Mindful Coping

by

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Thesis submitted in fulfilment of
the requirements for the degree of
PHILOSOPHIAE DOCTOR
(PhD)

Faculty of Social Sciences
University of Stavanger
2012

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NORWAY

www.uis.no

ISBN: 978-82-7644-508-4

ISSN: 1890-1387

PhD thesis no. 174

To my Albertine

Acknowledgments

Sincere thanks go to the patients, students, and schools who took part in this project; this work would be impossible without your willingness to participate! Main supervisor, Professor Edvin Bru at the University of Stavanger, has been an invaluable source of knowledge, support and guidance; thanks! Co-supervisor, Professor Ingvard Wilhelmsen at the University of Bergen, has provided helpful advices, and has been a genuine source of inspiration; thanks!

I thank Dalane DPS (SUS) for funding the work and UiS for practical arrangements. Sincere thanks go to my colleagues and fellow PhD-candidates at both institutions for support and encouraging discussions. Special thanks go to Møyfrid Løvbrekke, Hanna Pettersen, Henk Otten, Aslaug Mikkelsen, Knud Knudsen, Bjørn-Tore Blindheim, and Turid Rødne. Thanks to Svein Gran for valuable comments on the material.

I thank my closest friends and family for their love and support during ups and downs of this journey; we made it! Finally, I send a thought of gratitude to my Amish friends who taught me what being in the present moment was all about before I knew there was a name for it.

Stavanger, May 2012

Kjersti B. Tharaldsen

Summary

The main objective of this thesis was to investigate the relation between mindfulness and coping. Building on a definition of mindfulness as a way of being in the present moment, appraisal theory was linked to coping with distress. The reason was to inquire whether mindfulness may be related to a coping process that entails appraising and to suggest how it is associated. “Mindful coping” is presented as a way to link these two traditions. This aim was developed based on years of working with both clinical and non-clinical populations who have expressed interest in and benefitted from practicing mindfulness as a door-opener to more adequate coping with general stress- and emotion-related life problems.

Beginning with a look into coping strategies that may play a central role in mindful coping, these strategies were related to mental health indicators to provide information on how mindful coping strategies may affect mental health. Mindful coping strategies were then investigated empirically within a non-clinical adolescent sample and a sample of psychiatric outpatients. Two interventions believed to enhance mindful coping were evaluated with the main goal of learning more about how mindful coping skills may be developed, as well as their capability to stimulate mindful coping and improve mental health.

Using a pragmatic approach within a critical realist framework, and by mixing quantitative and qualitative methods, four studies contributed to the current research. Findings showed that mindfulness may play a part in coping (i.e., mindful coping). Strategies for promoting mindful coping have been suggested. Furthermore, the results revealed that mindful coping strategies do seem to affect mental health in different ways for different populations. Within the adolescent sample, tendencies reflected that some strategies were more beneficial than others, whereas the strategies seem to affect symptoms of poor mental health in promising ways within the patient sample.

In response to the findings, suggestions have been made to moderate interventions that enhance mindful coping to increase the use of such strategies and promote mental health. Finally, challenges in developing and executing mindfulness-based interventions for adolescents and for psychiatric outpatients have been suggested. The study provides important knowledge on how mindfulness can be linked to coping theories and how interventions integrating mindfulness practices and coping skills may be carried out.

Abbreviations

APA – American Psychiatric Association

ACT – Acceptance and Commitment Therapy

CC – Conscious Coping

CFA – Confirmatory Factor Analysis

BC – Brief Cope

DBT – Dialectical Behavior Therapy

DPS – District Psychiatric Outpatient Service (community mental health center)

EFA – Exploratory Factor Analysis

GAF – Global Assessment of Functioning

GP – General Practitioner

GSI – Global Severity Index

MABI – Mindfulness- and Acceptance-Based Interventions

MBC – Mindfulness-Based Coping

MBCT – Mindfulness-Based Cognitive Therapy

MBI – Mindfulness-Based Interventions

MBSR – Mindfulness-Based Stress Reduction

MC – Mindful Coping

MCS – Mindful Coping Scale

NSD – Personal Data Registers Act § 9 (Norwegian abbreviation)

PLS – Perceived Life Strain

PS – Psychological Symptoms

REK Vest – Regional Ethical Committee (Norwegian abbreviation)

S-GAF – Global Assesment of Functioning – split version

SCL-90-R – Symptom Checklist-90-Revised

SWLS – Satisfaction with Life Scale

TAU – Treatment as Usual

Contents

"Between stimulus and response there is a space.
In that space is our power to choose our response.
In our response lies our growth and our freedom."

Victor E. Frankl

1 Introduction

According to the World Health Organization (WHO), good mental health is the foundation for well-being and effective functioning of an individual in reduced quality of life, as well as for a community with regard to increasing social costs. More than 450 million people worldwide suffer from mental disorders, whereas many more experience mental problems (WHO, 2010:N220); this indicates a need for interventions and research-based knowledge on preventing and treating mental health problems. Although there are fewer mental health issues in Norway than in other European countries, symptoms of anxiety and depression, sleep deprivation, and reduced capacity for adaptive coping exist to a significant extent in the Norwegian population (Nes & Clench-Aas, 2011).

Additionally, there is a high prevalence of mental health problems among adolescents. Recent estimations of the global burden of mental

disorders in children and adolescents ranged from 8% (in the Netherlands) to 57% (for young people receiving services in five sectors of care, San Diego, CA, USA) (Patel et al., 2007). Furthermore, results from a national Australian survey showed that at least 14% of adolescents under the age of 18 had a diagnosable mental or substance use disorder within the last 12 months, a figure that increased to 27% in the age group ranging from 18 to 24 (Sawyer et al., 2000). A high prevalence of mental health problems among adolescents is also evident in Norway; emotional and behavioral disorders are the most frequent problems (Mykletun et al., 2009). Studies have suggested that adolescents reporting more distress symptoms or depression are at greater risk for psychiatric illness in adulthood and that the lifetime prevalence of depressive disorders presenting by late adolescence is approximately 20% to 25% (Oppedal & Roysamb, 2004). As the demands adolescents face often surpass the coping resources that they perceive as available (Allen & Hiebert, 1991), stressful events may affect not only their welfare, but also their developmental process (Trad & Greenblatt, 1990; Patel et al., 2007).

In response to the above, the Norwegian government has put mental illness on the agenda, especially during the last decades. Governmental White Paper No. 37 (1992-1993) established that preventing mental illness and problems of a psychosocial nature should be a main objective in health-advancing work because mental illness and psychosocial disorders are key drivers for sick leave and disability in Norway. Another governmental proposal claimed that public services,

especially within psychiatry, should be increased considerably (Governmental White Paper No. 63, 1997-1998). Among the more recent reforms in Norway is the Coordination Reform, which aims to provide users with *"proper treatment – at the right place and the right time"* (Governmental White Paper No. 47, 2008-2009). This objective implies an emphasis on developing services in municipalities and that municipalities will be rewarded for investing in prevention to reduce the need for specialist health care services. In line with this, the Norwegian government has recommended early interventions for psychiatric difficulties among both adolescents and adults.

Healthcare in Norway is divided into municipal and specialist health services, where the special health services include the district Psychiatric Outpatient Service (DPS) and psychiatric hospitals. Health institutions take on their responsibility by developing and executing necessary health-advancing initiatives (e.g., removing, impeding, and reducing factors that lead to illnesses), but also by educating the population. The work is divided into primary initiatives such as reducing risk of illness on a general level and secondary initiatives such as preventing deterioration and/or relapses for those already diagnosed. Thus, health-advancing initiatives are the basis for increasing quality of life. Regarding mental health work, skills training programs of a psychosocial nature were developed and executed in psychiatric clinics as part of the educational responsibility. This partly fulfils the objective of institutions emphasizing health-advancing plans and practices for the patient at the right time and the right place.

One such psychosocial skills training program is the mindfulness-based coping (MBC) program, developed at a Norwegian DPS as a secondary initiative for psychiatric outpatients (i.e., part of treatment) and as a primary initiative for adolescents (i.e., as means to reduce risk of poor mental health). Therefore, MBC for psychiatric outpatients can be considered a supplement to treatment, whereas MBC for adolescents was intended as an early intervention for youth. MBC is based on two well-known traditions: mindfulness and cognitive behavioral therapy. The conceptual framework of MBC draws on the mindful coping concept. The concept of mindful coping and its relationship to poor mental health was the focus of this study.

1.1 Background

The concept of mindful coping (MC) is a result of the role that mindfulness has played over the last decades, especially within the psychiatric realm. Mindfulness has contributed to new knowledge concerning the interrelatedness between ancient knowledge and modern medicine. Multiple interventions either integrating mindfulness practices or with mindfulness as a main element have been developed for various target groups within the health care sector. However, discussions have revolved around how to define mindfulness and what mechanisms are at work when practicing it. Relating mindfulness to the coping process through the mindful coping concept was an attempt to bring fruitful perspectives to the ongoing discussion of mindfulness in interventions and its influence, especially on mental health issues.

As a quality of consciousness (Giluk, 2009), mindfulness is often defined as *"paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally (…)* [nurturing] *greater awareness, clarity, and acceptance of present-moment reality"* (Kabat-Zinn, 1994, p. 4); it is an inner discipline for learning to meet and enter the challenges inherent in taking care of ourselves and others with awareness (Santorelli, 1999). Originating from Eastern meditation practices (i.e., Buddha's teachings), mindfulness practices have been applied to Western medicine and have emerged as an effective treatment for both psychological and somatic symptoms (Brown, Ryan, & Creswell, 2007; Grossmann, Niemann, Schmidt, & Walach, 2004; Baer, 2003). Why did interest in this ancient phenomenon grow in the twentieth century? One reason may be less judgmental attitudes so that it has become legitimate to conduct research on mindfulness, or other so-called alternative practices, within Western academic circles (Gran, 2011). Another reason may be that, despite discussions regarding for whom and under which circumstances, such research in fact indicates that mindfulness "works" (Gran, 2011). Additionally, there seems to be a need for mindfulness today. The silence brought about by mindfulness practices that teach us to "switch off" and be in the present moment may balance the sometimes overwhelming present we experience today; new technology increasingly "switches us on" and makes us capable of always being somewhere else than in the present moment. This sought-after balance may indicate that mindfulness is here to stay.

Using mindfulness in integrative medicine (Davidson et al., 2003) was first employed through mindfulness-based stress reduction (MBSR) for patients with chronic pain (Kabat-Zinn, 1982; 1990), soon to be followed by dialectical behavior therapy (DBT) for women with a borderline personality disorder (Linehan, 1993a, b), acceptance and commitment therapy (ACT) for psychotherapy in general (Hayes et al., 1999), and mindfulness-based cognitive therapy (MBCT) for preventing relapse of depression (Segal et al., 2002).[1] The three latter interventions are by some collectively referred to as "third wave cognitive therapies," with the first wave being traditional behavior therapy and the second wave being cognitive therapy (Hayes, 2004). Much of the current psychological literature on mindfulness is based on these therapies and the cognitive operationalization of mindfulness they have provided. Numerous variants of these four mindfulness-based interventions have since been developed with modified content and other populations (Cullen, 2010). Mindfulness interventions have been developed for different target groups (e.g., somatic patients, psychiatric patients, non-clinical groups), age groups (e.g., children and/or

[1] The main commonalities among these approaches are attempts to operationalize and teach a particular present moment awareness (Baer & Krietemeyer, 2006). The many differences are length of meditation practices, whether it is individual or group interventions, and, duration of treatment, amongst others (Baer & Krietemeyer, 2006). However, as differences and commonalities between the various interventions is not main focus here, it is not further elaborated on.

adolescents, adults, elderly), and subgroups (e.g., people diagnosed with recurrent depression, suicidal youths). Mindfulness interventions are often distinguished into mindfulness-based interventions (MBIs) and mindfulness- and acceptance-based interventions (MABIs).[2] MBIs and MABIs vary in their components, although they all include meditation practices, behavioral practices, cognitive strategies, and/or emphatic strategies (Singh et al., 2008). Additionally, over the past several decades, there has been increased research on mindfulness and mindfulness-based psychological interventions (Keng et al., 2011; Allen et al., 2006; Baer, 2003). However, debate is ongoing with regard to how to define and operationalize mindfulness, which mechanisms are at work, and for whom mindfulness is beneficial.

