$\circledS$SAGE

Predictors of Dropout From Cognitive-Behavioral Group Treatment for Panic Disorder With Agoraphobia: An Exploratory Study

Claude Bélanger[1,2], Catherine Courchesne[1], Andrea G. Leduc[1], Caroline Dugal[1], Ghassan El-Baalbaki[1,2], André Marchand[1], Natacha Godbout[1], Roger Marcaurelle[1], and Michel Perreault[1,2,3]

Abstract

Panic disorder and agoraphobia are both characterized by avoidance behaviors, which are known correlates of treatment discontinuation. The aim of this exploratory study is to distinguish the profile of participants suffering from panic disorder with agoraphobia that complete treatment from those who discontinue therapy by assessing four categories of predictor variables: the severity of the disorder, sociodemographic variables, participants' expectations, and dyadic adjustment. The sample included 77 individuals diagnosed with panic disorder with agoraphobia who completed a series of questionnaires and participated in a cognitive-behavioral group therapy consisting of 14 weekly sessions. Hierarchical linear regression analyses

[1]University of Quebec in Montreal, Canada
[2]McGill University, Canada
[3]Douglas Mental Health University Institute, Montreal, Canada

Corresponding Author:
Claude Bélanger, Department of Psychology, University of Quebec in Montreal, C.P. 8888, Succursale Centre-Ville, Montreal, Quebec, Canada H3C 3P8.
Email: belanger.claude@uqam.ca

revealed the importance of anxiety, prognosis, and role expectations as well as some individual variables as predictors of therapeutic dropout, either before or during treatment. Among the most common reasons given by the 29 participants who discontinued therapy were scheduling conflicts, dissatisfaction with treatment, and conflicts with their marital partner. These results suggest that expectations and dyadic relationships have an impact on therapeutic discontinuation. The clinical implications of these findings are discussed.

The prevalence for panic disorder varies from 2% to 3% and is often comorbid with agoraphobia (American Psychiatric Association [APA], 2013). In the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*; APA, 2013), the diagnoses for panic disorder with or without agoraphobia, and agoraphobia without a history of panic disorder have been replaced by two distinct diagnoses—panic disorder and agoraphobia. Wittchen, Gloster, Beesdo-Baum, Fava, and Craske (2010) highlighted several reasons for separating the two disorders, such as the existence of agoraphobia without any evidence of panic symptoms. Despite this change in terminology, the diagnosis panic disorder with or without agoraphobia is used in this article when referring to studies (including ours) conducted under the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text rev.; *DSM-IV-TR*; APA, 2000).

At least, the extent to which the new categorization will affect health care service utilization and clinical practice remains unclear, but according to Asmundson, Taylor, and Smits (2014), it may lower the threshold for meeting the diagnostic criteria for either, potentially increasing the number of individuals who might be eligible to receive treatment. This possible increase in requests for treatment raises fundamental questions regarding adherence to treatment considering that both disorders are characterized by high levels of anxiety and avoidance behaviors (Renshaw, Chambless, & Steketee, 2006), which, in the context of psychotherapy, are sometimes associated with therapy dropout (Taylor, 2000). Therapy dropout or attrition is defined as occurring when a client unilaterally discontinues an intervention prior to recovering from the problems that led him or her to seek out treatment and/or before completing the intervention's specified protocol (Garfield, 1994; Hatchett & Park, 2003; Swift, Callahan, & Levine, 2009; Swift & Greenberg, 2012, 2014).

Cognitive-behavioral interventions have been shown to be an effective treatment for panic disorder with or without agoraphobia, whether offered in individual or group therapy (Austin, Symbundu, Lykke, & Oestrich, 2008; Barlow, Gorman, Shear, & Woods, 2000; Galassi, Quercioli, Charismas, Niccolai, & Barciulli, 2007; Hahlweg, Fiegenbaum, Frank, Schroeder, & von Witzleben, 2001; Marchand, Roberge, Primiano, & Germain, 2009; Sánchez-Meca, Rosa-Alcazar, Marin-Martinez, & Gomez-Conesa, 2010). Despite the demonstrated effectiveness, attrition ranges from 10% to 55% across studies and treatment formats (i.e., individual or group), with higher rates for individuals with agoraphobia (Erickson, Janeck, & Tallman, 2007; Grilo et al., 1998; Issakidis & Andrews, 2004; Keijsers, Kampman, & Hoogduin, 2001; Rosenberg & Hougaard, 2005; Santana & Fontenelle, 2011; White et al., 2010). This adherence problem in panic disorder with agoraphobia is a major issue in the health care system as it raises questions regarding the effectiveness of the treatments provided to clients with these troubles. To better understand and address this problem, it is essential to differentiate the profile of people who complete treatment from those who unilaterally discontinue the intervention. In this regard, studies suggest different variables of interest, such as the severity of the disorder and comorbidities (Brown & Barlow, 2002; Issakidis & Andrews, 2004; Keijsers et al., 2001; Taylor, 2000; White et al., 2010); sociodemographic variables, such as income, education, and age (Grilo et al., 1998; Santana & Fontenelle, 2011; Swift & Greenberg, 2012); client's expectations (Katerelos, Bélanger, et al., 2011; Katerelos, Perreault, Bélanger, Marchand, & Pecknold, 2011; Perreault et al., 2014); and dyadic variables (Bélanger, Leduc, Fredman, El-Baalbaki, & Baucom, 2008; El-Baalbaki, Bélanger, Perreault, Fredman, & Baucom, 2010; Marcaurelle, Bélanger, Marchand, Katerelos, & Mainguy, 2005).

Regarding the severity of the disorder, data are mixed on pretreatment symptom severity of panic disorder and its effect on dropout (White et al., 2010). For instance, one study showed that mild or severe symptom severity is not related to treatment dropout (Keijsers et al., 2001), while another study showed that anxiety sensitivity, an indicator of panic disorder associated impairment and defined as the belief that experiencing anxiety causes important somatic, psychological, and social suffering, was associated with early discontinuation (Grilo et al., 1998; Katerelos, Perreault, et al., 2011). Data are also mixed concerning the association between treatment dropout and the severity of comorbid depressive symptoms, depression being the most common psychiatric comorbidity of panic disorder with or without agoraphobia (Brown & Barlow, 2002; Gorman & Coplan, 1996; Srinivasan & Neerakal, 2002). Indeed, several studies positively associated depression with treatment completion (Grilo et al., 1998; Keijsers et al., 2001; Stein, Cantrell,

Sokol, Eaddy, & Shah, 2006), whereas some others revealed a positive association with treatment discontinuation (Burke, Drummond, & Johnston, 1997; Issakidis & Andrews, 2004).

With respect to sociodemographic variables, such as age, income, level of education, sex, marital status, occupation, number of children, and medication, research shows inconsistencies regarding their effects on therapeutic discontinuation (Barrett et al., 2008; Garfield, 1994; Grilo et al., 1998; Issakidis & Andrews, 2004; Swift & Greenberg, 2012). In a study on treatment attrition in panic disorder (Grilo et al., 1998), sociodemographic factors, such as lower household income and education level, were associated with dropout. However, the results of a study by Issakidis and Andrews (2004) on pretreatment attrition and dropout in a sample of individuals with anxiety disorders showed that, except for having at least one child, no other sociodemographic variables significantly affected pretreatment attrition. In their review of studies on treatment adherence of clients with anxiety disorders, Santana and Fontenelle (2011) indicated that, up to now, the vast majority of the available studies were unable to find sociodemographic differences between adherent and non-adherent clients with anxiety disorders.

