g., Dunkley, Blankstein, Halsall, Williams, & Winkworth, 2000; Sherry, Law, Hewitt, Flett, & Besser, 2008). Although, naturally, psychological distress is distinct from suicide ideation, such research lends its support to the conceptualization of social support as a mediator of maladaptive personality traits, such as self-concealment and perfectionistic self-presentation, and suicide ideation.

**The Current Research**

The current research considered the role of two personality traits, self-concealment and perfectionistic self-presentation in concealment of psychache and suicide ideation (for a graphical representation, see Figure 1). I hypothesized that self-concealment and perfectionistic self-presentation are associated with concealment of psychache and suicide ideation. Additionally, I hypothesized that social support and concealment of psychache mediate the relationship between self-concealment and perfectionistic self-presentation and suicide ideation. Three studies were conducted to examine these relationships.

First, in Study 1, I examined the role of the two personality traits in the
concealment of psychache using a normal adult population. As mentioned prior, psychache is believed to be the cause of suicide (Shneidman, 1993). Hiding distress and psychache from others is a common concern for high-risk individuals as well as individuals higher in perfectionism (Flett et al., 2014; Törnbom et al., 2013). Thus, I examined if individuals who are higher on self-concealment and individuals who are higher on perfectionistic self-presentation are more likely to conceal their psychache from others. Additionally, no research has examined if self-concealment or perfectionistic self-presentation are associated with psychache, thus regression analyses were conducted to
evaluate this relationship.

Second, in Study 2, using the same participants from Study 1, I examined two potential mediators to explain the relationship that exists between the two personality traits and suicide ideation. I first examined concealment of psychache as a potential mediator. Individuals higher on both traits should be motivated to conceal their psychache from others and the continuous concealment may be associated with greater suicide ideation. Next, I examined a lack of perceived social support as a potential mediator. Given the ample research indicating that social support can serve as a protective factor against suicide behaviour and risk (e.g., Kleiman & Riskind, 2012), I expected that a lack of perceived social support would explain the link between the two traits and suicide ideation.

Third, I examined the link between the two personality traits, social support, and concealment of psychache using an experimental design. Participants were randomly assigned to either describe three scenarios in which they needed social support and received it or to describe three scenarios in which they needed social support but it was not available to them. I expected that participants assigned to describe situations with high levels of perceived social support would report significantly lower levels of concealment of psychache at higher levels of self-concealment and higher levels of perfectionistic self-presentation. Moderated regressions were conducted to examine self-concealment and perfectionistic self-presentation as moderators of social support and concealment of psychache. Additionally, correlation analyses were conducted to examine the relationship between the self-concealment, perfectionistic self-presentation and suicide ideation.
Chapter 2: The Role of Self-Concealment and Perfectionistic Self-Presentation in Concealment of Psychache (Study 1)

The goal of Study 1 was to examine the relationship between the two traits, self-concealment and perfectionistic self-presentation, and psychache as well as concealment of psychache. As mentioned prior, to my knowledge, no published research has examined the relationship between self-concealment as well as perfectionistic self-presentation and psychache, however, it has been posited that they are related (Flett & Hewitt, 2013).

Hypothesis 1: Individuals higher in self-concealment will report significantly higher psychache scores.

Hypothesis 2: Individuals higher on each of the subscales of the Perfectionistic Self-Presentation Scale will report higher psychache scores.

I also examined the relationship between these traits and concealment of psychache. Individuals higher in self-concealment are more likely to hide negative affect from others, thus, I predicted that they would be more likely to conceal psychache from others. Additionally, I expected that individuals higher on each of the subscales of perfectionistic self-presentation would also report higher levels of concealment of psychache, given their tendency to actively avoid displaying and disclosing imperfection to others (Hewitt et al., 2003).

Hypothesis 3: Individuals higher in self-concealment will be significantly more
likely to report concealment of psychache from others.

_Hypothesis 4:_ Individuals higher on each of the subscales of the Perfectionistic Self-Presentation Scale will report higher levels of concealment of psychache.

**Method**

**Participants**

Participants were adults \((N = 298)\) residing in the United States, recruited through a crowd-sourcing website, Amazon’s Mechanical Turk. The study was posted to the website and Mechanical Turk users were provided with the following description of the study: “This research project is designed to investigate personality traits and its relationship with negative emotions and suicide. You will be asked to respond to some questionnaires about personality as well as some questions about suicidal tendencies and behaviors.” Mechanical Turk users who were interested in participating could then begin the survey. Participants received $2.50 for their participation. The demographics of the sample were similar to past samples recruited through the site, with 175 men (120 women, 3 did not report gender). The mean age of the sample was 34.24 years \((SD = 10.42)\). The original sample had 330 participants, however, 12 participants were removed for not completing the entire survey and 20 additional participants were removed for failing validity checks throughout the study. Five validity checks were included in the study and comprised of items embedded in the measures that asked participants to make a specific selection on the scale (e.g., ‘Please select “somewhat disagree”’). Before data collection began, it was decided that the data of participants who failed a single validity
check or more would be removed.

**Procedure**

Data collection for Study 1 was combined with Study 2, which included additional questionnaires (discussed in Study 2). The study was created on [www.surveymonkey.com](http://www.surveymonkey.com) and was posted to Mechanical Turk, providing participants with the survey link. Participants completed a series of questionnaires, including the Self-Concealment Scale, the Perfectionistic Self-Presentation Scale, and both versions of the Psychache Scale as well as demographics. Upon completion of the survey, participants were provided with a debriefing form outlining resources they could access if they experienced distress at any point during the study. Participants responded anonymously to the survey, thus individual intervention was not possible.

**Measures**

**Self-Concealment Scale.** The Self-Concealment Scale (Larson & Chastain, 1990) is a measure of personality that assesses the degree to which an individual typically conceals distressing and negative personal information from others. The 10-item scale is measured on 5-point ratings, ranging from 1 (strongly disagree) to 5 (strongly agree). Sample items include “If I shared all my secrets with my friends they’d like me less” and “I have negative thoughts about myself that I never share with anyone”. The Self-Concealment Scale scores have demonstrated good test-retest reliability ($r = .74$ over 7 weeks, Cramer & Barry, 1999; $r = .81$ over 4 weeks, Larson & Chastain, 1990) and is a reliable measure with a mean coefficient alpha of .87 across 99 studies, with factor analyses supporting a unidimensional conceptualization. The internal consistency of the scale scores in the current study was also high, Cronbach’s $\alpha = .90$. 

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**Perfectionistic Self-Presentation.** The Perfectionistic Self-Presentation Scale (PSPS; Hewitt et al., 2003) assesses the stylistic personality trait which is associated with a need to appear perfect to others. The scale consists of 27 items and uses 7-point Likert ratings, ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). It consists of three subscales; in the current sample, all of the subscales had similar descriptive statistics to that of prior research (Flett & Hewitt, 2015). The Perfectionistic Self-Promotion subscale ($M = 38.75, SD = 12.21$) consists of 10 items, and assesses an individual’s tendency to continuously promote a positive image (e.g., “It is important to act perfectly in social situations”). The subscale scores had high internal consistency, Cronbach’s $\alpha = .91$. The Nondisplay of Imperfection subscale ($M = 43.70, SD = 12.17$) consists of 10 items, and refers to the avoidance of behavioural displays of imperfection (e.g., “I hate to make errors in public”). The subscale scores had high internal consistency, Cronbach’s $\alpha = .90$. Finally, the Nondisclosure of Imperfection subscale ($M = 24.96, SD = 8.04$) has 7 items, and involves actively withholding verbal admissions of imperfections (e.g., “I try to keep my faults to myself”). The subscale scores also had high internal consistency, Cronbach’s $\alpha = .85$.

**Psychache Scale.** The Psychache Scale (PAS; Holden et al., 2001) is a 13-item scale that assesses Shneidman’s (1993) concept of psychache, which he defines as unbearable, psychological pain. The scale is measured on 5-point ratings, ranging from 1 (*never*) to 5 (*always*) for the first 10 items, and ranging from 1 (*strongly disagree*) to 5 (*strongly agree*) for the remaining 3 items. Sample items include “My pain makes my life seem dark” and “I can’t understand why I suffer”. As with prior research, the scale scores had high internal consistency, Cronbach’s $\alpha = .97$. 
Modified Psychache Scale I. In order to assess if individuals higher in self-concealment report concealment of psychache from others, I included a modified version of the Psychache Scale (see Appendix A). The items remained the same as the Psychache Scale, however, participants were instructed to indicate how frequently they conceal or hide each item from others. Participants responded on a 5-point ratings, ranging from 1 (never conceal from others) to 5 (always conceal from others). The modified scale scores had high internal consistency, Cronbach’s α = .98.

Demographics. Participants were asked a series of questions regarding demographics, such as age, gender, and ethnicity. They were also asked to indicate previous mental disorder diagnoses and suicide attempts (if any). Twenty-six participants reported a previous suicide attempt.

Results

I examined the correlations between the Self-Concealment Scale and the three subscales of the Perfectionistic Self-Presentation Scale (see Table 1). Hewitt et al. (2003) found correlations ranging from .18 to .37 across two samples, which are lower than the current study. However, our samples differed; Hewitt et al. (2003) examined the correlations across a student sample as well as a clinical sample, with the clinical sample displaying higher correlations, whereas my sample consisted of a largely healthy adult population (i.e., the sample was a nonclinical sample, however, it is worth noting that some participants exhibited levels of psychache that are of concern).

I included a dichotomous variable, attempter, in the correlation matrix, to examine the correlation between individuals who reported a previous suicide attempt to those who reported no previous attempt across the study variables. Of the personality traits, self-
### Table 1

**Descriptive Statistics and Correlations of Study 1 Variables (N = 298)**

<table>
<thead>
<tr>
<th></th>
<th>M (SD)</th>
<th>1.</th>
<th>2.</th>
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<th>4.</th>
<th>5.</th>
<th>6.</th>
<th>7.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Self-concealment</td>
<td>29.38 (9.67)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Perfectionistic self-promotion</td>
<td>38.75 (12.21)</td>
<td>.47***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Nondisplay of imperfection</td>
<td>43.70 (12.17)</td>
<td>.63***</td>
<td>.73***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Nondisclosure of imperfection</td>
<td>24.96 (8.04)</td>
<td>.61***</td>
<td>.65***</td>
<td>.63***</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Psychache</td>
<td>24.59 (11.93)</td>
<td>.47***</td>
<td>.32***</td>
<td>.43***</td>
<td>.37***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Concealment of psychache</td>
<td>36.32 (18.66)</td>
<td>.45***</td>
<td>.30***</td>
<td>.45***</td>
<td>.42***</td>
<td>.48***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Attempter (Yes = 1, No = 0)</td>
<td></td>
<td>.13*</td>
<td>.04</td>
<td>.10</td>
<td>.12*</td>
<td>.33***</td>
<td>.14*</td>
<td></td>
</tr>
<tr>
<td>8. Gender (Men = 1, Women = 0)</td>
<td></td>
<td>.09</td>
<td>.08</td>
<td>.03</td>
<td>.11</td>
<td>-.001</td>
<td>.08</td>
<td>.15*</td>
</tr>
</tbody>
</table>

*Significant at the $p < .05$ level

**Significant at the $p < .01$ level

***Significant at the $p < .001$ level

*Note.* Correlations of .1, .3, and .5 represent small, medium, and large effect sizes, respectively.
concealment and nondisclosure of imperfection were significantly correlated with attempter status, with small effect sizes, \( r = .13 \) and \( .12 \), respectively. Concealment of psychache and attempter status was also correlated with a small effect size, \( r = .14 \).

