Generalized Anxiety Disorder and Psychological Distress in a Canadian Adult Sample:

Exploring the Role of Social Support

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Abstract

In the literature, there have been limited studies examining the relationship between social support and psychological distress in individuals with generalized anxiety disorder (GAD). Utilizing a sample of 1956, 25 to 64 year-old respondents from the Canadian Community Health Survey – Mental Health (CCHS-MH, 2012) who self-reported GAD diagnosed by a health care provider, the present study examined levels of social support (as measured by the Social Provisions Scale (SPS)), and psychological distress (as indicated by the Kessler Psychological Distress Scale (K10)), and explored the degree to which SPS subtypes predicted psychological distress in those with GAD overall, and men and women separately.

When compared with the general CCHS-MH sample, adults with GAD had significantly higher levels of psychological distress, and lower SPS levels overall, as well as for each subtype (i.e., guidance, reliable alliance, reassurance of worth, attachment, and social integration). Interestingly, comparisons between men and women with GAD revealed that while there was no difference in psychological distress, men scored significantly lower in overall SPS scores, as well as for each subtype.

When SPS subtypes were regressed onto psychological distress, social integration and income were both inversely associated for both men and women reporting GAD. Reassurance of worth predicted lower distress and reliable alliance predicted higher for men, while guidance predicted lower distress for women. Future directions and implications of the current findings are discussed.

Keywords: generalized anxiety disorder, social support, psychological distress, gender differences

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Generalized anxiety disorder (GAD) is the most reported anxiety disorder in primary care settings (Davidson et al., 2010) with a lifetime prevalence estimated to be between 2.4-5.7% (Bereza et al., 2009), and an average age of onset of 26.6 years (McLean, et al., 2011). GAD symptoms tend to persist six months or more, may involve restlessness, fatigue, difficulty concentrating, irritability, muscle tension and sleep disturbances, and are typically paired with excessive anxiety and worry that is out of proportion in intensity and duration to the actual threat involved (American Psychiatric Association, 2013). Individuals living with anxiety disorders such as GAD are also more likely to suffer a poorer quality of life (QOL), and experience problems with social interactions, increased somatic symptoms, and a poor mental health status (Olatunji et al., 2007).

Those with a GAD diagnosis often do not initially seek out mental health services, but rather a primary practitioner for somatic symptoms such as indigestion, muscle tension, fatigue, and irritability (Allgulander, 2012). In addition, the cognitive dysfunction and somatic complications due to the anxiety may also cause impairments in working, leisure, and relationships. Sufferers may also experience distortions in perceptions of risk, and threats to themselves and those close to them (Allgulander, 2012). For instance, individuals with GAD may ruminate over past failures and endure strong feelings of guilt or worry unnecessarily about tragedies that may occur (Allgulander, 2012). The etiology of GAD is not known. However, there have been suggestions as to why GAD exists. It is thought to be an interplay between genetics, environmental factors (childhood experiences, somatic disorders, alcohol and substance use and stress in life (Preti et al., 2021)).

GAD and Comorbid Conditions

Having comorbid conditions make the complexity of treatment and functioning harder for the individual. Comorbidities are other health conditions a person has in conjunction with the condition at hand (Valderas et al., 2009). A diagnosis of GAD or Major Depressive Disorder (MDD) carries much burden and distress and having comorbid conditions has been found to further decrease a person's QOL (Preti et al., 2021). Treatment is more difficult, and having these conditions increases the potential of serious complications such as increased risk for suicide (Bomyea et al, 2013; Reinhold et al., 2011) or increased dependency on alcohol and self-medicating (Culpepper, 2004).

According to the National Comorbidity Survey, 17% of individuals with GAD also have a diagnosis of bipolar disorder (BD; Simon, 2009), where it has been reported that twice as many individuals had at least one suicide attempt, compared to individuals without comorbid BD (Simon, 2009). The National Epidemiologic Survey on Alcohol and Related Conditions has suggested that a 12-month substance use disorder is also more likely to occur when one has a diagnosis of GAD (Simon, 2009; Compton et al., 2007). Further, a longitudinal study of anxiety disorders in primary care settings included 539 primary care patients who were recruited from doctors' offices and medical clinics. There were 15 offices in which data was collected, with 5 being in rural locations and 10 being in urban or suburban areas. Three quarters of the individuals were female, and the average age of the participants was 39.1 years. It was found that 36% of people with GAD also had another anxiety disorder (Rodriguez et al., 2004).