Some variables specific to the therapeutic process may also affect treatment discontinuation. In this regard, some studies examined the impact of four variables known to affect the development, maintenance, and treatment of panic disorder with agoraphobia: anxiety, process, role, and prognosis expectations (Katerelos, Bélanger, et al., 2011; Katerelos, Perreault, et al., 2011; Perreault et al., 2014). Anxiety expectations are defined as the degree to which a person expects to experience anxiety during treatment (Katerelos, Perreault, et al., 2011). Researchers have suggested that negative or excessively high anxiety expectations are associated with treatment discontinuation through avoidance (Cox, Endler, & Swinson, 1995; Whittal & Goetsch, 1997). Also associated with therapy dropout, process and role expectations include expectations regarding the course of treatment (e.g., procedures, techniques, format, and duration of treatment), as well as expectations of the respective roles of the therapist and the client (e.g., characteristics, attitudes, and behaviors; Constantino, 2012; Constantino, Arnkoff, Glass, Ametrano, & Smith, 2011). The results of a study conducted by Perreault et al. (2014) showed that the way the therapeutic process is anticipated (e.g., individual or group therapy), as well as the behaviors of the therapist and the client (e.g., "the therapist tells me what to do" or "the therapist doesn't talk"), are related to treatment satisfaction when these process expectations are met and to dropout when they are not. A study by Swift and Callahan (2011) also showed that expectations regarding the duration of treatment could influence treatment attrition. More precisely, their results indicated that people who are

informed about the relationship between the effectiveness of treatment and the number of sessions required are less likely to drop out (Swift & Callahan, 2011). Finally, research on prognosis expectations, defined as the degree to which participants expect to maintain avoidance behaviors following treatment and beliefs regarding the probability of success in therapy (Constantino, 2012; Constantino, Ametrano, & Greenberg, 2012; Constantino et al., 2011; Goldstein, 1962), have not generated consistent results with regard to treatment adherence (Constantino et al., 2011). However, it is conceivable that individuals with high prognosis expectations (i.e., those who believe treatment will result in big improvements) will leave treatment if they do not experience adequate levels of improvement in their condition. It is also possible that some clients leave therapy when they observe improvement in their symptoms (Mueller & Pekarik, 2000). In short, previous studies suggest the importance of expectations in the treatment of panic disorder with or without agoraphobia, and that more attention needs to be paid to their role in therapy dropout.

Finally, research indicates that dyadic variables, specifically those associated with romantic relationships, might play a role in treatment dropout (Bélanger et al., 2008; El-Baalbaki et al., 2010; Marcaurelle et al., 2005). In certain situations, the improvement of symptoms and the increasing autonomy of the anxious partner may be perceived as a threat for the non-anxious one, which may push the adoption of resistance behaviors to preserve the relationship balance, which may ultimately lead to therapy discontinuation (Bélanger et al., 2008; Daiuto, Baucom, Epstein, & Dutton, 1998). Marcaurelle et al. (2005) proposed that couples in which one member is agoraphobic tend to draw secondary benefits from the situation, which promotes maintenance of the disorder (e.g., agoraphobia may allow partners to spend more time together and to avoid problems, such as jealousy and differences of opinion in terms of activities). Breaking this pattern of interaction could be experienced as threatening and unsettling for certain partners (Marcaurelle et al., 2005). Thus, the romantic relationship can influence the effectiveness of therapy for individuals who suffer from panic disorder with agoraphobia, and, conversely, adherence to treatment may be influenced by several dyadic variables, including attachment style, communication skills, problem-solving strategies, and emotional overinvolvement from a partner (Bélanger et al., 2011; Daiuto et al., 1998; Marcaurelle, Bélanger, & Marchand, 2003; Renshaw et al., 2006). However, empirical research has not always supported the hypothesis that dyadic variables are adequate predictors of attrition (Bélanger et al., 2008; Daiuto et al., 1998; Marcaurelle et al., 2003), and additional research would be useful to better understand the impact of dyadic variables on treatment dropout.

Objectives

The possible increase in demand for panic disorder and agoraphobia treatment and the lack of consensus concerning predictors of therapeutic discontinuation in individuals with these disorders emphasize the importance of conducting more studies that target predictors of treatment discontinuation. Accordingly, the general objective of this study is to improve our understanding of group therapy dropout at different times during the therapeutic process (i.e., before the beginning of treatment or during its course). The choice for a group therapy format is based on studies that have shown several advantages of group-based interventions, such as increased cost-effectiveness and increased access to treatment (Oei & Dingle, 2008; Tucker & Oei, 2007), and on studies that have demonstrated no significant difference in efficacy between group and individual therapies for this specific population (Marchand et al., 2000; Marchand et al., 2009; Sharp, Power, & Swanson, 2004).

Our study aims to explore the association between discontinuation of a group treatment for panic disorder with agoraphobia and four categories of predictors, which are the severity of the disorder, sociodemographic variables, participants' expectations, and dyadic adjustment. The main objective is to develop a more complex model that would consider the multiple variables involved in therapeutic attrition. Given the lack of results and consensus in the literature on treatment attrition, specific hypotheses are not proposed. To date, no study has compared the impact of individual and interactional variables on treatment dropout in clients who suffer from panic disorder with agoraphobia. The analysis of the relative contributions of these variables at different times during the therapeutic process will not only promote a better understanding of their respective roles in therapeutic discontinuation but might also guide the elaboration of psychological services well-tailored to this population.

Method

Participants

The sample consisted of French Canadian participants who were recruited from two specialized outpatient anxiety disorder clinics in Montreal: the Anxiety Clinic at the Douglas Mental Health University Institute and the outpatient clinic at the Montreal University Institute of Mental Health. Participants were also recruited from advertisements in local newspapers, universities, cafes, and health care institutions.

The exclusion criteria for this study were participants with (a) a secondary diagnosis from Axis I of the *DSM-IV-TR* (APA, 2000) that is more severe or

equal to that of panic disorder with agoraphobia; (b) a secondary diagnosis of a personality disorder from Axis II of the *DSM-IV-TR* (APA, 2000) with exceptions for avoidant, obsessive-compulsive, and dependent personality disorders because they are characterized by similar symptoms, such as avoidant behaviors and anxiety; (c) a mental disorder of an organic nature, mental retardation, substance dependence, or addiction to non-prescribed substances; and (d) a problematic and non-stabilized medical condition underlying the symptoms that may be related to those of anxiety (e.g., asthma, thyroid dysfunction, or other endocrine problems). In addition, to be eligible for this study, participants must not have received cognitive-behavioral therapy for their anxiety disorder during the past year. All participants agreed beforehand not to engage in other forms of therapy and not to change their medications for the duration of the treatment. Participants who used psychotropic medication either withdrew from their medication or were stabilized (1 month for benzodiazepines and 3 months for all other psychotropic medications such as selective serotonin reuptake inhibitors) prior to evaluation of diagnostic eligibility. Those who were not taking medication agreed not to start taking medication during treatment. If medication had to be prescribed or changed for a participant, he or she was excluded from the study, but he or she could continue to receive the treatment.

Procedure

This study was conducted with 77 French Canadian individuals who were diagnosed with moderate to severe panic disorder with agoraphobia as a primary disorder according to the Anxiety Disorders Interview Schedule, Lifetime Version (ADIS-IV-L; DiNardo, Brown, & Barlow, 1994*)*. The sample consisted of 53 women and 24 men. Participants' ages ranged from 18 to 65 years ($M = 39.3$ years, $SD = 9.23$ years). On average, participants had 2.14 children ($SD = 0.97$). Regarding their level of education, 53.2% had completed secondary school ($M = 2.87$, $SD = 1.30$). As for their occupation, 46.8% worked full time, 11.7% worked part time, and 37.7% were unemployed. Among these, 26% reported not working because of their agoraphobia. Concerning annual wage (in Canadian dollars), most participants earned between $10,000 and $29,999 (41.6%). On average, they had suffered from panic disorder and comorbid agoraphobia for 12 years ($SD = 9.6$ years). All participants were either married or living with their partners and had been in this situation for an average of 11 years ($SD = 9.88$ years). Approximately, 65% of participants were currently taking medication for anxiety.

Participants who were recruited through advertising were preselected using telephone screening to ensure their eligibility for the study. The

evaluation interview, using the ADIS-IV-L, was performed by a psychology graduate student who completed a clinical internship in addition to having received training and regular supervision by a credited psychologist. Two psychiatrists who specialized in anxiety disorders evaluated all the candidates from the two affiliated clinics at the participating hospitals, confirmed the diagnoses, and made the final decisions regarding the selection of participants. All participants who did not satisfy the selection criteria were referred to another resource depending on their needs. Eligible participants were invited to complete the research questionnaires for this study.

Assessment interviews were audiotaped. Of the 77 interviews, 18 were randomly selected to establish inter-rater agreement for the diagnosis and severity of the disorder, which corresponds to 23% of the individuals participating in this study. Judges were doctoral students in clinical psychology who had completed clinical training with clients suffering from anxiety disorders and who were trained to administer the ADIS-IV-L. The kappa coefficient for inter-rater agreement was .77, which is satisfactory.

