Facing social fears

An investigation of mindfulness-based stress reduction for young adults with social anxiety disorder

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Scientific environment

This dissertation is the result of a collaboration between the Bergen Clinical Psychology Research Group and the Outpatient Clinic for Young Adults at the Department of Clinical Psychology, University of Bergen, and the Mental Health Care Centre (SPH) at the Student Welfare Organization in Bergen (SIB).

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Abstract

Social anxiety disorder (SAD) is a prevalent condition that often leads to co-morbid mental disorders and chronic functional impairments in most domains of human life. Psychological interventions are often effective, but many SAD patients do not respond to existing treatments, highlighting a need to explore new psychological interventions in order to expand the range of effective treatments for SAD. Mindfulness and acceptance-based interventions (MABIs) have been proposed as a promising strategy for SAD, although existing studies have yielded mixed findings.

The purpose of this dissertation was to explore the experiences and psychological changes of 54 young adults who participated in an open trial of mindfulness-based stress reduction (MBSR) for SAD. How do young adults who struggle with problems in the social anxiety spectrum experience and relate to their difficulties before, during and after they participate in an eight-week MBSR program? The dissertation consists of three papers. The aim of paper 1 was to explore the lived experiences of the young adults before they began the MBSR program. The aim of paper 2 was to examine mindfulness-based stress reduction for young adults with SAD. The aim of paper 3 was to investigate how the participants with the most and least change in their symptoms experienced the process of undergoing the MBSR program.

The clinical study was based on a quasi-experimental mixed methods design. The first paper was a qualitative study using in-depth interviews (n = 29) to explore the lived experiences of participants prior to the program. The second paper was a quantitative study that investigated the MBSR program as an intervention for young adults (n = 53) with SAD. The third paper was a mixed methods study exploring how the participants (n = 14) with the most and least symptomatic change experienced the process of participating in the MBSR program. The qualitative interviews were analyzed using a thematic analysis methodology, based on a hermeneutic-phenomenological epistemology. Statistical analyses were conducted to assess pre-post changes in social anxiety symptoms, global psychological distress, mindfulness, self-compassion and self-esteem after the MBSR program.

In paper 1, we identified five themes describing why the young adults sought help for social anxiety. The themes were: (a) from being shy to interpreting anxiety as a mental health problem, (b) experiencing emotions as threatening and uncontrollable, (c) encountering loneliness as relationships fall away, (d) hiding the vulnerable self from others, and (e) deciding to face social fears in the future. In paper 2, we found that the participants who completed the MBSR program reported significant reductions in-, and large effect sizes for, social anxiety symptoms and global psychological distress, as well as significant improvements in mindfulness, self-compassion and self-esteem. The largest effect sizes were found for self-compassion and mindfulness. Two thirds of the participants (69%) who were in the clinical range at pretreatment reported either clinically significant change (37%) or reliable improvement (31%) on SAD symptoms after completing the MBSR program, while almost two thirds (63%) reported clinically significant change (37%) or reliable improvement (26%) on global psychological distress. Approximately a third of the participants continued to describe symptoms in the clinical range after completing the MBSR program. In paper 3, we explored how the participants with high and low symptomatic change experienced the MBSR program. We identified the global theme of (1) discovering agency to change or not feeling empowered through the MBSR program, and four subthemes: (2) forming an active commitment or feeling ambivalence towards learning mindfulness, (3) engagement with others or avoidance of contact with the group, (4) using the mindfulness exercises to approach or resigning when facing unpleasant experiences, and (5) using the course to break interpersonal patterns or remaining stuck in everyday life.

The findings in this dissertation indicate that the MBSR program may be a beneficial intervention for young adults with social anxiety disorder, although the MBSR program may not work for all participants. The different experiences of the improved and less-improved participants in this study suggest that it may be important to match clients to their preferred psychological treatment. The methodological limitations of this study highlight the need for more research on MABIs for social anxiety disorder, and who are most likely to benefit or not benefit from the MBSR program.

List of Publications

Paper 1: Hjeltnes, A.; Moltu, C.; Schanche, E. & Binder, P. E. (2015). What brings you here? Exploring why young adults seek help for social anxiety. *Qualitative Health Research*. DOI:10.1177/1049732315596151. (Published online 20 July 2015).

Paper 2: Hjeltnes, A., Molde, H.; Schanche, E.; Vøllestad, J.; Svendsen, J.; Moltu, C. & Binder, P. E. (Submitted). An open trial of mindfulness-based stress reduction for young adults with social anxiety disorder.

Paper 3: Hjeltnes, A.; Moltu; C.; Schanche; E.; Jansen, Y. & Binder, P. E. (Accepted). Both sides of the story: Exploring how improved and less-improved participants experience mindfulness-based stress reduction for social anxiety disorder. *Psychotherapy Research*.

Abbreviations

AE	Aerobic Exercise
ACT	Acceptance and Commitment Therapy
APD	Avoidant Personality Disorder
CBT	Cognitive Behavioral Therapy
CBGT	Cognitive-Behavioral Group Therapy
DBT	Dialectical Behavior Therapy
DSM-V	Diagnostic and Statistical Manual of Mental Disorders, 5th Edition
FFMQ	Five Factor Mindfulness Questionnaire
iCBT	Internet-Based Cognitive Therapy
ICD-10	International Classification of Diseases, 10th Edition
MABIs	Mindfulness and Acceptance-Based Interventions
MAGT	Mindfulness and Acceptance-based Group Therapy
MBIs	Mindfulness-Based Interventions
MBCT	Mindfulness-Based Cognitive Therapy
MBSR	Mindfulness-Based Stress Reduction
MINI	Mini International Neuropsychiatric Interview
NICE	National Institute for Health and Care Excellence
NVIVO	NVIVO Computer software
PDT	Psychodynamic therapy
RCT	Randomized Controlled Trial
RSES	Rosenberg Self-Esteem Scale
SAD	Social Anxiety Disorder
SCL-90-R	Symptom Checklist 90-Revised
SCS	Self-Compassion Scale
SP	Social Phobia
SPS	Social Phobia Scale

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1. Introduction

You can hold yourself back from the sufferings of the world,
that is something you are free to do and it accords with your nature,
but perhaps this very holding back is the one suffering you could avoid.

- Franz Kafka, (1994), *Collected aphorisms*.

What I wanted
was to be willing
to be afraid.

- Mary Oliver, (1986), from "Starfish," *Dream Work.*

1.1 Purpose and scope of the dissertation

The purpose of this dissertation is to explore the experiences and psychological changes of fifty-four young adults who participated in a clinical study of mindfulness-based stress reduction (MBSR) for social anxiety disorder. Can eight weeks of mindfulness meditation make a difference in the lives of young adults who struggle with social anxiety disorder? What do young adults experience when they undergo mindfulness and acceptance-based interventions for social anxiety disorder? The dissertation is an explorative investigation seeking to describe and understand what these young adults experienced when they underwent the MSBR program. The dissertation will investigate the following main research question: How do young adults who struggle with problems in the social anxiety spectrum experience and relate to their difficulties before, during and after they participate in an eight-week mindfulness-based stress reduction program?

Psychotherapy can be defined as "the informed and intentional application of psychological methods and interpersonal stances derived from psychological principles for the purpose of assisting people to modify their behaviors, cognitions, emotions and/or other personal characteristics in directions that the participants deem desirable" (Prochaska & Norcross, 2014, p. 3). On the basis of this definition, the

MBSR program can be understood and studied as a form of psychotherapy. The MBSR program was originally developed within the context of behavioural medicine, but in recent years has also become an active area within psychotherapy research. Although decades of research has found psychotherapy to be a beneficial and "remarkably effective healing practice" (Wampold, 2007, p. 858), there are important challenges that remain to be addressed by psychotherapy research (Lambert, 2013b; Orlinsky, Rønnestad, & Willutzki, 2004; Wampold & Imel, 2013). An important challenge in the field of psychotherapy is that reviews of the scientific literature indicate that between 35-40% of patients in randomized clinical trials (RCTs) do not improve, and that between 5-10% of patients deteriorate in psychotherapy (Dimidjian & Hollon, 2010; Lambert, 2007, 2011; Lampropoulos, 2011). These findings highlight the need for research that may contribute to improving outcomes and preventing treatment failure across specific approaches to psychotherapy (Lambert, 2007, 2011). Another important scientific challenge is that we have little empirical knowledge about why and how psychotherapy leads to change (Kazdin, 2009; Silberschatz, 2015; Wampold, 2007).

Mindfulness refers both to a psychological state and a traditional Buddhist meditation practice, which in recent decades has been adopted into a secular Western context. The origin of the contemporary secular mindfulness and acceptance-based interventions (MABIs) was the Stress Reduction Clinic at the University of Massachusetts General Medical Hospital in Boston in in the late 1970s, where Jon Kabat-Zinn and colleagues developed the MBSR program as a way to bring mindfulness meditation into mainstream Western medicine (Kabat-Zinn, 1990, 2003; McCown, Reibel, & Micozzi, 2010; Williams & Kabat-Zinn, 2013a). The MBSR program was initially offered to patients with chronic pain and life-threatening somatic illnesses (Kabat-Zinn, 1990), but has gradually been introduced as an intervention for a broad range of physical and mental conditions (de Vibe, Bjørndal, Tipton, Hammerstrøm, & Kowalski, 2012). By the turn of the millennium, the clinical and scientific interest in mindfulness began to have a broad impact on medicine, psychology and health care. The contemporary "mindfulness revolution" in

science, health care, education and popular culture has generated both enthusiasm, skepticism and criticism (Barker, 2014; Boyce, 2011; Brazier, 2013; Kabat-Zinn, 2005; Madsen, 2014). An important question in these discussions is whether mindfulness may alleviate or exacerbate important problems within contemporary post-industrialized societies. Critics have argued that the "mindfulness revolution" does not address the social, economic and ecological problems in our world (Barker, 2014; Madsen, 2014; Purser & Loy, 2013). However, the criticism has only to a limited degree addressed the clinical use of mindfulness in medicine and mental health care (Dimidjian & Kleiber, 2013). Proponents of mindfulness-based interventions argue that mindfulness may represent a new "participatory medicine" that can empower individuals to make active choices that improve health and reduce suffering, both for themselves and for other people (Kabat-Zinn, 2000).

The MBSR program has played a pivotal role in launching scientific research and public interest in mindfulness. An important finding in early studies was that patients reported less anxiety after the MBSR program (Kabat-Zinn et al., 1992; Miller, Fletcher, & Kabat-Zinn, 1995), which has been supported by subsequent research on MBSR for patients with anxiety disorders (Vøllestad, 2016; Vøllestad, Nielsen, & Nielsen, 2012; Vøllestad, Sivertsen, & Nielsen, 2011). The scientific interest in the MBSR program has also been strengthened by neuroscientific studies describing changes in brain functions and neural architecture in patients who have completed the MBSR program (Davidson et al., 2003; Hölzel et al., 2010; Hölzel, Carmody, et al., 2011). After 2000, there has been an exponential increase in the scientific research on mindfulness and acceptance-based interventions (Dimidjian & Segal, 2015; Williams & Kabat-Zinn, 2013b). Despite the growing scientific research on mindfulness and acceptance-based interventions, there are many unanswered questions regarding the clinical use of mindfulness (Dimidjian & Segal, 2015). Anxiety disorders represent a field that may demonstrate both the potential and the limitations of mindfulness and acceptance-based interventions (Vøllestad, 2016). An important area of research in recent years has been the empirical studies on MABIs for social anxiety disorder.

Social anxiety disorder (SAD) or social phobia (SP) is the most common anxiety disorder and the third or fourth most common mental disorder, with prevalence estimates ranging from 3-14% in Western populations (Barlow, 2004; Kessler, 2003; Kessler et al., 1994; Kessler, Stein, & Berglund, 1998; Lecrubier et al., 2000; McGinn & Newman, 2013). A Norwegian epidemiological survey estimated a lifetime prevalence of 13.7 % for social phobia in the general population (Kringlen, Torgersen, & Cramer, 2001). Social anxiety disorder represents an important challenge in psychotherapy. Although psychological interventions have demonstrated efficacy in randomized clinical trials (Canton, Scott, & Glue, 2012; Leichsenring et al., 2014b; Mayo-Wilson et al., 2014), researchers estimate that between 40-50% of patients show little or no change in cognitive-behavioral treatments (Eskildsen, Hougaard, & Rosenberg, 2010; Hofmann & Bögels, 2006; Norton, Abbott, Norberg, & Hunt, 2014). This indicates a need to explore other psychological interventions in order to expand the range of evidence-based treatment alternatives for individuals with SAD (Dalrymple & Herbert, 2007; Goldin, Jazaieri, & Gross, 2015; Jazaieri, Goldin, Werner, Ziv, & Gross, 2012). Existing empirical studies on mindfulness and acceptance-based interventions (MABIs) for SAD have, however, yielded mixed or equivocal findings (Norton et al., 2014; Vøllestad, 2016), and raise important scientific questions: Can MABIs represent one of the future psychological interventions for social anxiety disorder? How do individuals with SAD experience and respond to these interventions? What are the psychological processes that lead to therapeutic change or treatment failure in MABIs for social anxiety disorder?

The research questions explored in this dissertation are embedded within these larger scientific, cultural and clinical discussions. The aim of this dissertation is to conduct an explorative investigation of the experiences and psychological changes of individuals who participate in mindfulness and acceptance-based interventions for social anxiety disorder, and provide empirical knowledge on how young adults experienced the process of undergoing an MBSR program for social anxiety disorder.

1.1.1 The research project

This dissertation includes findings from a larger research project which sought to investigate the mindfulness-based stress reduction (MBSR) program as an intervention for a university sample of young adults with SAD. The MBSR program was chosen as a clinical intervention on the basis of the preexisting theoretical rationale for using mindfulness to address maladaptive psychological processes in SAD (Norton et al., 2014; Vøllestad, 2016), previous clinical trials and neuroimaging studies of MBSR for patients with SAD (Goldin, Manber-Ball, Werner, Heimberg, & Gross, 2009; Jazaieri et al., 2012; Koszycki, Benger, Shlik, & Bradwejn, 2007), as well as the availability of MBSR teachers at the University of Bergen. The research project was conducted as an open trial at the University of Bergen in 2013-2014, and the study was run in collaboration with the Mental Health Care Centre (SPH) at the Student Welfare Organization in Bergen (SIB). The open trial was based on a quasi-experimental mixed research design which is described in the methods section.

1.1.2 The structure of the dissertation

The three papers in the dissertation follow a chronological structure, and attempt to describe the lived experiences and psychological changes of the participants as they underwent this clinical study, from their initial decision to seek help for their problems to their experiences and reflections after the MBSR program. First, the dissertation begins with a qualitative exploration of the lived experiences of the participants prior to the MBSR program. Second, the dissertation continues with a quantitative investigation of the psychological changes reported by the participants on outcome measures before and after the MBSR program. Finally, the dissertation explores how participants with high and low levels of symptomatic change experienced the process of undergoing the MBSR program.

In this introduction, I will review key areas in the scientific literature on SAD, and then proceed to discuss the theoretical rationale and existing empirical research on mindfulness and acceptance-based interventions for social anxiety disorder, and

finally present the aims of the study and the specific research questions and hypotheses explored in the individual papers.