However, mirroring prior research (Holden et al., 2001), attempter status and the Psychache Scale were correlated, demonstrating a medium effect size.

First, I conducted a regression analysis to examine if individuals higher in self-concealment are significantly more likely to report higher scores on the Psychache Scale. Self-concealment was entered as the predictor variable, and psychache was entered as the criterion variable. The regression equation was significant, \( R^2 = .22, F(1, 296) = 82.26, p < .001 \), and as expected, self-concealment was significantly related to psychache, \( \beta = .47, t(296) = 9.10, p < .001 \). Second, I conducted a regression to examine the relationship between the three subcomponents of perfectionistic self-presentation and psychache. The regression equation was significant, \( R^2 = .45, F(3, 294) = 24.41, p < .001 \). Independent of the other perfectionistic self-presentation subcomponents, the Perfectionistic Self-Promotion subscale, was not significantly related to psychache, \( \beta = -.06, t(294) = -.71, p = .48 \); the Nondisplay of Imperfection subscale was significantly positively related to psychache, \( \beta = .35, t(294) = 4.38, p < .001 \); and finally, the Nondisclosure of Imperfection subscale was also significantly positively related to concealment of psychache, \( \beta = .19, t(294) = 2.57, p = .011 \).

Next, in order to evaluate if individuals higher in self-concealment are significantly more likely to report concealment of psychache, a regression analysis was conducted. Self-concealment was entered as the predictor criterion variable, and concealment of psychache was entered as the criterion variable. The regression equation
was significant, $R^2 = .20$, $F(1, 296) = 74.61$, $p < .001$. As expected, self-concealment was significantly positively related to concealment of psychache, $\beta = .45$, $t(296) = 8.64$, $p < .001$.

Finally, a regression analysis was conducted to evaluate if individuals higher in perfectionistic self-presentation are significantly more likely to report concealment of psychache. Each of the three subscales of the Perfectionistic Self-Presentation Scale were entered as predictor variables, and concealment of psychache was entered as the criterion variable. The regression equation was significant, $R^2 = .24$, $F(3, 294) = 31.04$, $p < .001$. Independent of the other perfectionistic self-presentation subcomponents, the Perfectionistic Self-Promotion subscale, was significantly negatively related to concealment of psychache, $\beta = -.17$, $t(294) = -2.18$, $p = .03$; the Nondisplay of Imperfection subscale, was significantly positively related to concealment of psychache, $\beta = .40$, $t(294) = 5.10$, $p < .001$; and finally, the Nondisclosure of Imperfection subscale was also significantly positively related to concealment of psychache, $\beta = .28$, $t(294) = 3.92$, $p < .001$.

**Discussion**

It has been hypothesized that self-concealment and perfectionistic self-presentation are linked to psychache (Flett & Hewitt, 2013), and the findings from this study support that, to some extent. First, self-concealment is a strong predictor of psychache, indicating that individuals higher on the trait are also significantly more likely to experience higher levels of psychache. Second, this pattern also emerged for two of the subcomponents of the Perfectionistic Self-Presentation Scale: nondisplay of imperfection and nondisclosure of imperfection. Thus, self-concealment, nondisplay of imperfection,
and nondisclosure of imperfection are all significant predictors of psychache, supporting the idea that they are associated with the cause of suicide. Perfectionistic self-promotion did not, independently of the other two perfectionistic self-presentation components, predict psychache significantly. This was unexpected, however, perfectionistic self-promotion differs from self-concealment as well as nondisplay of imperfection and nondisclosure of imperfection in that it is an active attempt to appear perfect to others, whereas the other two subscales refer to an active avoidance of the display or disclosure of imperfection. In other words, the former refers to presenting a positive image while the latter refers to disguising a negative image. Although the subscale does appear to be associated with suicide-related constructs in prior research (Roxborough et al., 2012), the results of the current study indicate it is not a unique predictor of psychache.

Moreover, research suggests that perfectionism may be a two-dimensional construct consisting of (a) perfectionistic strivings, which refer to possessing high personal standards, a need for perfection from oneself, and a tendency toward order, and (b) perfectionistic concerns, which refer to the perception that others demand perfection, concerns surrounding making mistakes, doubt surrounding one’s actions, and a feeling of inconsistency between one’s standards and performance (Stoeber & Otto, 2006). Confirmatory factor analyses have indicated that perfectionistic self-promotion is more highly correlated with perfectionistic strivings, whereas nondisplay of imperfection and nondisclosure of imperfection are more highly correlated with perfectionistic concerns (Stoeber & Damian, 2014), which may be another possible explanation for the discrepancy, and may also provide support for the theory that there are some differences between perfectionistic self-promotion and the other two subcomponents. It may be that
the relationship of the dimension, perfectionistic strivings, is not as closely related to psychache as the dimension of perfectionistic concerns.

The results also supported the hypothesis that both self-concealment and perfectionistic self-presentation are significantly related to concealment of psychache. All of the subscales of the Perfectionistic Self-Presentation Scale were significant predictors of concealment of psychache. However, the Perfectionistic Self-Promotion subscale was negatively related, whereas self-concealment, nondisplay of imperfection and nondisclosure of imperfection were positively related. Again, perfectionistic self-promotion assesses maladaptive perfectionism from a slightly distinct perspective compared to the other subcomponents of the scale which may explain why it was negatively related to concealment of psychache. It is worth noting that perfectionistic self-promotion was significantly and positively correlated with psychache and concealment of psychache, indicating that it is related to the both constructs in some way. However, it is more difficult to draw conclusions about the role it plays in suicide-related concepts, given the contradictory information that was evident in the current study.

The Self-Concealment Scale, the Nondisclosure of Imperfection subscale of the Perfectionistic Self-Presentation Scale, and concealment of psychache generated correlations with small effect sizes in relation to attempter status. Attempter status and psychache were more strongly correlated, with a medium effect size. Thus, these variables are significantly associated with attempter status, and may have the ability to distinguish between attempters and non-attempters.

Overall, individuals higher on these traits are not only more likely to report higher levels of psychache, but are also more likely to conceal their psychache from others. It
may be beneficial for clinicians and mental health practitioners to assess individuals on these personality traits, as they are individuals who appear to be at a greater risk of experiencing and concealing psychache, which ultimately means that these individuals could be at a greater risk of suicide. Merely identifying such individuals is challenging, because they are less likely to disclose their negative feelings and thoughts to others. Thus, incorporating these scales into clinical assessments may be an important step towards helping such individuals.

Limitations

The study design was cross-sectional, thus findings in the current research should be interpreted with caution, as conducting a longitudinal design would improve upon the ability to interpret causal relationships. Additionally, the findings with the Perfectionistic Self-Promotion subscale were inconsistent and differed from prior research (Roxborough et al., 2012), which makes it difficult to draw conclusions surrounding the role it plays in psychache and the concealment of psychache. Furthermore, the study relied entirely on self-report measures, which may be considered less trustworthy than alternative approaches to data collection, due to biases such as self-presentation, acquiescent responding, and so on (for a review, see Paulhus & Vazire, 2007). However, there are many advantages to using self-report measures such as practicality, efficiency, and access to information that only the responder possesses (Paulhus & Vazire, 2007). Moreover, the current study emphasized that individuals high on self-concealment and perfectionistic self-presentation are significantly more likely to report concealment of psychache from others. Thus, in many regards, without self-report it would be highly challenging to gain insight into this phenomenon.
Finally, there may be a concern regarding the extent to which the Mechanical Turk sample is representative of the general population. However, research suggests data collected using Mechanical Turk members as participants provides researchers with a diverse sample as well as valid data (Buhrmester, Kwang, & Gosling, 2011). More specifically, the descriptive statistics of the current study indicate similarities between the current sample and samples from prior research in the area. For example, self-concealment mean scores in prior studies range from 25.92 (Larson & Chastain, 1990) to 30.16 (Cramer & Barry, 1999). In the current sample, the mean score was 29.38. Similarly, as mentioned prior, the subscales of the Perfectionistic Self-Presentation Scale had similar descriptive statistics to prior research as well (Flett & Hewitt, 2015).

**Conclusions**

The results of Study 1 emphasize the important role of self-concealment and perfectionistic self-presentation in both psychache as well as the concealment of psychache. Not only do individuals higher on self-concealment and individuals higher on nondisplay of imperfection, and nondisclosure of imperfection report higher levels of psychache, they also report greater levels of actively concealing that psychache from others. Thus, although reducing psychache in individuals who are at risk for suicide is highly important, perhaps focusing on reducing their concealment of psychache from others is the first step to helping them.
Chapter 3: The Role of Self-Concealment and Perfectionistic Self-Presentation in Suicide Ideation and Mediating Variables (Study 2)

The research linking self-concealment and perfectionistic self-presentation to suicide ideation is limited (e.g., Flett et al., 2014; Friedlander et al., 2012; Roxborough et al., 2012). Thus, one of the goals of Study 2 was to replicate the limited findings by Friedlander and colleagues (2012) and Roxborough and colleagues (2012) that the two traits are linked to suicide ideation in a normal, healthy adult population. Examining this in a normal, healthy adult population is important, because although suicide is often thought of as a clinical issue, in truth, it is both a clinical and nonclinical problem that affects many individuals (Campos et al., 2016). Although some individuals who attempt suicide or die by suicide meet the criteria for a clinical diagnosis, some do not (Campos et al., 2016). In fact, Campos and colleagues (2016) propose that three psychosocial variables, intrapersonal (e.g., psychache), interpersonal (e.g., thwarted belongingness), and contextual (e.g., life events) variables, can aid in identifying individuals who are at risk, but who do not meet the criteria for a clinical diagnosis.