Measures

In addition to the assessment of the overall clinical severity of panic disorder with agoraphobia using the ADIS-IV-L interview during the selection process, all participants completed a battery of self-report questionnaires. All measures were completed before the beginning of the treatment except the qualitative measure regarding reasons for therapy discontinuation that was given only when the participants decided to discontinue the treatment.

Measures of the severity of the disorder and comorbidities

ADIS-IV-L. The ADIS-IV-L (DiNardo et al., 1994) is a structured interview administered to assess the differential diagnoses among anxiety disorders. It evaluates the presence, severity, and history of the problem. The ADIS-IV has demonstrated good to excellent inter-rater reliability with kappa coefficients ranging from .67 to .86 for the various anxiety disorders. The psychometric properties of the French version used in this study are similar to those of the original English version (Boivin & Marchand, 1996).

Agoraphobic Cognitions Questionnaire (ACQ). The ACQ (Chambless, Caputo, Bright, & Gallagher, 1984) is a self-reported questionnaire including 14 items (plus an open question) rated on a 5-point Likert-type scale measuring the frequency of catastrophic thoughts related to the apprehended consequences of a panic attack. The psychometric properties of the French version used in this study are similar to those of the original English version.

The internal consistency ranges from .75 to .88, and the temporal stability at 42 days is .79 (Stephenson, Marchand, & Lavallée, 1999).

Body Sensations Questionnaire (BSQ). The BSQ (Chambless et al., 1984) is a self-reported questionnaire including 18 items rated on a 5-point Likert-type scale measuring fear of the physical sensations typically associated with panic attacks. The psychometric properties of the French version used in this study are similar to those of the original English version. The Cronbach's alpha coefficient ranges from .87 to .94, and the temporal stability at 42 days is .53 (Stephenson, Marchand, & Lavallée, 1998).

Mobility Inventory for Agoraphobia (MIA). The MIA (Chambless, Caputo, Jasin, Gracely, & Williams, 1985) is a self-reported questionnaire that includes two agoraphobic avoidance scales measuring the severity of phobic avoidance and the frequency of panic attacks during the last week depending on whether the participant is alone (MIA-Alone) or accompanied (MIA-Accompanied). For the Avoidance Accompanied scale, respondents rate 26 items on Likert-type scales ranging from 1 (*never avoid*) to 5 (*always avoid*) to indicate how much they avoid various situations due to anxiety or discomfort when they are accompanied by a trusted companion. For the Avoidance Alone scale, respondents rate the same items for the circumstances under which they are alone, plus an additional item for staying home alone. The psychometric properties of the French version used in this study are similar to those of the original English version (Stephenson, Marchand, & Lavallée, 1997). The internal consistency for MIA-Alone is .87 and for MIA-Accompanied is .85. Stephenson et al. (1997) reported reliability coefficients of .75 to .76 for a student sample over a 42-day interval.

Beck Anxiety Inventory (BAI). The BAI (Beck, Epstein, Brown, & Steer, 1988) is a self-reported questionnaire including 21 items rated on a 4-point Likert-type scale measuring the severity of anxiety symptoms. The French version of the BAI was validated with samples of students and non-students and reported similar psychometric properties to those of the original English version (Freeston, Ladouceur, Thibodeau, Gagnon, & Rhéaume, 1994). The internal consistency varies between .84 and .93, and the test–retest reliability coefficient is .63 (Freeston et al., 1994).

Beck Depression Inventory (BDI-II). The BDI-II (Beck, Steer, & Brown, 1996) is a self-reported questionnaire including 21 items rated on a 4-point Likert-type scale measuring cognitive, emotional, and somatic symptoms of depression. The psychometric properties of the French version used in

this study are similar to those of the original English version (Gauthier, Morin, Thériault, & Lawson, 1982). The internal consistency is .82, and the test–retest reliability coefficient for a period of 1 month is .75 (Gauthier et al., 1982).

Measure of the sociodemographic variables

General Information Questionnaire. Constructed by the authors, this questionnaire collects information regarding relevant sociodemographic variables, such as age, sex, income, education, marital status, occupation, and medication. The choice of these variables is based on previous studies (Barrett et al., 2008; Garfield, 1994; Grilo et al., 1998; Issakidis & Andrews, 2004; Swift & Greenberg, 2012). Information associated with the participants' romantic relationships was also collected, including the duration of the relationship and the frequency of conflicts within the couple caused by the anxiety disorder.

Measures of the expectations

Process Expectations Questionnaire (PEQ). The PEQ (Katerelos, Bélanger, & Perreault, 1998) is a self-reported questionnaire including 28 items rated on a 4-point Likert-type scale (1 = *strongly agree* to 4 = *strongly disagree*) divided into the following two sub-scales: expectations regarding the processes of therapy (10 items) and role expectations (18 items). Items examining the process expectations addressed whether clients expected to participate in exercises that would provoke anxiety symptoms or whether they expected to talk about their childhood, whereas those examining the role expectations included statements such as "I expect that talking with a therapist is similar to chatting with a friend" or "I expect that therapeutic advice is similar to what a medical doctor does." Higher scores indicate greater congruence with treatment process and greater congruence with therapist and participant roles. The Cronbach's alpha coefficient is .72 (Katerelos, Bélanger, & Perreault, 1998).

Expectancy Mobility Inventory for Agoraphobia (EMIA). The EMIA (Katerelos, Perreault, & Bélanger, 1998) is an adaptation of the MIA-Alone (Chambless et al., 1985) used to assess the prognosis expectations related to the degree to which clients expect their avoidance behaviors to persist following therapy depending on whether the participant is alone (EMIA-Alone) or accompanied by a trusted person (EMIA-Accompanied). The EMIA includes 26 items restated to correspond to an expectation (e.g., "After the treatment, I expect to stop avoiding going to the movies"). The French adaptation was performed by Katerelos, Perreault, and Bélanger (1998). The internal consistency of this version is .95 (Katerelos, Perreault, & Bélanger, 1998).

Symptom Expectancy Questionnaire (SEQ). The SEQ (Katerelos, Perreault, Bélanger, & Marcaurelle, 1998) is an adapted reformulation of the section measuring the severity of panic symptoms from the ADIS-IV-L used to evaluate anxiety expectations associated with panic-related symptoms. This self-reported questionnaire includes 14 items rated on a 4-point Likert-type scale. The Cronbach's alpha coefficient for the French version of the SEQ is .92 (Katerelos, Perreault, Bélanger, & Marcaurelle, 1998).

Measure of the dyadic adjustment. Participants and their romantic partner received the Dyadic Adjustment Scale (DAS) to complete at home. To prevent them from influencing each other, they were asked to complete it individually and not to discuss questions and answers.

DAS. The DAS (Spanier, 1976) is a self-reported questionnaire including 32 questions and measuring four aspects of dyadic adjustment: consensus, satisfaction, cohesion, and expression of affection. A brief version of this questionnaire, the DAS-IV (Sabourin, Valois, & Lussier, 2005), was used as a continuous measure of dyadic satisfaction. The total score distinguishes satisfied couples (i.e., individual scores greater than or equal to 13) from dissatisfied couples (i.e., individual scores less than 13). The Cronbach's alpha coefficient for the French version is .84 (Sabourin et al., 2005).

Qualitative measure on reasons for therapy discontinuation
Questionnaire regarding the reasons for discontinuing treatment. Constructed by the authors, this questionnaire collects information regarding participants who discontinued treatment. The first qualitative section allows participants to express three reasons why they discontinued therapy (e.g., scheduling conflicts, marital conflicts, and dissatisfaction with the treatment), while the second section allows them to rate the importance of the different reasons on a 4-point Likert-type scale (1 = *not important at all* to 4 = *very important*).

Cognitive-behavioral group treatment. Licensed clinical psychologists trained in the cognitive-behavioral approach for anxiety disorders applied the treatment modalities. All the treatments offered as part of this research were group treatments with similar levels of efficacy as individual treatments (Marchand et al., 2000).

The cognitive-behavioral group therapy (CBT; see Barlow & Cerny, 1988) consisted of 14 weekly sessions of 3 hr each, which were led by two experienced therapists with groups of 10 to 12 participants. CBT includes the following cognitive and behavioral strategies: providing information regarding panic disorder with agoraphobia, demystifying fears and symptoms

Table 1. Mean Scores for Non-Dropout and Dropout of Treatment.