People with comorbid conditions are known to have worse health outcomes and more clinical treatment (Valderas et al., 2009). Having comorbid conditions with GAD make diagnosis and treatment more complex (Simon, 2009). Hoffman and colleagues (2008), in addition, found

that approximately 92% of individuals with DSM-IV GAD had another psychiatric illness

including mood disorders (Simon, 2009). Similarly, the National Comorbidity Survey reported

that 67% of individuals with GAD have MDD, while another study that followed individuals to

the age of 32 found that 72% of individuals with a lifetime diagnosis of GAD also had a lifetime

diagnosis of MDD (Moffitt et al., 2007; Simon, 2009). Wittchen and colleagues (2002) also

found that when they defined impairment as missing at least one day of work within a month,

68% of individuals with GAD or MDD had impairment, and when analyzing comorbid GAD and

MDD, the researchers found that 81% of individuals suffered from impairments (Simon, 2009;

Wittchen et al., 2002).

Due to symptoms and likely comorbidities, individuals with GAD can certainly have

daily functioning difficulties. For example, physiological symptoms associated with GAD, such

as muscle tension and sleep disturbance, slow down one's ability to effectively carry out tasks

and expel unnecessary energy (American Psychiatric Association, 2013). In addition to vitality

level, whereby many experience similar role impairment as individuals with chronic health

conditions such as diabetes, arthritis, and autoimmune disease (Allgulander, 2012), individuals

with GAD also report dissatisfaction with family dynamics and emotional management

(Hoffman et al., 2008).

GAD and Gender

It can be seen on a dimension of internalizing (mood and anxiety)-externalizing

(antisocial and substance use) that people with mental health conditions, such as GAD can fit on

such a continuum, with males and females usually at opposite ends (Eaton et al., 2012). In terms

of gender, it has been generally proposed that males and females tend to differ in terms of the

type of mental health issues in that women have a higher frequency of internalizing disorders

such as anxiety and depression, whereas males tend to experience externalizing disorders such as

substance abuse (e.g., Eaton et al., 2012). Specific to GAD, McLean and colleagues (2011)

found that when dealing with an anxiety disorder, men were more likely to have substance use

disorders. Other studies suggest that women tend to ruminate more frequently, which further

suggests that they suffer from internalizing disorders and tend to have issues with emotion

regulation (Tamres, et al., 2002; Nolen-Hoeksema, 2012; Nolen-Hoeksema & Aldao, 2011). It is

therefore pertinent for professionals designing mental health service interventions to be aware

that the effective treatment of GAD may be gender specific.

In terms of prevalence, it has been observed that women tend to suffer from anxiety

disorders more frequently than men, and that the symptoms can be particularly more difficult to

manage (McLean et al., 2011; Angst & Dobler-Mikola, 1985; Bruce et al., 2005; Regier et al.,

1990). Specifically, compared to men with an anxiety disorder, women report significantly more

ER, urgent care, and doctor visits (McLean et al., 2011), and are also more likely than men to

have a comorbid condition (i.e., 44.8% vs. 34.2%; McLean et al., 2011).

GAD Treatment

Since experiencing a comorbid disorder with GAD can increase a person's risk for

impairment, disability, and suicidality (Simon, 2009), it is likely that such individuals require

more than one type of treatment, including cognitive and biological approaches (Borkovec &

Ruscio, 2001). CBT is a commonly used therapeutic intervention for GAD that has been

effective in decreasing associated psychopathology (Borkovec & Ruscio, 2001). It typically

follows a 4-step process in which the clinician will analyze how an individual might be

perceiving and/or predicting, determine whether such perceptions are based on reality, and where

appropriate, aid in the development of more accurate cognitions when anxiety is experienced (Borkovec & Ruscio, 2001).

Another type of therapy used to treat GAD is integrative therapy. Although CBT has been very effective for individuals struggling with GAD, CBT does not sufficiently follow ways to help individuals with emotional avoidance and interpersonal issues (Newman, 2008). This integrative therapy helps to address this issue. A study by Newman and colleagues (2008) set out to see if integrating CBT with techniques addressing emotional avoidance and interpersonal problems would help individuals with GAD. One group had 14 sessions of CBT plus interpersonal emotional processing therapy and one group had 14 sessions of CBT plus supportive listening. It was found that integrative therapy helped lessen GAD symptoms for up to a year (Newman, 2008).

Pharmacological treatments have also been effective for treating individuals with GAD with up to a 50% therapeutic response (Reinhold et al., 2011). Selective Serotonin Reuptake Inhibitors (SSRIs) and Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs) have been found to be particularly effective pharmacological interventions (Reinhold et al., 2011). Both of these types of drugs have been found to promote their antidepressant and anxiolytic effect by inhibiting the reuptake of the neurotransmitter serotonin and/or norepinephrine at the synaptic cleft. SSRIs have been shown their positive effects in many randomized controlled studies. For short-term and long-term use, SSRIs are deemed as first-line medications for GAD. The significant positive effects have been shown in various studies, one being a study by Pollack and colleagues, 2001. Paroxetine was used for an 8-week trial to treat GAD and it was found at the 8-week mark that there was a greater than 70% response rate among those given the drug, whereas there was only a 40% response rate when given a placebo (Pollack et al., 2001).