The main focus in the current research project was development of the mindful coping concept and how it may influence mental health issues in non-clinic adolescents and psychiatric outpatients. In short, this thesis has argued for a connection between mindfulness and coping through appraisal theory. This connection has been tentatively shown theoretically. Adequate coping strategies that may be part of mindful

[2] Some also distinguish MBSR and MBCT from other mindfulness-based interventions by referring to these two treatments as mindfulness-based therapy (MBT) (Hofmann et al., 2010). Furthermore, DBT has been said to be a form of CBT that includes acceptance strategies and not a "third wave therapy" (Hofmann et al., 2008). However, the different ways of distinguishing between use of mindfulness in integrative medicine is not main focus here, and is therefore not further elaborated on.

coping and their use were empirically investigated in the mentioned samples.

This study contributes to the growing body of mindfulness literature in the following ways: The study provides a more explicit link between the mindfulness and coping traditions than most previous studies have; it provides important knowledge regarding mindful coping strategies for non-clinical adolescents and psychiatric outpatients; and it suggests how mindful coping interventions for non-clinical adolescents and psychiatric outpatients can be developed.

1.2 Research aims

To investigate the mindful coping concept further, one must understand the concept both theoretically and empirically. To accommodate this need, the current research has examined the following:

1. Developing and testing a conceptual model for the measurement of mindful coping

2. Investigating the relationships between the reported use of mindful coping strategies and indicators of mental health

3. Evaluating interventions to develop mindful coping skills regarding their capability to stimulate mindful coping and improve mental health

The research questions have been addressed and discussed in the thesis' four articles. The first research question is primarily addressed in article I. The second research question is primarily addressed in article II. The third research question is primarily addressed in articles III and IV.

The current project used the MBC program as point of departure, a manualized educative skills training program developed as a secondary health-advancing initiative for psychiatric outpatients (Tharaldsen & Otten, 2008). MBC was adapted to high school students as a primary health-advancing initiative. By developing an instrument believed to measure mindful coping, by investigating the relationship between mindful coping and mental health, and by evaluating the MBC program for both target groups, this study sought to pursue the abovementioned research aims. The research was part of the work to suggest health-advancing plans and practices within psychiatry.

1.3 Structure of the thesis

The thesis consists of two parts. Part I presents the background for the research through a presentation of the theoretical framework of development of the mindful coping concept, followed by an introduction to the intervention that was the focus of the study. Part I also encompasses the methodological approach of the research process, a summary of the results of the research articles, and a description of the interrelatedness of the articles. Finally, important findings are

discussed. Part I ends with provisional conclusions, study limitations, and thoughts on future research.

Part II consists of the four research articles included in the thesis:[3]

Article I. Tharaldsen, K. B. & Bru, E. (2011). Validation of the mindful coping scale, *Emotional and Behavioural Difficulties, 16*(1), 87-103.

Article II. Tharaldsen, K. B., Bru, E., & Wilhelmsen, I. (2011). Mindful Coping and Mental Health Among Adolescents. *International Journal of Mental Health Promotion, 13*(2), 20-30.

Article III. Tharaldsen, K. B. (In press). Mindful Coping for Adolescents: Beneficial or Confusing? *Advances in School Mental Health Promotion.*

Article IV. Tharaldsen, K. B., & Bru, E. (In press). Evaluating the Mindfulness-Based Coping Program: An Effectiveness Study Using a Mixed Model Approach. *Mental Illness.*

[3] The four research articles are in the following referred to as "Article I," "Article II," "Article III," and "Article IV."

2 Theoretical framework

This chapter provides an overall introduction to the theoretical framework for the operationalization of the mindful coping concept and its relation to mental health issues. Beginning with a brief introduction to the concept of mindfulness, mindfulness is then defined, and mechanisms that are thought to be at work when practicing mindfulness are presented. This is followed by a short presentation of the central notions in the study, that is, stress, coping, and appraisal theory. Finally, relating mindfulness to coping with distress in general, the mindful coping concept is introduced and linked to the promotion of mental health.

2.1 The concept of mindfulness

If scientific concepts are to serve their purpose, their meanings must be specified in such a manner that they are testable. Hempel (1966) stated that providing a definition is an obvious and adequate method of characterizing a scientific concept. In other words, an important objective of defining scientific concepts is to instill definite empirical content into the defined terms and make them applicable to the empirical subject matter. The central idea of operational definitions is to provide a definition of a term or concept and to reveal the meaning of the scientific term so that it is specifiable by indicating a definite testing operation that provides a criterion of its application.

Mindfulness is often described as the process in which one brings a certain quality of attention to moment-by-moment experience (Kabat-Zinn, 1990). This capacity is developed using various techniques that originate from spiritual practices as taught in Buddha's time.[4] A general understanding of mindfulness practice is that it is a controlled way of awareness, of being in the moment (Kabat-Zinn, 1990). Mindfulness depends on our capacity to pay attention, moment by moment, on purpose. Mindfulness is observing and being aware in the present moment in a nonjudgmental manner. Practicing mindfulness may increase people's sense of control in life because they are consciously aware of it as it enfolds. This does not refer to control as a means to manipulate life and others in it, but to observe and describe the ongoing in a manner that may lead to a more constructive perspective on whatever the moment brings. This understanding of mindfulness is relatively broad, hence the need for an operationalization of the concept.

[4] In scientific circles, a distinction between Eastern and Western mindfulness is often made. The Western perspective is rooted in an information-processing perspective (Weick & Suatcliffe, 2006), focusing on the process of making novel distinctions and taking different perspectives as opposed to relying on categories created in the past or a single viewpoint (Giluk, 2009). Within the Western perspective, research on the topic essentially falls into the categories of health, business, and education (Langer & Moldoveanu, 2000). In the following discussions, the Eastern perspective on mindfulness is applied unless otherwise noted.

2.1.1 Defining mindfulness

Mindfulness was introduced to social psychology several decades ago, and efforts have been made to define and operationalize it. Most of these definitions highlight two key constructs: behavior that is conducted and how that behavior is conducted (Cardaciotto et al., 2008). Hence, common to the definitions are the following four components: the ability to regulate attention, an orientation to present experience, awareness of the experience, and an attitude of acceptance (nonjudgment) toward the experience (Feldman et al., 2007). Currently, Bishop et al.'s (2004) two-component definition of mindfulness is recognized as an important contribution. The first component in this definition focuses on the self-regulation of attention so that attention is maintained on immediate experience. This involves sustained attention, skills in switching back to the experience if the mind wanders, and non-elaborative awareness of thoughts, feelings, and sensations. The second component involves approaching one's experience with an orientation of curiosity and acceptance, regardless of the valence and desirability of the experience. Mindful acceptance involves actively choosing to be in the present moment, including tolerating emotions related to uncomfortable stimuli or situations. Also, when choosing to be in the "here-and-now," one can free oneself from the past and present, which in itself is believed to decrease distress. Finally, acceptance is argued to be a presupposition for change. Cultivating mindfulness by entering a state of mind as defined above has been referred to as entering a "being mode" consisting of present-focused awareness, with a "doing mode"

as its opposite because it entails goal-oriented tasks (Segal et al., 2002). Mindfulness is mainly cultivated through insight meditation, yoga, and body scan (Kroese, 2005), often using the breath as an anchor to regulate attention to the present moment. This practice is either performed with formal meditation exercises often lasting from 5 to 45 minutes or with informal exercises lasting from 1 to 5 minutes.[5] Each form of exercise is believed to make the here-and-now available. However, a longer period of formal training is recommended to enhance the quality of the informal exercises.[6] The "being mode" is here linked to viewing mindfulness as a conscious state-like condition, which has been connected to similar, and perhaps more familiar, perspectives on psychological processes such as that of decentering (Safran & Segal, 1990) and reperceiving (Shapiro et al., 2006). This general domain of constructs describes the ability to observe the temporal stream of thoughts and feelings (Bishop et al., 2004) as objects of the mind with subjective content rather than objective and

[5] Formal meditation exercises are usually performed while sitting or lying down for longer periods. Informal exersices are often carried out while in movement (e.g., driving in your car, doing the dishes) or when shorter timeouts are available throughout the day.

[6] There are ongoing discussions on how long meditation expercises need to be to potentially produce changes in affective reactions (Williams, 2010). As contributing to answering this question is not main objective here, this debate is not discussed in more detail in the follwoing.

factual truth. For instance, reperceiving as such is a continuance of Bishop and colleagues' (2004) two-component definition of mindfulness, further separated into intention, attention, and attitude, which encapsulates the process that is mindfulness (Shapiro et al., 2006). Therefore, reperceiving allows for a disidentification from consciousness and its content to obtain more clarity and objectivity. This may lead to a more adequate relation to thoughts, actions, and emotions. In short, mindfulness can be seen as a state of mind bringing about an attitude of acceptance toward whatever the present moment brings. It opens one to clarity and acceptance and makes one capable of relating to the world as it is in preference to how one wishes it to be. In short, one's way of viewing life may affect one's well-being. Thus, mindfulness may provide a more realistic worldview and influence one's experience of life quality.

2.1.2 Mindfulness as a multifaceted construct

Overall, in academic circles, three frameworks exist with which to inquire into mindfulness, that is, medicine, cognitive therapy, and psychodynamic therapy (Gran, 2011). Within the research literature, ongoing debates revolve around how mindfulness "works" in different settings and for different populations. Research on MBIs has entailed a number of clinical disorders (e.g., Hofmann et al., 2010; Teasdale et al., 2000; Bowen et al., 2006; Tapper et al., 2009; Grossman et al., 2007) and physical health studies (e.g., Carlson et al., 2007; Jacobs et al., 2010), and mindfulness has also shown positive influence on

psychological well-being and cognitive functioning in healthy populations (e.g., Carmody & Baer, 2008; Jha et al., 2007). In a recent review, existing findings were consolidated, describing both conceptual psychological perspectives and a neuroscientific perspective. This suggests that mindfulness practices comprise a process of self-regulation differentiated by the following distinct but interrelated components: attention regulation, body awareness, emotion regulation (reappraisal and extinction), as well as change in perspective on the self (Hölzel et al., 2011). Within the same framework, it is argued that various types of mindfulness practices may emphasize these components differently and that a further investigation of each component may indicate which are strengthened by the different types of mindfulness practices. Others have also suggested that mindfulness is a multifaceted construct, leading to a five-facet model of mindfulness; the facets are "observe," "describe," "actaware," "nonjudge," and "nonreact" (Baer, 2006). Viewing mindfulness as a multifaceted construct may help in understanding its components and relationships with other constructs (Baer, 2006). This was also the point of departure for this study.