	M	SD
Non-dropout (*n* = 48)	2.64	2.22
Dropout (*n* = 29)	0.380	0.490
Total (*n* = 77)		

associated with panic attacks, cognitive restructuring, breathing retraining, exposure to interoceptive stimuli, and gradual in vivo exposure to avoided situations.

The therapy was divided in two main phases: (a) the learning phase (Sessions 1 to 7), in which the participants received psychoeducation and learned skills related to cognitive restructuring; and (b) the behavioral phase (Sessions 8 to 14), in which exposure to anxiety-provoking exercises took place.

To minimize the risk of dropping out, any participant who missed a session was contacted by telephone to determine the reason for the absence and to emphasize the importance of being diligent during the sessions.

Results

In total, 29 participants of the 77 individuals (37.7%) who began therapy discontinued treatment (see Table 1), which is expected considering that attrition rates range from 10% to 55% across studies and types of treatment (i.e., orientation, format) in this population (Erickson et al., 2007; Grilo et al., 1998; Issakidis & Andrews, 2004; Keijsers et al., 2001; Rosenberg & Hougaard, 2005; Santana & Fontenelle, 2011; White et al., 2010). Among the 29 participants, 15 dropped out (51.7%) between the first and the seventh session (i.e., before the in vivo exposure), and 14 dropped out (48.3%) between the eighth and the 14th session (i.e., after the exposure to feared situations had begun).

Statistical Analyses

First, to maximize the normality of the distribution of the questionnaires, three participants were removed from the sample because they had more than 20% missing data. The questionnaires that were retained all had less than 10% missing data. Observations of basic assumptions led to the transformation of two variables to reduce skewness and improve the normality of the data. A square root transformation was used for the prognosis expectations in

the accompanied individuals and for the role expectations. In addition, a composite variable was generated from the questionnaires regarding anxiety symptoms to provide an overall measure of the severity of panic disorder with agoraphobia at pretest (Aldrich & Nelson, 1984; Cohen, Cohen, West, & Aiken, 2002; Field, 2013).

Second, correlation analyses were performed to examine the relationships between the independent variables and treatment discontinuation. To improve our understanding of the reasons behind treatment dropout, the analyses were performed at specific times during the therapeutic process, that is to say, before the beginning of the treatment, during the learning phase of treatment (Sessions 1 to 7), and during the behavioral phase of treatment (Sessions 8 to 14).

Finally, to establish a model of predictors for treatment dropout in general and prior to the first therapy session (because a better understanding of this phenomenon would help preventing it at the very beginning of treatment), hierarchical linear regression analyses were performed with the variables that correlated significantly with discontinuation of treatment. The choice of a hierarchical linear regression despite the presence of a dichotomous dependent variable (i.e., therapy dropout or no therapy dropout) was based on the texts of Aldrich and Nelson (1984) and Cohen et al. (2002). Basic assumptions were verified and respected.

Correlations

Correlations between the variables at pretest and treatment dropout. Results suggest that the severity of the disorder at pretest and treatment dropout were not related. Regarding expectations, results indicate a correlation between treatment attrition and prognosis expectations when the participant was alone (EMIA-Alone; $r = .242$, $p < .05$). There were no significant correlations between treatment discontinuation and dyadic adjustment. Regarding sociodemographic variables, age ($r = -.233$, $p < .05$) and the number of years of schooling ($r = -.348$, $p < .01$) were inversely related to treatment dropout, whereas having already been in therapy was positively associated with treatment dropout ($r = .443$, $p < .01$).

Correlations between the variables at pretest and treatment dropout before the first session. The relationships between the independent variables and the discontinuation of treatment pretreatment (i.e., prior to the first therapy session) were also examined. A positive relationship was found between dropping out before treatment and prognosis expectations when the participant was accompanied (EMIA-Accompanied; $r = .287$, $p < .05$). A relationship between role expectations ($r = -.259$, $p < .05$) and dropping out prior to the start of

treatment was also evident in this sample. Regarding the sociodemographic variables, results show that taking medication ($r = .254, p < .05$) and having received a diagnosis of panic disorder with agoraphobia in the past ($r = .279, p < .05$) were associated with treatment discontinuation pretreatment.

Correlations between the variables at pretest and treatment dropout during the learning phase of treatment (Sessions 1-7). Results show an inverse relationship between discontinuation of treatment prior to the eighth session (i.e., during the learning phase of the treatment) and the degree of fear concerning the physical sensations associated with panic attacks ($r = -.607, p < .01$) and anxiety expectations ($r = -.485, p < .05$). The results indicate that process expectations ($r = .525, p < .05$) and role expectations ($r = .532, p < .05$) were associated with dropout at the beginning of treatment. Regarding the sociodemographic variables, results show that the number of children ($r = -.645, p < .05$) and taking medication ($r = -.545, p < .05$) were inversely related to dropout between Sessions 1 and 7.

Correlations between the variables at pretest and treatment dropout during the behavioral phase of treatment (Sessions 8-14). The examination of attrition starting from the eighth session, when the in vivo exposure began, revealed an association between treatment dropout and the severity of agoraphobic avoidance when the participant was alone (MIA-Alone; $r = .524, p < .05$) as well as between treatment dropout and the presence of depressive symptoms ($r = .574, p < .05$). Only process expectations appeared to be inversely related to the discontinuation of treatment ($r = -.474, p < .05$). The number of children ($r = .533, p < .05$), income ($r = -.569, p < .05$), as well as having already been in therapy ($r = -.745, p < .05$) were correlated with attrition during the second part of the program of therapy, which was when in vivo exposure had started ($r = .533, p < .05$).

Table 2 shows all correlations between the outcome variables and treatment dropout at specific time during the therapeutic process.

Hierarchical Linear Regression Analysis

Combined impact of expectations and sociodemographic variables on treatment dropout. Based on the results of the correlations, four variables were entered in the hierarchical linear regression analysis: prognosis expectations, age, education level, and having been in therapy in the past. The final model included two significant variables: the participant's age and having been in therapy in the past. The R for the regression differed from zero. The age of participants (negative relationship; $sr^2 = .10$) and having been in therapy in

Table 2. Correlations Between the Outcome Variables and Treatment Dropout at Specific Time During the Therapeutic Process.

	At pretest	Dropout before first session	Between sessions 1-7	Between sessions 8-14
Severity				
ADIS-IV-L	−.221	−.221	.140	.390
ACQ	.013	−.063	−.105	.083
BSQ	−.132	−.204	−.607**	.393
MIA				
Alone	−.012	.033	−.434	.524*
Accompanied	−.019	.114	−.262	.379
BAI	.041	−.032	−.210	.268
BDI-II	.045	.023	−.357	.574*
Sociodemographic				
Sex	.056	−.031	−.204	−.079
Age	−.233*	−.135	−.245	.078
Income	−.143	−.163	.296	−.569*
Children	−.141	.047	−.645*	.533*
Schooling	−.348**	−.212	.207	−.215
Marital status	−.020	.053	−.065	.079
Duration relation	−.189	−.056	−.408	.004
Medication	−.013	.254*	−.545*	.324
Diagnostic	−.033	.279*	−.122	−.189
Previous therapy	.443**	.299	.258	−.745*
Expectations				
PEQ				
Process	−.171	−.091	.525*	−.474*
Role	−.001	−.256*	.532*	−.386
EMIA				
Alone	.242*	.131	−.314	.407
Accompanied	.222	.287*	−.202	.114
SEQ	−.020	−.189	−.485*	.418
Dyadic adjustment				
DAS				
Participant	−.026	−.187	.291	.071
Partner	−.191	−.018	.055	.339

Note. ADIS-IV-L = Anxiety Disorders Interview Schedule-IV, Lifetime Version; ACQ = Agoraphobic Cognitions Questionnaires; BSQ = Body Sensations Questionnaire; MIA = Mobility Inventory for Agoraphobia; BAI = Beck Anxiety Inventory; BDI-II = Beck Depression Inventory; PEQ = Process Expectations Questionnaire; EMIA = Expectancy Mobility Inventory for Agoraphobia; SEQ = Symptom Expectancy Questionnaire; DAS = Dyadic Adjustment Scale.

the past ($sr^2 = .21$) were found to explain 30% of the total variance for treatment dropout, $F(2.31) = 6.574$, $p < .01$.