While GAD symptoms may fluctuate over one's lifetime, the chance of full remission is low, resulting in persistent burden for the sufferer, the health system and society in general (Wittchen, 2002; Allgulander, 2012). In particular, individuals with GAD often overuse primary care services which may be costly to society in terms of frequent visits and increased wait times. There is also the high likelihood of distress to the individual because they are not receiving proper treatment for their condition (Wittchen, 2002; Allgulander, 2012).

GAD and Social Support

Individuals struggling with GAD can experience high levels of psychological distress (Vasiliadis et al., 2015; Kessler et al., 2002) which have also been highly correlated with other negative consequences such as low income (Caron & Liu, 2011), and increased health care system burden (Bereza et al., 2009). While these consequences place individuals in difficult situations, research contends that individuals with GAD can benefit from social support which can promote, for instance, self-esteem and the strengthening of coping mechanisms which can serve to lower psychological distress (Sangalang & Gee, 2012).

Social support is defined as the perceived or actual support from others including feeling loved and cared for, a sense of belonging, and available assistance (e.g., Fowler et al., 2013). It has been suggested that social support may help reduce psychological distress via two primary ways, i.e., main effects and stress buffering (Cohen & Wills, 1985; Hartley & Coffee, 2019). The main effects hypothesis of social support suggests that regardless of levels of stress, individuals with more social support report better mental health status than those with lower levels of support. However, the stress buffering hypothesis suggests that social support acts to help improve mental health status by buffering against the effects of stress primarily when it occurs (Hartley & Coffee, 2019). As stated, stress seems to be mediated by social support in those with

a psychiatric condition, and they often endure higher levels of psychological distress than the general population (Sangalang & Gee, 2012).

Studying the role that social support has played in other mental health conditions such as mania (e.g., Walsh & Fowler, 2019), bipolar disorder (e.g., Warren et al., 2018) and depression (e.g., Fowler et al., 2013) can help provide more information about its potential benefit in treating GAD. In terms of Bipolar I (BD-I) and Bipolar II (BD-II), for instance, previous studies have observed that while sufferers tend to experience high levels of psychological distress and low levels of social support, an inverse relationship between these variables indicates the potential salutary impact of social support (Walsh & Fowler, 2019). Qualitatively, other studies suggest that individuals with a BD diagnosis can have difficulty confiding in others, discussing uncomfortable experiences, socializing at work, or having casual conversations (Romans & McPherson, 1992), and tend to not socialize well (Sierra et al., 2005). Moreover, individuals experiencing manic episodes often associated with BD tend to have difficulty in their overall functioning (Romans & McPherson, 1992), particularly as social activities may be riskier, with potentially severe consequences (Johnson & Jones, 2009 & Kim et al., 2009) resulting in social rejection and loneliness. Further, it is also less likely that they reach out for support due to social dysfunction (Badcock et al., 2015; Cutting & Murphy, 1990).

Despite the potential salutary impact that social networks and support can have, studies suggest that GAD sufferers may be relatively deficient, similar to findings involving those with BD (e.g., Warren et al., 2018). For instance, Cramer and colleagues (2005) demonstrated that when compared to healthy individuals, those with an anxiety disorder reported lower social interactions, and poorer quality of life. Similarly, Saris and colleagues (2017) found that when compared to other anxiety disorders, GAD was particularly indicative of high levels of social

dysfunction and impairment. Moreover, research contends that GAD sufferers are also more likely to report severe impairments in romantic relationships (e.g., Henning et al., 2007). Overall, it appears that not having the support from close friends and family puts an individual at an increased risk for clinical anxiety (Chou et al., 2011), and that such social relationship challenges may serve to exacerbate stress and worry (Henning et al., 2007).

The Current Study

While there has been research in GAD relating to comorbidities, prevalence and symptomatology (Rodriguez et al., 2004; Simon, 2009), research exploring the influence of social support and its particular subtypes on psychological distress within the context of gender is nonexistent. The primary objectives of this study were to (1) establish mean levels of psychological distress and social support (overall and by each subtype) in a Canadian sample of men and women reporting a diagnosis of GAD, and compare them to an overall adult Canadian sample, (2) determine whether psychological distress and social support are comparable between GAD males and females, and (3) observe whether, and the degree to which social support subtypes predict psychological distress for the entire GAD sample, and for GAD males and females separately.

It was hypothesized that (1) men and women reporting a diagnosis of GAD would have significantly higher psychological distress levels, and have lower levels of social support (overall and each subtype) compared with the overall sample, (2) females reporting a diagnosis of GAD will report higher levels of psychological distress as per previous research (e.g., McLean et al., 2011; Angst & Dobler-Mikola, 1985; Bruce et al., 2005; Regier et al., 1990) , and 3) since previous research has not examined the types of social support used in this study in relation to psychological distress in adults reporting a GAD diagnosis, there were no predictions made in

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terms of the types of social support that predict psychological distress in the entire GAD sample

and between the male and female GAD sample.