2.2 Stress and coping

The above discussion indicates that mindfulness may decrease distress through some of its core components (e.g., acceptance). Hence, a closer look at the concepts of stress and coping seems necessary, followed by tentatively linking mindfulness and coping.

2.2.1 Stress as activating affects

Stress can be defined as *"that quality of experience, produced through a person-environment transaction, that, through either overarousal or underarousal, results in psychological or physiological distress"* (Aldwin, 2007: 24). However, the term distress has mainly negative associations. Despite common assumptions about the negative influence of stress, some researchers have argued that it is more accurate to perceive stress as having an activating affect that can have both positive and negative elements (Aldwin, 2007). Here the term stress refers to negative activation unless otherwise noted. Stress stimulus, or stressor, refers to external input, and stress response, or reaction, to output (Lazarus, 1999).[7] Stress is relevant in this study context as stressors, which can be caused by both desirable and undesirable events, predispose the individual to mental disorders (WHO, Report 2001). In this study, a transactional model of stress was the point of departure. That is, stress was seen as an experience that

[7] The various conceptions of stress have been differentiated by using a two-dimensional space defined by duration and severity, using the terms *"trauma"* (i.e., severe and short-term), *"hassels"* (i.e., minor and short-term), *"chronic"* (i.e., severe and long-term), and *"role strain"* (i.e., minor and long-term) (Aldwin, 2007: 63). However, as one main aim of this study was to develop an overall model of the mindful coping process where various forms of stress can be seen as a stressor or stress stimulus regardless of duration and severity, these distinctions are not elaborated on in further detail here.

arises from transactions between an individual and the environment, particularly when the individual experiences a mismatch between his or her resources and the perceived need (Aldwin, 2007). This view is in line with the current coping focus.

2.2.2 The role of coping

When discussing stress, or the impact of stress, the concept of coping soon emerges. Coping is defined as *"constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person*" (Lazarus, 1998: 201). As such, coping can be argued to involve three key features: effort and planning, recognition that the outcome of coping responses may not be positive, and understanding that coping as a process takes place over time (Kleinke, 2007). Unsurprisingly, coping responses are chiefly activated when a person faces stress.

When discussing coping, a distinction among the terms "strategies," "style," and "skills" seems fruitful. In short, coping style refers to a preferred way of using one's coping resources, whereas coping skills are used in the actual execution of coping resources (i.e., action). Coping strategies refer to the specific type of effort, both behavioral and psychological, that people employ to master, tolerate, reduce, or minimize stressful events. Two general strategies for adequate coping have been distinguished (Lazarus & Folkman, 1984): Problem-focused coping, also called active coping, involves efforts to actively do

something to alleviate stressful circumstances, whereas emotion-focused coping, also called passive coping, employs strategies that involve effort to regulate the emotional consequences of stressful or potentially stressful events. Research has indicated that people use both types of strategies to combat most stressful events (Folkman & Lazarus, 1980). The predominance of one type of strategy over the other is determined, in part, by personal style (e.g., some people cope more actively than others). It is also determined by the type of stressful event; for example, people typically employ problem-focused coping to deal with potentially controllable problems such as work-related or family-related problems, whereas stressors perceived as less controllable, such as certain kinds of physical health problems, prompt more emotion-focused coping.

Another distinction often made in the coping literature is between active and avoidant coping strategies (Carver et al., 1989). Active coping strategies are either behavioral or psychological responses designed to change the nature of the stressor itself or how one thinks about it, whereas avoidant coping strategies lead people into activities (such as alcohol use) or mental states (such as withdrawal) that keep them from directly addressing stressful events. Active coping strategies, whether behavioral or emotional, are thought to be more effective in dealing with stressful events, and avoidant coping strategies appear to be a psychological risk factor or marker for adverse responses to stressful life events (Holahan & Moos, 1987). Hence, both problem-focused and emotion-focused coping are active coping strategies.

2.2.3 Appraisal theory

Appraisal theory (Lazarus, 1999) is an important contribution to cognitive coping theory. Appraisals involve how individuals construe the significance of their well-being, of what is happening, and what might be done about it (i.e., the coping process). The theory focuses on the subjective experience in that it emphasizes that stress and emotion depend on an individual's appraisals (evaluations) of transactions with the environment. The theory is process-oriented as appraisals change in reference to environments and personality over time (Lazarus, 1999). Appraisals are combinations of environmental circumstances, individual needs, access to recourses, and cultural context (Aldwin, 2007).

Transactional appraisal theory distinguishes between primary and secondary appraisal (Lazarus, 1999): Primary appraisal revolves around whether anything is at stake, that is, harm/loss, threat, or challenge, whereas secondary appraisal refers to the process of making a choice for action, that is, what can be done about it. Primary appraisals are concerned with our well-being, both physical and psychological, and it is in the individual's best interest to make primary appraisals as realistic as possible (Kleinke, 2007). The reason is that if an individual's primary appraisal indicates cause for concern, the individual would want to make the secondary appraisal adaptive. Another feature related to appraisal theory relevant to this study is reappraisal. Reappraisal means altering one's emotions by constructing

a new relational meaning of the stressor, that is, adequate cognitive coping where the individual shapes his or her actions and reactions (Lazarus, 1999).[8]

Appraisals are made in two main ways, *"deliberate and largely conscious"* and *"intuitive, automatic and unconscious,"* which both require cognitive activity (Lazarus, 1999: 82). Furthermore, deliberate and conscious appraisals can, over time, become more automated, fuelling further questions regarding how such appraisals may work (Cooper & Dewe, 2004). The framework of stress and coping presented in this study provides a foundation for relating mindfulness and coping.

2.3 Mindful coping

One important attempt to link mindfulness and coping has been through a focus on reappraisals, more specifically, how mindfulness with its metacognitive qualities can lead to positive reappraisals (Garland et al., 2009). Positive reappraisals reduce distress in a number of medical conditions; however, some limitations to this mindful coping model are evident, such as mindfulness' facilitation of coping through other

[8] At some point, Lazarus (2001) introduced "benefit" as another form of primary appraisal to accommodate appraisal routes for positive emotions. However, as coping with distress were the focus of this study, this form of appraisal is not further elaborated on here.

channels than positive reappraisals and that other cognitive abilities may foster reapprasials (Garland et al., 2009). Additionally, positive reappraisal may increase vulnerability to cognitive processes that underlie mood and anxiety symptoms (Grabovac et al., 2011). Also, although mindfulness as meta-awareness fosters neutral experience of the present moment, it does not necessarily bring about only positive reappraisals; it also may lead to neutral reappraisals. Therefore, in this study, mindfulness is related to the larger framework of the coping process.

2.3.1 The mindful coping process

Several qualities of mindfulness may have a positive influence on the coping process. For example, as mindfulness involves decentering and/or reperceiving, mindfulness practices are expected to have a positive influence on disturbed cognition. Hence, such practices are expected to open a more adequate approach to cognitive challenges. Adding acceptance to theories and models of how patients cope with pain has been called for (McCracken & Eccleston, 2003) and mindfulness may contribute in this. Mindfulness can thus be seen as aiding in the phase of primary appraisal (i.e., increasing the individual's chances to make as realistic an evaluation of the stressor as possible). Furthermore, mindfulness may aid in secondary appraisal, as the individual can enter a mindful state of neutral awareness of the present moment with the aim of choosing further functions for coping when dealing with stressor. Cognitive theory assumes that cognition affects

emotions, and mindful awareness of the present moment and acceptance of what the present entails are, therefore, likely to also reduce affective disturbance through the generation of more constructive cognitions. Constructive cognitions will also decrease the risk of rash or impulsive reactions, thereby allowing for adaptive coping. Furthermore, with its metacognitive qualities, mindfulness can be considered an emotion-focused strategy in itself, also leading to reappraisals when necessary. Mindfulness is furthermore believed to make an individual aware of coping strategies already in use. This can lead to either deliberate and conscious appraisal and, hence, a change in coping strategies (hopefully to the better) or to reinforcement of an already adequate way of coping.

This view is in line with others who have emphasized the importance of becoming aware – or mindful – of one's personality style as it is intimately related to how one sees the world and reacts to stressful events (Kleinke, 2007). In becoming aware of one's personal style, especially focusing on its flexibility or lack thereof, one opens for personal growth by modifying perceptions and responses regarding challenging life events that are not in one's best interest (Kleinke, 2007). Discussions of mindfulness have centered on it as a cognitive ability, a personality trait, or a cognitive style (Sternberg, 2000), that is, a dispositional/trait-like or state mindfulness. If cognitive styles are defined as preferred ways of using one's cognitive abilities (Sternberg, 1997), they represent not abilities per se, but how people like to employ their abilities in their daily lives. Cognitive styles involve a preferred

way of viewing the world in general and specific problems in particular (Sternberg, 2000) and therefore relate personality with cognitive components. Some of the main cognitive styles have been identified as dichotomies (Carroll, 1993) and some have suggested that mindfulness fits well into this existing framework with mindlessness as its opposite (Sternberg, 1997). Mindlessness involves premature cognitive commitment, typically relying on adherence to stereotypical thoughts and actions (Aldwin, 2007).

That a transitory state of mindfulness may accrue into dispositional/trait-like mindfulness is supported elsewhere (e.g., Chambers et al., 2009; Garland et al., 2011). Furthermore, it is probable that cognitively controlled emotion regulation is present during initial mindfulness practices, whereas experienced mindfulness practitioners seem to have an automatic attitude of acceptance to their emotions so that it seems unnecessary to control them (Hölzel et al., 2011). Relating this perspective of mindfulness with appraisal theory and a general dual process model on cognition, it seems likely that mindfulness can, through practice, become automatic and intuitive with time. As mentioned, cognitive appraisals can either be deliberate and conscious or automatic and intuitive. Within dual process models of cognition, one can argue that there are two main modes of information processing: associative (e.g., quick, automatic) and reflective (e.g., slow, effortful) (Beevers, 2005). All dual process models state that associate processing is the default mode of information processing, requiring little cognitive effort compared to reflective processing, whereas reflective processing

is chiefly engaged when expectations are violated (Beevers, 2005). Mindfulness can aid in encounters with such automatic reactions, opening an individual to creative and effective coping, to accessing alternative options in everyday tools, and to perceiving opportunities in problems (Aldwin, 2007). Thus, one can argue that mindfulness is a state-like condition, which can, through practice, become part of a cognitive style. The purposed theoretical model for the mindful coping process is thus seen as aiding in primary and secondary appraisal and as an emotion-focused coping strategy with the potential of opening for adequate reappraisals. The mindful coping process is shown in Figure 1.

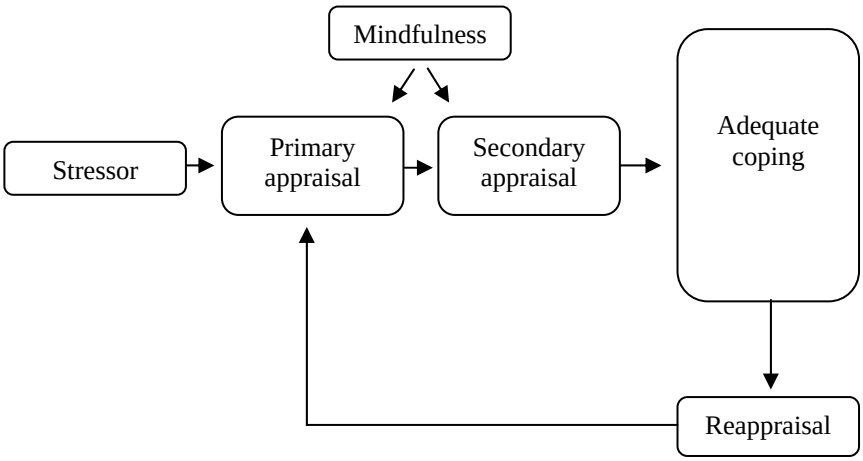

Figure 1. A Theoretical Model of the Mindful Coping Process.