Combined impact of expectations and sociodemographic variables on treatment dropout prior to the first session. Based on the results of the correlations, four variables were entered in the hierarchical linear regression analysis: prognosis expectations when the participant was accompanied (EMIA-Accompanied), role expectations, taking medication, and having received a diagnosis of panic disorder with agoraphobia in the past. Basic assumptions were verified and respected. The results identified three significant variables: prognosis expectations (EMIA-Accompanied), taking medication, and having received a diagnosis of panic disorder with agoraphobia in the past. The R for the regression differed from zero. The prognosis expectations ($sr^2 = .07$), taking medication ($sr^2 = .02$), and having received a diagnosis of panic disorder with agoraphobia in the past ($sr^2 = .15$) together explained 32% of the total variance for treatment dropout prior to the first session, $F(3.59) = 9.143$, $p < .01$.

Reasons for Discontinuing Therapy

As previously mentioned, among the 29 participants who discontinued treatment, 15 dropped out between the first and the seventh session (i.e., before the in vivo exposure), and 14 dropped out between the eighth and 14th sessions (i.e., after the exposure to feared situations had begun). After their discontinuation of therapy, they were asked to complete a questionnaire regarding the reasons that led them to drop out. The questionnaire was designed to explore variables that could possibly explain the therapeutic discontinuation to guide future studies and improve psychological services. A total of 56 reasons were identified. A content analysis was conducted using L'Écuyer's (1988) categorizations and classifications. The categories were derived from the analysis and were not predetermined. In total, 55 possible reasons for discontinuation of treatment were identified and categorized as follows: a lack of availability (38.2%), treatment-related variables (43.7%), variables related to conflicts with their romantic partners in relation to therapy (14.6%), and withdrawal for repeated absence (3.6%).

Table 3 shows that, in the lack of availability category, the most common reason for dropping out was scheduling conflicts, which were present in 66% of participants (14 of 21), and included work, family, or vacation. In 19% of cases (four of 21), participants reported a physical disease or problem (e.g., fibromyalgia, pneumonia) as a reason for dropping out. The distance from home to the clinic, reported as being very important by the patient, was reported in 14% of cases (three of 21). Regarding treatment-related variables, 58% of

Table 3. Reasons Given by Patients for Discontinuing Therapy.

Categories	Number of responses
1. Lack of availability	21
Scheduling conflict	14
Work	4
Children	1
Vacation	2
Unidentified scheduling conflict	7
Disease	4
Distance	3
2. Treatment-related variables	24
Dissatisfaction with the treatment	14
Group	2
Provided information	4
Not fitting in	2
Avoidance	8
Exposure	3
Emotions	2
Increase in symptoms	3
Lack of progress	2
3. Variables related to the romantic partners	8
Unavailability of the partner for travel	2
Increased marital conflict related to the therapy	5
Questioning the appropriateness of the therapy after conflicts with the partner	2
Fear of independence	3
Fear of the consequences of the conflicts	1
Illness of the partner	1
4. Exclusion for repeated absence	2

participants reported dropping out due to dissatisfaction with the treatment modalities (14 of 24); specifically, 33% (eight of 24) dropped out because of their tendency to avoid stressful situations (e.g., fear of exposure), and others left due to dissatisfaction with the provided information (four of 14; for example, expectations and needs not met, not enough information on agoraphobia, and too much emphasis on communication). Lack of progress was mentioned in 8% of cases (two of 24) as a reason for discontinuing treatment. As for the variables related to romantic partners, 62.5% (five of eight) reported increased marital conflict related to the therapy as an explanation for their discontinuation. This included participants' questioning the appropriateness of the therapy

following conflicts with their partners (five of eight), a fear of independence (two of five), and a fear of the consequences of the conflicts (one of five).

Discussion

This study examined the relationships between discontinuation of treatment for panic disorder with agoraphobia and the following four categories of predictors: severity of the disorder, sociodemographic variables, participants' expectations, and dyadic adjustment. First, the results suggest that the severity of panic disorder with agoraphobia was not a good predictor of therapy discontinuation. This result is well in line with the results of other studies that did not find such a link (Keijsers et al., 2001; White et al., 2010). Therefore, the severity of the disorder may be widely associated with treatment outcome but not necessarily with treatment completion (Grilo et al., 1998). However, participants with depressive symptoms tended to drop out during the in vivo exposure phase; this observation is in accordance with the results of Issakidis and Andrews (2004) who reported that more severe comorbid depressive symptoms were associated with pretreatment attrition and dropout. One hypothesis to explain this result would be that depressive individuals may have difficulty engaging in different activities due to their dreary mood, and the addition of the behavioral activation that is required during the in vivo exposure may result in these individuals perceiving therapy as an extremely difficult process. Thereby, a special intervention for depressive individuals would first require overcoming the lack of interest that is caused by depression to help clients gain the motivation to change, which would later benefit the exposure part of the therapy. Thus, the results of this study suggest that depression should be treated in conjunction with panic disorder with agoraphobia so that the behavioral activation needed to treat the affective disorder could be practiced prior to the exposure employed to treat the anxiety disorder (Issakidis & Andrews, 2004).

Second, among sociodemographic variables, age and having already been in therapy appear to be good predictors of therapy discontinuation. Indeed, results indicate that the older participants are, the less likely they will drop out of therapy. This result is consistent with previous findings from other studies regarding the reasons for therapy discontinuation (Baekeland & Lundwall, 1975; Barrett et al., 2008; Pinto-Meza et al., 2011; Swift & Greenberg, 2012). Having a history of panic disorder with agoraphobia diagnosis and having already been in therapy are also good predictors of treatment dropout before the first session. This could be partly explained by the generalized and recurrent use of escape and avoidance strategies by individuals who have panic disorder with agoraphobia. When the therapy is about to start, these individuals may use

avoidance to address the excessive anxiety that is generated by the therapeutic process in the same manner that they use avoidance on a daily basis as a central strategy to escape stress. The results also suggest that taking medication is related to therapy dropout before the first session but not during the course of treatment. Could this be explained by the fact that individuals who already take medication are less motivated to receive a psychological treatment? Studies exploring this question are required. However, when the therapy is underway, the results showed no significant difference in dropout rates between medicated and non-medicated individuals.

Moreover, participants with children do not typically drop out at the beginning of therapy but rather drop out during the in vivo exposure phase of therapy. This could be explained by the learning phase of therapy requiring moderate investment and time management, which allows participants to conciliate the demands of the therapy with those of their family life, whereas in vivo exposure requires more personal and time commitments that make it more demanding for some clients. However, this excuse could also be used as a strategy for the rationalization of avoidance. Indeed, it is "acceptable" to drop out of therapy to spend more time with one's children, whereas it is "not acceptable" to drop out because therapy generates excessive anxiety.

Third, regarding participants' expectations, those with high anxiety expectations are less likely to drop out in the learning phase of treatment, which could be explained by the fact that exposure to anxiety-provoking exercises have not yet started in that phase of treatment. Therefore, fears and expectations related to anxiety symptoms would not cause participants to drop out in this phase of treatment. As for participants with high process expectations, they are more likely to drop out during the learning phase, but less likely to drop out after the beginning of the behavioral phase. Thus, they tend to leave treatment if their unrealistic beliefs about the therapeutic process, the topics explored, their role, and the role of the therapist are not satisfied during the early sessions of therapy, whereas, they tend to pursue treatment when they expect a decrease in their anxiety symptoms. Similarly, a study by Perreault et al. (2014) indicates that clients receiving therapy according to their preferences (i.e., an individual or group therapy) tend to complete treatment, while those receiving therapy different from what they want tend to drop out. Finally, prognosis expectations predict treatment discontinuation before the first session. One possible explanation could be that participants with high prognosis expectations may hold unrealistic beliefs regarding the outcomes of the therapy (e.g., to never avoid again, to never feel anxious again), which might make the therapy seem too demanding and the outcome nearly impossible to attain. Thus, with regard to these results, it would be important to measure different types of expectations before and during therapy to better predict treatment completion.