1.2 Social anxiety disorder

Social anxiety disorder (SAD) is currently defined by the Diagnostic and Statistical Manual of Mental Disorders (DMS-V) as "a marked, or intense, fear or anxiety of social situations in which the individual may be scrutinized by others" (American Psychiatric Association, 2013, p. 203). The international ICD-10 system defines social phobia (SP) as a "fear of scrutiny by other people leading to avoidance of social situations" (World Health Organization, 2016). Etiological models propose that SAD disorder may develop due to complex interactions between biological (evolution, genetics, temperament, neurobiology) and psychosocial factors (life events, trauma, parenting styles and interactions, peer relations, cognitive and behavioural learning and culture) (McGinn & Newman, 2013). The core symptoms of individuals with SAD involve strong fears that anxiety reactions will be visible to others, which will lead to embarrassment, humiliation or rejection from other people. Individuals with SAD often experience physical reactions such as increased heart rate, blushing, trembling and sweating, and describe excessive self-focused attention, negative self-beliefs and negative emotional reactivity in social situations, which often leads them to avoid social situations (Bruce & Heimberg, 2014; McGinn & Newman, 2013; Stein & Stein, 2008). Social anxiety is often conceptualized on a continuum of severity, ranging from normal shyness and fearfulness in specific social situations to more intense, chronic and debilitating conditions that may generalize across situations and involve most areas of human life (Bögels et al., 2010; McGinn & Newman, 2013). The DSM system differentiates between two forms of SAD: the specific subtype, which is characterized by a fear of particular social situations (e.g. public speaking), and a generalized subtype, which includes most forms of social contact (American Psychiatric Association, 2013). The generalized subtype is associated with more severe impairments and poorer treatment outcomes (Aderka et al., 2012; Brown, Heimberg, & Juster, 1995; Wittchen, Stein, & Kessler, 1999), and

there is a large degree of overlap between generalized SAD and avoidant personality disorder (APD) (Cox, Turnbull, Robinson, Grant, & Stein, 2011).

The typical onset of SAD is in late childhood or adolescence, prior to the age of 25 (Wittchen & Fehm, 2003), and often leads to a developmental accumulation of secondary co-morbid psychiatric conditions and functional role impairments (McGinn & Newman, 2013; Wittchen & Nelson, 1998). Persons suffering from SAD have a higher risk of developing depression, alcohol dependence or other anxiety disorders, and SAD is associated with reduced quality of life and an increased risk of suicide (Feldman & Rivas-Vazquez, 2003; Lecrubier et al., 2000; Stein et al., 2001; Wittchen & Beloch, 1996). SAD is associated with functional impairments in most domains of life, including family relations (Schneier et al., 1994), friendships (Davila & Beck, 2002), romantic relationships (Sparrevohn & Rapee, 2009), dropout from school (Van Ameringen, Mancini, & Farvolden, 2003), lack of educational attainment (Schneier et al., 1994; Stein & Kean, 2000), as well as reduced work productivity and unemployment (Aderka et al., 2012; Lecrubier et al., 2000). SAD follows a chronic course and is unlikely to remit spontaneously if untreated (Wittchen & Beloch, 1996).

Despite these impairments, the majority of individuals with SAD show little help seeking behavior (Lecrubier et al., 2000; Stein & Kean, 2000), often due to fears of negative reactions from others (Olfson et al., 2000). SAD is often undetected and undiagnosed in primary care, and researchers estimate that only 20-40% of individuals with SAD seek mental health care (Boettcher, Carlbring, Renneberg, & Berger, 2013; Issakidis & Andrews, 2002; Wittchen et al., 1999). The personal and economic costs of SAD are substantial (Acarturk, Smit, et al., 2009), with high levels of reduced work productivity, unemployment and increased utilization of medical services (Aderka et al., 2012; Lecrubier et al., 2000). For these reasons, researchers have emphasized the potential of psychological interventions which may reduce barriers to seeking help and increase access to treatment for SAD (Feldman & Rivas-Vazquez, 2003; Kessler, 2003; Kessler, Stang, Wittchen, Stein, & Walters, 1999).

1.2.1 Social anxiety disorder in young adulthood

Young adulthood represents an important phase in human development, in terms of the biological, psychological and social changes that take place in this period (Arnett, 2000; Erikson, 1950/1993). Existing research has indicated that social anxiety symptoms may be particularly widespread among young adults (Fehm, Pelissolo, Furmark, & Wittchen, 2005; Lecrubier et al., 2000; Stewart & Mandrusiak, 2007; Wittchen et al., 1999), and that the time between the ages of 15 and 25 years represents a high-risk period for the development of the comorbid mental disorders and functional role impairments associated with SAD (Kessler, 2003). Stein et al. (2001) found that SAD in adolescence or young adulthood predicted subsequent major depression, and that a comorbidity of SAD and major depression in adolescents was associated with more malignant forms of subsequent depressive disorders. These findings may suggest that young adults experience higher levels of social anxiety in a life period where they also face important decisions in education, career and intimate relationships. The developmental transitions in this life period may make young adults in higher education particularly vulnerable to the onset of SAD (Stewart & Mandrusiak, 2007). Piet, Hougaard, Hecksher, and Rosenberg (2010) highlight that despite the developmental importance of this life phase, there has been "little specific focus on the group of young adult persons with SP within the treatment literature" (p. 403). The majority of existing research on SAD has been conducted with adult samples (Kashdan & Herbert, 2001; Rao et al., 2007; Rodebaugh, Holaway, & Heimberg, 2004). This indicates the importance of investigating psychological treatments that can be used as accessible interventions for young adults, and address the maladaptive psychological processes implicated in social anxiety disorder.

1.2.2 Psychological processes in social anxiety disorder

Anxiety disorder involves maladaptive psychological processes across the domains of cognition, emotion, behavior and self-experience (Vøllestad, 2016). In this section, I will briefly discuss theories and studies which have emphasized the role of cognitive, emotional, behavioral and self-related processes in social anxiety disorder.

Cognitive models (Clark & Wells, 1995; Rapee & Heimberg, 1997) emphasize the role of dysfunctional cognitive processes in SAD, which lead individuals to perceive and think about themselves and their interactions with other people in ways that produce and maintain anxiety in social situations. These negative ways of thinking are assumed to be based in early maladaptive schemas or negative beliefs about the self (Clark & Wells, 1995; Pinto-Gouveia, Castilho, Galhardo, & Cunha, 2006). Empirical studies have indicated the presence of multiple information processing biases in SAD (Clark & McManus, 2002). Individuals with SAD show heightened self-focused attention and negative attentional biases in social situations (Bögels & Mansell, 2004; Spurr & Stopa, 2002), tend to interpret ambiguous social situations negatively or interpret mildly negative situations as having catastrophic consequences (Stopa & Clark, 2000), as well as worrying and ruminating about their own performance in social situations (Brozovich & Heimberg, 2008).

Individuals with SAD often struggle with emotional reactivity and physiological hyperarousal in social situations, and have difficulties in regulating negative emotions in adaptive ways (Goldin et al., 2015; Jazaieri, Morrison, Goldin, & Gross, 2015). As a consequence, many individuals with SAD habitually avoid their emotions or attempt to control them in rigid or maladaptive ways (Jazaieri, Morrison, et al., 2015; Roemer, Williston, Eustis, & Orsillo, 2013). Individuals with SAD often have problems with understanding, attending to, and regulating their emotions (Mennin, McLaughlin, & Flanagan, 2009; Werner, Goldin, Ball, Heimberg, & Gross, 2011), and tend to perceive their emotions as uncontrollable and unchangeable (De Castella et al., 2014). A meta-analysis by O'Toole, Hougaard and Mennin (2013) found that social anxiety was negatively associated with emotion knowledge. Individuals with SAD may also have a limited repertoire of adaptive emotion regulation strategies (Goldin et al., 2015; Jazaieri, Morrison, et al., 2015). This suggests that emotion regulation may be an important target for psychological interventions for SAD.

Behavioral avoidance may also maintain and exacerbate the symptoms of SAD. Learning theories and behavioural therapies postulate that traumatic conditioning experiences and social learning may have important roles in the development and

maintenance of SAD (Mineka & Zinbarg, 1995, 2006; Wolpe, 1973). Roemer et al. (2013) highlight that patients with anxiety disorders often engage in avoidance behaviors that impair their ability to function and lead to constriction in their lives. Individuals with SAD often develop "safety behaviors" or avoidance behaviour to protect themselves from perceived threats in social situations, which over time may inadvertently maintain anxiety symptoms and limit their ability to learn adaptive skills and benefit from social learning opportunities (Goldin et al., 2015).

Maladaptive self-experience in the form of negative self-awareness, shame and self-criticism have also been described as important processes in SAD. Individuals with SAD consistently report low self-esteem (Baumeister & Twenge, 2003; Rasmussen & Pidgeon, 2011) and low self-compassion (Werner et al., 2012), as well as higher levels of self-criticism than individuals with other mental disorders (Cox, Fleet, & Stein, 2004). SAD involves an experience of the self as vulnerable, exposed and threatened by a potential catastrophe in social situations (Vøllestad, 2016; Wolfe, 2005). Wolfe (2005) have argued that anxiety disorders may be based on "*self wounds"* - unbearably painful experiences of the self as defective, unlovable or worthless - that derive from negative or traumatic experiences in the past. These maladaptive self-experiences may have a basis in early maladaptive schemas and traumatic social experiences (Cox, Walker, Enns, & Karpinski, 2002; Wild & Clark, 2011), and may represent important targets in psychological interventions for SAD.

These maladaptive psychological processes have been proposed as targets for different psychological interventions for SAD. In the next section, I will discuss the rationale and evidence base for existing psychological interventions for SAD.

1.2.3 Psychological interventions for social anxiety disorder

Existing interventions for social anxiety disorder include both pharmacological and psychological treatments (Canton et al., 2012; Mayo-Wilson et al., 2014). In this section, I will briefly review the rationale and evidence base for cognitive-behavioral, psychodynamic and humanistic-experiential psychotherapies for SAD.

Cognitive-behavioral therapies (CBT) are the most well-researched class of individual psychotherapies for SAD (Rodebaugh et al., 2004). These psychotherapies are based on the cognitive models for social phobia (Clark & Wells, 1995; Rapee & Heimberg, 1997), and use a range of different techniques (cognitive restructuring, exposure, applied relaxation, social skills training, imagery rescripting) to change the maladaptive cognitions and avoidance behaviors in SAD (Hoffart, 2008; Hougaard & Rosenberg, 2006). Meta-analyses have provided strong empirical support for the efficacy of CBT for SAD (Acarturk, Cuijpers, Van Straten, & De Graaf, 2009; Canton et al., 2012; Mayo-Wilson et al., 2014; Powers, Sigmarsson, & Emmelkamp, 2008; Taylor, 1996), and CBT is also the recommended first line treatment in the British NICE guidelines (National Institute for Health and Care Excellence, 2013).

The most well-researched group treatment for SAD is cognitive-behavioral group therapy (CBGT). CBGT for SAD is a 12 session treatment for groups of people (ideally: 6 people) who meet for 2 ½ hours on a weekly basis (Heimberg & Becker, 2002). The treatment format is based on the cognitive-behavioral model of social phobia (Rapee & Heimberg, 1997), and employs three primary components: in-session exposure to feared situations, cognitive restructuring and homework where patients are instructed to engage in exposure activities and use cognitive restructuring to challenge negative thoughts between sessions (Heimberg & Becker, 2002). Meta-analyses have reported the efficacy of CBGT for patients with SAD (Mayo-Wilson et al., 2014; Wersebe, Sijbrandij, & Cuijpers, 2013).

An important new contribution to the field has been the development of internet-based cognitive treatments (iCBT) for SAD (Andersson, Cuijpers, Carlbring, Riper, & Hedman, 2014; Boettcher et al., 2013). These self-help programs use internet as a means to increase access to treatment, with or without therapist support. A recent meta-analysis by Mayo-Wilson et al. (2014) indicated that iCBT is effective for reducing SAD symptoms, although effect sizes were smaller than for individual CBT and CBGT. A review of iCBT for SAD conclude that these interventions effectively reduce social anxiety symptoms, while not all participants benefit from these treatments (Boettcher et al., 2013).

The evidence base for psychodynamic therapies (PDT) for social anxiety disorder is smaller, although Leichsenring and Klein (2014) report three existing RCTs. The most recent trial was a large (N = 496) multicenter RCT by Leichensring et al. (2014b) that compared PDT (n = 207), CBT (n = 209) with a waiting list condition (n = 79). Both psychodynamic and cognitive treatment conditions were significantly superior to the waiting list, and there were no significant differences between the response rates for social phobia in CBT and PDT, although the CBT condition had superior remission rates (36% vs. 26%). A follow-up study did not find differences in the long-term outcome of these treatments (Leichsenring et al., 2014a). These findings have generated discussion between proponents of CBT (Clark, 2013) and PDT (Leichsenring & Klein, 2014; Leichsenring, Salzer, & Leibing, 2013), and highlights a need for more empirical research on psychodynamic therapies for SAD.

Existing research on humanistic-experiential therapies for SAD is based on a series of case studies of process-experiential therapy and emotion-focused therapy for social anxiety (Elliott, 2009; MacLeod & Elliott, 2014; MacLeod, Elliott, & Rodgers, 2012; Stephen, Elliott, & MacLeod, 2011). These case studies have indicated that humanistic therapies may be beneficial for individuals with social anxiety. Elliott (2013) reported preliminary findings from a partially controlled study (n = 50) that indicated that process-experiential and emotion-focused therapy were effective for social anxiety. Humanistic-experiential psychotherapies may have potential for individuals with social anxiety, although there is a need for larger clinical studies (Angus, Watson, Elliott, Schneider, & Timulak, 2014).

In summary, meta-analyses of existing clinical trials have demonstrated effect sizes in the large and large-to-moderate range for CBT and CBGT for SAD (Acarturk, Cuijpers, et al., 2009; Canton et al., 2012; Mayo-Wilson et al., 2014). Internet-based self-help CBT programs have also documented efficacy, although smaller than individual and group psychotherapies. The scientific literature on psychodynamic and humanistic-experiential therapies may show promise, although more systematic empirical research is needed. A limitation in the existing literature is the need for standardized estimates of how many patients who report clinically significant change

in clinical trials of psychological interventions for SAD (Lambert & Ogles, 2009; Rodebaugh et al., 2004). A recurrent estimate in the scientific literature is that between 40-50% of patients with SAD do not respond to cognitive-behavioral treatments, and continue to report symptomatic distress and functional impairments after treatment (Eskildsen et al., 2010; Hofmann & Bögels, 2006; Norton et al., 2014; Vøllestad, 2016). This estimate indicates that a substantial group of patients do not respond to the "gold standard" psychotherapy for SAD (Moscovitch, 2009). Several authors argue that this highlights a need for future research to refine and improve existing treatments, in addition to exploring additional or adjunct treatment alternatives for those who do not respond or are not motivated to engage in existing interventions (Dalrymple & Herbert, 2007; Goldin et al., 2015; Jazaieri et al., 2012). As such, mindfulness and acceptance-based interventions have been proposed as one potential avenue of scientific research in order to expand the range of psychological treatment alternatives for individuals with social anxiety disorder (Bruce & Heimberg, 2014; Otte, 2011; Rodebaugh et al., 2004).

1.3 Mindfulness and acceptance-based interventions

The concept of "mindfulness" derives from the ancient Pali term *Sati,* meaning "awareness," "bare attention" or "remembering" (Bodhi, 2011; Siegel, Germer, & Olendzki, 2009). Mindfulness is used both to describe a psychological process and a meditative practice (Shapiro & Carlson, 2009). The most widely used contemporary definition of mindfulness was proposed by Kabat-Zinn (2003), who defined mindfulness as "the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment" (p. 145). Mindfulness is often described as a psychological state that involves a conscious, intentional awareness and a non-judgmental stance of "radical acceptance" (Brach, 2003; Linehan & Lynch, 2007). Bishop et al. (2004) proposed a similar two-component definition of mindfulness that involves: 1) "a process of regulating attention in order to bring a quality of nonelaborative awareness to current experience," and 2) "a quality of relating to one's experience within an orientation of

curiosity, experiential openness, and acceptance" (p. 234). Germer (2005) describes mindfulness as a way to relate to all experience - positive, negative and neutral - in ways that promote well-being and reduce suffering. Baer (2003) also describes mindfulness "as the nonjudgmental observation of the ongoing stream of internal and external stimuli as they arise" (p. 125). The aim of mindfulness practice is to facilitate a more adaptive way of relating towards the full range of human experience with more psychological flexibility (Hayes, Follette, & Linehan, 2004).