Figure 1 shows a theoretical model that cannot undergo empirical investigation, at least not in this study context. However, when

discussing mindfulness alongside other coping strategies it can be fruitful to reflect upon this model to obtain a clear picture of how mindfulness may aid in the coping process. The mindful coping process can be viewed as a process of (re-)learning adequate and changing inadequate coping responses. The process entails both problem-focused and emotion-focused strategies for adequate coping. Bringing mindfulness into the coping process as suggested here may increase adequate coping. First, mindfulness may bring about increased consciousness of the situation at hand (primary appraisal). Furthermore, by facing stress with acceptant awareness, mindfulness may provide access to either new or more adequate ways of dealing with the current stress (secondary appraisal), including both problem-focused coping such as problem-solving and/or emotion-focused coping such as reappraisal. This may lead to adaptive coping involving a potential reappraisal of either the stressor or the coping response. One can argue that the more mindfulness training an individual has, the more mindfulness can contribute in appraisals. Hence, increased mindfulness training may bring about mindfulness through associative processing and hence more intuitive appraisals. This is in line with understanding the need to practice mindfulness through more formal training to enhance mindfulness in informal training thus making the mindful state more accessible in situations where it may aid in the coping process. “Successful copers” are those equipped with a battery of coping strategies and who are flexible in adapting their responses to specific

situations (Kleinke, 2007). The mindful coping process is an attempt to explain how mindfulness may improve coping.

2.3.2 Mindful coping and mental health

If seen as a facet of coping, mindful coping may be assumed to have an impact not only on short-term situational coping responses and stress, but also on longer term issues. Research over the past 20 years has shown that the manner in which individuals cope with stress is related to mental health status (Aldwin, 2007). Therefore, stress, and coping, can account for up to 50% of the variance in outcomes of depression and/or psychological symptoms (Aldwin, 1991; Aldwin & Revenson, 1987). If, then, mindful coping is in fact "good coping," one can assume that mindful coping strategies may decrease such symptoms and/or increase the experience of well-being.

In an attempt to further investigate the mindful coping process and its relation to mental health issues, it seems fruitful to use an existing theoretical framework that advocates mindfulness alongside other cognitive and behavioral coping strategies believed to benefit mental health. DBT (Linehan 1993a, b) was chosen for this purpose as it offers theory on cognitive behavior therapy and links mindfulness with first and second wave coping theory.[9] Defining mindfulness within DBT has

[9] Note that DBT initially was developed for women with a borderline personality disorder, and the parts of the theoretical framework for DBT presented here therefore

elements in addition to those mentioned in definitions above (Coffey et al., 2010), and fits well with Bishop and colleagues' (2004) as both additionally describe mindfulness as a skill or set of skills that can be developed with practice.[10] Furthermore, DBT is applied with psychiatric patients as the target group, and its targeted behavioral skills (emotion regulation, interpersonal effectiveness, distress tolerance, mindfulness) correspond closely to core issues of adolescent development (Rathus & Miller, 2002). Both psychiatric patients and adolescents were target groups in this study, thus making DBT relevant. DBT is based on the assumption that psychopathology involves four main sectors of psychological problems: disturbed cognition, affective disturbance, impulsivity, and unstable relationships. As for disturbed cognition, mindfulness is believed to be beneficial as mindfulness can reduce cognitive vulnerability to reactive

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emphasize more general aspects of the DBT framework. An example is use of distraction as coping strategy. Within DBT this is viewed as a strategy that should be employed during a crisis in order to avoid destructive behavior (Kåver & Nilsonne, 2005). In the MC process distraction is viewed as creating a break from a stressor not necessarily viewed as a crisis. This is congruent with discrete and time-limited experiental avoidance, which in and of itself is not problematic (Wilson & Murrell, 2004).

[10] DBT differs from MBSR and MBCT in its lack of regular practice of meditation to develop mindfulness skills, as well as, DBT's description of mindfulness techniques as psychological and behavioral versions of meditation skills (Burke, 2010).

modes of mind that might heighten stress and emotional distress or that may otherwise perpetuate psychopathology (Lau et al., 2006). Following Bishop and colleagues' (2004) definition, awareness was assumed to be a process underlying mindfulness (Singh et al., 2008). Mindfulness practices are believed to increase awareness of patterns of thoughts, emotions, and actions and the qualities of mindfulness are related to acceptance as a core element in this form of awareness. As such, mindfulness is believed to redirect focus on symptoms and thus change the relationship to the symptom. Regarding affective disturbance, impulsivity, and unstable relationships, DBT relies on active-cognitive and active-behavioral coping strategies, including skills for effectiveness in interpersonal conflicts, skills for regulating emotions, and stress tolerance skills (Linehan, 1993a, b). Hence, in this study, such strategies were used to provide a thematic foundation for the following four aspects of the mindful coping process: (a) awareness, (b) distraction, (c) preventing negative emotions, and (d) constructive self-assertion. Theoretically, awareness is believed to be beneficial in both primary and secondary appraisal and to stimulate problem-focused coping and emotion-focused coping. Distraction and preventing negative emotions are believed to stimulate both problem-focused and emotion-focused coping. Constructive self-assertion is believed to provide a base primarily for problem-focused coping. Combining mindfulness and coping as above may promote mental health and well-being. This was investigated empirically in this study (see Figure 2).

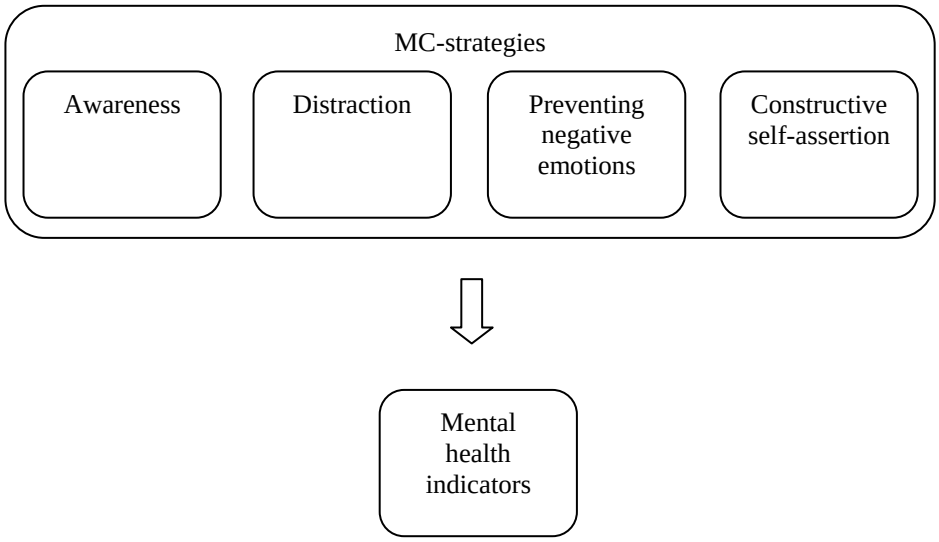

Figure 2. A Model of the Empirical Components of the Study: MC as Combining Mindfulness with Other Coping Srategies and MC's Potential Influence on Mental Health.

3 Enhancing mindful coping

An increased focus on decentralized mental health care in European countries and the development of mental health care services (WHO/Europe, 2005) has in Norway led to the establishment of DPSs, that is, community mental health centers adapted to the Norwegian context. The main reason is to provide necessary services to the population *when* they need it and *where* they need it (Norwegian Ministry of Health and Care Services, 2006: IS-1388). Another important focus is *what* the population needs, a need that may, and does, vary between regions and municipalities. The Coordination Reform (Governmental White Paper No. 47, 2008-2009) aimed to accommodate the "when," "where," and "what," whereas the latter is important when developing and executing health-promoting plans.

3.1 Mindfulness-Based Coping

MBC is a manualized educative MBI that includes coping skills training developed for psychiatric outpatients (Tharaldsen & Otten, 2008) at a DPS located in the district in the southwest of Norway. The DPS has responsibility for a population consisting of approximately 23,448 inhabitants (Statistics Norway, 2011) distributed across four

municipalities.[11] MBC was offered as a transdiagnostic group program with the aim of teaching participants coping skills for general life stressors, for emotion- and stress-related problems specifically. The four modules of MBC were named 'mindfulness,' 'stress management,' 'affect regulation,' and 'handling of relations.' Regarding the mindfulness tradition, MBC was especially inspired by MBSR and MBCT. The "3 minute breathing space," cognitive therapy exercises (e.g., "thoughts and feelings exercise"), and deliberately bringing difficulties to mind in sitting meditation are derived from MBCT. From MBSR, poems such as "The Guesthouse" by the Sufi poet Rumi, exercises in using mindfulness in everyday life, exercises for experiencing the present moment mindfully, and "the raisin exercise" were incorporated into MBC. The DBT skills training inspired MBC in terms of structuring the program, in part using mindfulness skills, selected skills for distress tolerance and emotion regulation, and the use of homework sheets for skills taught. Inspiration for using stories, fairytales, and metaphors to highlight subjects came from ACT, as did the emphasis on "acceptance" and "avoidance." In short, with a main emphasis on skills from DBT, parts of MBSR, MBCT, DBT, and ACT inspired the MBC program. Inspiration also came from other sources, such as worksheets to investigate personal stressors and build coping

[11] Numbers are from Statistics Norway retrieved the 6th of May 2012 and is a summation of statistics on inhabitants in the four municipalities per 1st of January 2011.

resources (e.g., Thingnæs, 2005). Criteria for inclusion in the program were patients' own wish to participate, a therapist's recommendation, a need for at least one of the components of the MBC program (e.g., communication skills), commitment to participate in all modules, reasonable level of functioning, and status as an outpatient at the clinic, at least for the duration of the program. Criteria for exclusion were psychotic patients or patients dissuaded from participation by their respective therapist, patients with current substance abuse, currently suicidal patients, and patients for whom the program in any way constituted a risk factor. See Table 1 for an overview of MBC. [12]

[12] Due to findings in this study, the revised edition of the MBC manual (Tharaldsen & Otten, 2012) presents 30 meetings, of which the 3 last meetings are repetitions of earlier meetings.

Table 1. *Overview of the MBC Program's Modules, Number of Meetings, Objectives, and Content.*

Modules	**Meetings**	**Objective**	**Content**
Mindfulness	3	Experience the present moment mindfully.	Homework, texts, quotations, meditation.
Stress management	8	Learn the difference between stress and distress and coping skills for acute and chronic distress.	Homework, quotations, cases, meditation, theory, comic strips, visualization, metaphors.
Affect regulation	8	Identify emotions to handle them adequately, reduce vulnerability to negative and increase positive emotions.	Homework, meditation, poems, stories, fairytales, theory, interpretation exercises, awareness of emotions.
Handling of relations	8	Engage in situations while optimizing chances for maintaining relations, self-esteem, and objectives.	Homework, meditation practices, quotations, poems, visualization practices, role play.