Finally, regarding dyadic adjustment, results from this research are contradictory. Our analyses indicated that dyadic adjustment does not seem to affect therapy dropout, although the main reasons provided by participants for discontinuing treatment include romantic partners or the marital relationship in 14.6% of cases (see Table 3). One possible explanation for this result is that the measure used to assess dyadic adjustment in this study was not optimal for studying the relational causes of attrition. The use of a self-reported questionnaire could be a limitation, given that its validity may have been affected by social desirability. Furthermore, the results could be explained by the fact that the relational problems that led participants to drop out were not present at the beginning of treatment, which was when the questionnaire was completed. Some of the problems that participants reported might have developed during or following therapy. Furthermore, some of the couples' problems might have been caused by the therapeutic process itself (Hafner & Minge, 1989; Marcaurelle et al., 2003; Marcaurelle et al., 2005). Indeed, Marcaurelle et al. (2003) explained that dyadic and therapeutic variables may affect each other in this particular population with the following sequence: (a) the growing autonomy of treated individuals tends to jeopardize the marital balance of a couple in which his or her partner acts as a protector who is emotionally overinvolved, (b) the partner who feels valued in this protective role may be reluctant to the changes resulting from the therapeutic process, and (c) this reluctance might lead to conflicts within the couple that push clients to discontinue treatment. This sequence is consistent with other researchers' conclusions (Barlow, O'Brien, Last, & Holden, 1983; Hafner, 1984; Hafner & Minge, 1989), which state that the couples' roles are modified by therapy, and the client's partner can have the impression that he or she has lost a certain amount of control in the relationship (Marchand et al., 2009). Indeed, therapy may eradicate the factors maintaining the disorder and acting as secondary benefits for the romantic relationship, such as the avoidance of discussions regarding social activities, child care, and household chores that protect individuals from disputes involving jealousy and activity planning (Marcaurelle et al., 2005). However, the potential negative impacts of treatment on dyadic adjustment need further investigation; some studies have found a positive impact of treatment on couples' functioning, while others have not found any effect (Barlow et al., 1983; Himadi, Cerny, Barlow, Cohen, & O'Brien, 1986).

Limitations and Future Research

The current study does have a number of limitations. First, its exploratory nature and the use of correlational analyses do not allow the inference of causal links between the variables. Second, the small sample size and the use of the *DSM-IV-TR* do not permit the generalization of the findings

to all individuals who suffer from panic disorder with agoraphobia, and to individuals with panic disorder and/or agoraphobia. Third, due to the large number of statistical analyses performed, a Bonferroni correction could have been applied to the results to control for the inflation of the alpha error (type I error). However, due to the exploratory nature of the study and its convenience sample, it was not applied. Fourth, the exploration of expectations required the use of certain non-validated questionnaires (e.g., EMIA-Alone, PEQ, and SEQ). Fifth, it would be interesting to assess all questionnaires during and after treatment to look at the relationship between changes in main symptom measures and dropout. Sixth, the use of a group treatment could contribute to therapy discontinuation; some studies showed that this format includes disadvantages, such as the risk that one individual monopolizes the sessions and the reluctance of some individuals to discuss disturbing cognitions in front of others (see Tucker & Oei, 2007). Finally, despite the substantial number of variables that were studied, other intervening variables (e.g., the therapeutic alliance, motivation) may play a role in the outcomes.

Notwithstanding these limitations, the results of this study highlight the need for further research on the predictive variables for therapy dropout in those suffering from panic disorder with agoraphobia. They show the need for additional research on expectations and dyadic variables by using experimental designs that address some conceptual and methodological limitations encountered in this study. First, future studies should use validated questionnaires for expectations. In addition, although our results are consistent with those of other studies, suggesting that clients are more likely to complete therapy when their expectations are congruent with the tasks and goals of treatment (Seligman, Wuyek, Geers, Hovey, & Motley, 2009), more studies should examine whether process expectations affect therapy discontinuation because participants are not satisfied with the treatment. Second, future studies should examine dyadic variables other than adjustment that may influence treatment dropout, including problem-solving abilities, attachment style, emotional overinvolvement by the non-anxious partner, and emotional dependency on the spouse and personality disorders (Marcaurelle et al., 2003). Third, in their investigation of marital interactions that would be at play in therapy dropout, researchers should use a behavioral coding measure (Bélanger, Sabourin, Laughrea, Dulude, & Wright, 1993) as a complementary measure to self-reported questionnaires. This procedure could help to shed light on important behavioral interaction processes at play during the marital interactions. The objective would be to identify conflict, avoidance, and denial strategies that are used by both partners that may play a role in the decision of the anxious partner to drop out of therapy. Finally, further studies need to have a control group and a larger sample.

In conclusion, the results of this study indicate the importance of considering variables related to age, diagnosis, medication, family, marital status, and client expectations during therapy planning. In addition, they emphasize the need to analyze the predictors of attrition at different times during the therapeutic process to guide future studies and the development of procedures designed to increase treatment adherence (Edlund et al., 2002; Grilo et al., 1998). Better adherence to treatment will help to reduce individual (e.g., distress, avoidance, and isolation) and societal (e.g., mobilization of public health material and human resources) costs associated with therapeutic discontinuation.

Declaration of Conflicting Interests

Funding

References

Aldrich, J. H., & Nelson, F. D. (1984). *Linear probability, logit, and probit models* (Sage University papers: Quantitative applications in the social sciences No. 07-045). Beverly Hills, CA: SAGE.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.

Asmundson, G. J. G., Taylor, S., & Smits, J. A. J. (2014). Panic disorder and agoraphobia: An overview and commentary on DSM-5 changes. *Depression and Anxiety*, *31*, 480-486.

Austin, S. F., Symbundu, A. D., Lykke, J., & Oestrich, I. H. (2008). Treating panic symptoms within everyday clinical settings: The feasibility of a group cognitive behavioural intervention. *Nordic Journal of Psychiatry*, *62*, 287-293.

Baekeland, F., & Lundwall, L. (1975). Dropping out of treatment: A critical review. *Psychological Bulletin*, *82*, 738-783.

Barlow, D. H., & Cerny, J. A. (1988). *Psychological treatment of panic*. New York, NY: Guilford Press.

Barlow, D. H., Gorman, J. M., Shear, M. K., & Woods, S. W. (2000). Cognitive-behavioral therapy, imipramine, or their combination for panic disorder: A randomized controlled trial. *Journal of the American Medical Association*, *283*, 2529-2536.

Barlow, D. H., O'Brien, G. T., Last, C. G., & Holden, A. E. (1983). Couples treatment of agoraphobia: Initial outcome. In K. D. Craig & R. I. McMahon (Eds.), *Advances in clinical-behavioral therapy* (pp. 99-126). New York, NY: Brunner/Mazel.

Barrett, M. S., Chua, W. J., Crits-Christoph, P., Gibbons, M. B., Casiano, D., & Thompson, D. (2008). Early withdrawal from mental health treatment: Implications for psychotherapy practice. *Psychotherapy: Theory, Research, Practice, Training*, *45*, 247-267.

Beck, A. T., Epstein, N., Brown, G., & Steer, R. A. (1988). An inventory for measuring clinical anxiety: Psychometric properties. *Journal of Consulting and Clinical Psychology*, *56*, 893-897.

Beck, A. T., Steer, R. A., & Brown, G. (1996). *Beck Depression Inventory–Second Edition: Manual*. San Antonio, TX: Psychological Corporation.

Bélanger, C., Leduc, A. G., Fredman, S., El-Baalbaki, G., & Baucom, D. H. (2008). Couples et troubles anxieux: Évaluation et intervention [The couple relationship and anxiety disorders: Assessment and intervention]. In J. Wright, Y. Lussier, & S. Sabourin (Eds.), *Manuel clinique des psychothérapies de couple* [Couples therapy: A clinical guide] (pp. 507-539). Sainte-Foy, Canada: Presses de l'Université du Québec.

Bélanger, C., Marcaurelle, R., Marchand, A., El Baalbaki, G., Guay, S., & Pecknold, J. (2011). Effect of a marital communication training on treatment outcome in panic disorder with agoraphobia. In A. M. Columbus (Ed.), *Advances in psychology research* (pp. 141-163). Hauppage, New York: Nova Science.

Bélanger, C., Sabourin, S., Laughrea, K., Dulude, D., & Wright, J. (1993). Macroscopic marital interaction coding systems: Are they interchangeable? *Behaviour Research and Therapy*, *31*, 789-795.

Boivin, I., & Marchand, A. (1996). Entrevue structurée pour les troubles anxieux du *DSM-IV* [Anxiety disorders interview schedule for *DSM-IV*]. Unpublished manuscript, Department of Psychology, Université du Québec à Montréal, Canada.