Mindfulness and acceptance-based interventions (MABIs) is a generic term for a family of interventions that seek to change maladaptive ways of relating towards experience by promoting a "present-centered and nonevaluative stance that facilitates valued action in the face of distress" (Vøllestad, 2016, p. 100). The primary aim of these interventions is to transform how individuals relate to difficult experiences in order to promote adaptive behavioral change, rather than the removal of negative emotions and symptoms (Norton et al., 2014). A growing range of MABIs have been introduced into medicine, psychotherapy and mental health care, most notably mindfulness-based stress reduction (MBSR) (Kabat-Zinn, 1990) mindfulness-based cognitive therapy (MBCT) (Segal, Williams, & Teasdale, 2013), dialectical behavior therapy (DBT) (Linehan, 1993) and acceptance and commitment therapy (ACT) (Hayes et al., 2004). There are two main categories of MABIs: 1) meditation-based programs such as MBSR and MBCT, which use systematic mindfulness training as the main intervention, and 2) psychotherapeutic approaches such as DBT and ACT that integrate mindfulness and cognitive-behavioral principles (Norton et al., 2014; Vøllestad, 2016). Vøllestad (2016) makes a distinction between the more general category of mindfulness and acceptance-based interventions (MABIs), which include all these approaches, and mindfulness-based interventions (MBIs) that refer to interventions primarily based on mindfulness training (MBSR, MBCT). The growing range of MABIs have been described as a "third wave" in cognitive-behavioral therapy (Hayes et al., 2004), and mindfulness has been proposed as a possible common factor across different "traditions" or approaches in psychotherapy (Germer, 2005; Martin, 1997; Shapiro, Carlson, Astin, & Freedman, 2006).

1.3.1 Mindfulness-based stress reduction (MBSR)

The standard MBSR program consists of an eight-week course for groups who meet weekly for 2–3 hours for instruction and practice in mindfulness meditation (Baer, 2003; Blacker, Meleo-Meyer, Kabat-Zinn, & Santorelli, 2009; Kabat-Zinn, 1990; McCown et al., 2010). The MBSR program also includes a silent retreat day between classes 6 and 7. A typical MBSR class consists of 12-40 participants and 1-2 instructors, and often includes a heterogeneous group of participants with different somatic and mental disorders. The MBSR program consists of formal mindfulness practice, where participants undergo systematic training in different mindfulness exercises, and informal mindfulness practice, where participants are gradually encouraged to bring awareness into other situations of their everyday life. Each class begin with a period of formal mindfulness practice, and includes group discussions and home mindfulness practice assignments. The formal mindfulness exercises include the body scan, which involves bringing awareness systematically to moment-by-moment physical sensations in different parts of the body, sitting meditation, where the participants practice bringing their awareness to the breath, as well as mindful body movement (hatha yoga) (Dobkin, Hickman, & Monshat, 2014). The homework assignments consist of audiofiles with guided mindfulness practice, which the participants are encouraged to use daily for 30-45 minutes during the program.

Dobkin et al. (2014) use the following themes to summarize the principles and contents of the eight classes in the MBSR program. In class one, “There is more right with you than wrong with you,” the participants are encouraged to take a broader perspective of themselves and their goals for the program. In class two, “Perception and creative responding,” the participants are taught how perceptions may shape what they experience. Class three, “The pleasure and power of being present,” encourages the participants to become more aware of positive experiences in daily life. Class four, “The shadow of stress,” teaches participants about the impact of stress, and the difference between maladaptive coping styles (stress reactivity) and adaptive coping strategies (stress responsivity). In class five, “Finding the space for making choices,” participants are taught to accept and open to what they experience in each moment,

and how they can use this awareness to make choices that promote well-being. In class six, "Working with difficult situations," the participants begin to explore bringing mindful awareness and acceptance into difficult situations in their everyday life, including difficult interactions with other people. The silent all-day retreat gives the participants an opportunity to gain more experience with the formal and informal practices. In class seven, "Cultivating kindness towards self and others," participants are encouraged to practice awareness and acceptance in their relationships to themselves and other people. Class eight, "The eighth week is the rest of your life," focuses on exploring what the participants have learned, and how they can maintain their mindfulness practice after the program (Dobkin et al., 2014; Kabat-Zinn, 1990).

The aim of the MBSR program is to teach the participants about psychological processes that exacerbate or alleviate different forms of human suffering, and how they can meet their own experience in ways that reduce suffering and improve well-being. The MBSR program gradually teaches the participants to focus on physical sensations and increase their capacity for awareness and acceptance of present-moment experience in order to move from "stress reactivity" – automatic and maladaptive ways of responding to stress distressing experience and difficult situations – towards "stress responsivity" – where individuals develop more flexible and adaptive ways of relating to their problems in life. The MBSR program emphasizes the experience of suffering as a normal and universal feature of the human condition, and focuses on enabling participants to become active self-healers and agents of therapeutic change (Kabat-Zinn, 2000; Santorelli, 1999).

1.3.2 Empirical research on the MBSR program

The MBSR program has been subject to systematic empirical research since its conception. Meta-analytic studies have reported that MBSR may be efficacious for a broad spectrum of physical and psychological symptoms, including stress, chronic pain, psoriasis, immune reactivity, anxiety, depression and eating disorders, as well as increasing well-being, self-compassion, empathy and quality of life (Baer, 2003; de Vibe et al., 2012; Grossman, Niemann, Schmidt, & Walach, 2004; Hofmann, Sawyer,

Witt, & Oh, 2010; Khoury et al., 2013; Piet & Hougaard, 2011; Vøllestad et al., 2012). In the most recent meta-analysis of MBSR, de Vibe et al. (2012) reported moderate effect sizes for mental health outcomes among patients with somatic problems and mild to moderate psychological problems. Neuroscientific research on the MBSR program has found evidence for increased left-hemispheric anterior activation (Davidson et al., 2003), increases in regional gray matter density (Hölzel, Carmody, et al., 2011) and structural changes in the amydala (Hölzel et al., 2010) in patients who have completed the MBSR program. Hölzel et al. (2011) argue that these neural changes may be associated with increased capacities for self-regulation.

The existing research literature has indicated that the MBSR program holds promise as a cost-effective intervention with broad and robust mental health benefits (Baer, 2010b). There is, however, a need for more empirical knowledge of how and when the MBSR program may be helpful for different populations in specific contexts (Roth & Fonagy, 2013). An important area of research has been the empirical investigation of MBSR as an intervention for anxiety disorders (Vøllestad et al., 2012). RCTs have indicated that MBSR may reduce symptom severity in heterogeneous samples of anxiety disorders (Arch et al., 2013; Miller et al., 1995; Vøllestad et al., 2011), although the existing evidence base has yielded different results for specific anxiety disorders (Vøllestad, 2016). In the next section, I will review the rationale and current status of empirical research on MABIs for SAD.

1.4 Mindfulness and acceptance-based interventions for social anxiety disorder

Mindfulness and acceptance-based interventions (MABIs) for social anxiety disorder is a relatively new field of research (Norton et al., 2014). I will here discuss the proposed theoretical rationales for how mindfulness may be beneficial for SAD, then proceed to review the empirical research on the MABIs for SAD, and finally discuss the current status of scientific knowledge.

1.4.1 Theoretical rationale

How can mindfulness practice be beneficial for individuals with social anxiety disorder? Mindfulness training has been proposed as a beneficial practice for shyness and SAD (Flowers, 2009; Henderson, 2011; Herbert & Cardaciotto, 2005; Herbert, Gershkovich, & Forman, 2014). Vøllestad (2016) argues that MABIs may address maladaptive cognition, emotion, behavior and self-experience in anxiety disorders. In this section, I will discuss how MABIs have been hypothesized to address maladaptive cognitive, emotional, behavioral and self-related processes in SAD.

The cognitive processes in SAD have been proposed as an important target for MABIs (Norton et al., 2014). Piet et al (2010) and Koszycki et al. (2007) argue that mindfulness training may help patients with SAD by increasing capacities for attentional control and reducing negative self-evaluative attention in social situations. This may reduce rumination among patients with SAD (Bögels, Sijbers, & Voncken, 2006; Kocovski, Fleming, & Rector, 2009). Vøllestad (2016) argues that the mindfulness exercises in MBSR might facilitate more adaptive self-regulation of attention by improving capacities for sustaining and broadening the focus of attention, citing neuroimaging studies that have found changes in neural networks mediating attentional processes (Hölzel, Lazar, et al., 2011; Marchand, 2014).

Mindfulness has also been proposed as a potential strategy for reducing emotional reactivity and enhancing emotional regulation in SAD. Koszycki et al. (2007) argued that the MBSR program may reduce the distressing physiological symptoms of social anxiety. The body scan or yoga exercises in the MBSR program may help patients with anxiety disorders to “turn toward” their internal experience, which may counteract experiential avoidance (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996) and facilitate interoceptive exposure (Barlow, 2004). A neuroimaging study by Goldin and Gross (2010) found reductions in amygdala activity among patients with SAD after the MBSR program, which might indicate that MBSR may improve emotion regulation in SAD.

The behavioral avoidance of patients with SAD has also been proposed as an important target for MABIs (Kocovski et al., 2009). Mindfulness training might counteract avoidance behaviors by raising awareness of important goals in life (valued actions), and by increasing the capacities and willingness to engage in exposure to feared situations and activities (Vøllestad, 2016). Although the domain of behavior is more explicitly emphasized in behaviour-analytic therapies (ACT and MAGT), Goldin et al. (2010) argued that MBSR may be used to address the rigid avoidance behaviors of individuals with SAD.

An important aim of mindfulness training is to promote a compassionate stance towards the self. Werner et al. have argued (2012) that self-compassion may represent "a logical antidote" for the maladaptive self-experience described by individuals with SAD. Goldin et al. (2009) have reported neuroimaging findings which suggest that MBSR training may promote a shift from negative self-referential processing toward more adaptive perceptions of the self. Self-compassion involves "the ability to hold one's feelings of suffering with a sense of warmth, connection and concern" (Neff & McGehee, 2010, p. 226). Clinical trials report that MBSR may promote increased self-compassion (Shapiro, Astin, Bishop, & Cordova, 2005; Shapiro, Brown, & Biegel, 2007), and self-compassion has been proposed as a mechanism of change in MABIs (Baer, 2010a; Kuyken et al., 2010).

In summary, the existing literature contains several hypotheses of how MABIs may be beneficial for SAD. In the next section, I will review the existing empirical research on MABIs for social anxiety disorder.

1.4.2 Empirical research

There are four main lines of empirical research on MABIs for social anxiety disorder. In this section, I will 1) briefly review correlational and experimental studies of mindfulness and social anxiety, and then proceed to discuss 2) the quasi-experimental clinical studies and 3) randomized controlled trials of MABIs for SAD, as well as 4) process studies that have examine mechanisms of change in these interventions.

The first line of empirical research consists of correlational studies and brief experimental induction studies that have examined the relationship between mindfulness and social anxiety (Burton, Schmertz, Price, Masuda, & Anderson, 2013; Cassin & Rector, 2011; Hayes-Skelton & Graham, 2013; Rasmussen & Pidgeon, 2011; Schmertz, Masuda, & Anderson, 2012; Treanor, 2013). These studies have found empirical support for the hypothesis of a negative correlation between mindfulness and social anxiety, where increased mindfulness is associated with reduced social anxiety symptoms. The research designs in these studies limit the ability to draw causal inferences about the negative association between mindfulness and social anxiety symptoms, but provide an important first line of empirical support for investigating whether mindfulness training may reduce social anxiety symptoms.

The second line of research includes the quasi-experimental clinical studies that have investigated MABIs for SAD. Bögels, Sijbers, & Voncken (2006) conducted a pilot study incorporating mindfulness and task concentration for nine patients with social phobia, reporting that the treatment was well accepted and associated with significant reductions in social phobia symptoms at posttreatment and 2-month follow-up. After treatment, 7 of 9 patients did not meet diagnostic criteria, and the follow-up showed continued improvements. Ossmann,Wilson, Storaasli, and McNeill (2006) conducted a study of a group-based acceptance and commitment therapy (ACT) for 22 patients with social phobia, reporting significant reductions in social phobia symptoms and experiential avoidance. However, the completer sample in this study still met criteria for social phobia at 3-month follow-up. Dalrymple and Herbert (2007) conducted a pilot study of 19 individuals with generalized SAD who participated in a 12-week program combining exposure therapy with ACT, reporting significant reductions in SAD symptoms and improvements in quality of life. Kocovski, Fleming and Rector (2009) conducted an open trial of the feasibility and effectiveness of mindfulness- and acceptance-based group therapy (MAGT) for 42 patients with SAD, reporting significant reductions in SAD symptoms, depression, rumination as well as increases in mindfulness and acceptance. After treatment, 43% of the original sample demonstrated clinically significant change. Recently, Dalrymple et al. (2014)

published findings from a pilot study of an integrated acceptance-based behavioral individual psychotherapy for 38 patients with depression and comorbid SAD, reporting significant reductions in SAD and depressive symptoms, as well as improvements in functioning and quality of life over the course of treatment. Goldin, Ramel and Gross (2009) conducted a neuroimaging study of the effects of MBSR on neural mechanisms for self-referential processing among 16 patients with SAD. Compared to baseline, the participants showed increased self-esteem and reduced social anxiety, increased positive and decreased negative self-endorsement, as well as increased activity in a brain network related to attention regulation and reduced activity in brain systems implicated in conceptual-linguistic self-view. The authors argued that these findings indicate a specific neural mechanism of change related to mindfulness training for SAD. The main limitations in this second line of research are the sample sizes and lack of active control conditions, which limits the generalizability and internal validity of these studies.

The third line of research includes the RCTs that have examined mindfulness and acceptance-based interventions for social anxiety disorder. Currently, four RCTs have been reported in the scientific literature of MABIs for SAD (Norton et al., 2014; Vøllestad, 2016). Koszycki, Benger, Schlik and Bradwejn (2007) conducted a randomized trial comparing 53 patients undergoing MBSR (n = 27) or CBGT (n = 26), finding that these treatments were equivalent in decreasing self-rated depression, disability and improving quality of life, and that reductions in SAD symptoms were significantly greater for CBGT. Remission rates for SAD symptoms were also greater for CBGT than MBSR (44% vs. 10%). The authors concluded that MBSR was comparable to CBGT in improving mood, disability and quality of life, although it was less effective than CBGT in reducing SAD symptoms. Faucher, Koszycki, Bradwejn, Merali and Bielajew (2016) subsequently evaluated the effects of CBGT (n = 20) and MBSR (n = 18) on subjective anxiety, SAD symptoms and physiological responses (salivary cortisol and heart rate variability) after a stressful speaking task. In this study, significant improvements in subjective anxiety and SAD symptoms were found for both groups, and CBGT produced better results. No physiological differences were found as a result of treatment.