4 Methodology

4.1 Introduction

Due to the nature of the research questions of this study the overall methodological approach was that of eclecticism.[13] Eclecticism is one characteristic of mixed methods research stemming from rejection of the incompatibility of methods thesis (Teddlie & Tashakkori, 2010). This allows for paradigm pluralism (e.g., combining quantitative and qualitative methods is appropriate in research). Methodological eclecticism offers freedom to combine methods, and we do so by choosing what we perceive as the best means to answer our research questions (Teddlie & Tashakkori, 2010). This chapter describes the methodological foundation for the study. Starting with some reflections on the philosophical and theoretical approach,[14] methods of each of the

[13] This chapter presents the overall methodological perspective regarding data production and construction of this thesis. The specific methods of each of the four studies (Article I through IV) are fully described in the respective articles. For detailed information on these, see Part II of the thesis and the relevant articles.

[14] The theoretical perspective points to the philosophical stance that informs the methodology in the respective study, provides a context for the process, and grounds its logic and criteria (Crotty, 2003).

four studies (Articles I through IV) are presented. Hence, design and data collection are accounted for, as are the performed data analyses and the respective samples. Finally, methodological challenges and ethical considerations are presented.

4.2 Philosophical and theoretical perspectives

The main objective of this study was to examine the relationship between mindfulness and coping. Research questions revolved around strategies central to mindful coping, how such strategies may influence mental health issues, and suggestions for how such skills may be developed so as to promote mental health and psychosocial functioning. With this as the point of departure, it may be fruitful to reflect upon the philosophical underpinnings of the research and the research-focused considerations that may stem from these underpinnings.

4.2.1 Mental models and pragmatic thinking

When investigating different phenomena, the researcher's understanding of research as such is essential to conduct the research process. One important concern is how one understands the phenomenon under study, and whether it is believed to exist in and by itself, to be a phenomenon entirely construed by human interaction, or something in between. Several factors guide the work of researchers, such as education, politics, and values. These are referred to as the

researcher's *"mental model"* (Greene, 2007). A mental model is *"the set of assumptions, understandings, predispositions, and values and beliefs with which all social enquirers approach their work"* (Greene, 2007:12), meaning that the researcher in many ways is as complex as the phenomenon being studied. According to this thesis' research questions it seems that a more practical approach is fruitful, opening for combining quantitative and qualitative methods. Pragmatism is an American philosophical tradition that also provides a base for the current study. Specifically, three aspects are of importance regarding the pragmatic worldview (Morgan, 2007). The first concerns the connection of theory to data. While quantitative and qualitative paradigms traditionally emphasize either a deductive or an inductive approach, the pragmatic view advocates abduction (i.e., a dialectic process of deductive and inductive procedures). The second aspect regards the relationship to the research process. While quantitative and qualitative paradigms have been chasing objective or subjective knowledge, respectively, the pragmatic approach values the intersubjectivity of reality (i.e., a continuum of subjectivity and objectivity on which the researcher moves back and forth during the research process). The third aspect refers to what recognizes knowledge and "truth." While quantitative and qualitative paradigms traditionally aim either for generalizability or uniqueness, the pragmatic approach argues that within social science there is no knowledge so general that it applies to all contexts nor so unique that it has no value for anyone else. Hence, within a pragmatic paradigm, elements such as ontology,

epistemology, methodology, and axiology are recognized through a pluralistic attitude oriented toward *"what works"* as well as practice (Creswell & Plano Clark, 2007). Reasons include its emphasis on multiple realities (ontology), practicality (epistemology), multiple stances (axiology), combination (methodology), and both formal and informal rhetoric (Creswell & Plano Clark, 2007). As such, the pragmatic approach seemed appropriate in this study and was recognized as the researcher's mental model. The value did not lie in either the qualitative approach or the quantitative approach, but rather in the strengths in both strands. Furthermore, intersubjectivitey was valued because the current study emphasized "truth" as existing as a mutual understanding of experience. This means that a perspective of commensurability of a single "real" world with an individual's unique interpretations of that world (Morgan, 2007) has been emphasized. Finally, in compliance with the understanding that researchers need to investigate the factors that influence whether the knowledge gained can be transferred to other settings in preference to either context-bound or generalizable results (Morgan, 2007), transferability was used to underpin the current study.

The underpinnings of pragmatism as described above lead to a consideration of critical realism. In its broad sense, critical realism provides an adequate philosophical and theoretical assumption for both quantitative and qualitative research (Lund, 2005a). Scientific realism *"assumes that 'the world is the way it is', while acknowledging that there can be more than one scientifically correct way of understanding*

reality in terms of conceptual schemes with different objects and categories of objects" (Lakoff, 1987: 265). Such a perspective suggests that a reality do exist. However, and due to our limitations as human beings, it can only be known imperfectly. As such, it can only be discovered within a probability range and hence not be proved (Mertens, 2005). Critical realism indicates that phenomena under study do correspond to entities or processes that exist independently of the scientist, and thus are not completely constructions in the scientist's mind (Lund, 2005a). As such, critical realism entails an ontological realism and accepts epistemological relativism (Maxwell & Mittapalli, 2010). This is in line with the pragmatic mental model of this study. Furthermore, some scholars have suggested that a critical realist perspective can, within the field of mental health promotion, offer a model not submitting to the dominant discourse but also recognizing that service users are important with regard to processes of decision-making (Stickley, 2006). Hence, such a perspective may be fruitful in this study to reveal participants' and therapists' opinions regarding proper treatment. With pragmatism and critical realism in mind, implications for the methodology of this study are presented below.

4.2.2 Mixed methods – a research cocktail?

Within mixed methods research, a contemporary characteristic is paradigm pluralism, indicating that various paradigms may serve as underlying philosophies for the use of mixed methods (Teddlie & Tashakkori, 2010). Critical realism (Maxwell & Mittapalli, 2010) and a

pragmatic mental model (Greene, 2007) are both suitable for working with mixed methods (Greene, 2007). Some even argue that pragmatism is *the* mixed methods paradigm (Johnson & Onwuegbuzie, 2004).[15] The reason is that a pragmatic paradigm among others signals attention to *"transactions and interactions; to the consequential, contextual, and dynamic nature of character of knowledge; to knowledge as action; to the intertwinement of values with inquiry"* (Greene, 2007:85). Critical realism and pragmatism show the paradigmatic pluralism of this study.

Within mixed methods research circles, there are some debates around conceptual issues, designs, and boundaries of the mixed methods field (Teddlie & Tashakkori, 2010). Here the methodology of mixed research is defined as *"the broad inquiry logic that guides the selection of specific methods and that is informed by conceptual positions common to mixed methods practitioners (e.g., the rejection of "either-or" choices at all levels of the research process)"* (Teddlie &

[15] Some mixed methods researchers use the term "dialectical pragmatism," which is believed to be tailored for mixed methods research. In this definition, pragmatism refers to *"(…) the applicability of the core tenets of philosophical and methodological pragmatism"* whereas *"(…) dialectical emphasizes that mixed methods researchers must carefully listen to, consider, and dialogue with QUAL and QUAN perspectives, and learn from the natural tensions between these perspectives"* (Johnson & Gray, 2010: 88). However, as the current study is dominated by QUAN and dialectical pragmatism is most important in equal-status mixed designs (Johnson & Gray, 2010), the term "pragmatism" is used alone here.

Tashakkori, 2010: 5). When working with mixed methods research a particular terminology is evident, such as research emphasis timing, weighting, and integration of methods. Furthermore, new methodologies bring forward a need for notation systems. The relative importance of the methods within mixed methods research is indicated by using uppercase letters for the primary method and lowercase letters for the secondary method, while pluses indicate methods that occur at the same time and arrows indicate methods that occur in a sequence (Morse, 1991). Parentheses indicate methods embedded within other methods (Plano Clark, 2005). Mixing methods in this manner demonstrates a conscious use of methods, with an objective for choosing to work in this manner as one does when working either within the quantitative or the qualitative paradigms. In short, a "new blend" of existing methods brings forth a new research paradigm.

4.2.3 Mixing methods in the current study

Within this study, two of the four articles were quantitatively driven (Articles I and II) and two used a mixed methods approach (Articles III and IV). There are several arguments for bringing a mixed methods approach to the table within this study. [16] Some within mental health

[16] Triangulation is believed to illuminate the vulnerability in using one method in terms of avoiding errors linked to that particular method (Patton, 2002) and is associated with the convergence of results (Teddlie & Tashakkori, 2010). Some use the triangulation design as one major mixed methods type of design (Clark &

promotion research have argued for a focus not only on outcome measures but also on contextual factors (Wampold, 2001), as the latter are not adequately covered by traditional quantitative methods but nonetheless contribute to outcomes. The henceforth dominant approach has been referred to as the medical model (i.e., the ingredients of a theoretical approach are sources of effects within psychotherapy measured by outcome), while the other approach is referred to as the contextual model (i.e., emphasizing a holistic common factors approach) (Wampold, 2001). In the latter, not only outcome factors are emphasized, but also factors such as allegiance and adherence are considered. A more holistic approach is supported by others calling for further emphasis of the value dimension within psychological research (Binder et al., 2009), that is, what is valued as of importance by participants. A mixed methods approach is believed to suggest answers to quantitatively derived hypotheses and to explore in greater depth the processes by which relationships occur. As such, mixed methods

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Creswell, 2008). Others emphasizing not only convergence and corroboration argue that transferring the trigonometric construct of triangulation to social sciences, although capable of allowing for insights, has clear boundaries and may give rise to serious misunderstandings (Erzberger & Kelle, 2003). Hence, they have moved past triangulation to create a *"third methodological community"* (Teddlie & Tashakkori, 2010:11), also emphasizing complementarity and divergence of results. The latter perspective prevails in this study, and the construct of triangulation is therefore not further elaborated on here.

research seems adequate in terms of integration of the medical and contextual model.

As a pragmatic stance supports the idea that a complex world calls for complex research and a complex methodology, consciously mixing methods is believed to provide the current research with strengths of, and compensate for weaknesses of, the different methods. Also, one method alone seems inadequate considering the relatively small sample sizes in the intervention studies, the fact that MBC as a theory-based program increases the need for a process evaluation of the intervention, and the aim of measuring change. The nature of the research questions also calls for mixing methods, as they seek not only to measure outcome but also to understand underlying processes of the potential changes revealed. As such, the overall approach of the research is mixed methods, and the overall argument for this is that of complementarity, that is, seeking "*broader, deeper, and more comprehensive social understandings by using methods that tap into different facets or dimensions of the same complex phenomenon*" (Greene, 2007:101). Hence, complex projects call for multiple procedures for collecting informative data to perform analysis from which to draw inferences.

4.3 Research design

The design of the four studies in this research differed. The first study involved the development and validation of the mindful coping

concept, based on a larger survey among adolescents. The second study was a cross-sectional study also based on a larger survey, focusing on the relationships between mindful coping and mental health indicators. The two latter studies had a more quasi-experimental design with a mixed methods approach aiming to evaluate mindful coping interventions.

4.3.1 The quantitative and qualitative strands

When blending quantitative and qualitative methods it seems appropriate to briefly mention qualities of the two. Differences in strengths and weaknesses are found between the quantitative and qualitative strands. Quantitative approaches are more appropriate for hypothesis testing, but are less in-depth, and achieve better objectivity than qualitative methods (Lund, 2011). Qualitative approaches are more appropriate for hypothesis generation and provide greater depth, although they are not as generalizable as quantitative methods (Lund, 2011).