Brown, T. A., & Barlow, D. H. (2002). Classification of anxiety and mood disorders. In D. H. Barlow (Ed.), *Anxiety and its disorders: The nature and treatment of anxiety and panic* (2nd ed., pp. 292-327). New York, NY: Guilford Press.

Burke, M., Drummond, L. M., & Johnston, D. W. (1997). Treatment choice for agoraphobic women: Exposure or cognitive-behaviour therapy? *British Journal of Clinical Psychology*, *36*, 409-420.

Chambless, D. L., Caputo, G. C., Bright, P., & Gallagher, R. (1984). Assessment of fear in agoraphobics: The Body Sensations Questionnaire and the Agoraphobic Cognitions Questionnaire. *Journal of Consulting and Clinical Psychology*, *52*, 1090-1097.

Chambless, D. L., Caputo, G. C., Jasin, S. E., Gracely, E. J., & Williams, C. (1985). The Mobility Inventory for Agoraphobia. *Behaviour Research and Therapy*, *23*, 35-44.

Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2002). *Applied multiple regression/correlation analysis for the behavioral sciences*. New York, NY: Routledge.

Constantino, M. J. (2012). Believing is seeing: An evolving research program on patients' psychotherapy expectations. *Psychotherapy Research*, *22*, 127-138.

Constantino, M. J., Ametrano, R. M., & Greenberg, R. P. (2012). Clinician interventions and participant characteristics that foster adaptive patient expectations for psychotherapy and psychotherapeutic change. *Psychotherapy*, *49*, 557-569.

Constantino, M. J., Arnkoff, D. B., Glass, C. R., Ametrano, R. M., & Smith, J. Z. (2011). Expectations. *Journal of Clinical Psychology*, *67*, 184-192.

Cox, B. J., Endler, N. S., & Swinson, R. P. (1995). Anxiety sensitivity and panic attack symptomatology. *Behaviour Research and Therapy*, *33*, 833-836.

Daiuto, A. D., Baucom, D. H., Epstein, N., & Dutton, S. S. (1998). The application of behavioral couples therapy to the assessment and treatment of agoraphobia: Implications of empirical research. *Clinical Psychology Review*, *18*, 663-687.

DiNardo, P. A., Brown, T. A., & Barlow, D. H. (1994). *Anxiety Disorders Interview Schedule for DSM-IV: Lifetime version (ADIS-IV-L)*. New York, NY: Graywind Publications.

Edlund, M. J., Wang, P. S., Berglund, P. A., Katz, S. J., Lin, E., & Kessler, R. C. (2002). Dropping out of mental health treatment: Patterns and predictors among epidemiological survey respondents in the United States and Ontario. *The American Journal of Psychiatry*, *159*, 845-851.

El-Baalbaki, G., Bélanger, C., Perreault, M., Fredman, S. J., & Baucom, D. (2010). Marital interactions in predicting treatment outcome in panic disorder with agoraphobia. *International Journal of Humanities and Social Science*, *5*, 671-681.

Erickson, D. H., Janeck, A. S., & Tallman, K. (2007). A cognitive-behavioral group for patients with various anxiety disorders. *Psychiatric Services*, *58*, 1205-1211.

Field, A. (2013). *Studyguide for discovering statistics using IBM SPSS statistics: And sex and drugs and rock 'n' roll*. Los Angeles, CA: SAGE.

Freeston, M. H., Ladouceur, R., Thibodeau, N., Gagnon, F., & Rhéaume, J. (1994). L'inventaire d'anxiété de Beck: Propriétés psychométriques d'une traduction française [The Beck Anxiety Inventory: Psychometric properties of a French translation]. *L'Encéphale*, *20*(1), 47-55.

Galassi, F., Quercioli, S., Charismas, D., Niccolai, V., & Barciulli, E. (2007). Cognitive-behavioral group treatment for panic disorder with agoraphobia. *Journal of Clinical Psychology*, *63*, 409-416.

Garfield, S. L. (1994). Research on client variables in psychotherapy. In A. E. Bergin & S. L. Garfield (Eds.), *Handbook of psychotherapy and behavior change* (4th ed., pp. 190-228). New York, NY: Wiley.

Gauthier, J., Morin, C., Thériault, F., & Lawson, J. S. (1982). Adaptation française d'une mesure d'auto-évaluation de l'intensité de la dépression [French adaptation of a self-report measure of depression intensity]. *Revue Québécoise de Psychologie*, *3*(2), 13-27.

Goldstein, A. P. (1962). Therapist-patient expectancies in psychotherapy. New York, NY: Pergamon Press.

Gorman, J. M., & Coplan, J. D. (1996). Comorbidity of depression and panic disorder. *Journal of Clinical Psychiatry*, *57*(10), 34-41.

Grilo, C. M., Money, R., Barlow, D. H., Goddard, A. W., Gorman, J. M., Hofmann, S. G., . . . Woods, S. W. (1998). Pretreatment patient factors predicting attrition from a multicenter randomized controlled treatment study for panic disorder. *Comprehensive Psychiatry*, *39*, 323-332.

Hafner, R. J. (1984). The marital repercussions of behavior therapy for agoraphobia. *Psychotherapy: Theory, Research, Practice, Training*, *21*, 530-542.

Hafner, R. J., & Minge, P. J. (1989). Sex role stereotyping in women with agoraphobia and their husbands. *Sex Roles*, *20*, 705-711.

Hahlweg, K., Fiegenbaum, W., Frank, M., Schroeder, B., & von Witzleben, I. (2001). Short- and long-term effectiveness of an empirically supported treatment for agoraphobia. *Journal of Consulting and Clinical Psychology*, *69*, 375-382.

Hatchett, G. T., & Park, H. L. (2003). Comparison of four operational definitions of premature termination. *Psychotherapy: Theory, Research, Practice, Training*, *40*, 226-231.

Himadi, W. G., Cerny, J. A., Barlow, D. H., Cohen, S., & O'Brien, G. T. (1986). The relationship of marital adjustment to agoraphobia treatment outcome. *Behaviour Research and Therapy*, *24*, 107-115.

Issakidis, C., & Andrews, G. (2004). Pretreatment attrition and dropout in an outpatient clinic for anxiety disorders. *Acta Psychiatrica Scandinavica*, *109*, 426-433.

Katerelos, T. E., Bélanger, C., & Perreault, M. (1998). *Process Expectations Questionnaire*. Unpublished manuscript, Department of Psychology, Université du Québec à Montréal, Canada.

Katerelos, T. E., Bélanger, C., Perreault, M., Marchand, A., El-Baalbaki, G., & Pecknold, J. (2011). The differential impact of expectancies and symptom severity on cognitive behavior therapy and outcome in panic disorder with agoraphobia. In A. Szirmai (Ed.), *Anxiety and related disorders*. Rijeka, Croatia: InTech Books.

Katerelos, T. E., Perreault, M., & Bélanger, C. (1998). *The Expectancy Mobility Inventory for Agoraphobia-Alone*. Unpublished manuscript, Department of Psychology, Université du Québec à Montréal, Canada.

Katerelos, T. E., Perreault, M., Bélanger, C., & Marcaurelle, R. (1998). *The Symptom Expectancy Questionnaire*. Unpublished manuscript, Department of Psychology, Université du Québec à Montréal, Canada.

Katerelos, T. E., Perreault, M., Bélanger, C., Marchand, A., & Pecknold, J. (2011). The differential impact of prognostic and process expectations versus panic severity on depressive symptoms in panic disorder with agoraphobia. *Europe's Journal of Psychology*, *7*, 241-260.

Keijsers, G. P. J., Kampman, M., & Hoogduin, C. A. L. (2001). Dropout prediction in cognitive behavior therapy for panic disorder. *Behavior Therapy*, *32*, 739-749.

L'Écuyer, R. (1988). L'analyse de contenu: Notion et étapes [Content analysis: Notion and stages]. In J. P. Deslauriers (Ed.), *Les méthodes de la recherche qualitative* [The methods of qualitative research] (pp. 35–51). Québec City, Canada: Presses de l'Université du Québec.

Marcaurelle, R., Bélanger, C., & Marchand, A. (2003). Marital relationship and the treatment of panic disorder with agoraphobia: A critical review. *Clinical Psychology Review*, *23*, 247-276.

Marcaurelle, R., Bélanger, C., Marchand, A., Katerelos, T. E., & Mainguy, N. (2005). Marital predictors of symptom severity in panic disorder with agoraphobia. *Journal of Anxiety Disorders*, *19*, 211-232.