Piet, Hougaard, Hecksher and Rosenberg (2010) conducted a randomized pilot study using a crossover design where 26 young adults (aged 18-25) with social phobia underwent mindfulness-based cognitive therapy (MBCT) and group cognitive-behavioral therapy (CBT) in reversed order. The authors did not find significant differences between MBCT and CBT, although they noted a trend favoring CBT which they hypothesized might have been significant given a larger sample size (Piet et al., 2010). The authors concluded that MBCT might be a useful low cost intervention for social phobia, although probably less efficacious than CBT.

A RCT by Jazaieri, Goldin, Werner, Ziv and Gross (2012) compared 56 adult patients undergoing MBSR (n = 31) with Aerobic Exercise (AE) (n = 25). The authors reported that both MBSR and AE were associated with reductions in social anxiety and depressive symptoms as well as increased subjective well-being, although reductions in SAD symptoms were smaller than existing studies of cognitive-behavioral treatments. Approximately a quarter of the participants demonstrated clinically significant change on SAD symptoms at posttreatment, which was also lower than previous studies on CBT. Jazieri et al. (2012) concluded that the MBSR program merits further exploration as alternative or complementary treatments for SAD. This MBSR study was part of a neuroscientific research program that has found evidence for changes in neural systems involved in attention regulation, emotion regulation and self-referential processing, which indicate that MBSR might have a beneficial impact on maladaptive processes in SAD (Goldin & Gross, 2010; Goldin, Manber-Ball, et al., 2009; Goldin, Ramel, et al., 2009; Goldin, Ziv, Jazaieri, & Gross, 2012).

Kocovski, Fleming, Hawley, Huta and Antony (2013) conducted a RCT involving 137 patients with SAD who underwent either mindfulness and acceptance-based group therapy (MAGT) (n = 53), CBGT (n = 53) or a waiting-list condition (n = 31). MAGT is a 12-week group-based treatment modality was developed specifically as an intervention for social anxiety disorder, and integrates mindfulness exercises with behavioral principles from ACT (Kocovski et al., 2009) In this RCT, both MAGT and CBGT were more effective than the control group, but they not find significant

differences in SAD symptom reduction between these two treatments. After treatment, 43.8% of treatment completers in CBGT and 43.2% in MAGT reported clinically significant change. The authors (2013) argued that these results provide "additional support for the use of mindfulness and acceptance-based treatments for SAD," and propose that "future research should examine how and why these treatments lead to change" (p. 889).

The final line of research includes the empirical studies that have examined psychological processes of change in MABIs for SAD. Kocovski, Fleming, Hawley, Ho and Antony (2015) examined mechanisms of change in their previous trial of MAGT and CBGT, finding support for a bidirectional model where mindfulness was associated with subsequent change in social anxiety, and that social anxiety was associated with subsequent change in mindfulness in both treatment conditions. Jazaieri, Lee, Goldin and Gross (2015) found that pretreatment SAD severity moderated the impact of MBSR, and that the MBSR program was most effective for patients with lower SAD symptom severity. These studies indicate a need for more empirical research on processes of change in MABIs for SAD (Baer, 2010b).

1.4.3 Current status of knowledge

The existing empirical research provides a converging pattern of findings on MABIs for SAD. The first line of research indicates a negative association between mindfulness and social anxiety symptoms. The second line of research from quasi-experimental studies indicates that MABIs may facilitate reductions in social anxiety symptoms, although the lack of control conditions limits the internal validity of these studies. The third line of RCTs indicates that MABIs produce significant reductions in SAD symptoms, although these effects are smaller than cognitive-behavioral therapies. Process research has indicated that mindfulness may mediate the reductions in SAD symptoms in MAGT, and that pretreatment symptom severity may moderate the impact of the MBSR program. The existing empirical research raises several questions about the clinical use of MABIs for social anxiety disorder.

One important question concerns the efficacy and effectiveness of MABIs for social anxiety disorder. The existing studies have indicated that MABIs may significantly reduce SAD symptomatology and improve mental health or quality of life, although two RCTs have reported that MBSR was significantly less effective in reducing SAD symptoms of compared to CBGT or prior studies of CBT (Norton et al., 2014). These findings are in line with a recent meta-analysis by Strauss et al. (2014) concluded that MBIs might not be sufficiently effective in targeting primary symptoms severity to be recommendable as a first line intervention for people with a primary anxiety disorder. The NICE guidelines do also not recommend the routinely use of MBSR and MBCT in the psychological treatment of SAD, on the basis of few existing studies and lower effects compared with CBT (National Institute for Health and Care Excellence, 2013). This document cited the clinical trials on MBSR and MBCT by Koszycki et al. (2007), Piet et al. (2010) and Jazaieri et al. (2012), and concluded that there was insufficient evidence to support the use of these treatments. Norton et al. (2014) argue that although studies of MABIs demonstrate significant reductions in SAD symptoms, these outcomes should be interpreted with caution until further research has been conducted. This highlights the need for more empirical research on MABIs for social anxiety disorder.

Another important question concerns how participants themselves experience and respond to MABIs with SAD. The majority of scientific research on MBSR has been conducted using quantitative and neuroscientific paradigms, and there is a need for qualitative research to explore the experiences of individuals who participate in MBSR for social anxiety disorder. Mace (2008) have argued that qualitative research methods are important to understand "the needs of, and likely impacts on, specific client groups when undertaking interventions like the MBSR program" (p. 38). Qualitative studies have the potential of systematically exploring the processes of change in psychotherapy and other psychosocial interventions (Castonguay & Beutler, 2006; McLeod, 2011). Wyatt, Harper and Weatherhead (2013) have argued that qualitative research methods may be particularly well suited to study the process of change in mindfulness and acceptance-based interventions:

> "Qualitative approaches are a useful way of investigating psychological processes at work during interventions, and seem especially compatible with the inherently experiential nature of mindfulness-based approaches" (p. 3).

To summarize, the existing research on mindfulness and acceptance-based interventions for SAD has yielded a mixed picture, and there are several important questions which remain to be answered in the scientific literature. MABIs may reduce symptoms and improve mental health and well-being for individuals with SAD, but may be generally relatively less effective for reducing core SAD symptoms when compared to cognitive-behavioral therapies (Norton et al., 2014; Vøllestad, 2016). However, several researchers have highlighted that a significant proportion of patients with SAD drop out or do not improve in clinical trials of CBT (Eskildsen et al., 2010; McManus, Peerbhoyb, Larkinc, & Clark, 2010; Moscovitch, 2009). This indicates a need for scientific research to explore additional or adjunct treatment alternatives for those who do not respond or are not motivated to engage in existing interventions (Dalrymple & Herbert, 2007; Goldin et al., 2015; Jazaieri et al., 2012). There is a general need to explore new interventions that may reduce barriers seeking help and increase access to treatment for young adults with social anxiety disorder. MABIs are a relatively novel group of interventions that, although they might be less effective compared to cognitive-behavioral treatments, may appeal to individual less likely to seek psychological treatment and thus expand the range of accessible mental health services for individuals with SAD. Koszycki et al. (2007) argue that the MBSR program may address the problem of underutilization of health services among individuals with SAD, and provide an accessible and inexpensive intervention for SAD. Faucher et al. (2016) argue that "MBSR is relatively easily accessible and may be preferred by those looking for a more holistic approach". Vøllestad (2016) asserts that mindfulness and acceptance-based interventions may represent "an empowering and non-pathologising approach emphasizing the active participation of the individual in self-care and emotion regulation" (p.128). As I have attempt to document in this review of the existing scientific literature, there is a need for further empirical studies to investigate the potential benefits and limitations of mindfulness-

based stress reduction for young adults with SAD, and to investigate the actual experiences of individuals who participate in MABIs for social anxiety disorder.

1.5 Aim of the study

The aim of this dissertation was to conduct an explorative investigation of the experiences and psychological changes of fifty-four young adults who participated in a clinical study of mindfulness-based stress reduction (MBSR) for social anxiety disorder, and to provide empirical knowledge on how these individuals experienced the process of undergoing the eight-week MBSR program. The dissertation was an explorative investigation with a primary focus on change process research, or "the study of the processes by which change occurs in psychotherapy" (Elliott, 2010). The aim of this explorative investigation was to describe and understand the experiences and psychological changes of the young adults before, during and after they participated in a campus-based MBSR program for social anxiety disorder. The main research question for the dissertation is: How do young adults who struggle with problems in the social anxiety spectrum experience and relate to their difficulties before, during and after they participate in an eight-week mindfulness-based stress reduction program?

The specific aims and research questions in the three papers are described below.

1.5.1 Aim and research question paper 1

The aim of paper 1 was to explore the lived experiences and life worlds of the young adults before they started the MBSR program. To achieve this, I conducted qualitative in-depth interviews with the participants to investigate how they experienced anxiety in social situations and relationships, and how they gave meaning to their experiences prior to the MBSR program. The research question in the first paper was: How do young adults experience the personal impact and consequences of struggling with symptoms of social anxiety in their everyday lives, and what do they describe as their own concerns and reasons for seeking help? The results from this study are presented in paper 1.

1.5.2 Aim and research hypotheses paper 2

The aim of paper 2 was to investigate the mindfulness-based stress reduction program as an intervention for young adults with social anxiety disorder, by conducting an open trial of this intervention in a university setting and examining the self-reported psychological changes of the participants after the program. First, it was hypothesized that the participants would report statistically significant reductions in SAD symptoms and global psychological distress after the MBSR program. Second, it was also hypothesized that the participants would report statistically significant increases in mindfulness, self-compassion and self-esteem after the MBSR program. Finally, the clinical significance of the individual changes of the participants after the MBSR program were examined. The results from this study are presented in paper 2.

1.5.3 Aim and research questions paper 3

The aim of paper 3 was to explore the experiences of the participants who reported the highest or lowest levels of symptomatic change after the eight-week MBSR program. To achieve this aim, members of the research team conducted qualitative in-depth interviews with all the participants who completed the two first MBSR groups. We employed a two-stage mixed methods design to identify 14 participants who reported the highest (n = 7) and lowest (n = 7) levels of symptomatic change on quantitative outcome measures after the MBSR program, and subsequently analyze qualitative in-depth interviews with these participants to explore what they experienced as helpful and unhelpful during the MBSR program. The research questions in the third paper were: How did the participants with the highest levels of symptomatic change and the participants with the lowest levels of symptomatic change experience the process of participating in an eight-week mindfulness-based stress reduction program? What did they experience as helpful and unhelpful aspects of this program as an intervention for their social anxiety? The results from this study are presented in paper 3.

2. Methods

In this section, I will describe the research design in the clinical study, and then continue with a discussion of the qualitative, quantitative and mixed methodologies used in this dissertation. Finally, I will discuss the process of reflexivity and ethical considerations in this research project.

2.1 Research design

The clinical study as a whole was organized as a quasi-experimental mixed methods design (Kendall, Butcher, & Holmbeck, 1999). The data collection included qualitative interviews and quantitative measures. The basic structure of the clinical study was four identical MBSR classes organized as a one group pretest-posttest quasi-experimental design, which consisted of 1) a pretest measurement before the introduction of a treatment to a group of individuals, 2) an active treatment and 3) a posttest measurement (Campbell & Stanley, 1963; Reichardt, 2009). In this design, the difference between the pretest and posttest measurements is used to estimate the size of the effect of the treatment (Reichardt, 2009). The quasi-experimental design was chosen due to limited project resources, and the implications of this design will be discussed in the limitations section (4.4). The design is described in Appendix A.

2.2 Sample

The sample of young adults in the clinical study consisted of 54 university students (33 women and 21 men) with social anxiety or social anxiety disorder. Participants were recruited through the Mental Health Care Centre (SPH) at the Student Welfare Organization in Bergen, as well as via posters and online announcements at the University of Bergen. A total of 288 students made initial contact to participate in the clinical study. The students were pre-screened through telephone interviews, and eligible participants were (n = 142) subsequently invited to clinical intake interviews to assess suitability for the study. Inclusion criteria were: 1) age between 19-25 years, 2) presenting problem of social anxiety or SAD and 3) self-declared motivation for

treatment. Exclusion criteria were: 1) suicidality, 2) substance abuse/dependence, 3) severe mental disorder (current severe depression, bipolar disorder, psychosis), 4) self-injurious behavior, and 5) severe trauma history. Three students enrolled in the study, but later disclosed exclusion criteria (exclusion criterion 3) and were subsequently not included in the data analyses. A total of 54 eligible students started in the four MBSR groups. One participant was included in the qualitative data analysis at pretreatment (paper 1), but not included in the quantitative and mixed methods data analyses at posttreatment (papers 2 and 3) due to subclinical social anxiety (did not meet formal diagnostic criteria for SAD). Treatment completion was defined by attending at least 6 of the 9 classes (eight weekly classes plus one day retreat) during the MBSR program. Eight participants (15%) did not complete the MBSR programs (5 women and 3 men). A total of 45 students completed the quantitative study in the MBSR program. The completer sample consisted of 28 women and 17 men with a mean age of 23.1 years (SD = 1.42). A total of 36 students (80%) met MINI criteria for generalized SAD, 9 students (20%) met criteria for specific SAD. At the time of participation, they were enrolled in bachelor and master programs in the natural sciences, social sciences, legal studies and the humanities.

2.3 The MBSR intervention

Participants were offered the standard eight-week MBSR program, based on the curriculum guidelines of the Center for Mindfulness (Blacker et al., 2009). This involved eight weekly class meetings lasting 2 ½-3 hours, one all-day seminar, and daily homework assignments with formal and informal mindfulness practice. The group conversations during the MBSR program included information specific to SAD (emphasizing social anxiety as stress reactivity in social situations), while maintaining fidelity to the structure and pedagogical principles of the MBSR program (Dobkin et al., 2014; Kabat-Zinn, 1990). Four MBSR programs were run on campus at the Faculty of Psychology and the Student Centre between 2013 and 2014. Each MBSR program had up to 15 participants and was taught by two clinical psychologists. At least one of the teachers in each program had completed the MBSR

teacher training, and both teachers had taken the MBSR program or previous teaching experience from leading mindfulness-based group interventions. As the main researcher in this research project, I was a teacher in all the MBSR programs.

2.4 Samples and procedures

The data collection in the present study was based on qualitative interviews and quantitative outcome measures at pre- and posttreatment. In this section, I will briefly describe the samples and procedures in the three papers.

2.4.1 Sample and procedures paper 1

To explore the lived experiences and life worlds of the young adults before the MBSR program, I conducted qualitative interviews with all the participants in Group A and Group B prior to the MBSR program (n = 29). The interviews were conducted at the Department of Clinical Psychology at the University of Bergen, and were based on a semi-structured interview guide (Kvale & Brinkmann, 2009), which is presented in Appendix C. The participants in Group C and D were not interviewed at pretreatment or posttreatment.

2.4.2 Sample and procedures paper 2

Prior to each weekly MBSR class, the participants (n = 53) filled out psychological self-report measures to assess the impact of the MBSR program. The measurements at pretreatment (week 1) and posttreatment (Week 8) were used in Paper 2 and 3. The measures are described in the quantitative section below.

2.4.3 Sample and procedures paper 3

The participants who completed the first two MBSR groups were interviewed individually within 1 month after the intervention by members of the research team who did not teach that MBSR program. The interviews were based on a semi-structured interview guide informed by the qualitative helpful factors design (Elliott, 2010), which is used to explore how clients experience change or what they

experience as helpful or unhelpful factors in psychotherapy. We also incorporated questions from the Client Change Interview (Elliott, 1999) to explore helpful and hindering aspects of the program. The Interview Guide in paper 3 is presented in Appendix D. One interview was lost due to a recording error, while one interview was not used in the posttreatment analyses because this participant did not fulfill all diagnostic criteria for SAD. A total of 24 interviews were used as primary data in paper 3. We used a two-stage mixed methods approach where the quantitative outcome measures (SPS and SCL90R) were used identify the participants in the first two treatment groups (n = 14) who showed the highest and lowest levels of symptomatic change. The interviews with these participants were subsequently analyzed using an explorative-reflective thematic analysis.