Regarding quantitative methods, these are here defined as *"research that uses numbers and statistical methods (…) based on numerical measurements of specific aspects of phenomena; it abstracts from particular instances to seek general description or to test causal hypotheses; it seeks measurements and analyses that are easily replicable by other researchers"* (King et al., 1994:3-4). Quantitative methods are primarily used here with the aim of developing and

validating the mindful coping construct (Article I), providing statistical knowledge of the relationships between mindful coping strategies and mental health indicators (Article II), and for detecting changes in the use of MC strategies, psychological symptoms, and life satisfaction in response to intervention participation (Articles III and IV). The strength of the quantitative strand in this study was the relationship among, and detected changes in, selected variables such as the MC construct, its relation to mental health, and measures of treatment outcome. A weakness with the quantitative approach was that it could not describe the process of program participation in-depth and, hence, could not alone provide a sufficient understanding of potential changes and experiences of program participation.

As for qualitative methods, these are here defined as research which is *"multimethod in focus, involving an interpretive, naturalistic approach to its subject matter. (...) qualitative researchers study things in their natural settings, attempting to make sense of, or interpret phenomena in terms of the meanings people bring to them. Qualitative research involves the studied use and collection of a variety of empirical materials – case study, personal experience (...) interview, (...) and texts – that describe routine and problematic moments and meanings in people's lives"* (Denzin & Lincoln, 1994:2). Qualitative methods are primarily used here to reveal potential subcomponents explaining changes in coping due to program participation and additionally to give meaning to and/or contextualize data (Articles III and IV). The qualitative approach is believed to provide more in-depth

understanding of the MC strategies and their value to participants, as well as if and how participants use the MC strategies.

In line with the above a framework for using an overall mixed methods approach is suggested through an emphasis on the value of identifying patterns of using mindful coping strategies within the respective target groups, by emphasizing the respective therapists' opinions regarding their patients' program participation, and by valuing the information from the participants through interviews that can provide more in-depth meaning regarding mindful coping strategies. The overall mixed design was that of an integrated component design indicating that the chosen methods were implemented relatively independently of one another, and the linkage made often reflected the purpose of mixing (Greene, 2007). In this study, the quantitative and qualitative approaches were used sequentially; they were integrated after separate analyses in discussing results, and to show the complementarity of the findings, convergent or divergent results were examined.

4.4 Data collection

Regarding data collection, researchers have increasingly used mixed method techniques to expand the scope of, and deepen insights from, their studies (Sandelowski, 2000). This was also the case in the present research with the purpose being to achieve complementarity in terms of clarifying, explaining, and more fully elaborating the results of analysis. Data collection began in January 2007 and was completed in

June 2009; it consisted of both quantitative and qualitative data collection.

4.4.1 Procedure

In the two quantitatively driven studies (Articles I and II), data were collected in a mapping sample by a questionnaire. The questionnaire consisted of several measurements (see section 4.4.2). The main aim was to investigate the validity of the mindful coping construct, to inquire about strategies central to the mindful coping process (Article I), to investigate which mindful coping strategies adolescents seem to use, and how these strategies may have a moderating influence on the relation between perceived life strains and symptoms of mental health (Article II). The survey was conducted in the presence of the researcher or employees at the respective schools or at the DPS with persons trained to conduct it.

In the two intervention studies with a mixed model design (Articles III and IV), quantitative data consisted of measuring participants pre-, post-, and follow-up intervention by using the same questionnaire. The aim was to investigate the use of mindful coping strategies, as well as the potential influence on indicators of mental health and quality of life. Qualitative data were obtained from a semi-structured interview conducted among a sample of students and among all of the patients participating in the intervention. Interviews were executed in the time period between post-treatment and follow-up. For practical reasons, the

researcher carried out the student interviews, whereas therapists carried out the interviews with their respective patients. Data on adaptive functioning were also gathered in terms of GAF scores (Global Assessment of Functioning, see section 4.4.2), set by the patients' respective therapist. Patients were scored pre- and post-treatment.

4.4.2 Measurements

With only two exceptions, the same measurements were used in all samples, as was the interview guide. The following is a brief presentation of the different measurements.

Brief Cope (BC) (Carver, 1997). The BC is a measurement modified from the COPE inventory (Carver et al., 1989) and is an inventory of 14 subscales, each with two items. Coping scales include problem-focused strategies (e.g., active coping), emotion-focused strategies (e.g., emotional support), and avoidant strategies (e.g., substance use). The a priori scales showed adequate internal reliability by meeting or exceeding the value of .50 (Carver, 1997). The BC is a measurement often used within adolescent samples. The BC was used in the current research with the aim of providing a way to assess potentially important coping responses without tiring the respondents.

Mindful Coping Scale (MCS) (Article I). The MCS is a 23-item, self-report questionnaire. The scale was constructed with four subscales to assess four different aspects of mindful coping: awareness (e.g., observe nonjudgmentally), distraction (e.g., by using one's hearing),

preventing negative emotions (e.g., by sleeping properly), and constructive self-assertion (e.g., how to reject requests). Each item was rated on a 5-point Likert scale (1 = *never/hardly ever,* 5 = *always*). The scales had good internal consistency with coefficient alphas of the four subscales ranging from 0.76 to 0.85 (Article I). The MCS was developed as part of this research to develop measurements for mindful coping (Article I).

Symptom Checklist-90-Revised (SCL-90-R) (Derogatis, 1983). The SCL-90-R is a 90-item, self-report symptom inventory measuring current psychological symptom status. Each item was rated on a 5-point scale of distress (0 = *not at all*, 4 = *extremely*). The scale included nine primary symptom dimensions (somatisation, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism) and three global indices of distress, of which the global severity index (GSI) was the most important as it is the best single indicator of current levels or depths of disturbance (Ogles et al., 1996). The GSI was used in the current research. The SCL-90-R has been found to have high reliability in terms of alpha values. Stability coefficients have generally been adequate across a range of patient groups and test-retest intervals (Handboook of Psychiatric Measures, 2000). The SCL-90-R was used in this study to obtain a reputable indicator of current psychological distress experienced by the respondents.

Satisfaction with Life Scale (Diener et al., 1985). The SWLS is a 5-item measure of subjective well-being, assessing global cognitive judgments of life satisfaction. The 7-point Likert scale ranged from 1 (*strongly disagree*) to 7 (*strongly agree*), and scores were calculated by summing item ratings to obtain a total. The SWLS has been found to have favorable psychometric properties. The internal consistency of the SWLS and alpha coefficients have repeatedly exceeded .80, and test-retest reliability has been generally acceptable (Pavot & Diener, 1993). The SWLS was used in the current research to obtain respondents' comprehension of contentment with their lives.

Perceived life strains (PLS). PLS was only used in the student sample. PLS during the previous 12 months were measured by a checklist constructed on the basis of a negative life event list for adolescents and a list of long-lasting adversities (Ystgaard, 1997). The checklist comprised six items containing the following life events: remarriage or divorce among parents, unemployment among parent(s), serious illness or injury either for the adolescent or someone close to him/her, and other perceived life strains. In addition, the checklist comprised four items concerning the following adversities: academic problems, problems concerning friends, problems concerning parents, and problems concerning teachers. Respondents were asked to indicate whether they had experienced any of the perceived life strains presented on a two-step scoring format (*yes* or *no*). The PLS was used in this study to investigate the relationship between life strains and

mental health indicators, as well as whether mindful coping strategies had an influence on, or moderated, this relationship.

Global Assessment of Functioning – Split Version (S-GAF) (Karterud et al., 1998). The S-GAF was only used in the patient sample. The S-GAF is based on the global assessment of functioning (GAF) scale (DSM-IV-TR). The GAF scale aims to measure "adaptive functioning" through therapists scoring their respective patients on psychiatric symptoms and social and occupational functioning levels on a scale from 0-100. With the aim of measuring function and symptom as different clinical aspects, the S-GAF is divided into one symptom (GAF-S) and one function score (GAF-F), each on scales from 0-100 with a 10-point range. Studies have shown that S-GAF scores from single independent raters hold acceptable reliability (Karterud et al., 1998). The S-GAF was used in the current research to measure treatment outcome, which was one main purpose of the measurement (Pedersen et al., 2007).

Interviews. An interview guide was developed for a semi-structured interview that combined approaches such as standardized open-ended questions and closed fixed-response questions (Patton, 2002). This interview form involved predetermined questions and special topics with questions asked systematically and consistently and, at the same time, it provided the interviewer with freedom to digress when necessary (Berg, 2009). The interview guide focused on program participants' reflections on expectations of the program, potentially

useful coping strategies or skills, strategies or skills they found less useful and/or difficult, as well as whether they experienced any changes in thoughts or actions as a result of learning coping skills. The steps of pretesting an interview schedule, a critical examination by someone familiar with the study's subject matter, and a practice interview (Berg, 2009) were carried out. Step one involved the main supervisor of the study and the chief psychiatrist at the DPS, whereas step two involved one family member of the researcher. The interviews were seen as prolonging and potentially providing in-depth understanding of the measurements from the questionnaire, and thus providing important knowledge on the research topic.

All measurements are presented in the appendix, with instruments from the questionnaire in Appendix A, the S-GAF in Appendix B, perceived life strains in Appendix C, and the interview guide in Appendix D.

4.5 Data analyses

Primary activities of data analysis include data cleaning, reduction, transformation, correlation and comparison, and analysis for inquiry conclusions and inferences (Greene, 2007). As for data analysis within a mixed methods perspective, each method calls for separate procedures. Hence, parallel mixed analyses were carried out within the two mixed model studies (Articles III and IV). In the two quantitative studies (Articles I and II), total statistics analyses were performed. The repeated measurement design provided quantitative data to be analyzed

for detecting differences. Statistical analyses included descriptive analyses, correlation exploratory factor analysis (EFA), Cronbach's alpha, Pearson's product moment correlations, multiple regression analysis, and repeated measures analysis using SPSS 16.0 (Norusis, 2008), as well as confirmatory factor analysis (CFA) using Amos 16 (Arbuckle, 2007).

Interviews were transcribed verbatim and qualitative data were analyzed by summative content analysis (Hsieh & Shannon, 2005) with the assistance of NVivo 8 Software (QSR, 2008). Summative content analysis involves both quantitative and qualitative components, including manifest content analysis and latent content analysis, respectively (Hsieh & Shannon, 2005; Berg, 2009).[17] Qualitative data analysis began by searching occurrences of and counting frequencies of identified words or phrases, and to interpret context associated with that word or phrase, results were used to identify and contextualize data patterns. Some scholars have suggested that counting qualitative data and narrative descriptions may give more meaning (Sandelowski,

[17] A leading debate regarding content analysis is whether analysis should be quantitative or qualitative (Berg, 2009). As quantitative analysis is believed to aid in determining frequencies of relevant categories and qualitative analysis opens for examination of topics by grounding them to data (Berg, 2009), a blend of the two forms of analysis was emphasized in this study. This is in accordance with the integrated component design chosen for this study, emphasizing integration of findings after separate analyses of data.

2000). Hence, to be able to investigate potential skills or strategies labeled as useful, how these were used in daily life, and a potential experience of change, participants' qualitative data were quantified and referrals to either skills or strategy were counted into predefined categories. The concept production and coding issues were supported by one co-researcher and the chief psychiatrist at the DPS. To understand contextual details, accounts of situations in which participants made use of the skills or strategies were explored.

4.6 Samples

Three different samples were used, all presented below.