Method

Participants

The participant data for this study were extracted from the Public Use Microdata File of

the Canadian Community Health Survey- Mental Health 2012 (CCHS-MH; Statistics Canada,

2013), which is a national mental health survey. Statistics Canada collected these data between

January 2012 and December 2012 and had a total of 25,113 respondents (68.9% response rate;

Statistics Canada, 2013). Included in this survey are individuals 15 years of age or older that live

in one of the ten provinces. Individuals that are institutionalized, full time members of the

Canadian Forces, individuals living in the three territories and people living on reserves and

other Indigenous settlements were excluded from the survey (represents around 3% of the target

population; Statistics Canada, 2013).

Data Collection

The CCHS- Mental Health questions were administered using Computer Assisted

Personal Interviewing (CAPI). Interviews were conducted mostly in person (87%) and the rest

were done by phone. It was administered in a three-stage design. Specific clusters (geographical

areas) were chosen, households were then chosen within these clusters and lastly, for each

household one individual was randomly selected. No proxy interviews were allowed. This

dataset in particular was chosen because it included reports of GAD, which was the illness of

interest, while also having pertinent data on comorbid conditions. There is little to no research on

psychological distress and social support in individuals with GAD. This data set helped to

capture our findings as it has information on both. It was also used because there are gender

differences, which was of particular interest because it is important to find differences between genders for future research and future treatment of individuals.

Weighting

In order for the survey results to be representative of the general population, each participant in the final sample was given a survey weight, in which the weight assigned was based on how many people the individual represents in the entire population. The weighting phase calculated each person's sampling weight, which in turn reflects the number of people in the population that the respondent represents.

Variables of Interest

Self-report of Generalized Anxiety Disorder

Individuals administered this survey had to answer "yes" or "no" to questions as to whether they have experienced specific mental health conditions in the past 6 months, with one of these questions pertaining to GAD. They were asked, "Do you have generalized anxiety disorder?" Individuals were also asked questions about lifetime prevalence of GAD. The questions asked for this disorder are a modified version of a World Health Organization of the Composite International Diagnostic Interview (WHO-CIDI; Statistics Canada, 2013), which is a standardized instrument based on the Diagnostic and Statistical Manual of Mental Disorders (4th ed.; DSM-IV; American Psychiatric Association, 2000) and International Classification of Diseases and Related Health Problems (ICD-10; World Health Organization, 1992) to evaluate mental health conditions.

Self-report diagnosis is also challenging because we run the risk of participants providing inaccurate answers to questions, particularly the question which asks if they have been diagnosed with GAD. Individuals over-reporting on questions and incorrectly reporting can affect the study

and its results, specifically by giving false conclusions based on whether they have GAD or other mental health disorders.

Sociodemographics

Sociodemographic variables included gender (male, female), and age range (20-24, 25-29, 30-34, 35-39, 40-44, 45-49, 50-54, 55-59, 60)

Perceived Social Support - Short Form (SPS-SF)

Perceived social support was analyzed in this study using The Social Provisions Scale (SPS-SF; Cutrona & Russell, 1987). The SPS has 10 questions to which the respondent answers on a scale ranging from 1 (strongly agree) to 4 (strongly disagree). This survey assesses an individual's social relationships by asking questions regarding different dimensions of social support. There are six scores given from the results of this survey; one is the overall social support score, which is combined from all of the questions asked, and a score for each type of social support assessed, which include *guidance* (having someone to go to for advice/information), *reliable alliance* (the assurance that others can be counted upon for tangible assistance), *reassurance of worth* (recognition of one's competence, skills, and value by others), *attachment* (emotional closeness from which one derives a sense of security) and *social integration* (a sense of belonging to a group that shares similar interests, concerns, and recreational activities; Cutrona & Russell, 1987). Higher scores indicate higher levels of social support, whereas lower scores indicate lower levels of social support (Statistics Canada, 2013).

Psychological Distress

Psychological distress was measured using The Kessler Psychological Distress Scale (K10), which has 10 questions that the respondent answers on a scale ranging from 1 ("none of the time") to 4 ("all of the time"). The K10 assesses mood and anxiety in the past month by

asking questions such as "In the past 4 weeks, about how often did you feel depressed?". A score from 0 to 40 is given by summing the answers provided and the higher the score, the more psychological distress is being experienced by the individual.

Analytical Strategy

Using a series of one-sample *t* tests, comparisons between individuals with GAD and the overall CCHS sample were conducted for psychological distress, as well as overall SPS mean score and each subtype mean. Independent sample *t* tests were conducted to compare GAD men and women in terms of social support overall and for each subtype, as well as psychological distress, while stepwise linear regressions were used to explore whether social support subtypes, age and total income predicted psychological distress for the GAD sample overall, and for GAD men and women separately.