2.5 Qualitative methodology

The aim of the qualitative analyses in papers 1 and 3 was to explore the lived experiences of the young adults before and after the MBSR program. Qualitative research can be defined as a scientific approach used in the "exploration of meanings of social phenomena as experienced by the people themselves, in their natural context" (Malterud, 2001a, p. 483).

Psychology has historically been dominated by positivist or post-positivist paradigms (Guba & Lincoln, 2004; Ponterotto, 2013), although there has been a growing recognition of qualitative research in psychology and psychotherapy research (Camic, Rhodes, & Yardley, 2003; Rennie, Watson, & Monteiro, 2002). The statements on evidence-based practice issued by the American Psychological Association and the Norwegian Psychologist Association explicitly acknowledge the scientific status of empirical knowledge derived from qualitative research methods (American Psychological Association, 2005; Norsk Psykologforening, 2007; Rønnestad, 2008). The last three decades have also seen a growth in the use of qualitative methods to study the experiences of therapists and clients in psychotherapy (Levitt, 2015; McLeod, 2011, 2013). Qualitative psychotherapy studies typically gather data from clients, therapists or recordings of sessions in order to describe and understand

important phenomena in psychotherapy (Elliott, 2010; Levitt, 2015; McLeod, 2013). Elliott and James (1989) have argued that explorative qualitative research on the first person perspective is important in building empirical knowledge of the processes of change in psychotherapy. This argument is parallel to the broader recognition in the diverse field of psychosocial intervention research that well-performed qualitative studies are needed to enhance the clinical usefulness, conceptual robustness and ecological validity of the knowledge base (Castonguay, 2010; Castonguay & Beutler, 2006; Malterud, 2001b). Qualitative research methods have important limitations in terms of causality and generalizability (Elliott, 2010; Gough, 2003), but may be useful to investigate the experiential worlds of clients and therapists, the relational context of therapeutic interventions and personal growth processes – what Binder, Holgersen and Moltu (2012) refer to as the "how" and "what" questions in psychotherapy. In the qualitative analyses in this dissertation, I have chosen to use the general framework for thematic analysis developed by Braun and Clarke (2006, 2012) and explorative-reflective thematic analysis (Binder et al., 2012).

2.5.1 Thematic analysis

Braun and Clarke (2012) define thematic analysis as a "method for systematically identifying, organizing, and offering insight into patterns of meaning (themes) across a data set" (p. 57). Braun and Clarke (2006) describe a theme as a category "that captures something important about the data in relation to the research question, and represent some level of patterned response or meaning within the data set" (p. 82). Thematic analysis is primarily used to make comparisons of shared meanings and experiences across a qualitative data set, rather than to identify the unique and idiosyncratic meanings within a single data item (Braun & Clarke, 2012). Braun and Clarke describe thematic analysis as a flexible research method not tied to a particular pre-existing theoretical framework, but emphasize that thematic analyses require a systematic procedure and consistent epistemological to guide the research process. There are several approaches to thematic analysis (Binder et al., 2012; Boyatzis, 1998; Guest, MacQueen, & Namey, 2012; Meier, Boivin, & Meier, 2008), and in this dissertation I have chosen explorative-reflective thematic analysis.

2.5.2 Explorative-reflective thematic analysis

Exploratory-reflective thematic analysis is a team-based approach to qualitative research on the experiences of patients or therapists in psychotherapy (Binder et al., 2012). The aim of this approach is to explore psychological phenomena through a dialogue with the participants in the interviews and interpretations of the transcribed texts in the data analyses (Binder et al., 2012). This research approach combines phenomenological exploration of the lived experience or the experiential worlds of the research participants with hermeneutic interpretations and reflexivity during the research process. By analyzing the similarities and differences in how different research subjects describe their own experiences, the analytic process seeks to identify patterns of meaning (themes) in the participants' subjective experience.

Binder et al. (2012) describe phenomenological exploration and hermeneutical interpretation as forming two poles in the qualitative research process. They describe the process of doing qualitative research as a creative dialectic between staying close "to the phenomena themselves" seeking to provide concrete descriptions of how individuals experience and give meaning to everyday situations, and an interpretative process of attempting to understanding important themes or patterns of meaning in these experiences. The epistemological framework of this approach to thematic analysis is based on Heidegger's (1927/1996) hermeneutic phenomenology and Gadamer's (1960/2004, 1976/2008) philosophical hermeneutics - in attempting to describe important phenomena and structures in human experience, whilst also acknowledging that the interpretative nature of the research process inevitably will be informed by the pre-judices, preconceptions and worldview of the researcher (Alveson & Sköldberg, 2009; Binder et al., 2012; Finlay, 2003). Phenomenology can be defined as "the study of structures of consciousness as experienced from the firstperson point of view" (Smith, 2011) or "the study of lived experience" (Van Manen, 1990), and attempts to describe how human experience the world and what it means to be human in particular situations. Hermeneutics is commonly defined as "the study or analysis of how texts, utterances, or actions are interpreted" (Oxford English Dictionary, 2013) and concerned with the interpretation and understanding of

the meaning of linguistic and non-linguistic expressions (Ramberg & Gjesdal, 2009). Hermeneutic-phenomenological qualitative research is concerned with investigating lived experience or the life world – what it is like for a human being to experience and seek meaning in particular life situations (Laverty, 2003), but does not assume that the research inquiry will lead to a complete reduction of the essential structures or objective truths about human experience (Binder et al., 2012). Hermeneutic-phenomenology emphasizes the interpretative and intersubjective nature of human understanding, highlighting that the subjectivity of the researcher inevitably will affect how phenomena are understood in the research process (Alveson & Sköldberg, 2009; Laverty, 2003)**.** I will discuss implications of this in the reflexivity section.

2.5.3 Qualitative analysis paper 1 and paper 3

The explorative-reflective thematic analysis was chosen for the qualitative analyses in paper 1 and paper 3 in order to have a flexible method for comparing the lived experiences of the participants before and after the MBSR program. The qualitative analyses began by writing down initial immediate impressions after the interviews, or discussing the observations with the interviewers in the research team to establish a basic sense of the experiences of the participants and interpersonal processes in the interview situation. I subsequently transcribed the qualitative interviews ($N = 54$) together with ten research assistants. As the main researcher, I supervised the work of the research assistants and discussed their reflections about the interviews they were transcribing. I subsequently read all the transcribed interviews to obtain an overview of the experiences described by the participants. The transcribed interviews were analyzed using NVivo computer software (QSR, 2012). The thematic analysis began with an explorative search for patterns of meaning across the interviews guided by the specific research questions in papers 1 and 3. We examined those parts of the text relevant to the research questions, and identified separable content units that represented different aspects of the participants' experiences. I developed categories for organizing the material in "meaning codes" relevant to the research questions. For example, the participants' descriptions of feeling isolated from others were given the tentative code "Loneliness" (paper 1) or their experiences of using active change

strategies were labeled “Agency” (paper 3). The meaning codes were subsequently reviewed and summarized into themes that conveyed the most important aspects of the experiences of the participants. The themes were reviewed by the research team by going back to the text in order to check whether other voices and perspectives needed to be added, or whether the descriptions of themes could be refined further. One member of the research team (Moltu) did not have a personal or professional mindfulness background, and was assigned a role as a critical auditor in the research group. Finally, the research group reached a consensus on the themes. The specific stages in the research process are described in more detail in papers 1 and 3.

2.6 Quantitative methodology

Quantitative research refers to “methods of investigating phenomena which involve the collection and analysis of numerical data” (Oxford English Dictionary, 2015). In this section, I will describe the quantitative outcome measures and statistical analyses used in papers 2 and 3.

2.6.1 Measures

The research project employed standardized self-report measures to assess the psychological changes of the participants after the MBSR program. Primary outcome measures were social anxiety symptoms (Social Phobia Scale) and global psychological distress (the GSI-index of the SCL-90-R). Secondary outcome measures were self-compassion (Self-compassion Scale), mindfulness (Five factor mindfulness questionnaire) and self-esteem (Rosenberg Self-Esteem Scale). The Cronbach’s Alpha of these measures in the completer sample are provided in paper 2. The following measures were included in the quantitative design of the study:

The Social Phobia Scale (SPS). The SPS (Heimberg, Mueller, Holt, Hope, & Liebowitz, 1992) consists of 20 questions related to symptoms of anxiety in situations involving observation by others. SPS scores range from 0 to 80, with higher scores representing greater social anxiety symptoms.

The Symptom Checklist 90 Revised (SCL-90-R). The SCL-90-R (Derogatis, 2010; Vassend, Lian, & Andersen, 1992) consists of 90 questions that measure psychological symptoms and global psychological distress. SCL-90-R consists of nine primary symptom scales. The summarized Global Severity Index (GSI) of the SCL-90-R is a frequently used measure of global psychological distress in psychotherapy research and clinical practice (Schmitz, Hahtkamp, & Franke, 2000).

The Five Facet Mindfulness Questionnaire (FFMQ). The FFMQ (Baer et al., 2008; Dundas, Vøllestad, Binder, & Sivertsen, 2013) consists of 39 questions that measure mindfulness across of five dimensions: 1) ability to be aware of inner experiences and outer events (*observing*), 2) ability to describe internal experiences with words (*describing*), 3) ability to act with full awareness and presence rather than being distracted (*acting with awareness*) 4) having a accepting and non-judgmental approach to their own experience (*non-judging of inner experience*), and 5) not reacting excessively to internal sensations (*non-reactivity to inner experience*).

The Self-Compassion Scale (SCS). The SCS (Neff, 2003) consists of 26 questions that measure a person's degree of compassion for herself/himself in terms of three dimensions: 1) the degree of self-kindness versus self-criticism towards oneself when encountering difficult experiences, 2) the degree of perceived common humanity versus isolation when facing difficulties, and 3) the degree of mindful awareness versus over-identification with difficult experiences.

The Rosenberg Self Esteem Scale (RSES). The RSES (Bjørkvik, Biringer, Eikeland, & Nielsen, 2008; Rosenberg, 1965) consists of ten statements that measure global self-esteem and perceived self-worth.

2.6.2 Statistical analyses paper 2 and 3

Statistical analyses were performed with SPSS for Windows (Version 22). In paper 2, the self-reported changes of the participants after the MBSR program were examined using paired sample *t*-tests, Cohen's *d* effect size estimates and Jacobson-Truax

criteria for clinical significance. To assess the changes of all participants who initially started the MBSR program and the changes reported by those participants who completed the MBSR program, separate analyses were conducted for the intention-to-treat (ITT) sample (n = 53) and the completer sample (n = 45). (Kazdin, 2003; Kendall et al., 1999). For both analyses, missing data were handled using replace by mean and last observation carried forward (LOCF) (see paper 2).

Paired samples *t*-tests were used to examine the statistical significance of within-group changes on social anxiety symptoms, global psychological distress, mindfulness, self-compassion and self-esteem after the MBSR program (Field, 2013). Cohen's *d* effect size estimates were calculated to assess the magnitude of average change in the group after treatment (Lambert, 2013a). Cohen (1988) have proposed the following conventions when the interpreting effect sizes: 0.2 = small, 0.5 = medium, and 0.8 = large effect. Pearson product-moment correlation coefficients were calculated to assess relationships between changes in social anxiety symptoms and changes in mindfulness, self-compassion or self-esteem (Howell, 2013).

In papers 2 and 3, the Jacobson and Truax method for clinical significance was used to estimate how meaningful the changes in symptoms reported by the participants after the MBSR program would be in clinical practice. This method employs two main criteria for assessing clinically significant change (Jacobson, Follette, & Revenstorf, 1984; Jacobson & Truax, 1991; Lambert & Ogles, 2009). The first criterion requires that patients make statistically reliable improvements after treatment, and is calculated using a reliable change index (RCI) which estimates if the magnitude of change exceeded measurement error for that instrument. The second criterion requires that patients are indistinguishable from a functional population of "normal" or "non-clinical" peers after treatment, and is calculated by estimating a clinical cut-off point between a functional and a dysfunctional population, and assessing whether a patient moves from the dysfunctional to the functional range during the course of therapy (Lambert & Ogles, 2009). These criteria were used to estimate how many participants in the study reported reliable and clinically significant change (passed both criteria), reliable change (passed first criterion), no

reliable change (no criteria) and deterioration (passed first criterion in negative direction). Clinical significance indices were calculated for all participants in the ITT and completer sample who had pretreatment scores in the clinical range on social anxiety symptoms (SPS) and global psychological distress (GSI). The RCI and clinical cut-off criteria for the ITT and completer sample are described in paper 2.

2.7 Mixed methods approach

Mixed methods research can be defined as a "class of research where the researcher mixes or combines quantitative and qualitative research techniques, methods, approaches, concepts or language into a single study" (Johnson & Onwuegbuzie, 2004, p. 17). Mixed methods research has been described as a "third research paradigm" (Johnson & Onwuegbuzie, 2004) that combines qualitative and quantitative approaches to "accomplish more than what would have been possible with one method alone" (Morgan, 2013, p. xiii). Qualitative and quantitative traditions operate from different paradigms and philosophical assumptions (Creswell, 2003; Guba & Lincoln, 2004; Kuhn, 1962/1996), but in recent years there has been a growing dialogue between quantitative and qualitative researchers. Qualitative and quantitative methodologies have distinctive strengths and weaknesses, and the rationale for using mixed methods is to combine these different strengths and minimize the weaknesses of quantitative and qualitative approaches (Johnson, Onwuegbuzie, & Turner, 2007; Morgan, 2013). Johnson and Onwuegbuzie (2004) and Biesta (2010) have described pragmatism as a philosophical foundation for mixed methods research, and argued that "research methods should follow research questions in a way that offers the best chance to obtain useful answers" (p. 17). Mixed methods studies are relatively new in psychotherapy research (Haverkamp, Morrow, & Ponterotto, 2005), but some researchers have used mixed methods designs to investigate processes of change in psychotherapy (Elliott, 2009; Werbart, von Below, Brun, & Gunnarsdottir, 2014). McLeod (2013) have highlighted that there are still relatively few mixed methods studies in the existing literature.

The "mixing" in mixed methods research can occur on different levels in a research study (Biesta, 2010). The research project in this dissertation can as a whole be described as an additional coverage mixed methods design (Morgan, 2013) that "assigns different methods to different purposes" (p. 73), using a division of labor between qualitative and quantitative methods to pursue different research goals within a larger research project. In paper 3, we used a mixed methods approach combining the quantitative outcome measures and the qualitative post-interviews in order to explore the experiences of the participants after the MBSR program.

2.7.1 Mixed methods analysis paper 3

In paper 3, we employed a 2-stage mixed methods approach combining the quantitative measures and qualitative interviews to explore the experiences of the participants who reported the most and least change in their symptoms after the MBSR program. The rationale for the mixed methods approach was to gain a deeper understanding of how the most improved and least improved participants had experienced the process of undergoing the MSBR program.