4.6.1 Mapping sample

A convenience sample of students from two high schools was recruited for the two quantitative studies (Articles I and II). Both schools had approximately the same number of students, and students from all streams were represented. One school was located in the district, and the other was close to one of the bigger cities in the region. Both schools recruited students from a variety of social strata covering all courses of study. The students' ages ranged from 16 to 20 years. The questionnaire was returned by 750 respondents, which yielded a response rate of 85%. A review of the quality of responses resulted in samples of 690 and 625 respondents, respectively. One sample (N=690) comprised 51.2% males and 48.8% females, with 47.9% vocational

course students and 52.1% general educational course students. The other sample (*N*=625) comprised 49.1% males and 50.9% females, with 44.9% vocational students and 55.1% general educational students, respectively.

4.6.2 Student sample

Purposeful procedures for convenience sampling were used in the student sample, which consisted of four classes of high school students selected by the local high school's administration to participate in the research (*N*=81). All of the students were second graders and MBC was adapted to this target group. The school recruited students from a variety of social strata, covering all courses of study. Program participation was mandatory whereas study participation was voluntary. Two classes were chosen to participate in the program (one with vocational and one with general educational students), and two classes were selected as a comparison group (one with vocational and one with general educational students). There were 28 students in each of the general educational classes, and 13 students in each of the vocational classes. From the intervention group (*N*=40), 32.5% were vocational students and 67.5% were general educational students, of which 75% were female and 25% were male (M_{age} = 17.25 years, age range 17-21 years). From the comparison group (*N*=41), 31.7% were vocational students and 68.3% were general educational students, of which 65.9% were female and 34.1% were male (M_{age} = 17.4 years, age range 16-27 years). To minimize key informant bias (Maxwell, 1996) a randomized

selection of study participants within the intervention group represented a student sample for interviews. Due to the larger number of students in the general educational class, students from this class were biased and the selection of students was balanced between the vocational and general educational classes, resulting in the recruitment of seven students for interviews (28.6% from the vocational course and 71.4% from the general educational course). Participants from the vocational course were female (M_{age} = 18.5 years, age range 17-20 years). Of the students from the general education course, 40% were female and 60% were male (M_{age} = 17.2 years, age range 17-18 years).

4.6.2.1 Practical accomplishment of the intervention

The intervention for the adolescent sample, called conscious coping (CC), is an adaptation of the MBC program for the adolescent age group and consists of 14 weekly group meetings. The students met on a class-wise basis. Each meeting lasted 90 minutes, with a short break. The meetings began by discussing homework, followed by new work sheets introducing coping skills and related theory and/or practices, and ended with distribution of new homework sheets.

For practical reasons, the researcher was the group leader. The school hours spent on CC were divided among several courses. The respective teachers were invited to be present during the program when the

program was held during their courses. None chose to do so.[18] The students had two contact persons beyond the researcher. One was the vice-principal at the school, who also acted as contact person for the researcher, and the other was a department head at the DPS. The latter also introduced herself to the students with contact information at the initial CC meeting.

4.6.3 Patient sample

Purposeful procedures for sampling were used in the patient sample. Referrals to the MBC groups were either internal, that is, by employees at the DPS, or external, that is, through a general practitioner (GP). An MBC team consisting of one specialist in psychiatry, the department head, and the training supervisor shared responsibility regarding referrals.[19] If the referred patient was believed to be suitable for participation in the program, he or she was put on a waiting list. Participants were concurrently enrolled to an MBC group. Between-groups enrolment was sequential.

[18] In 2005, the DPS established a co-project with the high school to try out a preliminary version of the CC program. At that point, a teacher was always present during the program.

[19] The training supervisor at the DPS was also the researcher in this study.

The psychiatric outpatients participating in the project constituted the clinical sample in the project as they suffered from Axis I disorders and/or other diagnosed medical and psychiatric problems. The majority of the patients suffered from anxiety, depression, or stress-related disorders, such as bereavement, burnout, and/or relational problems. There was a total of 54 participants distributed in 7 groups, of which 16 chose to drop out (N = 38). Dropout was due to hospitalization and severe life changes challenging program participation, two were known to have difficulty in finishing commitments such as program participation, one abused medical drugs, and one gave religious beliefs as the reason for dropping out. Only three dropouts gave no reason at all. This may indicate that dropout was not due to the program or its content. Of the 38 participants who finished the program, 35 participated in the quantitative questionnaire study pre- and post-intervention (82.9% were female and 17.1% were male, M_{age} = 41.1 years, age range 22-72 years), whereas 32 responded to pre-, post-, and follow-up intervention (74.3% were female and 25.7% were male, M_{age} = 41.9 years, age range 22-72 years). Thirty-four chose to participate in the qualitative interview study post-intervention (82.3% were female and 17.7% were male, M_{age} = 40.7 years, age range 22-72 years). All 38 participants who finished the program were scored by their respective therapist pre- and post-intervention on their level of mental health in terms of symptoms and function (84.2% were female and 15.8% were male, M_{age} = 40.4 years, age range 21-72 years).

4.6.3.1 Practical accomplishment of the intervention

MBC consisted of 27 weekly group meetings of 6 to 8 participants. Each meeting lasted 90 minutes and began and ended with a short mindfulness meditation practice. The first 45 minutes were mainly repetition of the last week's subjects and practices, as well as discussion of the homework. During the next 45 minutes participants learned new coping skills and theory on mindful coping within the current subject. Homework sheets were handed out at the end of each meeting. Group members were not allowed to discuss particular private matters, such as diagnosis, and a therapist was appointed to each participant. Each participant had 10 to 12 meetings with his or her therapist throughout the duration of the program. As the objective of these consultations was to ensure that the participant was able to relate skills from the program to his or her problems, the program was the main topic during these consultations. After approximately 11 meetings, and almost half-way through the program, participants were encouraged to participate at an evening meeting where they could invite two relatives or others to learn more about MBC. The reason was to give participants the opportunity to share MBC with someone they felt closely related to. During the meeting, a short presentation of MBC was given, and the meeting was opened up for questions relating to MBC participation.

All therapists with patients in an ongoing MBC group met at consultation meetings held approximately every third week, where the

training supervisor and group leaders were present. The main objective of these meetings was to provide a safe work environment for patients, therapists, and group leaders by providing a setting where therapists could be updated on the groups' and participants' progress and give group leaders necessary information regarding their respective patients. The training supervisor had the main responsibility for administrating the MBC programs, involving supervising group leaders approximately every third week. Group leaders had all undertaken MBC instructor training. Their educational background was varied; they included nurses, psychologists, occupational therapists, and pedagogues. Two group leaders shared responsibility for each group and were present in each MBC group.

4.7 Methodological challenges

Within mixed methods research, methodological challenges revolve around potentially biased data, contradictory findings, and ensuring of quality. Criteria related to inference quality are conceptual consistency, interpretative agreement, and interpretative distinctiveness (Tashakkori & Teddlie, 2006). Some of these are introduced along with other main challenges relevant for this study in the paragraphs below.[20]

[20] Some have argued that when performing mixed methods research with one dominant and one less-dominant design, quality criteria associated with the dominant design is used to assess both components of a study (Bryman, 2006). Questions are

4.7.1 Internal validity

Internal validity is concerned with correctly concluding that an independent variable is responsible for variation in the dependent variable (Shadish et al., 2002). Threats to internal validity central in this study were history (e.g., incidences that in any way influence mental well-being), maturation (e.g., patients seek help when experiencing symptoms and a reduction in such could be expected due to natural development), testing (e.g., the pre-test made participants aware of the program's content and affected the post-test), and mortality (i.e., dropout was biased and trivial).

Due to lack of a control group, threats to internal validity was perhaps mostly present in the patient sample (Article IV). Natural development and individual consultations alongside program participation were probably the most important aspects in this respect. However, all therapists ensured that they only focused on the program during the intervention's course and did work on other symptoms unless

raised whether it is necessary to apply the full set of quality criteria to the less-dominant method of a study. Others have argued that the same validity system, that of Campbell and co-workers, is relevant in both quantitative and qualitative research (Lund, 2005). Therefore, in this study, ensuring quality in terms of validity forms was weighted in favor of the dominant method, that is, the quantitative strand. However, the distinctions were gliding and so components of quality within the less-dominant strand, that is, the qualitative, were accounted for implicitly.

necessary. Individual consultations could also have led to the allegiance effect (Wampold, 2001), also called the experimenter-expectancy effect, which could additionally have been present between the group leader and group participants.

The Hawthorne effect, which is similar to the placebo effect indicating that knowledge of being included in an experiment influences participants' behavior and hence the result, was also a possible threat here. Some have argued that in hospital studies researchers may tend toward a double Hawthorne effect (Polit & Beck, 2004), here meaning that both participants and group leaders were aware of their participation in a study and as a result altered their actions in response to this knowledge. The fact that there was a wait-list for program participation may have led to the influence of delayed treatment, that is, that all patients received full experimental treatment although the treatment was deferred (Polit & Beck, 2004) with the result being comparable to the effects of a wait-list placebo within psychotherapy. The latter, for example for outpatients on a wait list for psychotherapeutic treatment for depression, has shown a 10% to 15% reduction in symptoms within a few months (Posternak & Miller, 2001).

To face the threat regarding testing, instruments used in the questionnaire were not explicitly linked to the research hypothesis and the latter was not explicitly discussed with participants at any given point in the project. Regarding mortality, sample sizes were a challenge

in the present research. The reason was that the main objective was to detect change, which is increasingly difficult when analyzing small samples as it complicates the work of decomposing the potential change. According to Cohen (1988), an 80% chance of detecting a medium-sized to large treatment effect (d = 0.70) with a two-tailed t test at *alpha* = .05 requires 33 participants per sample. As for the students, sample size was 40 in the intervention group and 41 in the comparison group. Regarding the patient-group, the sample was, at most, 38 participants. It should therefore be noted that the sample in the present study was vulnerable regarding dropout and missing, which again could have influenced the potential significant findings. Because of this, the reasons for dropout were investigated both by asking the participants and their therapist, respectively; overall, reasons were due to events other than the program. The one dropout in the student sample was due to changing schools and moving from the city. However, trying to account for internal validity, the participants in the patient sample had varied conclusions that were not drawn from a single source (i.e., only one intervention group), and multiple participants in different intervention groups with different group leaders. The units (both groups and classes) were stable as no shift in group membership or class was possible. Regarding the student sample (Article III), it was ensured to the highest possible degree that the intervention and comparison groups were comparable in terms of number of students, gender, age, and courses. Furthermore, data were collected at the same time points, when possible even during the same class hours. Some

practical difficulties may have made the students less interested in the course. As the school's administration decided to participate in the study without conferring with the teachers, participation came as a top-down decision; some teachers expressed displeasure about the decision because they had to give several of their school hours to this study in preference to their own teaching schedule. This may also have had a negative influence on the students. It was, however, expected that a potential change would be larger within the patient sample compared with the student sample. The reason was that patients were referred to program participation with a diagnosis and hence an objective of positive change, whereas students were non-clinical and obliged to participate in the program.

Summative content analyses also have limitations regarding inattentiveness to broader meanings in the data, relying on credibility as evidence of thrustworthiness (Hiesh & Shannon, 2005). Essential to this is content validity, which was accounted for by dialogue with content experts (see section 4.5), which is required to increase content validation and hence the study's credibility (Elo & Kyngäs, 2007). Additionally the presentation of the data and its interpretation in the various articles were intended to be as transparent as possible without introducing too much or too little of the material.

In this study, drawing firm conclusions regarding which components cause potential change seemed unlikely; however, it seemed legitimate to argue that it is possible to indicate which components *may* have

caused the potential detected change. Additionally, the total sample of patients being interviewed and the findings from the qualitative components of both intervention studies may to a certain degree compensate for the mentioned validity threats.