*Hypothesis 1:* Self-concealment will be significantly related to suicide ideation.

*Hypothesis 2:* Each of the subscales of the Perfectionistic Self-Presentation Scale will be significantly related to suicide ideation.

The second objective of Study 2 was to examine two potential mediators to explain the relationship between the two personality traits and suicide ideation. The two
mediators that I investigated were concealment of psychache and perceived social support. These variables were chosen as potential mediators given the possibility that they may be more amenable to interventions, whereas personality traits are often considered to be more fixed, and thus potentially more resistant to interventions. I expected that concealing psychache from others may in part explain the link between these traits and suicide ideation because individuals higher on self-concealment and perfectionistic self-presentation are more likely to conceal their distress from others which could lead to increases in suicide ideation.

_Hypothesis 3:_ Concealment of psychache will mediate the relationship between self-concealment and suicide ideation.

_Hypothesis 4:_ Concealment of psychache will mediate the relationship between each of the subscales of the Perfectionistic Self-Presentation Scale and suicide ideation.

Additionally, I expected that a lack of perceived social support would provide an explanation for why individuals higher in self-concealment and perfectionistic self-presentation report greater suicide ideation in this adult sample. Self-disclosure in relationships is believed to build trust and strengthen the bond of the relationship (e.g., Wheeless, 1978). Individuals higher on self-concealment and perfectionistic self-presentation are less likely to disclose their distress to others (Flett et al., 2014; Larson et al., 2015), thus, they may perceive lower levels of social support because their
relationships may be weakened by a lack of self-disclosure. In turn, I expect that that lack of perceived social support will lead to increases in suicide ideation.

*Hypothesis 5:* A lack of perceived social support will mediate the relationship between self-concealment and suicide ideation.

*Hypothesis 6:* A lack of perceived social support will mediate the relationship between each of the subscales of the Perfectionistic Self-Presentation Scale and suicide ideation.

**Method**

**Participants**

Participants were the same as Study 1.

**Procedure**

Data collection for Study 2 was combined with Study 1. The study was created on [www.surveymonkey.com](http://www.surveymonkey.com) and was posted to Mechanical Turk, providing participants with the survey link. Participants completed a series of questionnaires, including the Self-Concealment Scale, the Perfectionistic Self-Presentation Scale, the Beck Scale for Suicide Ideation, the Modified Psychache Scale I, the Multidimensional Scale of Perceived Social Support, and demographics.

**Measures**

**Beck Scale for Suicide Ideation.** The Beck Scale for Suicide Ideation (BSS; Beck & Steer, 1993) is a 19-item questionnaire that assesses the intensity level of
attitudes, behaviours, and plans to die by suicide. The scale consists of two subscales. The first, Motivation, refers to a desire to die by suicide, attitudes towards living/dying, and, suicide ideation, and the current sample’s scores had high internal consistency, Cronbach’s $\alpha = .88$. The second subscale, Preparation, refers to plans to die by suicide, and its scores also had good internal consistency, Cronbach’s $\alpha = .78$. For the current analyses, the entire scale was used as the criterion variable. The total scale’s scores had high internal consistency, Cronbach’s $\alpha = .87$.

**Multidimensional Scale of Perceived Social Support.** The Multidimensional Scale of Perceived Social Support (MSPSS; Zimet, Dahlem, Zimet, & Farley, 1988) is a 12-item scale that measures perceived social support on a 7-point ratings, ranging from 1 (very strongly disagree) to 7 (very strongly agree). The scale is comprised of three subscales: Significant Other (e.g., “There is a special person who is around when I am in need”), Family (e.g., “I get the emotional help and support I need from my family”), and Friends (e.g., “My friends really try to help me”). Higher scores indicate higher perceived social support. For the purposes of analysis, social support scores were not divided by type of social support; rather all 12 items were aggregated as I was interested in a holistic overview of perceived social support. The scale’s scores had high internal consistency, Cronbach’s $\alpha = .96$.

In addition, the Self-Concealment Scale, Perfectionistic Self-Presentation Scale, the Modified Psychache Scale, as well as the demographics questionnaire were included in Study 2.
Results

Suicide Ideation

I ran two regression analyses to ensure the current study replicated past research indicating that a significant relationship between self-concealment and perfectionistic self-presentation and suicide ideation exists. In the first analysis, self-concealment was entered as the predictor variable, and suicide ideation was entered as the criterion variable. The regression equation was significant, \( R^2 = .06, F(1, 296) = 20.10, p < .001 \). As expected, self-concealment was significantly related to suicide ideation, \( \beta = .25, t(296) = 4.48, p < .001 \). In the second analysis, the three subscales of the Perfectionistic Self-Presentation Scale were entered as predictor variables and suicide ideation was entered as the criterion variable. The regression equation was significant, \( R^2 = .08, F(3, 294) = 8.81, p < .001 \). Independently of the other perfectionistic self-presentation components, the perfectionistic self-promotion subscale was significantly and negatively related to suicide ideation, \( \beta = -.23, t(294) = -2.59, p = .01 \); the nondisplay of imperfection subscale was significantly positively related to suicide ideation, \( \beta = .19, t(294) = 2.20, p = .03 \); and, finally, the nondisclosure of imperfection subscale was also significantly positively related to suicide ideation, \( \beta = .27, t(294) = 3.50, p = .001 \).

Mediation Analysis

To examine concealment of psychache and social support as possible mediators between self-concealment and perfectionistic self-presentation and suicide ideation, I conducted a path analysis. It is worth nothing that the focus of the analysis was on

\(^{1}\) Due to the fact that suicide ideation was positively skewed, bootstrapping was used to evaluate whether the results were consistent with the use of a parametric analysis. The regression analyses remained significant.
evaluating the mediation of the model, rather than focusing on the measurement component of the model. In other words, the analysis represented a type of path analysis, rather than a latent variable structural equation modelling approach. Suicide ideation was significantly correlated with self-concealment and two of the subscales of perfectionistic self-presentation (nondisplay of imperfection and nondisclosure of imperfection; see Table 2). However, suicide ideation and perfectionistic self-promotion were not significantly correlated, so no mediation analyses were conducted with perfectionistic self-promotion as a predictor variable.

In order to examine concealment of psychache and social support as possible mediators between self-concealment and perfectionistic self-presentation and suicide ideation, I conducted a mediation analysis using the statistical program, Mplus (Muthén & Muthén, 2010). First, I examined if concealment of psychache significantly mediated the relationship between self-concealment, nondisplay of imperfection, nondisclosure of imperfection, and suicide ideation (See Figure 2). Bootstrapping with 10,000 samples were used to test the parameters. None of the 95% confidence intervals of the indirect effects contained zero, thus concealment of psychache significantly mediated the relationship between the three traits and suicide ideation.

Second, I examined if social support significantly mediated the relationship between self-concealment, nondisplay of imperfection, nondisclosure of imperfection, and suicide ideation. The 95% confidence intervals of the indirect effects contained zero for self-concealment and nondisplay of imperfection. However, the 95% confidence interval of the indirect effect for nondisclosure of imperfection did not contain zero, thus social support significantly mediated the relationship between nondisclosure of
Table 2

**Descriptive Statistics and Correlations of Study 2 Variables (N = 298)**

<table>
<thead>
<tr>
<th></th>
<th>M (SD)</th>
<th>1.</th>
<th>2.</th>
<th>3.</th>
<th>4.</th>
<th>5.</th>
<th>6.</th>
<th>7.</th>
<th>8.</th>
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</thead>
<tbody>
<tr>
<td>2. Perfectionistic self-promotion</td>
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<td>.47***</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
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<td>43.70 (12.17)</td>
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<td>.73***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Nondisclosure of imperfection</td>
<td>24.96 (8.04)</td>
<td>.61***</td>
<td>.65***</td>
<td>.63***</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>5. Suicide ideation</td>
<td>6.40 (5.67)</td>
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<td>.09</td>
<td>.19***</td>
<td>.24***</td>
<td></td>
<td></td>
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<tr>
<td>6. Social support</td>
<td>59.62 (17.65)</td>
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<td>- .13*</td>
<td>- .23**</td>
<td>- .36***</td>
<td>- .43***</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>7. Psychache</td>
<td>24.59 (11.93)</td>
<td>.47***</td>
<td>.32***</td>
<td>.43***</td>
<td>.37***</td>
<td>.54***</td>
<td>-.51***</td>
<td></td>
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</tr>
<tr>
<td>8. Concealment of psychache</td>
<td>36.32 (18.66)</td>
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<td>.30***</td>
<td>.45***</td>
<td>.42***</td>
<td>.29***</td>
<td>-.34***</td>
<td>.48***</td>
<td></td>
</tr>
<tr>
<td>9. Gender (Men = 1, Women = 0)</td>
<td>.09</td>
<td>.08</td>
<td>.03</td>
<td>.11</td>
<td>.03</td>
<td>-.07</td>
<td>-.001</td>
<td>.08</td>
<td></td>
</tr>
</tbody>
</table>

* Significant at the $p < .05$ level  
** Significant at the $p < .01$ level  
*** Significant at the $p < .001$ level  

*Note.* Correlations of .1, .3, and .5 represent small, medium, and large effect sizes, respectively.
imperfection and suicide ideation.

**Discussion**

Study 2 replicated the finding that self-concealment and suicide ideation are linked. In terms of replicating the finding that perfectionistic self-presentation and suicide ideation are linked, the regression was significant for the two of the subscales: nondisplay of imperfection and nondisclosure of imperfection, however, perfectionistic self-promotion was negatively associated with suicide ideation. Additionally, perfectionistic self-promotion was not significantly correlated with suicide ideation; both findings are discrepant with Roxborough et al.’s (2012) finding with perfectionistic self-promotion.
and suicide risk in adolescents. It is unclear as to why the results of this subscale differed from the other two, however, the items on the perfectionistic self-promotion subscale are focused on needing to appear perfect, whereas the items on the other two subscales are focused on avoiding appearing imperfect. Thus, it is possible that the need to avoid appearing imperfect is, in fact, a stronger predictor of suicide ideation than a need to appear perfect. Alternatively, as discussed prior, perfectionistic self-presentation is believed to belong to a different construct (i.e., perfectionistic strivings) than nondisplay of imperfection and nondisclosure of imperfection (i.e., perfectionistic concerns; Stoeber & Damian, 2014). The distinction may also be explained by Higgins (1997) self-regulatory focus, which underlines the motivation to approach pleasure and avoid pain.