Results

Perceived Distress Scores

A one-sample *t* test was conducted for perceived distress between adults reporting GAD and the overall sample. It was found that those reporting GAD had statistically higher distress scores than the overall sample (*n*=1948, M=12.04, SD=7.903 vs. *n*=16, 238, M=5.47, SD=5.47), *t*(1947)= 36.688, *p*<0.001, with a large effect size (*d* = 0.96). These results can also be found in Table 1.

A one-sample *t* test was conducted for perceived distress between males and females with reported GAD. It was found there were no significant differences between males with reported GAD and females with reported GAD for level of perceived distress (*n*=644, M=12.46, SD=7.885 vs. *n*=1304, M=11.83 SD=7.907), *t*(1946)= 1.656, *p*>0.001) (See Table 2).

Social Support Scores

A one-sample *t* test showed that overall differences for the overall SPS score for comparing individuals reporting GAD (*n*=1,904, M=34.53, SD=5.393) to those without GAD (*n*=15,962, M=36.12, SD=4.330) was statistically significant, $t(1903) = -12.874$, $p<0.001$, with a small effect size of *d* =0.32. Results are shown in Table 1. One-sample t tests were also conducted for SPS subtypes comparing adults reporting GAD to the overall sample and all values were all significantly lower. That is, adults reporting GAD had significantly lower scores for attachment (*n*=1947, M=6.98, SD=1.221 vs. *n*=16,662, M=7.27, SD=1.00), $t(1946)= -10.405$, $p < 0.001$; guidance (*n*=1947, M=7.06, SD=1.257 vs. *n*=16,239, M=7.33, SD=1.00), $t(1946)= -9.401$, $p <0.001$; reliable alliance (*n*=1952, M=7.14, SD=1.141 vs. *n*=16,254, M=7.38, SD=0.92), $t(1951)= -9.259$, $p<0.001$; social integration (*n*= 1953, M=6.56, SD=1.371 vs. *n*=16,180, M=7.02, SD=1.09), $t(1934)= -14.631$, $p<0.001$; and reassurance of worth subscales (*n*=1925, M=6.71, SD=1.255 vs. *n*=16,065, M=7.04, SD=1.01), $t(1924)= -11.588$, $p<0.001$. Effect sizes were small for subtypes of social support and ranged from (*d* = 0.23-0.37).

An independent t-test comparing the overall social provision scores between males and females reporting GAD was statistically significant, with males being lower (*n*=631, M=33.73, SD=5.60 vs. *n*=1273, M=34.92, SD=5.245), $t(1902) = -4.562$, $p<0.001$ (See Table 2). Further, all other measured values assessing subtypes of social support were significantly lower for males; i.e., attachment (*n*=645, M=6.75, SD=1.320 vs. *n*=1302, M=7.10, SD=1.153), $t(1946)= -5.861$, $p < 0.001$; guidance (*n*=646, M=6.92, SD=1.330 vs. *n*=1301, M=7.13, SD=1.214), $t(1945)= -3.500$, $p <0.001$; reliable alliance (*n*=646, M=7.01, SD=1.171 vs. *n*=1306, M=7.20, SD=1.121), $t(1950)= -3.467$, $p<0.001$; social integration (*n*=641, M=6.41, SD=1.332 vs. *n*=1294, M=6.64,

SD=1.385), $t(1933)$= -3.405, p<0.001; and reassurance of worth (n=636, M=6.60, SD=1.324 vs. n=1289, M=6.76, SD=1.216), t(1923)= -2.733, p<0.001.

Role of Psychological Distress Variables for GAD

A stepwise regression examining individuals reporting GAD revealed that social integration ($F(1,1766) = 345.298$, p<.001), total income ($F(2,1766) = 199.420$, p<.001), guidance ($F(3,1766) = 150.486$, p<.001), age ($F(4,1766) = 123.552$, p<.001), and reassurance of worth ($F(5,1766) = 101.393$, p<.001) were significant, inverse predictors of psychological distress. These results can be found in Table 3.

Role of Psychological Distress Variables for Males

A stepwise regression examining males reporting GAD revealed that social integration ($F(1,591) = 145.329$, p<.001), total income ($F(2,591) = 108.185$, p<.001), reliable alliance ($F(3,591) = 83.892$, p<.001), reassurance of worth ($F(4,591) =66.505$, p<.001), and age ($F(5,591) = 55.015$, p<.001) were significant inverse predictors of psychological distress. These results can be found in Table 4.