In the first research stage, we used quantitative outcome measures to identify the participants we interviewed in the two first groups (n = 24) who reported the highest and lowest levels of symptomatic change after the MBSR program. In this paper, we defined symptomatic change in terms of (a) reduction of social anxiety symptoms on the SPS and (b) reduction of global psychological distress on the GSI of SCL-90-R. We estimated symptomatic change by calculating the magnitude of pre-post changes for each participant on these measures. We arranged a ranked order (5-1) of the participants with the 5 highest or 5 lowest pre-post changes on these two measures and combined these scores to identify one group of participants (n = 7) with the highest levels of symptomatic change (*high responders*) and one group of participants (n = 7) with the lowest levels of symptomatic change (*low responders*). The outcomes were subsequently classified according to Jacobson and Truax criteria for reliable and clinically significant change, reliable change, no change or deterioration (Jacobson & Truax, 1991; Lambert & Ogles, 2009). The selection of the interviews was based a

purposive outlier (extreme or deviant case) sampling strategy (Teddlie & Yu, 2007), where we wanted to explore the experiences of the participants who reported the *most* and *least* change in their presenting symptoms after the MBSR program. The quantitative measures were used to select cases falling within the extreme "ends" of the quantitative data set for a subsequent in-depth qualitative analysis. The assumption behind this purposive sampling strategy was that participants with high and low symptomatic change would have important experiences with the helpful and hindering factors in the MBSR program.

In the second research stage, we conducted a qualitative thematic analysis of the interviews with the participants (n = 14). To investigate the lived experiences of the participants after the MBSR program, we used an explorative-reflective thematic analysis similar to the methodological approach in paper 1.

2.8 Reflexivity

Reflexivity can be defined as "an attitude of attending systematically to the context of knowledge construction, especially to the effect of the researcher, at every step of the research process" (Malterud, 2001b, p. 484). Reflexive methodology involves an examination of how the subjectivity, backgrounds, and preconceptions of the researchers might impact on the research process and the production of knowledge (Alveson & Sköldberg, 2009; Finlay, 2003; Gadamer, 1960/2004). This does not imply an ideal objectivity free from all sources of bias and pre-judices (Kvale & Brinkmann, 2009), but may represent an important strategy to "move beyond the partiality of our previous understandings and our investment in particular outcomes" (Finlay, 2003, p. 108). Following the hermeneutic-phenomenological framework of this research approach, the aim was to generate knowledge about the experiences of the participants, while at the same time critically examining the impact of one's own subjectivity and pre-judgements in the research process (Binder et al., 2012). Wilkinson (1988) differentiated between three forms or levels of reflexivity: personal, functional and disciplinary. I will here use these concepts to discuss the reflexive process during the research project as a whole.

Personal reflexivity refers to the how the personal identity, interests and values of the researcher may influence and be influenced by the research process (Wilkinson, 1988). In the research process, I have sought to be aware of how my own personal background and professional training may have informed the different phases of the research project. I was first introduced to mindfulness meditation in 2006, and it was the personal experiences of learning to meditate and eventually training to be an MBSR teacher that drew me to mindfulness research. I was fascinated by the range and depth of the existential challenges that people would bring with them into the MBSR program, and wanted to understand what it is like for individuals in different life situations to participate in the MBSR program. During this research process, I have actively sought to be as open and reflexive as possible about the role of mindfulness in contemporary culture, the challenges inherent in the current "hype" of mindfulness, and how my own research project might be influenced or potentially influence these scientific and cultural contexts. Throughout the project, I made space for personal doubt and felt an ethical commitment to be willing to listen to the actual experiences of the participants, even if listening to "both sides of the story" would lead me to discover negative experiences or findings suggesting that mindfulness or MBSR might not be a beneficial intervention for young adults with SAD.

Functional reflexivity refers to one's role as a researcher and how this impacts on the research process (Wilkinson, 1988). Moltu, Binder and Nielsen (2010) highlight that the interpersonal dynamics of the interview situation might give prominence to some stories over others. The interview studies were conducted within the context of a clinical study. For practical and logistical reasons, I and three other members of the research team (Binder, Schanche and Svendsen) had a dual role as MBSR teachers and researchers in the research project. This dual role of being both participants (MBSR-teachers) and observers (researchers) represented an important methodological and ethical challenge in this research project. One important question was how the different roles of the research team would affect the dynamics of the interview situation. Another important question was whether the social anxiety and interpersonal problems of the young adults would stop them from disclosing negative experiences in the interviews after the MBSR program. To address these issues, the

participants were not interviewed by the teachers in their MBSR program, and were explicitly informed that the goal of these interviews was to identify areas or aspects of the MBSR program that could be improved, and that both negative and positive experiences would be helpful in this evaluation. The interviewers explicitly acknowledged the possibility of positive and negative experiences at the start of the interviews, and the interview guide in paper 3 included questions about negative experiences and adverse treatment effects (See Appendix D). We could not be certain that the participants would not underreport negative experiences, but sought to provide conditions that would promote as much safety and open rapport as possible.

Disciplinary reflexivity refers to a "a critical stance toward the place and function of the particular research project within broader debates about theory and method" (Gough, 2003, p. 25). As described in the introduction, the present study has been embedded in a larger ongoing scientific and cultural discussion of mindfulness. During the years of working with this project, mindfulness has received much attention in media and popular culture (Purser & Loy, 2013). In 2013, a critical article by Madsen (2013a) started a larger public debate about mindfulness in Norwegian media. Did the contemporary interest in mindfulness represent a problematic example of an expanding individualistic self-help culture? To a large extent, the ensuing discussions about mindfulness appeared to address different levels of analysis, where critics focused on a discursive perspective on mindfulness as a part of a "therapeutic culture" or problematic self-help industry (Kvittingen, 2013; Madsen, 2013b; Ravatn, 2013), while proponents argued for the benefits of mindfulness from the position of science and clinical practice (Binder & Gjelsvik, 2013; Binder & Vøllestad, 2013; Solhaug & Jakobsen, 2013). As a PhD candidate entering the field of mindfulness research during these public discussions, I felt that important questions about the clinical use of mindfulness were not sufficiently addressed in the public debate. These discussions have, however, changed the public reception of mindfulness and raised the need to be reflexive in the clinical use and scientific research on mindfulness-based interventions. It is important to acknowledge this social context for the present research project, as I have been supervised by and collaborated with

several leading academic researchers in the field of mindfulness research in Norway during this research project, and participated in a panel discussion with a leading critic of mindfulness in Norwegian psychology (Hjeltnes & Madsen, 2013). Throughout this research project, I have sought to investigate mindfulness openly and critically – by conducting an empirical study of both the positive and negative experiences of participants in a mindfulness-based intervention.

To summarize, all forms of scientific research are situated within a social and historical perspective. The aim of the discussion in this section has been to present the reader with a contextual understanding and provide transparency about the personal, functional and disciplinary background for this clinical study. In the next section, I will discuss ethical considerations in the research project.

2.9 Ethical considerations

The research project was approved by the Regional Committee for Medical Research Ethics (REK code 2013/221-3). Ethical considerations were an important concern throughout the different stages of the research process. The exclusion criteria in the study were designed to prevent potential adverse effects or harm from treatment. In the screening phase, students who did not meet inclusion criteria but described a need for psychological treatment were given recommendations for where they could seek professional help. Eligible participants were provided with written and verbal information of the general objectives of the study, and were required to fill out an informed consent form prior to participation (see Appendix B). The safeguarding of the integrity of the participants was an important concern during the qualitative interviews (Norsk Psykologforening, 1998). Due to the potentially sensitive nature of the interview topics, care was taken to provide participants with support and the possibility to debrief after the interviews. To prevent harm or negative effects during the program, participants who experienced emotional distress were given the opportunity to contact the teachers between classes. One participant disclosed posttraumatic symptoms after the start of treatment, and was offered supportive therapy and referred to other treatment after being advised to withdraw from the

study. In the posttreatment interviews, the participants were interviewed by members of the research team who had not had prior contact with the participants. Individuals who described a continued need for psychological treatment were advised where they could seek help. During the subsequent work of transcribing the qualitative interviews, I supervised the team of research assistants to ensure confidentiality and respect for the integrity of the participants in the study. To ensure the anonymity of informants who potentially could be identified by the research assistants, I transcribed 25% of the interviews in the study.

Qualitative research has been described as a way to empower people and give a voice to those who cannot speak (Elliott & James, 1989; McLeod, 2011). During the study, I was also concerned about the ethical implications of my dual roles as a psychologist and researcher. Gough (2003) have argued that "although researchers are committed to democratic forms of inquiry where the voices of participants are encouraged and respected, it is virtually impossible to escape researcher-participant relationships structured by inequalities" (p. 24). The dual roles of researcher/psychologist give extra power to the researcher that might potentially pose a risk to the personal integrity of the research participants. When conducting a clinical study with young people with social anxiety, I found it important to respect the potential vulnerability of these individuals by not pushing for answers during the interviews and the clinical intervention. The post-interviews were intended to reduce shame or other potential harmful effects for those who might experience that they did not get better, by providing opportunities to acknowledge and validate their experiences, and provide practical recommendations where they could seek further help.

3. Results

3.1 Summary of paper 1

The first paper is entitled ”What brings you here? Exploring why young adults seek help for social anxiety”, and reports findings from the qualitative interviews conducted prior to the MBSR program. The aim of this explorative qualitative study was to investigate the lived experiences of 29 Norwegian university students who were seeking professional help for symptoms of social anxiety, by exploring how these young adults experienced the personal impact and consequences of struggling with symptoms of social anxiety in their everyday lives, and what they described as their own concerns and reasons for seeking help. We analyzed these interviews using an explorative-reflective thematic analysis method (Binder et al., 2012). We identified five themes: (a) from being shy to interpreting anxiety as a mental health problem, (b) experiencing emotions as threatening and uncontrollable, (c) encountering loneliness as relationships fall away, (d) hiding the vulnerable self from others, and (e) deciding to face social fears in the future. These findings indicate several under-researched areas in the existing scientific literature on social anxiety and SAD, which are discussed in relation to existing theory and research. The paper concludes with a discussion of the process of reflexivity, highlighting study limitations as well as suggesting implications for future research. The paper has been published in *Qualitative Health Research*.

3.2 Summary of paper 2

The second paper is entitled ”An open trial of mindfulness-based stress reduction for young adults with social anxiety disorder”. The aim of this quantitative study was to investigate the MSBR program as an intervention for young adults with social anxiety disorder, by conducting an open trial with young adults in a university setting. We examined the self-reported psychological changes of the participants on social anxiety symptoms, global psychological distress, mindfulness, self-compassion and

self-esteem after the MBSR program. Fifty-three self-referred young adults in a higher education setting were assigned to a standard eight-week MBSR program. Eight participants (15%) did not complete the MBSR intervention. As hypothesized, the participants reported significant reductions in social anxiety symptoms and global psychological distress after the MBSR program, as well as significant increases in mindfulness, self-compassion and self-esteem. Intention-to-treat effect sizes ranged from moderate to large for social anxiety symptoms (Cohen's $d = 0.61$) and global psychological distress ($d = 0.80$). Completer analyses yielded large effect sizes for SAD symptoms ($d = 0.96$) and global psychological distress ($d = 0.81$). The largest effect sizes were found for self-compassion ($d = 1.49$) and mindfulness ($d = 1.35$), while a moderate to large effect was found for self-esteem ($d = 0.71$). Changes in social anxiety symptoms were negatively correlated with changes in mindfulness ($r = -.36$), self-compassion ($r = -.46$) and self-esteem ($r = -46$). Approximately two thirds of the participants (69%) who were in the clinical range at pretreatment reported either clinically significant change (37%) or reliable improvement (31%) on SAD symptoms after completing the MBSR program, while almost two thirds (63%) reported clinically significant change (37%) or reliable improvement (26%) on global psychological distress after completing the MBSR program. One participant (3%) deteriorated on SAD symptoms. Approximately a third of the participants continued to describe symptoms in the clinical range after completing the MBSR program.

The results in this study indicate that the MBSR program may be a beneficial and well-tolerated intervention for young adults with social anxiety disorder. The MBSR MBSR program may, however, not work for all participants. The quasi-experimental design limits the ability to draw strong causal inferences, but the results in this study indicate that the MBSR program could potentially be introduced in higher education settings to increase access to psychological treatment in campus mental health services. The present study highlights the need for more systematic research on mindfulness and acceptance-based interventions for SAD, and which individuals who may benefit or not benefit from participating in MBSR for social anxiety disorder. The paper has been submitted for publication in an international journal.

3.3 Summary of paper 3

The third paper is entitled ”Both sides of the story: Exploring how improved and less-improved participants experience mindfulness-based stress reduction for social anxiety disorder”, and is a mixed methods study that explores the experiences of 14 participants during the MBSR program. The aim of Paper 3 was to explore the experiences of the participants with the highest or lowest levels of symptomatic change after the eight-week MBSR program, and investigate how these participants experienced the process of participating in the program, and what they described as helpful and unhelpful aspects of this intervention. We employed a two-staged mixed methods design to identify the participants who reported either the highest (n = 7) or lowest (n = 7) levels of symptomatic change, and subsequently analyzed qualitative in-depth interviews with these participants to explore what they experienced as helpful and unhelpful during the MBSR program. The qualitative interviews were analyzed using explorative-reflective thematic analysis methodology.

We identified the global theme of (1) Discovering agency to change or not feeling empowered through the MBSR program, and four subthemes: (2) Forming an active commitment or feeling ambivalence towards learning mindfulness, (3) Engaging with others or avoiding contact with the group, (4) Using the mindfulness exercises to approach or resigning when facing unpleasant experiences, and (5) Using the course to break interpersonal patterns or remaining stuck in everyday life. These findings indicate that the MBSR program may be useful for participants who are motivated to learn and practice mindfulness as a way to work on their problems, but that the MBSR program may offer too little support and active guidance for clients who are demoralized, and ambivalent or have different models of change. In this paper, we concluded that the MBSR program may be helpful for young adults with SAD, although the different experiences of the improved and less-improved participants indicate that it may be important to match clients to their preferred form of treatment. The paper has been accepted for publication in *Psychotherapy Research*.

4. Discussion

The aim of this dissertation was to conduct an explorative investigation of the experiences and psychological changes of fifty-four young adults who participated in a clinical study of mindfulness-based stress reduction (MBSR) for social anxiety disorder, and to provide empirical knowledge on how these individuals experienced the process of undergoing the eight-week MBSR program. The scope of the dissertation was to investigate the following main research question: How do young adults who struggle with problems in the social anxiety spectrum experience and relate to their difficulties before, during and after they participate in an eight-week mindfulness-based stress reduction program? To explore this research question, three more specific research aims were investigated in the individual papers. The following discussion of the findings will be structured according to these research aims, where I will discuss the implications of these findings on a more general level than in the individual papers. I will subsequently discuss limitations in the study as a whole, and finally suggest potential implications for clinical practice and future research.

4.1 Understanding the experiences of young adults with social anxiety

The research aim of paper 1 was to explore the lived experiences and life worlds of the young adults before they started the MBSR program, and attempt to describe how they experienced the personal impact of struggling with anxiety in social situations and relationships.