Higgins (1997) proposed two self-regulatory processes: (a) promotion focus which emphasizes achievement and accomplishment, and (b) prevention focus which emphasizes safety and security. Thus, perfectionistic self-presentation would be associated with a promotion focus, whereas nondisplay of imperfection and nondisclosure of imperfection would be associated with a prevention focus. These distinct motivational approaches could, at least in part, account for the absence of a relationship between perfectionistic self-presentation and suicide ideation. Finally, perhaps differences exist between adolescent and adult populations in terms of the relationship between perfectionistic self-promotion and suicide ideation. These results echo the results of Study 1, in that perfectionistic self-promotion was not significantly associated with psychache, but the other subscales of perfectionistic self-presentation and self-concealment were. Having said that, the participants are the same in both studies, so it is possible this finding is specific to the sample that was used.
Concealment of psychache mediated the relationship between self-concealment, mediated the relationship between nondisplay of imperfection and mediated the relationship between nondisclosure of imperfection and suicide ideation. The results suggest that actively concealing psychache from others explains, at least in part, the relationship between self-concealment, between nondisplay of imperfection, and between nondisclosure of imperfection, and suicide ideation. In other words, for individuals who are high on these traits, concealing their psychache from others appears to be associated with an increased suicide ideation risk.

The role of social support as a mediator between self-concealment, between nondisplay of imperfection, and between nondisclosure of imperfection, and suicide ideation was less straightforward. Social support only mediated the relationship between nondisclosure of imperfection and suicide ideation. Based on the rationale I provided regarding self-disclosure building trust and bonds in relationships (Wheeless, 1978), it seems intuitive that nondisclosure of imperfection affects perceived social support which in turn affects suicide ideation. On the other hand, nondisplay of imperfection refers to hiding mistakes and failures from others, and perhaps this subscale is not as closely related to social support. It may be that concealing mistakes or failures from one’s social network has little effect on those relationships, especially if the mistakes or failures occur outside of those relationships. However, it is surprising that social support did not mediate the relationship between self-concealment and suicide ideation. Given that the items of the scale focus on concealing secrets and negative thoughts from others, including friends, and that the constructs of self-concealment and self-disclosure share some similarities, this concealment should reduce their ability to build trust in their
relationships with others, which in turn should affect perceived social support. Perhaps, for individuals high on self-concealment, it may be a distinct construct, such as a lack of intimacy or trust (e.g., Ganzini et al., 2013), that might explain this relationship, rather than a lack of perceived social support.

Specifically, the results suggest that the role of social support as a mediator ought to be interpreted with caution. Roxborough et al.’s (2012) found that social hopelessness partially mediates the relationship between perfectionistic self-promotion and nondisclosure of imperfection and suicide risk in children and adolescents. In their study, social hopelessness fully mediated the relationship between nondisplay of imperfection and suicide risk (Roxborough et al., 2012). Thus, the link between each of the subcomponents of perfectionistic self-presentation and suicide risk or suicide ideation is not entirely clear. Taken together, the results of the current research and Roxborough and colleagues’ (2012) study indicate that social support and social hopelessness are important factors in the relationship between self-concealment and perfectionistic self-presentation and suicide ideation and risk; however, the exact mechanism through which social support influences suicide ideation and risk for these individuals is still somewhat unclear.

**Practical Applications**

Study 2 provided support for the relationship between self-concealment, nondisplay of imperfection, nondisclosure of imperfection, and suicide ideation. Given the strength of the relationship between the traits and suicide ideation, it would be useful for mental health practitioners to assess clients on these traits. This would not only indicate that clients high on these traits may be at an increased risk of suicide, but that
they also may be at risk for experiencing elevated levels of concealment of psychache. As Shneidman (1993) proposed, interventions for high-risk individuals ought to be focused on reducing psychache. For individuals who are high on self-concealment, nondisplay of imperfection, and nondisclosure of imperfection, reducing their tendency to conceal psychache from others is an important intervention strategy that ought to be undertaken first. In other words, implementing strategies to encourage such individuals to reveal, rather than conceal, their psychache to others is necessary to first identify such individuals and subsequently reduce their suicide risk overall.

The results of the social support mediation analyses were not as straightforward as the concealment of psychache mediation analyses, however, they suggest that at a minimum, social support mediates the relationship between nondisclosure of imperfection and suicide ideation. Thus, interventions aimed at increasing access to social support or even modifying perceptions of social support for individuals higher on nondisclosure of imperfection should reduce suicide ideation.

**Limitations**

First, the Perfectionistic Self-Promotion subscale of the Perfectionistic Self-Presentation Scale, did not significantly correlate with suicide ideation, which runs counter to previous research (Roxborough et al., 2012). It is unclear as to why the scale did not correlate, although one potential explanation, as mentioned previously, is that there is a distinction between attempting to portray an image of perfection (perfectionistic self-promotion) versus avoiding appearing imperfect (nondisplay and nondisclosure of imperfection). Again, the Perfectionistic Self-Promotion subscale was also not a significant predictor of psychache in Study 1, which suggests that perhaps, given the
limited research on perfectionistic self-presentation, the perfectionistic self-promotion subscale is not as closely related to suicide as previously thought.

Second, social support did not significantly mediate the relationship between self-concealment and between nondisplay of imperfection and suicide ideation. As discussed prior, social support has been conceptualized as both a predictor and as a mediator, however, it is more commonly treated as a predictor variable. Thus, perhaps, social support is not the mechanism through which self-concealment, nondisplay of imperfection and suicide ideation are linked.

Third, as mentioned in regards to Study 1, the design of the study was cross-sectional; a longitudinal design may be beneficial to better understand the role of social support on suicide ideation over time in individuals high in self-concealment and individuals high in perfectionistic self-presentation. Furthermore, conducting mediation analyses using a cross-sectional approach can increase biases, such as underestimation or overestimation of longitudinal effects (Maxwell & Cole, 2007). Additionally, without a longitudinal design, it is difficult to assess the temporal ordering of variables (Mathieu & Taylor, 2006). Moreover, mediation analyses that are conducted on non-experimental data should not be interpreted as definitive, rather future research should test mediation using an experimental design (Shrout & Bolger, 2002). The model that was tested was based on an a priori model, but naturally, it important that future research test the current models using a longitudinal approach.

Fourth, as with Study 1, there may be limitations with relying solely on self-report measures. However, again, self-report may be a useful approach to examining concealment of psychache, as it is not something others would be able to readily identify.
Additionally, often perception is considered to be a core component of social support, such that social support involves the *perception* that one is loved and valued by others (e.g., Wills, 1991). Thus, in order to gain insight into individuals’ perceived social support levels, self-report is an appropriate methodological approach.

**Conclusions**

The results of the current study have extended the research by Roxborough and colleagues (2012) on perfectionistic self-presentation with a normal adult population, using a similar (i.e., suicide ideation) but distinct construct (i.e., suicide risk). Additionally, the current study underscores the link between self-concealment and suicide ideation. Concealment of psychache explains the relationship between self-concealment, between nondisplay of imperfection, and between nondisclosure of imperfection and suicide ideation. Indeed, the results suggest that for individuals who are high on these traits, concealing their psychache from others may in fact be contributing to suicide ideation. The results for social support as a possible mediator were less clear-cut, however, what is evident is that both concealment of psychache and social support are important factors in helping to understand the relationships between self-concealment and between perfectionistic self-presentation and suicide ideation.
Chapter 4: Self-Concealment and Perfectionistic Self-Presentation as Moderators of the Relationship between Social Support and Concealment of Psychache (Study 3)

The goal of Study 3 was to examine the relationship between the two personality traits, self-concealment and perfectionistic self-presentation, and social support as well as concealment of psychache, using an experimental design. Based on the results of Study 2, it is evident that the role of social support in suicide related concepts with relation to self-concealment and perfectionistic self-presentation is complex. An experimental design was utilized in order to better understand its role. Specifically, participants were randomly assigned to describe situations when they needed support from others and either describe three examples of when someone provided them with social support or describe three situations when no one provided them with social support. In other words, I expected that social support would serve as a buffer against concealment of psychache for individuals higher in both personality traits. However, when social support was low, I expected concealment of psychache to remain high.

Hypothesis 1: Participants assigned to describe situations where social support was available to them will report significantly lower levels of concealment of psychache at higher levels of self-concealment.

Hypothesis 2: Participants assigned to describe situations where social support was available to them will report significantly lower levels of concealment of psychache at higher levels of each of the subscales of the Perfectionistic Self-Presentation Scale.
Although the personality traits were treated as predictor variables in Study 2, in Study 3 they were treated as moderator variables because, conceptually, I was interested in examining if different levels of self-concealment and different levels of perfectionistic self-presentation impact the relationship between social support and concealment of psychache. Given the buffering effects of social support, higher levels of perceived social support should reduce concealment of psychache, but it is worth knowing if this relationship is maintained for individuals who are higher in self-concealment as well as for individuals who are higher in perfectionistic self-presentation. In other words, a goal of Study 3 was to assess if social support serves as a protective factor against concealment of psychache in individuals who are higher in self-concealment and in individuals who are higher in perfectionistic self-presentation. Furthermore, although social support was treated as a mediator in Study 2, it was treated as a predictor variable in Study 3. First, social support, particularly in the context of suicide research, is typically treated as a predictor variable. Second, based on the results of Study 2, within the context of self-concealment and perfectionistic self-presentation, it appears as though conceptualizing social support as a mediator does not provide the most explanatory assessment of the relationship of these variables. Based on the results of Study 1, it is clear that these individuals are significantly more likely to conceal their psychache and if social support can reduce that concealment it could serve as a useful intervention technique.
Method

Participants

Participants were adults (N = 208) residing in the United States, recruited through a crowd-sourcing website, Amazon’s Mechanical Turk. The study was posted to the website and Mechanical Turk users were provided with the following description of the study: “This research project is designed to investigate personality traits and its relationship with negative emotions and suicide. You will be asked to respond to some questionnaires about personality as well as some questions about suicidal tendencies and behaviors.” Mechanical Turk users who were interested in participating could then participate in the survey. Participants received $2.00 for their participation. The demographics of the sample were similar to Study 1 and 2 as well as past samples recruited through the site, with 96 men (111 women, 1 did not report gender). The mean age of the sample was 35.10 years (SD = 10.86). The original sample had 228 participants, however, 20 participants were removed for failing validity checks throughout the study. Two validity checks were included in the study and comprised of items embedded in the measures that asked participants to make a specific selection on the scale (e.g., ‘Please select “somewhat disagree”’). It was determined before data collection began that the data of participants who failed either validity check would be removed.