Role of Psychological Distress Variables for Females

A stepwise regression examining females reporting GAD revealed that social integration (F(1,1174)= 197.525, p<.001), guidance (F(2,1174)= 113.512, p<.001), age (F(3,1174)= 87.243, p<.001), and total income (F(4,1174)= 67.236, p<.001) were significant inverse predictors of psychological distress. Results can be found in Table 5.

Discussion

The main objectives of the current study were to examine psychological distress in Canadian adults with GAD and the potential predictive role of social support, and to explore

whether gender differences were evident. As hypothesized, adults reporting a diagnosis of GAD reported higher levels of psychological distress than that observed in the overall Canadian adult sample. This finding is reflective of what has been consistently found in the literature for individuals with anxiety disorders in terms of higher levels of psychological distress (e.g., Kessler et al., 2002). Higher psychological distress levels have also been observed with other diagnoses such as depression (e.g., Fowler et al., 2013) and BD (e.g., Walsh & Fowler 2019).

The hypothesis that adults with GAD would report lower levels of social support (overall and for each subtype) compared with the overall Canadian adult sample was also supported, and these results were consistent with other studies investigating GAD and social support (e.g., Cramer et al., 2005). For example, Henning et al. (2007) found that individuals with GAD reported having fewer associations with friends and relatives. These findings are also consistent with other mental health diagnoses such as depression and BD where there were lower levels of social support overall, and for each subtype (e.g., Fowler et al., 2013; Walsh & Fowler 2019).

In this study, the predictive value of social support subtypes with respect to psychological distress was assessed, where it was observed that social integration, guidance, and reassurance of worth were significantly associated with lower levels. In considering the definitions of these SPS subtypes, it would appear that more social support in terms of feeling a sense of belonging to a group (i.e., social integration), having someone to provide advice (i.e., guidance), and having one's competence being recognized (i.e., reassurance of worth) were particularly predictive of lower psychological distress. As previous research has suggested, individuals with GAD tend to experience social challenges with family and friends, partly due to uncertainty about thoughts, leading to avoidance of events that make them feel tentative in potential interactions (Henning et al., 2007; Roemer & Orsilli, 2002). It therefore makes sense that when social integration feels

more abundant, psychological distress would likely be relatively lower, perhaps because the individual is able to feel as though they belong to a group, and more likely experience other types of social support, such as guidance and reassurance of worth.

In terms of gender, contrary to the hypothesis, there was no significant difference between reported GAD males and females in terms of psychological distress. Further, in addition to personal income and age, the stepwise regression analyses revealed an inverse relationship between social integration and psychological distress, suggesting that regardless of gender, social integration may be a common salutary factor in terms of lower psychological distress. However, there were interesting differences between men and women with respect to other subtypes of social support that predicted psychological distress. Specifically, reliable alliance and reassurance of worth emerged as significant, inverse predictors of psychological distress for men, while guidance surfaced as a significant, inverse predictor of psychological distress for women. Future research might consider how these social support subtypes operate to differentially predict psychological distress between men and women, and how this knowledge could be beneficial in terms of advancing counselling services for those with GAD.

Social Support as a Buffer

When comparing individuals with a GAD diagnosis to individuals without, those with GAD are more likely to report dissatisfaction in family functioning, emotional functioning, vitality and poorer overall functioning (Hoffman et al., 2008). Social support has been found to act as a buffer for those with psychological disorders, and stress seems to be mediated by social support in those with a psychological disorder (Sangalang & Gee, 2012). If individuals are not receiving sufficient levels of support, this can result in isolation and contribute to their chronic condition. This buffer makes sense because if someone is struggling, having social support can

help them feel less alienated, more confident and perhaps look at their future in a better light. As found in the current study, guidance, reliable alliance, social integration, and reassurance of worth for individuals with GAD were found to be particularly health enhancing, so might these be specific "buffering components" of social support? This query is certainly worthy of further assessment.

GAD and the Proposed Three Part Model

It has been found that when individuals with GAD feel stigma, they tend to turn away from others and become isolated (Ociskova et al., 2018). This leads to decreases in areas such as the individual's quality of life, and internalization of negative thoughts towards themselves. The three-part model can help explain this. It has been proposed by Roemer and Orsilli (2002) that there may be a three-part model which explains why individuals with GAD may have higher dysfunction and life dissatisfaction. The model suggests that individuals with GAD have a certain sensitivity with their inner experiences which is characterized as being "fused, critical and judgmental". For individuals with GAD, this means that they tend to over-identify with their feelings, sensations, and thoughts, and view events as overwhelming and threatening. GAD individuals then try and suppress the internal experiences via escape and avoidance, which further increases distress. Such avoidance then leads to the restriction of behaviors, resulting in social isolation, and not following through with personal ambitions because of avoidance of events that may cause internal sensations that are unsettling to the individual (Hayes et al., 1996). This proposed model may explain why individuals with GAD do not receive levels of social support similar to the general population and have a lower expectation of having experiences of affection, trust or reassurance of worth.