How can the findings from this study help us to understand the lived experience of young adults with social anxiety? The first paper suggests that the decision to seek professional help was part of a long-term process for the young adults, where for years they had attempted to understand and make sense of their experiences of anxiety and shame in social relationships. The young adults described an important tension between seeing these experiences as part of their own “way of being” and as

possible signs of a mental disorder. Their self-reflexive attempts to understand the nature of their problems have important parallels to scientific discussion on how to delineate the boundaries between normal and pathological forms of social anxiety (Lane, 2008). Within the SAD literature, researchers have discussed whether social anxiety disorder represents a qualitative distinctive disease entity (categorical model), or if it represents the far end of a continuum of severity (dimensional model) (McGinn & Newman, 2013). Lane (2008) argues that the construction of the psychiatric diagnosis of SAD in the DSM-III system illustrates a larger trend toward increased medicalization of human experience in psychiatry and contemporary Western culture. Hofmann, Moscovitch and Heinrichs (2002) argue that, "from an evolutionary perspective, some anxiety disorders may be viewed as overresponsive, evolutionarily adaptive, but culturally maladaptive mechanisms rather than qualitatively different disease entities" (p. 327). Horwitz and Wakefield (2012) propose that anxiety disorders represent a mismatch between our biological nature (evolution) and our current social environment (culture). Culture and social norms may form an important dimension in how young individuals may come to experience and understand shyness and social anxiety as important problems in life (Scott, 2007). Horwitz and Wakefield (2012) suggest that the functional impairments used to differentiate social phobia from intense shyness emerge only when cultural norms place a strong emphasis on social engagement and outgoing interaction styles. Heimberg, Stein, Hripi & Kessler (2000) describe an important trend of rising prevalence figures for social phobia in younger cohorts in the U.S., especially among white, educated and married persons. Heimberg et al. speculate that these changes among persons with social and economic advantage might be associated with larger social changes (such as increased geographical mobility and new demands for sociability) among the middle-class in the U.S. The increased social pressures and norms towards extroversion and assertiveness in American society have been described by Cain (2013), who claims that the extrovert ideal of "sociability" represents a growing tendency to devalue introversion and interpersonal sensitivity in American culture. Although these discussions may reflect challenges specific to American culture, it is possible that contemporary Western societies face changes in

social structures that place new demands on young adults in Norway and Northern European countries in terms of individual competitiveness, sociability and flexibility in their personal and professional life (Bauman, 2000; Putnam, 2015). The young adults interviewed in this study described that they were seeking help out of a concern for their future, as they recognized the negative consequences of their social insecurities in everyday life. It is possible that young adults in contemporary societies face increasing pressures to perform, interact and compete with others in order to conform to social expectations (Scott, 2007), and that the young adults in this study were responding to these social processes when seeking professional help for their social anxiety.

Another important question is how the experiences of the young adults prior to the clinical intervention can help us to understand their subsequent experiences during the MBSR program. The thematic categories in the first paper may potentially contribute to an understanding of the findings in the study as a whole. In the pretreatment interviews, the young adults described psychological processes that might have been important in the development of the different experiences of the improved and less-improved participants during the eight weeks of the MBSR program. The participants at pretreatment described that they experienced their emotions as uncontrollable (theme *b* in paper 1), and many of them described that they lacked the practical tools to control or cope with the negative emotions they encountered in social situations. This led many of them to withdraw from difficult situations, which might have impeded their ability to benefit from the group situation or engage with the mindfulness exercises during the MBSR program. Their experiences of feeling vulnerable and exposed in social situations – and their attempts for hide this vulnerable sense of self from other people (theme *d* in paper 1) – may have led the less-improved participants to not disclose their experiences in the group discussions during the MSBR program, which might have limited their ability to receive validation or benefit from the contact with other people in the same situation. For some of the participants, the experience of meeting other people in the MBSR program who struggled with similar problems did not change the basic sense of

isolation and loneliness they described when seeking help (theme *c* in paper 1). In the pre-interviews, many participants expressed hope and described that they felt ready to make a change in how they approached their social anxiety and interpersonal relationships, while some described feeling helpless and unable to change the ways they avoided difficult situations and relationships with others in their everyday life (theme *e* in paper 1). In these experiences described by the young adults prior to the clinical study, it is possible to see starting points for different experiences which the improved and less-improved participants later described after the MBSR program. The themes described in the interviews prior to the MBSR program might illustrate psychological processes that could have affected how the improved and less-improved participants experienced and responded to the MBSR program. At the same time, it is important to acknowledge that the MBSR program may not have offered a meaningful model of change for these participants, or given them the practical framework they needed to solve their problems in life.

The findings in this explorative study may demonstrate that there are important psychological dimensions in the lives of young adults with social anxiety that have not been fully described in the scientific literature, such as the existential isolation they experience, such as how they attempt to hide their problems from others, their reflexive attempts to make sense of themselves and their problems, and how they experience the personal and professional challenges they face in their future. The present study highlights a need for more qualitative studies of how young adults experience and give meaning to mental health problems.

4.2 Using MBSR for young adults with social anxiety disorder

The aim of paper 2 was to investigate mindfulness-based stress reduction as an intervention for young adults with social anxiety disorder, by examining the self-reported psychological changes of the participants after the MBSR program. Can the MBSR program represent a beneficial intervention for young adults with SAD?

As hypothesized, the participants reported statistically significant reductions in SAD symptoms and global psychological distress, as well as statistically significant increases in mindfulness, self-compassion and self-esteem after the MBSR program. An interesting pattern of findings was that the largest effect sizes were found for self-compassion and mindfulness, especially the subscales for self-kindness (SCS), non-judgment (FFMQ) and non-reactivity (FFMQ). This may suggest that the MBSR program may be helpful to improve the reduce the self-criticism and maladaptive self-experience of individuals with SAD (Wolfe, 2005). However, it is important to note that effect size for self-esteem was moderate, which suggest that the participants reported comparably less increases in their self-esteem. The changes in social anxiety symptoms after the MBSR program were negatively correlated with changes in mindfulness, self-compassion and self-esteem, consistent with findings in prior studies of mindfulness and social anxiety (Burton et al., 2013; Rasmussen & Pidgeon, 2011; Schmertz et al., 2012).

The results of this study may indicate that the MBSR program can represent an acceptable and well-tolerated intervention for young adults with SAD. Eight participants (15%) dropped out during the MBSR program. This dropout rate is comparable to existing studies of MBSR for anxiety disorders and SAD, which report dropout rates between 15-18% (Jazaieri et al., 2012; Koszycki et al., 2007; Vøllestad et al., 2011) as well as studies of CBT and CBGT, which report dropout-rates in the 10-20% range (Gordon, Wong, & Heimberg, 2014; Rodebaugh et al., 2004; Wersebe et al., 2013). This may suggest that the MBSR program was well tolerated and acceptable to most participants.

The results of this study further indicate that approximately two thirds of the participants (63-69%) who were in the clinical range at pretreatment reported either reliable change or clinically significant change in their symptoms after completing the MBSR program, which indicates that the MBSR program may be a beneficial intervention for young adults with SAD. At the same time, it is important to note that approximately a third of participants (31-34%) who completed the MBSR program continued to describe symptoms in the clinical range. One participant (3%) also

reported deterioration on SAD symptoms. The mean levels of SAD symptoms and general psychological distress at pretreatment indicate that the participants reported relatively high levels of social anxiety symptoms and global psychological distress, compared with the clinical samples described by Heimberg et al. (1992) and Schmitz et al. (2000). The group means for SAD symptoms and global psychological distress were significantly reduced after the MBSR program, but still above the clinical cut-off points, which also indicated that a substantial proportion of the participants continued to experience clinical levels of SAD symptoms.

The findings in this study show higher percentages of remission or clinically significant change compared to prior studies of MBSR for social anxiety disorder. Koszycki et al. (2007) reported that although the MBSR program produced significant reductions in SAD symptoms, less than 10% of the MBSR patients met study criteria for remission, compared with 44% in CBGT. In their MBSR study, Jazaieri et al. (2012) reported that 25% of MBSR completers demonstrated clinically significant change on social phobia symptoms. In this study, 37% of the participants in the completer sample who were in the clinical range at pretreatment reported clinically significant change. These criteria represent a conservative estimate of therapeutic change (Jacobson et al., 1984; Lambert & Ogles, 2009). However, despite better outcome compared to similar studies of mindfulness-based interventions, it is still the case that MBSR seems to be less effective for reducing SAD symptoms when compared with cognitive-behavioral treatments (Mayo-Wilson et al., 2014; Norton et al., 2014; Vøllestad, 2016). Previous studies of cognitive therapy report that between 31-75% of patients with SAD improved after CBT or CBGT (Borge et al., 2008; Heimberg et al., 1990; Jazaieri et al., 2012). In a review of internet-based cognitive therapy (iCBT), Boettcher, Carlbring, Renneberg and Berger (2013) reported between 38-56% of patients with SAD met criteria for improvement and recovery. The British NICE Guidelines do not recommend the routinely use of mindfulness-based interventions (including MBSR and MBCT) in the treatment of social anxiety disorder (National Institute for Health and Care Excellence, 2013; Pilling et al., 2013). This document cites the clinical trials conducted by Koszycki et al. (2007), Piet et al. (2010) and Jazaieri et al. (2012), and concluded on the basis of these

studies that there was insufficient evidence to support the use of MBSR or MBCT. Vøllestad (2016) have highlighted that the differences between the effects of MABIs and CBGT on SAD symptoms might represent a difference in treatment dosage, as these trials compared the eight-week format of MBSR or MBCT with the twelve-week format of CBGT. The preliminary evidence has indicated that MAGT, which combines a longer treatment format (12 sessions) and exposure components, may increase the response rates on SAD symptoms (Kocovski et al., 2013; Kocovski et al., 2009). Kocovski, Fleming, Hawley, Huta and Antony (2013) did not find significant differences in social anxiety symptom reduction when comparing a 12-session MAGT and a 12-session cognitive CBGT. The findings in the present study may also indicate a need for more clinical trials on MABIs for social anxiety disorder.

The findings in this study indicate that the MBSR program may be a beneficial intervention for young adults with social anxiety disorder, although the MBSR program may not work for all participants. This indicates that it may be important to consider potential limitations of the MBSR program as an intervention for social anxiety disorder. The MBSR program was originally designed as a transdiagnostic intervention for a broad spectrum of physical and mental health conditions. This means that although the MBSR program may have broad mental health benefits, it is possible that this intervention does not sufficiently target the maladaptive processes in SAD. In contrast, MBCT was specifically developed for the recurrent depressive disorders by targeting the hypothesized mechanisms in depressive relapse (Segal et al., 2013), while MAGT was specifically designed as a mindfulness and acceptance-based therapy for individuals with SAD (Kocovski et al., 2009). The primary aim of the MBSR program is to transform the reactive relationship to difficult experience and promote adaptive change, what Williams and Kabat-Zinn (2011) refer to as "an orthogonal rotation in consciousness," rather than to remove negative emotions or symptoms. This may be an important consideration when comparing outcome in MBSR with treatment formats that more explicitly emphasize symptom-focused change strategies. Goldin et al. (2015) argue that future research should seek to refine existing treatments and explore alternative interventions for SAD, and propose that

one important part of this research will be to investigate the role of emotion and emotion regulation processes in SAD. The integration of therapeutic principles from behavioral and cognitive approaches may represent an important strategy to increase the effectiveness of MABIs for SAD. The promising findings for MAGT indicate that the integration of mindfulness and acceptance-based and exposure-based approaches may represent one potential strategy for improve outcomes in these interventions. Emotional avoidance and maladaptive emotion regulation have been proposed as important transdiagnostic processes across the spectrum of anxiety disorders (Barlow, Allen, & Choate, 2004; Hayes et al., 1996). Exposure constitutes an important principle in cognitive-behavioral therapies for anxiety disorders, and has also been proposed a mechanism of change in MABIs (Craske, Treanor, Conway, Zbozinek, & Vervliet, 2014; Treanor, 2011). Koszycki et al. (2007) hypothesized that: ”it would be of interest to evaluate whether integrating mindfulness meditation with CBGT for SAD yields a better outcome than standard CBGT” (p. 2525). The findings in this study also raise questions about how the participants experienced the process of undergoing the MBSR program, which was further examined in paper 3.

4.3 Understanding how participants experience the MBSR program

The aim of Paper 3 was to explore the experiences of the improved and less-improved participants after the MBSR program. What did the participants who reported the highest or lowest levels of symptomatic change experience during the eight weeks of the MBSR program, and what can their experiences tell us about the MBSR program as an intervention for social anxiety disorder?

A core finding in this study was that the participants with high or low symptomatic change had different ways of understanding and using the MBSR program. We used the concepts of “agency” and demoralization” to describe the main contrasts in how the participants entered the MBSR program with different personal expectations and degrees of motivation to change. One important question in this context is what worked well for the participants who reported the highest levels of symptomatic

change. The experiences of these participants resonate with humanistic theories that highlight the active role of the clients as agents of change in psychotherapy (Bohart, 2006; Bohart & Tallman, 2010; Rogers, 1957). The participants with high symptomatic change used the MBSR program to actively explore the mindfulness exercises and new ways to interact with others that gave them a stronger sense of personal agency and being able to make an impact on their problems. Bohart and Tallman (1999) argued that clients are not passive recipients of therapists' interventions, but actively use the learning opportunities provided by the structure of the psychotherapy to make changes in their own life (regardless of school or treatment modality). Bohart (2006) highlights that the most important aspect in this process is the "provision of a relationship that supports, engages, and mobilizes clients' open involvement" (p. 242), and an "empathic workspace" where the client can actively explore new ways to approach their problems in life. The improved participants used the different aspects of the program as an inner resource (mindfulness meditation) and interpersonal resource (relationship with the group and the teachers) to challenge and break their own problematic patterns in life. The experiences of these participants also raise further questions about the role of agency in therapeutic change. Did these participants have so many personal resources and high levels of readiness to change that they would have improved regardless of therapeutic modality, or did they benefit from the relationship with the teachers and the other group members, or the practical tools they learned through the mindfulness training in the MSBR program?

Another important question is what the participants who did not improve from their symptoms would have needed in order to change. The less-improved participants struggled to understand how they could use the program to change their problems, and described that the group discussions or mindfulness exercises did not necessarily provide them with the support or practical tools they needed to change their life situation. The less-improved participants continued to experience doubts and ambivalence during the eight weeks of the program, and described that the MBSR program did not help them to engage with their problems in a way that increased their

personal agency or led to meaningful change. The experiences of these young adults may resonate with the demoralization hypothesis proposed by Frank and Frank (1991), who argued that people often seek psychotherapeutic in a state of "demoralization", which involves experiences of "helplessness, hopelessness, confusion and subjective incompetence"(p. 14). The findings in papers 1 and 3 suggest that addressing these experiences of demoralization, helplessness and powerlessness may be important to mobilize client resources and promote agency, new learning and change in psychotherapy. The MBSR program – which explicitly states that "There is more right with you than wrong with you" contains therapeutic attitudes and strategies which might be important to address the maladaptive self-experience of individuals with social anxiety disorder, and emphasizes the process of mobilizing clients to move from a passive state of stress reactivity towards an active position where they can make active choices and take new responsibility for their own actions and well-being (responsivity). At the same time, the format and content of MBSR program may not have offered a meaningful rationale for the less-improved participants, who expressed that the MBSR program was not sufficient to enable them to make these choices and take significant steps towards change. An important overarching question arising from this study is how we can further our understanding of demoralization, agency, courage, and readiness for change in the context of psychosocial interventions, as these phenomena seem to span across different intervention studies (Frank & Frank, 1991; Norcross, Krebs, & Prochaska, 2011).

In this study, the participants with the most symptomatic change reported higher levels of symptom distress at the beginning of the MBSR program, compared with the less-improved participants. This might represent a ceiling effect where individuals with more severe symptoms at pretreatment may show larger improvements (Seligman, 1995) or a regression toward the mean (Nesselroade, Stigler, & Baltes, 1980), but possible psychological explanations for these differences might be that that these individuals had less experiential avoidance at pretreatment and were more aware of the impact of their anxiety symptoms (Barlow et al., 2004; Hayes et al., 1996), and thus were more motivated to engage in exposure activities and work actively to make progress through the program. We did not find more descriptions of

symptoms and symptom distress in the interviews with the participants with the highest levels of symptomatic change, but found meaningful differences in terms of agency, motivational processes and commitment between the participants in these two groups. These results diverged somewhat from a study by Jazaieri, Lee, Goldin and Gross (2015), who reported that pretreatment SAD severity moderated the impact of MBSR, and that the MBSR program was most effective for patients with lower SAD symptom severity. In a systematic review of the literature on pre-treatment patient variables in CBT for SAD, Eskildsen et al. (2010) reported that more disturbed patients both begin and end treatment at a higher symptomatic level, but show a similar degree of improvement. An implication from the findings in this study is that individuals who report high symptom distress at pretreatment may experience large and meaningful changes after the MBSR program.