Procedure

The study was created on www.surveymonkey.com and posted to Mechanical Turk, providing participants with the survey link. Participants were randomly assigned to one of two conditions: high social support or low social support, using a similar, but
modified, paradigm to Ross, Lutz, and Lakey (1999). In the high social support condition, participants were instructed to describe the three most recent personal experiences in which they needed and received social support for each of the following: (a) assistance (e.g., you were behind with a report at work and your work friend offered to stay late and help you finish the report), (b) cheering up (e.g., your partner broke up with you and your best friend comes over to try and take your mind off of things), and (c) a demonstration of caring (e.g., you wanted to go out for your birthday and a family member planned the whole evening). In the low social support condition, participants were instructed to describe the three most recent personal experiences in which they needed but did not receive social support for each of the following: (a) assistance (e.g., you were behind with a report at work and your work friend refused to stay late and help you finish the report), (b) cheering up (e.g., your partner broke up with you and your best friend doesn’t come over to try and take your mind off of things), and (c) a demonstration of caring (e.g., you wanted to go out for your birthday but you had no one to plan the evening).

Participants then completed the Modified Psychache Scale II, which was the only measure that required that participants indicate their agreement based on how they were currently, in that moment, feeling, followed by the Self-Concealment Scale, the Perfectionistic Self-Presentation Scale, the Multidimensional Scale of Perceived Social Support, the Beck Scale for Suicide Ideation, and demographic items. As with Study 1 and 2, participants were provided with a debriefing form at the end of the study listing resources they could contact if they were feeling upset or distressed.

Measures

Modified Psychache Scale II. A second modified Psychache Scale was used to
assess concealment of psychache in the present moment. The Modified Psychache Scale I used in Study 1 and 2 assessed concealment of psychache in general, thus, I modified the instructions and scale for Study 3 in order to assess concealment in the present (See Appendix A). The items of the scale remained the same, and participants responded on a 5-point rating, ranging from 1 (do not want to conceal this from others at all) to 5 (want to conceal this from others completely) for the first 9 items. For the remaining 4 items, participants responded on a 5-point rating, ranging from 1 (strongly disagree that I want to conceal this from others) to 5 (strongly agree that I want to conceal this from others). The scale’s scores had high internal consistency, Cronbach’s α = .97.

Additionally, the following measures were included, and all their scores demonstrated high internal consistency: the Self-Concealment Scale (α = .91), the Perfectionistic Self-Presentation Scale (self-presentation promotion subscale, α = .91; nondisplay of imperfection subscale, α = .91; nondisclosure of imperfection subscale, α = .83) the Multidimensional Scale of Perceived Social Support (α = .93), the Beck Scale for Suicide Ideation (total scale α = .84; motivation subscale α = .85; preparation subscale α = .76), and demographics.

Results

Manipulation Check

As a manipulation check, I examined if concealment of psychache differed by high and low social support conditions. The independent samples t-test was non-significant, t(206) = -1.85, p = .07, Cohen’s d = .25, however, the means were in the expected direction (high social support, M = 37.75, SD = 16.20; low social support, M = 41.79, SD = 15.27). I then examined mean differences across conditions for the
Multidimensional Scale of Perceived Social Support, the Self-Concealment Scale, and the subscales of the Perfectionistic Self-Presentation Scale (see Table 3). I believe my manipulation was successful because participants differed significantly on the social support scale. Additionally, my manipulation appears to have also affected self-concealment and perfectionistic self-presentation. To lend support to the argument that randomization was successful, I evaluated whether participants differed in sex and age across the two conditions, and the statistical tests were nonsignificant.

**Correlation Analyses**

First, I conducted correlation analyses with the Study 3 measures in order to compare them to the results of Study 2 (see Table 4). As with Study 2, the Self-Concealment Scale and the subscales of the Perfectionistic Self-Presentation Scale were highly correlated. Additionally, the Self-Presentation Promotion subscale of the Perfectionistic Self-Presentation scale was not significantly correlated with suicide ideation, however, the other subscales and self-concealment displayed the same pattern that emerged in Study 2. Similar correlations to Study 2 emerged between concealment of psychache and social support, and the remaining variables that were included in Study 3.

Second, I conducted correlation analyses for each of the two conditions: high social support and low social support to examine how they related to one another by condition (see Table 5 and Table 6). The correlations among the Self-Concealment Scale and the subcomponents of the Perfectionistic Self-Presentation Scale were higher in the low social support condition. Additionally, concealment of psychache correlated more strongly with the measures from Study 3 in the low compared to the high social support condition. Furthermore, I included the Beck Scale for Suicide Ideation and its two
Table 3
*Independent Samples t-tests Across High (n = 106) and Low (n = 102) Social Support Conditions*

<table>
<thead>
<tr>
<th>Condition</th>
<th>Condition</th>
<th>M</th>
<th>SD</th>
<th>t</th>
<th>Cohen’s d</th>
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</thead>
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<td>Social support</td>
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<td>2.30*</td>
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</tr>
<tr>
<td></td>
<td>Low Social Support</td>
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<td>15.87</td>
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<td>Self-concealment</td>
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<td>9.94</td>
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<tr>
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<td>Low Social Support</td>
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<tr>
<td>Perfectionistic self-presentation</td>
<td>High Social Support</td>
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<td>.28</td>
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<td>Nondisplay of imperfection</td>
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<td>12.63</td>
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<td>Low Social Support</td>
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<td>Nondisclosure of imperfection</td>
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<td>Low Social Support</td>
<td>25.48</td>
<td>7.26</td>
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*Significant at the p < .05 level
Table 4
Correlations of Study 3 Measures (N = 208)

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<td>2. Perfectionistic self-promotion</td>
<td>.39***</td>
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<td></td>
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<tr>
<td>3. Nondisplay of imperfection</td>
<td>.61***</td>
<td>.77***</td>
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<tr>
<td>4. Nondisclosure of imperfection</td>
<td>.59***</td>
<td>.70***</td>
<td>.71**</td>
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*Significant at the $p < .05$ level
**Significant at the $p < .01$ level
*** Significant at the $p < .001$ level

Note. Correlations of .1, .3, and .5 represent small, medium, and large effect sizes, respectively.
Table 5

**Correlations of High Social Support Condition (n = 106)**

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*Significant at the p < .05 level
**Significant at the p < .01 level
***Significant at the p < .001 level

*Note.* Correlations of .1, .3, and .5 represent small, medium, and large effect sizes, respectively.
Table 6

Correlations of Low Social Support Condition (n = 102)

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<td>.42***</td>
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</table>

*Significant at the $p < .05$ level
**Significant at the $p < .01$ level
***Significant at the $p < .001$ level

Note. Correlations of .1, .3, and .5 represent small, medium, and large effect sizes, respectively.
subscales, motivation and preparation, in the correlation matrices, because as mentioned prior, suicide ideation has strong relationships to all of the measures that were included in Study 3. The relationship between the Beck Scale for Suicide Ideation and the personality measures was attenuated in the high social support condition. This pattern also held for the motivation and preparation subscales of the Beck Scale for Suicide Ideation and the personality traits. Many of the relationships were non-significant in the high social support condition. Finally, the relationship between the Multidimensional Scale of Perceived Social Support and the Self-Concealment Scale was attenuated in the low social support condition, however, it was stronger amongst the subcomponents of the Perfectionistic Self-Presentation Scale in the low social support condition.

**Regression Analysis**

I conducted a regression to test whether my hypothesis that higher levels of social support would be predictive of lower levels of concealment of psychache was supported. The regression equation was significant, $R^2 = .37, F(1, 206) = 32.78, p < .001$, and as expected, social support was significantly related to concealment of psychache, $\beta = -.37, t(206) = -5.73, p < .001$.

**Moderated Regressions**

My proposed analyses were moderated regressions using effects coding for high and low social support conditions as the independent variable. Using the dichotomous variable did not yield significant results; however, given that participants differed

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2 Because concealment of psychache was significantly correlated with gender for the low social support condition, all regression analyses were also analyzed with the inclusion of gender as a covariate, however, this did not result in any change in the interpretations of the regression analyses.
significantly on the Multidimensional Scale of Perceived Social Support across the two conditions, I also ran regression analyses with the continuous social support variable as the independent variable instead.

First, I ran a moderated regression to examine if the relationship between concealment of psychache and social support was moderated by self-concealment, using standardized variables to assist in the interpretation of the results. Self-concealment was not a significant moderator of social support on concealment of psychache, $\beta = .07$, $t(204) = 1.17$, $p = .24$. However, self-concealment and social support were both significant predictors of concealment of psychache, and $\beta = .35$, $t(204) = 5.41$, $p < .001$ and $\beta = -.23$, $t(204) = -3.56$, $p < .001$, respectively.

Second, I ran a moderated regression to examine if the relationship between concealment of psychache and social support was moderated by perfectionistic self-promotion, using standardized variables to assist in the interpretation of the results. Perfectionistic self-presentation was a significant moderator of social support on concealment of psychache, $\beta = .15$, $t(204) = 2.59$, $p = .01$. To follow up the significant interaction, I ran simple slope analyses at high, moderate, and low levels of perfectionistic self-promotion. At moderate and low levels of perfectionistic self-presentation, higher levels of social support were associated with lower levels of concealment of psychache, $\beta = -.27$, $t(204) = -4.43$, $p < .001$ and $\beta = -.42$, $t(204) = -4.91$, $p < .001$, respectively. However, social support was not associated with concealment of psychache at high levels of perfectionistic self-promotion, $\beta = -.13$, $t(204) = .08$, $p = .124$.

Third, I ran a moderated regression to examine if the relationship between concealment of psychache and social support was moderated by nondisplay of
imperfection, using standardized variables to assist in the interpretation of the results. Nondisplay of imperfection was not a significant moderator of social support on concealment of psychache, $\beta = .09$, $t(204) = 1.59$, $p = .14$. However, nondisplay of imperfection and social support were both significant predictors of concealment of psychache, and $\beta = .43$, $t(204) = 6.66$, $p < .001$ and $\beta = -.21$, $t(204) = -3.39$, $p = .001$, respectively.

Fourth, I ran a moderated regression to examine if the relationship between concealment of psychache and social support was moderated by nondisclosure of imperfection, using standardized variables to assist in the interpretation of the results. Nondisclosure of imperfection was a significant moderator of social support on concealment of psychache, $\beta = .13$, $t(204) = 2.39$, $p = .018$. To follow up the significant interaction, I ran simple slope analyses at high, moderate, and low levels of perfectionistic self-promotion. At moderate and low levels of nondisclosure of imperfection, higher levels of social support were associated with lower levels of concealment of psychache, $\beta = -.16$, $t(204) = -2.56$, $p < .011$ and $\beta = -.29$, $t(204) = -3.38$, $p = .001$, respectively. However, social support was not associated with concealment of psychache at high levels of nondisclosure of imperfection, $\beta = -.30$, $t(204) = .08$, $p = .709$, again.