GAD and Stigma

Stigma may be another reason why individuals with GAD do not report sufficient levels of social support. It has been suggested in the literature that individuals with psychiatric conditions are often viewed as being irrational, hostile and dangerous, leading to being socially distanced from others (Ociskova et al., 2013; Ociskova et al., 2018). Not only are individuals more likely to be stigmatized by the general public, but also by health care professionals such as physicians and nurses (Ociskova et al., 2013). It was found that individuals with GAD sometimes avoid being labelled as having a psychiatric condition so much that they ignore the psychological symptoms associated with their psychosomatic symptoms and focus only on physiological and somatic symptoms (Ociskova et al., 2013; Ociskova et al., 2018). These issues lead to delaying treatment for the core problem, which can exacerbate the condition (Ociskova et al., 2013). Stigmatization by health care professionals can affect diagnosis, treatment, and reintegrating individuals back into society (Ociskova et al., 2013). Therefore, it is crucial that healthcare professionals view individuals with mental health conditions differently, so they can be treated properly and have a better prognosis. Less stigma by health care professionals may help individuals accept their condition and talk about their concerns to health care professionals, helping to foster a good therapeutic alliance with the patient.

Internalized stigma is when individuals agree and accept the prejudice attitude that society has about a certain condition and then applies it to themselves (Corrigan et al., 2011; Ociskova, et al., 2015)]. This kind of stigma has been found to be the most harmful type associated with mental health conditions (Ociskova, et al., 2015). This causes the individuals to lose their past identity and has been linked to a worse quality of life, not adhering to treatment and increased suicidal attempts and ideations (Corrigan et al., 2011; Ociskova et al., 2015).

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It has also been stated that individuals with anxiety disorders, more than individuals with other mental health conditions, deal with internalized stigma which may be a function of individuals being sensitive to stereotypes in their environment, and the expectation of rejection from others, which may further lead to a denial of their diagnosis (Ociskova, 2013). As age increases, psychological distress decreases, which is consistent with findings from Jorm et al. (2005). This study found that as age increased for both men and women, psychological distress as well as anxiety decreased. Findings suggest that individuals with GAD have less distress when they are part of a group, have someone to ask advice from, increase in age, have a higher personal income, and feel that they are worthy. Since there is stigma by the general population, health care professionals, and from oneself, it is expected that individuals with GAD report lower levels of social support and subtypes of social support than the general population.

Limitations

There are a few limitations with this research. Firstly, the GAD diagnosis is not conducted by a professional, rather, it is a self-report. This means that the diagnosis may not be accurate, therefore leading to possible flawed conclusions. Secondly, this is a correlational study, meaning causation must not be inferred from these results. Thirdly, the CCHS left out 3% of the population (individuals that are institutionalized, live on Aboriginal settlements, members of the Canadian forces, and individuals living in the three territories). This population of individuals may have influenced the outcome of the results found in this study. Lastly, this study did not account for the treatments that individuals with GAD were receiving, as well as co-occurring conditions, which could have greatly influenced the findings.

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Future Research

In the future, researchers should focus on the role of social support on levels of psychological distress for individuals with GAD to continue enhancing the understanding of the issue. As previously stated in the limitations, the study is correlational, meaning that researchers cannot make a causal conclusion. To be able to provide a causal conclusion, one must use an experimental design. For a study such as the present one, this may be unethical.

Another problem arises when dealing with this type of data set. A self-reported diagnosis can cause the statistics found and used in this study to be inaccurate, in contrast to the diagnosis of GAD having been made by a professional that is qualified to diagnose mental health conditions. Future research on GAD and social support on psychological distress should include individuals with a diagnosis of GAD made by an appropriately qualified health professional. Although the sample may not be as big as in this study, more accurate findings are probable. Further, primary physicians would be trained in knowing what symptoms to look for in individuals. However, when compared to mental health professionals (e.g. clinical psychologists or psychiatrist), primary physicians have less understanding of the lived experience of GAD. Future research could have primary physicians attend applicable seminars or watch videos on people's lived experiences with GAD, in hopes that physicians may be able to better understand more of what living with GAD is like for individuals.

Implications

Although this research has its limitations, studies such as this can help individuals dealing with GAD and comorbid conditions. Healthcare workers and researchers can plan to increase knowledge around GAD. If researchers can explain to primary physicians about the symptoms of GAD, they may be more understanding and patient with the presenting individuals. This could

help patients feel like they have someone to confide in, which could increase the rapport between them.

The research can help spread knowledge about GAD and its comorbid conditions, and why individuals with GAD present the way they do. Lowering the stigma from healthcare professionals and the general public may help people who suffer from GAD have less internalized stigma. This could result in fewer or none of the common effects from internalized stigma such as rumination (which could lead to worsening of GAD symptoms).