In summary, the exploration of the different experiences of the participants in this clinical study suggest two different story lines which might have important implications for the clinical use of MABIs for young adults with SAD. The first is that approximately two thirds of young adults with SAD may recover or improve from their symptoms after completing the MBSR program, and experience MBSR as a meaningful and helpful way to address the symptoms and problems associated with SAD. The participants in this study described substantial and meaningful forms of change, and it may not necessarily be those individuals with least symptoms distress at pretreatment who find it most helpful. Another implication is that not all young adults with SAD may benefit from this intervention. In this study, approximately a third of participants continued to experience clinical levels of symptomatic distress after the MSBR program.

The findings in this study indicate that there is a need for more empirical research to identify which individuals who are most likely to benefit or not benefit from mindfulness and acceptance-based interventions for social anxiety disorder, and how it may be possible to improve outcomes and client acceptability in these interventions. There is generally a need for more empirical studies on negative client experiences and treatment failure in psychotherapy (Lambert, 2011; Lampropoulos,

2011). Lampropoulos (2011) argues that treatment failure in psychotherapy represents "an important and prevalent topic meriting professional attention and clinical remediation" (p. 1093). Studies have indicated that clients often underreport their negative experiences in therapy, and therapists consistently fail to detect them (Lambert, 2007). In a review of RCTs that used clinical significance methodology, Hansen et al. (2002) reported that between 67% and 57% reported improvement or recovery within an average of 12.7 sessions, which indicates that many patients do not improve even within in carefully controlled and implemented treatments. Naturalistic data indicated that across an average of 5 sessions, 14% of patients recovered, 21% improved, 57% reported no change and 8% deteriorated (Hansen et al., 2002). In reviews of the existing scientific literature, researchers have highlighted that a "substantial" or "significant" proportion of patients do not improve in cognitive-behavioral treatments, and estimated that between 40-50% of patients with SAD do not respond to treatment in clinical trials, and continue to report symptomatic distress and functional impairments after treatment (Eskildsen et al., 2010; Hofmann & Bögels, 2006; Norton et al., 2014; Vøllestad, 2016). Rodebaugh et al. (2004) highlighted that many clinical trials of cognitive-behavioral treatments for SAD do not provide information on clinically significant change, making it difficult to assess how meaningful the effect sizes reported in meta-analyses are, at an individual level, in clinical practice. Goldin et al. (2015) highlight that "when examining clinically significant change, these treatments are far from perfect" (p. 524).

The present study has attempted to investigate how improved and less-improved participants experience the process of undergoing a mindfulness and acceptance-based intervention for SAD. Qualitative research has been described as an important strategy for describing the helpful and unhelpful aspects of psychotherapy. Elliott (2010) describes qualitative helpful factor research as "a powerful strategy for providing mental health users with a scientifically sanctioned voice for expressing their views of what works or does not work in psychotherapy" (p. 128). Werbart et al. (2014) argue that "the patient's view of psychotherapy is an invaluable but underutilized source of information on what is helpful or curative, and, to even greater extent, nonhelpful in psychotherapy" (p. 546). Although qualitative studies of

negative experiences and treatment failure might uncover information that potentially might challenge the "branding" of specific approaches to psychotherapy, it is likely that this research might yield important empirical knowledge of how we can improve the delivery of psychotherapy for particular client with specific needs in the future.

4.4 Limitations of the study

There are several important limitations in the present study. In this section, I will discuss methodological limitations that concern the research project as a whole. Some of the more specific methodological limitations are discussed in the individual papers. The discussion in this section will focus on three main limitations: the quasi-experimental research design, the dual roles of several members of the research team, and generalizability of the findings from the sample in this study.

A first main limitation was the quasi-experimental research design used in the clinical study. The clinical study was conducted as an open trial, based on a quasi-experimental one-group pretest-posttest design (Campbell & Stanley, 1963). The main limitation of this quasi-experimental design is the lack of control conditions, which means that threats to internal validity cannot be ruled out nor were potential confounding variables controlled for, such as history, maturation, the impact of testing, instrumentation and statistical regression (Campbell & Stanley, 1963; Reichardt, 2009). The quantitative research design also lacked other components that could have supported the internal validity of the findings. We did not formally measure therapist adherence or client compliance, and were therefore unable to assess the fidelity or integrity of the treatment. The psychological measures were based on self-report, and the use of repeated measurements during the eight weeks of the MBSR program might have affected how the participants experienced and evaluated their own response to treatment. The process of filling out psychological self-report measures on a weekly basis might have psychological effects by itself, and could potentially represent an intervention within the intervention. Furthermore, we have so far not conducted follow-up measurements to assess long-term outcomes after treatment. The lack of control conditions also limited the ability to quantitatively

examine causal mechanisms of change (mediators and moderators) during the MBSR program. The Jacobson and Truax methodology has important limitations, especially when describing clinically meaningful change for participants who were in the subclinical range at pretreatment (Lambert & Bailey, 2012; Lambert & Ogles, 2009).

The main implication of the quasi-experimental design in this study is the limited ability to draw strong conclusions about the treatment effects and causal mechanisms of the MBSR program. I have chosen to refer to the pre-post comparisons in paper 2 as "psychological changes" to acknowledge these methodological limitations and not to make strong claims of causality in this study. The quasi-experimental research design does not yield strong evidence for the causal effects of the MBSR program, but appears to support findings from prior RCTs of MABIs for social anxiety disorder (Norton et al., 2014; Vøllestad, 2016).

A second main limitation was the organization of the qualitative research design used in the clinical study. As discussed earlier, the dual role of several members of the research team represents an important limitation in this research project. Although we attempted to address this issue throughout the research process (see the Reflexivity and Ethics sections), we cannot rule out that these dual roles may have represented a source of bias in this study. It is important to acknowledge that that the participants may have responded to this dual role by underreporting their negative experiences. Given that many individuals with SAD struggle with interpersonal difficulties, we cannot rule out that the informants may have not disclosed all adverse experiences or negative aspects of the MBSR program. Furthermore, Elliott (2010) have also highlighted that clients may make attribution errors or have difficulties articulating important change processes. To recognize these challenges in the qualitative research process, we attempted to combine hermeneutic reflexivity of our preconceptions with phenomenological sensitivity and openness to the particular experience of the participants – while we attempted to formulate thematic categories that could describe important psychological processes across the interviews with the young adults in this study, we did not make the claim that these thematic categories would be universally valid across individuals and contexts.

There were also other methodological limitations in the qualitative research design used in this study. We only interviewed half the sample of participants in the clinical study. The strategy of interviewing all the participants in the two first groups was set in advance, as we assumed that 20 interviews would be sufficient to obtain data saturation (Malterud, 2011) and ensure that all the qualitative data could be transcribed and used in the study. The experience of participating in these interviews might potentially represent a therapeutic intervention in itself, and may have led the participants to view themselves and experience the intervention in different ways. We cannot rule out the possibility that there were important experiences among the participants we did not interview and thus not included in the qualitative study.

A third main limitation was potential sample characteristics and the generalizability of the findings in the present study. The widespread use of college student samples represents a general limitation in psychological research (Henrich, Heine, & Norenzayan, 2010; Schultz, 1969). In this study, the participants were explicitly recruited from a university population, with the specific aim of investigating the MBSR program as an on-campus intervention for SAD. As described in paper 1, the participants were voluntarily seeking help and were generally highly articulate in the interviews. We did not assess the participants for comorbid personality disorders in the screening interviews, although 80% of the young adults in this study met criteria for generalized SAD. This may represent an important limitation as prior studies indicate a strong co-morbidity (61%) between generalized SAD and avoidant personality disorder, and that axis 2 comorbidity is associated with poorer treatment response (McGinn & Newman, 2013). The mean levels of symptom distress reported by the participants were in the clinical range (paper 2), indicating that the participants represented a clinical sample of young adults. However, this does not necessarily imply that the findings from this study of young adults in higher education would generalize to other populations. Peterson (2001) argued for the use of caution and replication studies to generalize findings from college populations to a nonstudent population. Although I have chosen to employ the term “young adults” when describing the participants in this dissertation, it is important to recognize that the

findings from this study were derived from a higher education context with university students, and that these results may not generalize to all young adults with SAD.

In summary, the main limitations in this study call for tentative conclusions about the causality, trustworthiness and generalizability of the findings. Despite these important methodological and conceptual limitations, the findings from this clinical study may suggest important implications for future research and clinical practice.

4.5 Implications for future research

To the best of current knowledge, this dissertation is the first empirical study to investigate how individuals experience and relate to their difficulties when participating in mindfulness and acceptance-based interventions for social anxiety disorder (Malpass et al., 2012; Norton et al., 2014; Vøllestad, 2016; Wyatt et al., 2013). The findings and limitations in this study indicate several potential areas for future research.

First, there is a need for replication studies using more methodologically rigorous RCT designs to examine the efficacy of MABIs such as MBSR for young adults with SAD (Norton et al., 2014). Replication studies may also be important to investigate if these findings may generalize to other populations of young adults. A general limitation in the field is the lack of explicit data on how many SAD patients actually improve or recover in psychotherapy, which indicates a need for more explicit reporting standards for clinical significance in future research on psychological interventions for SAD (Beidel, Turner, & Cooley, 1993; Goldin et al., 2015; Lambert & Ogles, 2009; Rodebaugh et al., 2004). Second, the findings in this study indicate that it may be important to conduct empirical studies to investigate processes that lead to therapeutic change or treatment failure in MABIs for SAD (Kocovski et al., 2015). Qualitative process research may be important to understand how individuals experience and respond to these interventions, and identify psychological processes that may be investigated by quantitative process research. Quantitative process-outcome research, for example additive component or micro process studies, may be

important to examine mechanisms of change in MABIs for social anxiety disorder. The findings in this study indicate several psychological factors that may represent potential mediators (self-efficacy, self-compassion, mindfulness, group processes and therapeutic alliance) or moderators of change (levels of motivation, avoidant personality disorder and homework practice). Psychophysiological research may also be important to identify the biological correlates and mechanisms of change (for example heart-rate variability, stress hormones and neural activation patterns) in MABIs for SAD. Dismantling studies may also be important to disentangle and identify the effective components within MABIs for SAD (for example group cohesion, homework practice, therapeutic alliance). An important area for future research will be to describe "what works for whom" and identify who is most likely to benefit or not benefit from the MBSR program. Third, the present study raises the question of whether mindfulness-based interventions such as the MBSR program should be integrated with existing psychotherapies for SAD in the future. The initial results for MAGT indicate the potential of combining mindfulness and acceptance-based strategies with a structured exposure-based treatment (Kocovski et al., 2013; Kocovski et al., 2009). However, as the first RCT of MAGT was conducted by the method developers, there is a need for independent replication studies of this intervention. Finally, there is a need for longitudinal quantitative and qualitative studies to examine the long-term impact of MABIs such as MBSR on anxiety symptoms, mental health, psychosocial functioning and quality of life among individuals with anxiety disorder.

4.6 Implications for clinical practice

The findings from this study also indicate several potential implications for clinical practice. First and foremost; mindfulness-based interventions such as the MBSR program may be helpful to reduce symptoms and promote beneficial psychological changes among young adults with social anxiety disorder, although the results from this study indicate that the MBSR program may not be an optimal treatment format for all young adults with SAD. The experiences of the improved and less-improved

participants in this study suggest that it may be important to match clients to their preferred form of treatment, and explicitly address client motivation to improve outcomes in psychological interventions for SAD (Swift & Callahan, 2009). The findings in this study indicate that when introducing MBSR to young adults with SAD, it may be important to initially assess clients' readiness for change, as well as their personal expectations and theory of change. The experiential and discovery-oriented approach in the MBSR program may not be an optimal choice of treatment for young adults with SAD who have low expectations of improvement, who are not personally motivated to engage in sustained mindfulness practice or to participate in a group-based intervention. MBSR may also not be suitable for individuals who are unwilling to engage in exposure activities. Correspondingly, the findings from this study indicate that the MBSR program may represent a beneficial intervention for individuals are motivated for active participation in the MBSR program, and who are willing to engage in mindfulness practice at home and exposure activities during the program. The findings in this study suggest that it may be important to be "mindful about the use of mindfulness" in clinical practice (Dimidjian & Kleiber, 2013), and to use caution as the MBSR program may not be an optimal form of psychological treatment for all young adults with SAD (Norton et al., 2014).

5. Conclusion

The purpose of this dissertation was to explore the lived experiences and psychological changes of fifty-four young adults who participated in a clinical study of mindfulness-based stress reduction (MBSR) for social anxiety disorder. The aim of this dissertation was to conduct an explorative investigation of how these individuals experienced the process of undergoing the eight-week MBSR program. The dissertation was organized around the following research question: How do young adults who struggle with problems in the social anxiety spectrum experience and relate to their difficulties before, during and after they participate in an eight-week mindfulness-based stress reduction program? The first paper investigated the lived experiences and life worlds of young adults before they started the MBSR program. The second paper examined the self-reported psychological changes of the participants after the MBSR program. The third paper investigated how the participants with the highest and lowest levels of symptomatic change experienced the process of participating in the MBSR program.

We found that the participants described a long-term process before they recognized their own personal struggles as mental health problems and decided to seek help, and that their own sense of isolation and concerns about the future were important reasons for seeking help. After the MBSR program, the participants reported significant reductions and effect sizes in the large to moderate range for social anxiety symptoms and global psychological distress, as well as significant increases and effect sizes in the moderate to large range for mindfulness, self-compassion and self-esteem. Changes in social anxiety symptoms were negatively correlated with changes in mindfulness, self-compassion and self-esteem. Approximately two thirds of the participants who were in the clinical range at pretreatment reported either clinically significant change or reliable improvement on SAD symptoms after completing the MBSR program, while almost two thirds reported clinically significant change or reliable improvement on global psychological distress after completing the MBSR program. One participant deteriorated on social anxiety symptoms. Approximately a

third of participants continued to describe symptoms in the clinical range after completing the MBSR program. When investigating the experiences of the participants in the two first groups who reported most and least symptomatic change after the MBSR program, we found that the participants had very different ways of understanding and using the different components of this intervention. This indicates that although the MSBR program may be beneficial for young adults in higher education with SAD, it may not represent an optimal form of psychological treatment for all young adults with SAD. The different experiences of the improved and less-improved participants suggest it may be important to match clients to their preferred form of psychological treatment.

What is the future of mindfulness and acceptance-based interventions for social anxiety disorder? The present study does not provide a definite answer, but indicate a need for more systematic empirical research on mindfulness and acceptance-based interventions for young adults with social anxiety disorder. The findings in this study suggest that systematic mindfulness training may be helpful for up to two thirds of young adults with SAD, but also that approximately a third of participants continue to report symptoms in the clinical range after completing the MBSR program. Although the present study has important limitations, the findings in this dissertation indicate a need for more empirical research on which individuals are most likely to benefit or not benefit from the MBSR program, and how to improve outcomes in mindfulness and acceptance-based interventions for social anxiety disorder.

The findings in this dissertation indicate that the mindfulness-based stress reduction program may be helpful for many young adults with social anxiety disorder, but that this intervention does not work for all participants. An honest look at the scientific evidence suggests that there is probably no ultimate or perfect psychological treatment that will work for all individuals with social anxiety disorder. A perhaps more meaningful question is how scientific research can help us continue to explore, refine and improve psychological interventions for persons who suffer from social anxiety disorder, in order to help these individuals to face their fears and find the pathways that lead them to change.

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