Discussion

The primary goal of Study 3 was to examine if describing past experiences of social support reduced concealment of psychache, in particular, for individuals who are higher in self-concealment and perfectionistic self-presentation. This hypothesis was not supported. Using the dichotomous variable that represented the two conditions, low social
support and high social support, as the independent variable did not yield significant findings in the proposed regression analyses. More specifically, in each moderation analysis with the dichotomous variable, although the main effect for each personality trait was significant (all p values < .001), the main effect for the dichotomous variable was not significant in any of the moderation analyses. However, a similar, but weaker, pattern to the analyses with the continuous social support measure occurred. In terms of the interaction effects, the pattern for perfectionistic self-promotion was similar, but weaker (β = .14, t(204) = 1.15, p = .25), however, the relationship was essentially absent for nondisclosure of imperfection (β = .02, t(204) = .13, p = .89). Overall, it is not surprising that the dichotomous variable demonstrates weaker effects, because it was only measuring the lab experience, whereas the continuous social support variable assessed both the experimental situation and background experience associated with social support. It was unexpected that the interaction effect for nondisclosure of imperfection with the dichotomous variable was not simply weakened, rather was absent. However, the results of the t-tests indicate that nondisclosure of imperfection demonstrated the weakest effect size for differences across the two conditions, thus, the effect was not as strong for that trait as it was for self-concealment, perfectionistic self-promotion, and nondisplay of imperfection.

As discussed previously, I believe the experimental manipulation was successful because the two groups differed significantly on the Multidimensional Scale of Perceived Social Support, the Self-Concealment Scale, and each of the subscales of the Perfectionistic Self-Presentation Scale. It is worth noting that the effect sizes for these measures fell in the small to medium range. The Multidimensional Scale of Perceived
Social Support (Cohen’s $d = .10$) demonstrated a small effect size; the Self-Concealment Scale (Cohen’s $d = .28$), the Perfectionistic Self-Presentation subscale (Cohen’s $d = .28$), the Nondisplay of Imperfection subscale (Cohen’s $d = .28$), and the Nondisclosure of Imperfection subscale (Cohen’s $d = .22$), demonstrated small to medium effect sizes. Moreover, the two groups did not differ significantly by sex or age, suggesting that randomization was successful. There are limitations to conducting regression analyses with dichotomous rather than continuous variables (Donner & Eliasziw, 1994), and because the two groups did differ significantly on the Multidimensional Scale of Perceived Social Support, that was used as the independent variable instead.

Two of the subcomponents of the Perfectionistic Self-Presentation Scale significantly moderated social support and concealment of psychache. At low and moderate levels of perfectionistic self-promotion and nondisclosure of imperfection, lower levels of social support were associated with higher levels of concealment of psychache. This suggests that higher levels of social support may reduce concealment of psychache in individuals who are low or moderate on perfectionistic self-presentation as well as individuals who are low or moderate on nondisclosure of imperfection. This finding aligns with prior research (e.g., Johnson et al., 2011) that conceptualizes social support as a buffer or a protective factor against suicide ideation.

Contrary to my hypothesis, neither the Self-Concealment Scale nor the Nondisplay of Imperfection subscale significantly moderated the relationship between social support and concealment of psychache. In other words, differing levels of self-concealment and nondisplay of imperfection did not affect the relationship between social support and concealment of psychache. Moreover, I expected that high levels of the traits
would moderate the relationship between social support and concealment of psychache, however, this was not true for self-concealment or any of the subcomponents of perfectionistic self-presentation.

As mentioned prior, individuals high on self-concealment are believed to experience an approach-avoidance conflict in regards to help-seeking behaviour (Cramer, 1999; Larson et al., 2015). Perhaps a similar approach-avoidance conflict occurs in situations involving social support, such that although they are distressed and in need of support from others, their disposition is to conceal their need, which may be a possible explanation for why at high levels, self-concealment was not a significant moderator between social support and concealment of psychache. In terms of perfectionistic self-presentation, it may be that individuals who are high on these traits enact their disposition to withhold such negative feelings and thoughts, regardless of perceived social support. Indeed, individuals high on the Perfectionistic Self-Promotion subscale, may feel a need to display themselves in an overly positive manner, perhaps even believing that in order to maintain social support they must continue to display only positive thoughts and feelings to others. Similarly, individuals higher on the Nondisclosure of Imperfection subscale may also be motivated to conceal negative thoughts and feelings from others, even when surrounded by those who are perceived as willing and able to help in times of need. Nondisplay of imperfection refers to concerns over looking foolish and attempts to appear competent to others. Again, high levels of nondisplay of imperfection may not moderate the relationship because concerns with not looking ‘foolish’ and appearing ‘competent’ dominate, and concealing psychache from others aids in this process.

Although a strong desire to conceal negative thoughts, feelings, and actions from
others may explain why high levels of the all of the traits did not significantly moderate the relationship, it is less clear why low and moderate levels of self-concealment and nondisplay of imperfection did not demonstrate the same pattern as perfectionistic self-promotion and nondisclosure of imperfection, particularly given the similarities across the traits. One possible explanation surrounds the conceptualization of perfectionism as a two-dimensional construct, consisting of perfectionistic strivings and perfectionistic concerns, as discussed previously. Although research suggests that perfectionistic self-promotion is more highly correlated with perfectionistic strivings, whereas nondisplay of imperfection and nondisclosure of imperfection are more highly correlated with perfectionistic concerns, nondisplay of imperfection is also related to perfectionistic strivings (Stoeber & Damian, 2014). I would argue it shares more similarities to perfectionistic strivings than it does to perfectionistic concerns (e.g., demanding perfection of oneself: “It is okay to show others that I am not perfect (reverse coded)”; high personal standards: “I should solve my own problems rather than admit them to others”). In other words, perfectionistic self-promotion and nondisclosure of imperfection may belong to distinct constructs, and this may provide some insight into why they are significant moderators, whereas nondisplay of imperfection is not. Moreover, although not a perfectionism construct, self-concealment would likely be more closely related to perfectionistic concerns than it would be to perfectionistic strivings (e.g., doubts about one’s actions: “Telling a secret often backfires and I wish I hadn’t told it”; perceiving that others demand perfection from oneself: “If I shared all my secrets with my friends, they’d like me less”).

Although it is possible that these results suggest that social support may not serve
as a protective factor against concealment of psychache for individuals who are high on
self-concealment or perfectionistic self-presentation, there may be some evidence to
suggest it may have an effect. Independent samples t-tests indicated that participants who
were assigned to the high social support condition had significantly lower scores on the
Self-Concealment Scale and all three subscales of the Perfectionistic Self-Presentation
Scale. Thus, although these traits are considered to be quite stable, it appears as though
they are amenable to the social support experimental manipulation. Indeed, Larson and
colleagues (2015) hypothesized that the consistency with which self-concealment
strategies are implemented may be affected by situational factors. Thus, although the
traits did not moderate the relationship between social support and concealment of
psychache at high levels, describing scenarios in which social support was needed and
available appears to reduce concealment and maladaptive perfectionistic tendencies to a
greater degree than describing situations in which social support was needed but was
unavailable.

Interestingly, individuals who reported higher scores on the Multidimensional
Scale of Perceived Social Support were significantly more likely to report lower levels of
concealment of psychache. Thus, social support does seem to serve as a protective factor
against concealing psychache from others, however, this does not necessarily hold true
for individuals higher on self-concealment and perfectionistic self-presentation. It may be
that even if other concealment and maladaptive perfectionistic tendencies are reduced
with the presence of social support, that support is not sufficient to reduce concealment of
psychache in those individuals. Perhaps concealment of such negative thoughts and
feelings is still maintained under such circumstances by individuals higher on self-
concealment and perfectionistic self-presentation.

Finally, many of the correlations among the measures were attenuated in the high, compared to the low, social support condition. For instance, the correlations among the Self-Concealment Scale and the subcomponents of the Perfectionistic Self-Presentation Scale were higher in the low social support condition, which aligns with the outcome of the t-tests that indicated the traits were affected by the experimental manipulation. In regards to the Beck Scale for Suicide Ideation, the correlations with the personality traits were attenuated in the high social support condition. This pattern also held for each of the subscales of the Suicide Ideation Scale and the personality traits. Thus, not only did describing social support scenarios affect scores on the personality traits, it also affected their relationship to suicide ideation scores. This further lends itself to the conceptualization of perceived social support serving as a protective factor against suicide. Additionally, it is worth noting that similar patterns to Study 2 emerged when examining the correlations across Study 3. Interestingly, perfectionistic self-promotion was also not significantly related to suicide ideation in Study 3. Perhaps the active avoidance of displaying and disclosing imperfection are of greater relevance to studying and assessing risk for suicide than the active presentation of perfection. Additionally, perhaps examining the role of perfectionistic strivings and perfectionistic concerns (Stoeber & Damian, 2014) as well as the role of self-regulatory focus (Higgins, 1997) would be useful in detecting the contrast between perfectionistic self-promotion and nondisplay of imperfection and nondisclosure of imperfection.

Limitations

Study 3 was not without its limitations. First, although the experimental
manipulation affected scores on self-concealment and perfectionistic self-presentation, concealment of psychache scores were not significantly different across the two conditions. Moreover, using the dichotomous variable as the independent variable in the moderated regression did not yield significant findings. Thus, perhaps the manipulation was not sufficiently strong and future research should aim to improve upon it. Second, the original Psychache Scale was not included in this study, however, its inclusion may have been informative because perhaps psychache itself would have been moderated by the personality traits. Third, it remains unclear what may serve as a protective factor against concealment of psychache for individuals higher on self-concealment and individuals higher on perfectionistic self-presentation. A lack of trust has been found to be a barrier to disclosing suicide ideation to mental health practitioners (e.g., Ganzini et al., 2013). In other words, perhaps feeling that the individual who is being confided in can be trusted to maintain confidentiality is an important component to increase willingness to reveal suicide ideation (Ganzini et al., 2013) and psychache. This is linked to social support in that, naturally, it is important to have someone to discuss these issues with, but perhaps also ensuring there is a sufficient level of trust is needed as well. Thus, future research should be directed toward unmasking potential factors, including concepts related to trust, that may be most useful at reducing concealment of psychache for such individuals.