Marchand, A., Roberge, P., Dupuis, G., Contandriopoulos, A., Mainguy, N., & Savard, P. (2000). *Évaluation clinique, psychosociale et économique de trois modalités de traitement du trouble panique avec agoraphobie* [Clinical, psychosocial and economic evaluation of three modalities of treatment of panic disorder with agoraphobia]. Montréal, Quebec, Canada: Centre de recherche Fernand-Seguin.

Marchand, A., Roberge, P., Primiano, S., & Germain, V. (2009). A randomized, controlled clinical trial of standard, group and brief cognitive-behavioral therapy for panic disorder with agoraphobia: A two-year follow-up. *Journal of Anxiety Disorders*, *23*, 1139-1147.

Mueller, M., & Pekarik, G. (2000). Treatment duration prediction: Client accuracy and its relationship to dropout, outcome, and satisfaction. *Psychotherapy: Theory, Research, Practice, Training*, *37*, 117-123.

Oei, T. P. S., & Dingle, G. (2008). The effectiveness of group cognitive behaviour therapy for unipolar depressive disorders. *Journal of Affective Disorders*, *107*, 5-21.

Perreault, M., Julien, D., White, N. D., Bélanger, C., Marchand, A., Katerelos, T., & Milton, D. (2014). Treatment modality preferences and adherence to group treatment for panic disorder with agoraphobia. *Psychiatric Quarterly*, *85*, 121-132.

Pinto-Meza, A., Fernandez, A., Bruffaerts, R., Alonso, J., Kovess, V., De Graaf, R., . . . Haro, J. M. (2011). Dropping out of mental health treatment among patients with depression and anxiety by type of provider: Results of the European Study of the Epidemiology of Mental Health. *Social Psychiatry & Psychiatric Epidemiology*, *46*, 273-280.

Renshaw, K. D., Chambless, D. L., & Steketee, G. (2006). The relationship of relatives' attributions to their expressed emotion and to patients' improvement in treatment for anxiety disorders. *Behavior Therapy*, *37*, 159-169.

Rosenberg, N. K., & Hougaard, E. (2005). Cognitive-behavioural group treatment of panic disorder and agoraphobia in a psychiatric setting: A naturalistic study of effectiveness. *Nordic Journal of Psychiatry*, *59*, 198-204.

Sabourin, S., Valois, P., & Lussier, Y. (2005). Development and validation of a brief version of the Dyadic Adjustment Scale using a nonparametric item analysis model. *Psychological Assessment*, *17*, 15-27.

Sánchez-Meca, J., Rosa-Alcazar, A. I., Marin-Martinez, F., & Gomez-Conesa, A. (2010). Psychological treatment of panic disorder with or without agoraphobia: A meta-analysis. *Clinical Psychology Review*, *30*, 37-50.

Santana, L., & Fontenelle, L. F. (2011). A review of studies concerning treatment adherence of patients with anxiety disorders. *Patient Prefer Adherence*, *5*, 427-439.

Seligman, L. D., Wuyek, L. A., Geers, A. L., Hovey, J. D., & Motley, R. L. (2009). The effects of inaccurate expectations on experiences with psychotherapy. *Cognitive Therapy and Research*, *33*, 139-149.

Sharp, D. M., Power, K. G., & Swanson, V. (2004). A comparison of the efficacy and acceptability of group versus individual cognitive behaviour therapy in the treatment of panic disorder and agoraphobia in primary care. *Clinical Psychology & Psychotherapy*, *11*, 73-82.

Spanier, G. B. (1976). Measuring dyadic adjustment: New scales for assessing the equality of marriage and similar dyads. *Journal of Marriage and Family*, *38*, 15-28.

Srinivasan, K., & Neerakal, I. (2002). A study of panic patients with and without depression. *Indian Journal of Psychiatry*, *44*, 246-252.

Stein, M. B., Cantrell, C. R., Sokol, M. C., Eaddy, M. T., & Shah, M. B. (2006). Antidepressant adherence and medical resource use among managed care patients with anxiety disorders. *Psychiatric Services*, *57*, 673-680.

Stephenson, R., Marchand, A., & Lavallée, M.-C. (1997). Validation of the adaptation for the Quebec francophones of the Mobility Inventory for Agoraphobia. *Science et Comportement*, *26*, 35-58.

Stephenson, R., Marchand, A., & Lavallée, M.-C. (1998). Validation du questionnaire des sensations physiques auprès de la population canadienne-française [Validation of the Body Sensations Questionnaire in a French-Canadian population]. *L'Encéphale*, *24*, 415-425.

Stephenson, R., Marchand, A., & Lavallée, M.-C. (1999). A Canadian French Adaptation of the Agoraphobic Cognitions Questionnaire: Cross-cultural validation and gender differences. *Scandinavian Journal of Behaviour Therapy*, *28*, 58-69.

Swift, J. K., & Callahan, J. L. (2011). Decreasing treatment dropout by addressing expectations for treatment length. *Psychotherapy Research*, *21*, 193-200.

Swift, J. K., Callahan, J. L., & Levine, J. C. (2009). Using clinically significant change to identify premature termination. *Psychotherapy: Theory, Research, Practice, Training*, *46*, 328-335.

Swift, J. K., & Greenberg, R. P. (2012). Premature discontinuation in adult psychotherapy: A meta-analysis. *Journal of Consulting and Clinical Psychology*, *80*, 547-559.

Swift, J. K., & Greenberg, R. P. (2014). A treatment by disorder meta-analysis of dropout from psychotherapy. *Journal of Psychotherapy Integration*, *24*, 193-207.

Taylor, S. (2000). *Understanding and treating panic disorder: Cognitive-behavioural approaches*. New York, NY: John Wiley.

Tucker, M., & Oei, T. P. S. (2007). Is group more cost effective than individual cognitive behaviour therapy? The evidence is not solid yet. *Behavioural and Cognitive Psychotherapy*, *35*, 77-91.

White, K. S., Allen, L. B., Barlow, D. H., Gorman, J. M., Shear, M. K., & Woods, S. W. (2010). Attrition in a multicenter clinical trial for panic disorder. *Journal of Nervous and Mental Disease*, *198*, 665-671.

Whittal, M. L., & Goetsch, V. L. (1997). The impact of panic expectancy and social demand on agoraphobia avoidance. *Behaviour Research and Therapy*, *35*, 813-821.

Wittchen, H.-U., Gloster, A. T., Beesdo-Baum, K., Fava, G. A., & Craske, M. G. (2010). Agoraphobia: A review of the diagnostic classificatory position and criteria. *Depression and Anxiety*, *27*, 113-133.

Author Biographies

Claude Bélanger (PhD) is a professor of psychology at the University of Quebec in Montreal (UQAM), an assistant professor in psychiatry at McGill University, and a researcher at the Interdisciplinary Research Centre on Intimate Relationship Problems and Sexual Abuse (CRIPCAS). His research focuses on anxiety disorders and couples therapy.

Catherine Courchesne is a PhD student at the UQAM in the department of psychology and a researcher at the Montreal Mental Health University Institute Research Centre. Her research interests include anxiety disorders and obsessive-compulsive and related disorders.

Andrea G. Leduc was trained at the UQAM in the department of psychology. She is now a clinical psychologist in private practice.

Caroline Dugal is a PhD student at the UQAM in the department of psychology, and a researcher at the CRIPCAS. Her research interests concern marital violence and couples therapy.

Ghassan El-Baalbaki is currently an associate professor at the UQAM in the department of psychology and an adjunct professor at McGill University in the department of oncology. His research focuses on personality disorders, anxiety disorders, and marital relationships.

André Marchand (PhD) is a professor of psychology at the UQAM and a researcher at the Montreal Mental Health University Institute Research Centre. His main research interest concerns the assessment and treatment of anxiety disorders.

Natacha Godbout (PhD) is a professor of sexology at the UQAM. She is also a researcher at the CRIPCAS. Her research interests are mainly couple relationships and marital violence.

Roger Marcaurelle (PhD) was trained at the UQAM in the department of psychology. He is an associate professor at the UQAM. He is also a clinical psychologist in private practice.

Michel Perreault (PhD) is an associate professor at McGill University in the department of psychiatry, and a researcher at the Douglas Mental Health University Institute in Montreal, and an affiliated professor at the UQAM in the department of psychology.