Conclusion

Research in this area is novel. Social support and psychological distress in individuals with GAD have not been examined before in a Canadian sample. GAD is a chronic mental health condition that affects females more than males. There are impairments to both genders in receiving social supports. When compared to the overall sample, individuals with GAD report lower levels of social support and subtypes of support, and higher levels of psychological distress. When analyzing age, gender, total personal income, overall social support and subtypes of support to determine if these factors predict psychological distress in individuals with GAD, it was found that age, gender, total personal income, social integration, guidance, and reassurance of worth had significant positive effects on psychological distress.

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Tables

Table 1. Means for Social Support, Subtypes of Support, and Psychological Distress Between Individuals with GAD and Those in the Overall CCHS Sample.

Variable	GAD (n= 1956)		CCHS sample (n=16,238)		Sig.
	M	SD	*M*	*SD*	
Social Provisions Scale	34.53	5.393	36.12	4.330	*
Attachment	6.98	1.221	7.27	1.00	*
Guidance	7.06	1.257	7.33	1.00	*
Reliable alliance	7.14	1.141	7.38	0.92	*
Social integration	6.56	1.371	7.02	1.09	*
Reassurance of worth	6.71	1.255	7.04	1.01	*
Psychological distress	12.04	7.903	7.04	1.01	*

*$p<.001$

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Table 2. Means for Social Support, Subtypes of Support, and Psychological Distress Between Males and Females with GAD.

Variable	Males (n= 646)		Females (n=1310)		Sig.
	M	SD	*M*	*SD*	
Social Provision Scale	33.73	5.600	34.92	5.245	*
Attachment	6.75	1.320	7.10	1.153	*
Guidance	6.92	1.330	7.13	1.214	*
Reliable alliance	7.01	1.171	7.20	1.121	*
Social integration	6.41	1.332	6.64	1.385	*
Reassurance of worth	6.60	1.324	6.76	1.216	*
Psychological distress	12.46	7.885	11.83	7.907	

*p<.001

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Table 3. Summary of Stepwise Regression Analysis for Variables Predicting Psychological Distress for the GAD Sample.

Variable	*Step*	*Predictors*	*B*	*SE*	R	*R²*
	1	Social Integration	-2.290	.123	-.405	**.164***
	2	Social Integration	-2.071	.126	-.366	**.184***
		Total Income	-.651	.097	-.1.49	
	3	Depression	-1.426	.159	-.252	**.204***
		Total Income	-.635	.096	-.146	
		Guidance	-1.127	.172	-.181	
	4	Social Integration	-1.441	.157	-.255	**.219***
		Total Income	-.553	.096	-.127	
		Guidance	-1.189	.170	-.191	
		Age	-.977	.067	-.125	
	5	Social Integration	-1.196	.0175	-.211	**.224***
		Total Income	-.522	.096	-.120	
		Guidance	-.987	.181	-.158	
		Age	-.401	.067	-.127	
		Reassurance of Worth	.598	.187	-.097	

Note: *N*=1956

*$p<.001$

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Table 4. Summary of Stepwise Regression Analysis for Variables Predicting Psychological Distress in Males with GAD.

Variable	*Step*	*Predictors*	*B*	*SE*	R	*R²*
	1	Social Integration	-2.616	.217	-.445	**.198***
	2	Social Integration	-2.221	.214	-.377	**.269***
		Total Income	-1.242	.164	-.275	
	3	Social Integration	-1.374	.276	-.234	**.300***
		Total Income	-1.269	.161	-.281	
		Reliable Alliance	-1.494	.293	-.227	
	4	Social Integration	-1.003	.289	-.170	**.312***
		Total Income	-1.231	.160	-.272	
		Reliable Alliance	-1.176	.307	-.178	
		Reassurance of Worth	-.887	2.76	-.151	
	5	Social Integration	-1.070	.289	-.182	**.319***
		Total Income	-1.141	.163	-.253	
		Reliable Alliance	1.121	.306	-.170	
		Reassurance of Worth	-.946	.275	-.161	
		Age	-.285	.111	-.090	

Note: *N*=646

*p<.001

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Table 5. Summary of Stepwise Regression Analysis for Variables Predicting Psychological Distress in Females with GAD.

Variable	Step	Predictors	B	SE	R	R²
	1	Social Integration	-2.112	.150	-.380	**.144***
	2	Social Integration	-1.506	.191	-.271	**.162***
		Guidance	-1.100	.218	-.173	
	3	Social Integration	-1.471	.189	-.264	**.183***
		Guidance	-1.177	.216	-.185	
		Age	-.449	.083	-.143	
	4	Social Integration	-1.377	.192	-.248	**.187***
		Guidance	-1.150	.216	-.181	
		Age	-.425	.083	-135	
		Total Income	-.295	.120	-.068	

Note: *N*= 1310

*p<.001