**Conclusions**

Although social support is considered to have buffering effects and has many beneficial effects on individuals, it is perhaps not the most useful construct for individuals higher on self-concealment and individuals higher on perfectionistic self-
presentation in reducing concealment of psychache. It may be that the tendency to conceal or actively avoid displaying or disclosing imperfection to others overrides potential buffering effects that social support may generate. In other words, social support may not be the most effective means of reducing the dissembling or concealment of psychache in these individuals. Thus, it is important that future research examine other factors that may prove to be useful strategies for such individuals to implement in order to not only reduce suicide ideation, but also to reduce the concealment of psychache from others, especially from those who may be in a position to help.
Chapter 5: General Discussion

Over 20 years ago, Shneidman (1994) discussed the role of dissembling in suicide, emphasizing the difficulty associated with identifying individuals who disguise, mask, or conceal clues of suicide from those around them. The current research provides valuable insight into individuals high on self-concealment and individuals high on perfectionistic self-presentation, who are prone to dissembling. In particular, the current research highlights the tendency such individuals possess towards concealing their psychache from others.

First, the results of Study 1 indicated that not only do individuals higher on self-concealment, individuals higher on nondisplay of imperfection, and individuals higher on nondisclosure of imperfection report higher levels of psychache, they are also significantly more likely to report concealment of psychache from others. In other words, these individuals report higher levels of psychological distress and pain, yet they conceal that from others, suggesting that they are more likely to engage in dissembling.

Second, the results of Study 2 demonstrated that concealment of psychache significantly mediates the relationship between self-concealment, between nondisplay of imperfection, between nondisclosure of imperfection, and suicide ideation. Essentially, concealment of psychache helps to explain the relationship between increased suicide ideation for individuals who are higher on these traits. Concealing psychache from others potentially increases suicide ideation, perhaps because the psychological distress is not being addressed either in an informal (e.g., with family or friends) or in a formal context (e.g., mental health practitioner, doctor).

Third, the results of the final study suggest that social support serves as a
protective factor against concealment of psychache for individuals who report low or moderate scores on the Perfectionistic Self-Promotion subscale of the Perfectionistic Self-Presentation Scale. The same pattern occurs for individuals who report low or moderate levels on the Nondisclosure of Imperfection subscale. This pattern does not emerge for individuals who are high on self-concealment or for individuals who are high on nondisclosure of imperfection. This suggests that differing levels (i.e., low, moderate or high) of self-concealment and nondisclosure of imperfection may not impact the relationship of social support on concealment of psychache. Moreover, it is worth noting that the relationship was not moderated at high levels of self-concealment or high levels of any of the three subcomponents of perfectionistic self-presentation. Individuals higher on self-concealment and perfectionistic self-presentation are reluctant to share their negative feelings and thoughts with others, thus disclosing psychache to others is likely especially difficult for them to do. Although individuals higher on self-concealment experience higher levels of psychological distress than individuals who are lower on self-concealment, it is hypothesized that they experience an approach-avoidance conflict wherein they wish to seek help, yet their negative attitudes towards help-seeking interfere with their willingness to reach out to others, especially seeking help from mental health practitioners (Larson et al., 2015). Perhaps a similar conflict occurs for individuals high on perfectionistic self-presentation.

In sum, individuals higher on self-concealment, individuals higher on nondisplay of imperfection, and individuals higher on nondisclosure of imperfection are more likely to report psychache as well as concealment of psychache. Moreover, concealment of psychache mediates the relationship between these traits and suicide ideation. Finally,
social support leads to lower levels of concealment of psychache at low and at moderate levels of perfectionistic self-promotion and at low and at moderate, but not high, levels of nondisclosure of imperfection. Evidently individuals high on self-concealment and perfectionistic self-presentation are highly reluctant to disclose their psychological distress to others, even when social support is high. Thus, taken together, the results of the three studies indicate that self-concealment and perfectionistic self-presentation are tightly linked to suicide ideation and psychache, and concealment of psychache appears to be of utmost importance to unraveling and understanding that link.

However, some of the results presented in the current research were more difficult to interpret. For instance, social support only mediated the relationship between nondisclosure of imperfection and suicide ideation. Much research indicates that social support can serve as a protective factor against suicide related behaviours (Johnson et al., 2011), thus the finding is not surprising. It is somewhat surprising that the same pattern did not emerge for self-concealment and nondisplay of imperfection. However, in Study 3, self-concealment and nondisplay of imperfection did not significantly moderate the relationship between social support and concealment of psychache. Thus, perhaps the interaction and relationship of self-concealment and nondisplay of imperfection with social support, suicide ideation, and concealment of psychache, are indeed distinct from that of nondisclosure of imperfection. The desire to conceal secrets or thoughts from others for individuals high on self-concealment may override the tendency to rely on their friends and family for support, reducing the potential benefits it may afford them in reducing their psychological distress. In terms of nondisplay of imperfection, the tendency to avoid making mistakes or looking foolish in front of others may also prevent
those individuals from experiencing a willingness to share their feelings and thoughts for fear of being perceived negatively by others, thus failing to reap the benefits social support may afford them.

The results of the current research indicate that perceived social support impacts suicide related concepts, but exactly how this process occurs as well as how it can serve as a protective factor against concealment of psychache for individuals higher on these personality traits is yet to be determined. The social support manipulation in Study 3 affected participants’ scores on the Self-Concealment Scale and the Perfectionistic Self-Presentation Scale, suggesting that social support does have the ability to affect some of the related behaviours and/or tendencies that are common for individuals who are high on these traits. Moreover, correlation analyses indicated that the relationship between suicide related concepts (i.e., concealment of psychache, suicide ideation) and the personality traits were stronger when participants were assigned to the low social support condition. Taken together, the results of Study 2 and Study 3 suggest that the role of social support in individuals high on self-concealment and individuals high on perfectionistic self-presentation in concealment of psychache is complex.

Another finding that posed a challenge to interpret was the Perfectionistic Self-Promotion subscale of the Perfectionistic Self-Presentation Scale. First, in Study 1, the subscale was not a significant unique predictor of psychache. Although this relationship, to my knowledge, has not yet been tested, it has been hypothesized that it should be related to psychache (Flett & Hewitt, 2013). Furthermore, nondisplay of imperfection and nondisclosure of imperfection were significant predictors of psychache, thus it was unexpected that perfectionistic self-promotion was not, given the three are considered to
be components of perfectionistic self-presentation and are highly interrelated. Moreover, the Perfectionistic Self-Promotion subscale was negatively related to concealment of psychache whereas self-concealment, nondisplay of imperfection, and nondisclosure of imperfection were positively related. Second, in Study 2, the subscale was not significantly correlated with suicide ideation, which runs contrary to research by Roxborough and colleagues (2012).

Additionally, in Study 3, the subscale also did not correlate significantly with suicide ideation. However, the correlations were also examined by the two social support conditions, and interestingly, the subscale was significantly correlated with suicide ideation in the low, but not in the high social support condition. In Study 3, perfectionistic self-promotion was a significant moderator of the relationship between social support and concealment of psychache. Nondisclosure of imperfection was also a significant moderator and the two revealed the same pattern, however, interpretation of the Perfectionistic Self-Promotion subscale is difficult because the relationship that emerged was inconsistent with the lack of a relationship between the subscale and suicide related concepts throughout the current research. In other words, it is difficult to draw a solid conclusion surrounding the subscale’s relationship to suicide related concepts. It does appear that the subscale is not as closely linked to suicide as self-concealment, nondisplay of imperfection, and nondisclosure of imperfection. Again, perhaps Higgins (1997) self-regulatory process may provide insight into the contrast between perfectionistic self-promotion and nondisplay of imperfection and nondisclosure of imperfection. In other words, perfectionistic self-promotion may be associated with a promotion focus (achievement, accomplishment), whereas nondisplay of imperfection...
and nondisclosure of imperfection may be associated with a prevention focus (safety, security). Additionally, as discussed prior, there appears to be a distinction between attempting to portray an image of perfection (i.e., perfectionistic self-promotion) versus avoiding appearing imperfect (i.e., nondisplay and nondisclosure of imperfection) and concealing negative thoughts and feelings from other (i.e., self-concealment). It may be that this distinction is a relevant one within the context of suicide. For instance, individuals who are high on suicide ideation and/or psychache are more likely to be experiencing elevated levels of hopelessness (Brown et al., 2000) and depression (Thomson, 2012), thus for those individuals who are also high on self-concealment and perfectionistic self-presentation, more energy and effort may be focused on concealing the negative, rather than promoting a positive image, a task which may be much more taxing for those individuals.

Finally, the relationship between social support and concealment of psychache was significant at low and moderate levels of perfectionistic self-promotion and low and moderate levels of nondisclosure of imperfection. However, differing levels of self-concealment and nondisplay of imperfection did not affect the relationship between social support and concealment of psychache. Moreover, contrary to expectations, high levels of the four traits did not significantly moderate the relationship between social support and concealment of psychache. Although a strong desire to conceal negative thoughts, feelings, and actions from others may explain why high levels of the traits do not significantly moderate the relationship between social support and concealment of psychache, it is less clear why low and moderate levels of self-concealment and nondisplay of imperfection did not demonstrate the same pattern as perfectionistic self-
promotion and nondisclosure of imperfect, given the similarities across the traits. One possible explanation that has been offered is that nondisclosure of imperfection shares more similarities to perfectionistic strivings than it does to perfectionistic concerns, and that perhaps perfectionistic self-promotion and nondisclosure of imperfection belong to a different construct than nondisplay of imperfection does. Moreover, although not a perfectionism construct, it is also possible that self-concealment could be more closely related to perfectionistic concerns than it would be related to perfectionistic strivings. Thus, if self-concealment and nondisplay of imperfection are more aligned with perfectionistic concerns, other factors dominate, such as a concern with making mistakes and doubts surrounding one’s own actions (Stoeber & Damian, 2014), which may interact with social support and concealment of psychache differently.

Limitations & Future Directions

First, although there are many advantages to using a low suicide risk population for the current research, it is important to examine these relationships with a high-risk group to ensure similar patterns emerge. Research with a high-risk and/or clinical population should be conducted. If similar findings emerge, it would suggest that there is merit to utilizing the Self-Concealment Scale and the Perfectionistic Self-Presentation Scale in clinical assessments. Doing so could aid in identifying individuals who are prone to or who are indeed dissembling.

Second, the current research examined suicide ideation, however, it did not focus on suicide attempts or death by suicide. Suicide ideation is not necessarily a precise proxy for suicide attempts and death by suicide (Holden & Kroner, 2003). For instance, although a prior suicide attempt is associated with death by suicide, many individuals
who die by suicide had no prior suicide attempt (Rudd et al., 1996). Furthermore, it has been argued that suicide is a multidimensional construct that involves both negative cognitions (e.g., suicide ideation, depression, hopelessness) and action orientation (e.g., previous suicide attempts, future intentions), whereas suicide ideation may only be associated with negative cognitions (Holden & Johns, 1997; Holden & Kroner, 2003). Thus, it is important that future research examine self-concealment and perfectionistic self-presentation within the context of suicide attempts as well as death by suicide. However, suicide ideation is often a precursor to suicide attempts and/or death by suicide (Beck et al., 1979), as well as an important mental health issue, thus research examining suicide ideation remains an important contribution to the literature.

Third, all three studies were cross-sectional in nature, which limits the ability to interpret causal relationships, assess temporal ordering of variables (Mathieu & Taylor, 2002), and reduce biases (Maxwell & Cole, 2007). Conducting a study using a longitudinal design would improve upon the ability to interpret causal relationships and better understand the relationship between self-concealment, perfectionistic self-presentation, social support, concealment of psychache, and suicide ideation. Moreover, future research should examine the mediation model using an experimental design.

Fourth, although social support mediated the relationship between nondisclosure of imperfection and suicide ideation, it was unexpected that it did not mediate the relationship between self-concealment or nondisplay of imperfection and suicide ideation. Future research should examine the specific ways in which self-concealment, perfectionistic self-promotion, nondisplay of imperfection, and nondisclosure of imperfection differ. For example, it would be useful to examine the way in which the
three subcomponents of perfectionistic self-presentation can be categorized based on the two-dimensional approach to perfectionism. A better understanding of how each component differs may provide insight into the exact role each one plays in suicide related concepts as well as the ways social support interacts with each of them. There may be very specific social support interventions or strategies that would be effective for individuals high on self-concealment and perfectionistic self-presentation, but it may be that optimal strategies differ across self-concealment as well as across each subcomponent of perfectionistic self-presentation. For instance, perhaps possessing social support is insufficient unless trust is present in those relationships and trust may be a factor that contributes to reducing concealment of psychache (Ganzini et al., 2013).

Future research should deconstruct the relationship between self-concealment perfectionistic self-presentation, social support, and suicide related concepts to determine if there are particular strategies that would be useful in reducing dissembling, with the goal of decreasing concealment of psychache, ultimately, diminishing overall psychache.

Finally, from a research perspective, including self-concealment and perfectionistic self-presentation in suicide related studies will not only provide a clearer understanding of the role the two personality traits play in suicide, but will also be informative for identifying intervention strategies that will assist these individuals. Identifying these individuals is the first step, but the current research also suggests that they may also require interventions that are tailored to reduce their tendency to conceal or mask their psychological distress. Future research can help in identifying what these potential interventions may be.
Practical Applications

As mentioned prior, having clients or patients complete the Self-Concealment Scale and Perfectionistic Self-Presentation Scale may be an important means of identifying individuals who are dissembling. A client or patient who is high on either or both traits will likely (a) be holding negative attitudes towards mental health help-seeking, (b) withholding important and pertinent information, (c) be experiencing high levels of psychological distress. Ensuring the mental health practitioner is aware that the individual is high on these traits would be beneficial, because they will be aptly attuned to the specific difficulties these individuals face and may recognize that certain strategies will be more effective than others in promoting a space where the client or patient will becoming more willing to disclose.

Conclusions

The results of the current research underscore the importance of not only identifying, but also continuing to research self-concealment and perfectionistic self-presentation within the context of suicide. Suicide is a grave societal problem, occurring at alarming rates (National Institute of Mental Health, 2009) and increasing rates (National Center for Health Statistics, 2016). Fortunately, many interventions exist to help individuals who come forward. Individuals higher on self-concealment and individuals higher on perfectionistic self-presentation are often masking or concealing their psychological distress from others. Thus, an important first step is to identify these individuals, because those who seek mental health treatment, may still be concealing suicide related thoughts and psychological distress from mental health practitioners. The development and identification of strategies and interventions for reducing concealment
of psychache in individuals high on self-concealment and individuals high on perfectionistic self-presentation is an important next step. However, it cannot be emphasized enough that the psychological distress of these individuals often remains hidden or disguised from those around them, and future research and clinical work surrounding identifying and treating these individuals should be a priority.
References


doi:10.1016/j.paid.2008.05.001


doi:10.1037//1082-989X.7.4.422


APPENDIX A: Measures
Psychache Scale

The following statements refer to your psychological pain, not your physical pain. By selecting the appropriate number, please indicate how frequently each of the following occurs.

<table>
<thead>
<tr>
<th>Never</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

1. I feel psychological pain.
2. I seem to ache inside.
3. My psychological pain seems worse than any physical pain.
4. My pain makes me want to scream.
5. My pain makes my life seem dark.
6. I can’t understand why I suffer.
7. Psychologically, I feel terrible.
8. I hurt because I feel empty.

Please continue this inventory using the following scale:

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Unsure</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

10. I can’t take my pain any more.
11. Because of my pain, my situation is impossible.
12. My pain is making me fall apart.

---

Modified Psychache Scale I

The following statements refer to your psychological pain, not your physical pain. By selecting the appropriate number, please indicate how frequently you conceal or hide the following from other:

<table>
<thead>
<tr>
<th>Never conceal from others</th>
<th>Sometimes conceal from others</th>
<th>Often conceal from others</th>
<th>Very often conceal from others</th>
<th>Always conceal from others</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

1. I feel psychological pain.
2. I seem to ache inside.
3. My psychological pain seems worse than any physical pain.
4. My pain makes me want to scream.
5. My pain makes my life seem dark.
6. I can’t understand why I suffer.
7. Psychologically, I feel terrible.
8. I hurt because I feel empty.
10. I can’t take my pain any more.
11. Because of my pain, my situation is impossible.
12. My pain is making me fall apart.
Modified Psychache Scale II

The following statements refer to your psychological pain, not your physical pain. By selecting the appropriate number, please indicate how much you would feel like concealing or hiding each of the following from other people RIGHT NOW in the present moment:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. If I feel psychological pain.</td>
<td>1-5</td>
</tr>
<tr>
<td>2. If I seem to ache inside.</td>
<td></td>
</tr>
<tr>
<td>3. If my psychological pain seems worse than any physical pain.</td>
<td></td>
</tr>
<tr>
<td>4. If my pain makes me want to scream.</td>
<td></td>
</tr>
<tr>
<td>5. If my pain makes my life seem dark.</td>
<td></td>
</tr>
<tr>
<td>6. If I can’t understand why I suffer.</td>
<td></td>
</tr>
<tr>
<td>7. If psychologically, I feel terrible.</td>
<td></td>
</tr>
<tr>
<td>8. If I hurt because I feel empty.</td>
<td></td>
</tr>
<tr>
<td>9. If my soul aches.</td>
<td></td>
</tr>
</tbody>
</table>

Please continue this inventory using the following scale. Remember, indicate the degree to which you want to conceal or hide the following from others RIGHT NOW in the present moment:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>10. If I can’t take my pain any more.</td>
<td>1-5</td>
</tr>
<tr>
<td>11. If, because of my pain, my situation is impossible.</td>
<td></td>
</tr>
<tr>
<td>12. If my pain is making me fall apart.</td>
<td></td>
</tr>
<tr>
<td>13. If my psychological pain affects everything I do.</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX B: Research Ethics Board Approval
January 25, 2016

Miss Madeleine D'Agata
Ph.D. Candidate
Department of Psychology
Queen's University
Kingston, ON, K7L 3N6

GREB Ref #: GPSYC-740-15; Romeo # 6017113
Title: "GPSYC-740-15 The Role of Self-concealment & Perfectionistic Self-presentation in Suicide"

Dear Miss D'Agata:

The General Research Ethics Board (GREB), by means of a delegated board review, has cleared your proposal entitled "GPSYC-740-15 The Role of Self-concealment & Perfectionistic Self-presentation in Suicide" for ethical compliance with the Tri-Council Guidelines (TCPS 2 (2014)) and Queen's ethics policies. In accordance with the Tri-Council Guidelines (Article 6.14) and Standard Operating Procedures (405.001), your project has been cleared for one year. At the end of each year, the GREB will ask if your project has been completed and if not, what changes have occurred or will occur in the next year.

You are reminded of your obligation to advise the GREB of any adverse event(s) that occur during this one year period (access this form by signing at http://www.queensu.ca/traq/signon.html; click on "Events"; under "Create New Event" click on "General Research Ethics Board Adverse Event Form"). An adverse event includes, but is not limited to, a complaint, a change or unexpected event that alters the level of risk for the researcher or participants or situation that requires a substantial change in approach to a participant(s). You are also advised that all adverse events must be reported to the GREB within 48 hours.

You are also reminded that all changes that might affect human participants must be cleared by the GREB. For example you must report changes to the level of risk, applicant characteristics, and implementation of new procedures. To submit an amendment form, access the application by signing at http://www.queensu.ca/traq/signon.html; click on "Events"; under "Create New Event" click on "General Research Ethics Board Request for Amendment of Approved Studies". Once submitted, these changes will automatically be sent to the Ethics Coordinator, Ms. Gail Irving, at the Office of Research Services for further review and clearance by the GREB or GREB Chair.

On behalf of the General Research Ethics Board, I wish you continued success in your research.

Sincerely,

John Freeman, Ph.D.
Chair
General Research Ethics Board

c: Dr. Ronald Holden, Faculty Supervisor
   Dr. Stanka Fitneva, Chair, Unit REB
   Ms. Marie Tooley, Dept. Admin.
Dear Miss D’Agata:

RE: Amendment for your study entitled: GPSYC-740-15 The Role of Self-concealment & Perfectionistic Self-presentation in Suicide; ROMEO# 6017113

Thank you for submitting your amendment requesting the following changes:

1) To include an experimental manipulation of social support;

2) Updated Attachments (v. 2016/05/25):
   a) Letter of Information and Consent Form;
   b) Mechanical Turk Ad;
   c) Debriefing Letter;
   d) Social Support Conditions;
   e) Demographics;
   f) The Modified Psychache Scale II;
   g) The Self-Concealment Scale;
   h) The Perfectionistic Self-Presentation Scale;
   i) The Psychache Scale;
   j) The Beck Scale for Suicide Ideation; and
   k) The Multidimensional Scale of Perceived Social Support.

By this letter you have ethics clearance for these changes.

Good luck with your research.

Sincerely,

John Freeman, Ph.D.
Chair
General Research Ethics Board

c.: Dr. Ronald Holden, Supervisor