4.7.2 Construct, conclusion, and external validity

Construct validity concerns the content of the construct one seeks to measure. Here construct validity referred to the mindful coping concept. Relevant threats to construct validity were chiefly met by empirical validation of the construct to be measured. Part of the project was to develop and test a conceptual model of mindful coping, the MCS (see section 4.4.2), an instrument later used for measuring the degree to which participants increased specific skills taught during the intervention. Validation of the MCS was performed by nomological network validation (Cronbach & Meehl, 1955), that is, an investigation of the theoretical network of the construct by showing theoretical and empirical frameworks and how these are linked (Article I). The MCS was correlated with the BC. Nomological network validation was mainly in accordance with expectations, indicating construct validity. As for the qualitative strand in this study, the making of the interview guide and the carrying out of the interviews were done cautiously to reduce additional possible threats to construct validity by gaining insights into how words and themes were used.

Conclusion validity refers to the validity of conclusions, or inferences, traditionally based on statistical tests of significance (Shadish et al., 2002), including issues such as reliability of measures and treatment implementation, statistical power, and violations of assumptions. However, its relevance to qualitative data is increasingly apparent. One main threat to conclusion validity is statistical power, which was accounted for in attempt to face the threat (Article IV).[21] Furthermore, five forms of significance within educational evaluation research have been advocated (Onwuegbuzie & Leech, 2004). In short, significance in quantitative research has been categorized as statistical (i.e., *p* values), practical (i.e., effect sizes), clinical (i.e., amount of change linked to treatment), and economic significance (i.e., cost-effectiveness of treatment), whereas significance within qualitative research refers to meaning or representation (Onwuegbuzie & Leech, 2004). In this study, statistical, practical, clinical, and qualitative significance have tentatively been accounted for in an attempt to meet threats of conclusion validity (Articles I through IV). Furthermore, the program

[21] Prior to the research, other data sets from psychotherapy programs for psychiatric outpatients with small sample sizes were used to maintain agreement as to the magnitude of desired impact in terms of power and finding acceptable variance estimates (Svartberg et al., 1996; Svartberg et al., 2001). With a two-tailed test, a = 0.05 and N= 50, the power of a "medium-sized effect" (d = 0.50) was 0.41 in comparing the two groups. The power for a large effect (d = 0.80) was 0.79. Using a third data set for finding variance estimates (Svartberg et al., 2004), it was expected that in Article IV the effect size would be between "medium" and "large."

was standardized (Tharaldsen & Otten, 2008) and group leaders were trained in MBC. Finally, questionnaires were filled out during school hours or after program meetings, reducing the risk of external disturbances that may have influenced the reporting.

The final validity form presented here is that of external validity, suggesting whether the ability to generalize research findings to and across populations of subjects and settings is present (Shadish, 2002). However, for practical reasons, the samples were purposeful convenience samples and may not be representative. Regarding the student sample, the school's administration made it clear that administrators were to choose which classes could be part of the research based on convenience and schedules. As such, neither quantitative nor qualitative results may be strictly generalizable. In fact, it is stated that the goal of qualitative research is not to generalize beyond a sample (Onwuegbuzie & Leech, 2007). As such, qualitative findings could perhaps mainly be generalizable on an institutionalized level, that is, to high school students within similar courses, age range and participating in the same MBI. Regarding quantitative findings differences in student samples in Norwegian schools are relatively moderate (Marks, 2006). This could indicate that findings to some certain degree are representative. Regarding the patient sample, ethical considerations made it difficult, if not impossible, to have a randomized patient sample. However, that dropout rates were either low and/or not due to the program may to some degree compensate for this.

4.7.3 Enhancing quality of findings

Different methods may yield contradictory findings. This is not necessarily a downfall as divergent findings are valuable in that they may lead to a re-examination of the conceptual framework and the assumptions underlying each of the components (Erzberger & Prein, 1997; Erzberg & Kelle, 2003; Greene, 2007; Johnson & Onwuegbuzie, 2004; Tashakkori & Teddlie, 2008). The outcomes of re-examination are further analysis of data by possible transformation of data types, internal validity audits (Tashakkori & Teddlie, 1998), and designing a new study or phase for further investigation (Rossman & Wilson, 1985). Hence, divergent or no findings are important findings. Some researchers have even argued that a major reason for following the fundamental principle of mixed methods research is to elucidate divergent aspects of a phenomenon (Johnson & Turner, 2003), which also can ensure quality.

Ensuring quality is here based on inferences. Inferences in mixed methods are affected, among others, by weightings (Teddlie & Tashakkori, 2003). In this study, the quantitative component was the most extensive. Hence, a bias may exist in this regard. However, in order to seek answers to the research questions both methods were used as they were believed to potentially reveal different types of knowledge through their different practices. As such, mixing methods brings forward the need of transparency, making it necessary to describe the procedures within each method. This was carried out in each of the

research articles. Ethical considerations were additionally important regarding ensuring quality prior to initiation of the data collection and are elaborated on in the following paragraphs.

4.8 Ethical considerations

The APA standards for research ethics were followed. The project was formally approved by the Regional Ethical Committee (REK Vest) and received official permission from NSD/the Personal Data Registers Act § 9 (See Appendix E). However, some points should be elaborated.

Mixing methods was for the researcher time-consuming and resource demanding. In addition, that the same sample was used throughout the study increased the participant response burden. Therefore, formal approval provided security, especially since respondents were either patients or youths. Hence, obtaining informed consent was the procedure, describing methods regarding measurement, data collection, and further use of data. The consent also entailed information on professional secrecy and anonymity. The consent form was distributed to all participants. For students under age, informed consent was signed by parents. In the questionnaire, students also had the opportunity to mark if they wished to be contacted by a staff member at the DPS if they scored significantly on pathology. Some did, and they were followed up by therapists at the DPS. That the students had a contact person at both the school and at the DPS has been mentioned (section 4.6.2.1). Regarding the patients' ability to consent, criteria of exclusion

were emphasized as no patients with severe pathology were included in MBC (see section 3.1). The close cooperation between the researcher (training supervisor), group leaders, and therapists was also seen as supporting identification of potential problems for participants at an early stage.

There were no foreseen risks in terms of increased distress, pain, or other complications regarding participation in MBC. MBC was, on the contrary, believed to increase participants' skills in dealing with various stressors in their everyday life. Furthermore, the material presented to participants was developed from clinically documented methods, that of mindfulness and cognitive psychology. These traditions represent two major treatment approaches that have been found to benefit health: relaxation (i.e., meditation) and talk (cognitive/behavioral) therapies (Smyth & Pennebaker, 1999). Still, participation in the study could have been experienced as somewhat intimidating and this perception could possibly have influenced the experience of participation as voluntary. Students may have felt that participation was involuntary as the survey and/or intervention was held during school hours; however, it was pointed out to the students that participation was strictly voluntary.

Vested interest is another ethical consideration, as the researcher's employer financed the project. As the researcher in some groups holds the roles of group leader and researcher, it was important to be open about and reflect upon implications this may have had. The researcher

was both employed by the DPS and had the overall responsibility for the MBC groups as training supervisor. The role of the DPS's manager was limited to approving financial aspects. Finally, neither of the group leaders had any form of personal relationship with the participants.

5 Results

One characteristic of contemporary mixed methods research is an emphasis on diversity at all levels of the research enterprise, meaning that mixed methods research potentially can answer both qualitative and quantitative research questions (Teddlie & Tashakkori, 2010). Within this lies the understanding that both divergence and convergence of results may occur. This study's research articles and their results are presented below.

5.1 Results in Article I

A 23-item self-report instrument called the mindful coping scale was developed to measure the use of mindful coping strategies. The four dimensions of awareness, distraction, preventing negative emotions, and constructive self-assertion were theoretically deduced from mindfulness theory and coping theory and supported by factor-analytical procedures. Construct validity was supported by nomological network validity, and results were mainly consistent with expectations and satisfactory. Cronbach's alphas for the four subscales were .83, .85, .76, and .84, respectively. These results indicate a reliable and valid instrument.

5.2 Results in Article II

The relationship between reported use of mindful coping strategies and psychological symptoms, as well as how mindful coping strategies moderate perceived life strains and psychological symptoms, were investigated. Coefficients of correlations ranged from .00 for the correlation of PLS with preventing negative emotions to .43 for the correlation awareness with constructive self-assertion. PLS showed the strongest bivariate as well as multivariate associations with PS. Distraction yielded the strongest positive multivariate and bivariate associations with psychological symptoms. Preventing negative emotions had significant but modest negative associations with PS. Constructive self-assertion and awareness had non-significant associations with PS among the whole sample. Among those reporting two or more PLS, a weak negative association was found for constructive self-assertion, and a weak positive association was found for awareness. These latter findings were in line with significant coefficients for interaction terms. Overall, findings regarding preventing negative emotions and constructive self-assertion indicate mental health promotion properties. Distraction is associated with PS, whereas awareness indicates stronger associations between PLS and PS.

5.3 Results in Article III

By evaluating the MBC intervention called Conscious coping, the aim was to investigate how mindful coping strategies can be developed to promote mental health and psychosocial functioning in non-clinical adolescents. Quantitative findings indicate small changes in the use of mindful coping strategies between the intervention and comparison group and no improvement in PS and deterioration in sense of satisfaction with life in the intervention group in contrast to the comparison group. Qualitative findings indicate that program participants found the strategies useful and that participants valued distraction as the most useful strategy, whereas constructive self-assertion was emphasized as contributing to change in coping. Few strategies were experienced as difficult. Strategies were used mainly in situations demanding communication skills. Results call for caution when introducing awareness and distraction skills to adolescents.

5.4 Results in Article IV

By evaluating the MBC program, the aim was to investigate how mindful coping strategies can be developed to promote mental health and psychosocial functioning in psychiatric outpatients. Qualitative findings indicated that participants found awareness and distraction most useful; they also said that the mindful coping strategies contributed to a positive change in their coping. Few skills were seen as difficult. Skills were used both for intra- and interpersonal problems.

Quantitative results supported these findings as participants increased their use of mindful coping strategies, scores for PS were significantly reduced, and participants experienced an improvement in life satisfaction. Additionally, the respective therapists' evaluation of his or her patient's level of adaptive functioning showed a significant improvement in functioning and symptoms. Results indicated that mindful coping strategies are experienced as useful for psychiatric outpatients, that the strategies improve mental health, and that some skills can be modified to appeal even more to participants and to facilitate the implementation of these strategies in real-life situations.

5.5 Relationships among the articles

Together, the articles show different elements of the mindful coping process. A conceptual model for the mindful coping process was tested, indicating essential qualities of the mindful coping process and strategies that may be central to it (Article I). The link between reported use of mindful coping strategies and indicators of poor mental health was investigated, showing that mindful coping strategies mainly work as expected; however, they do affect mental health in somewhat different ways (Article II). By evaluating interventions believed to enhance mindful coping in adolescents (Article III) and psychiatric outpatients (Article IV), mindful coping was investigated further and provided important knowledge regarding how such strategies can be developed to advance mental health and psychosocial functioning in different populations.

6 Discussion

This thesis aims to contribute to understanding mindfulness as a coping facet by operationalizing, validating, and empirically testing the mindful coping construct. It additionally investigates how mindful coping is related to mental health issues and how mindful coping and its potential health-promoting properties can be enhanced in adolescents and psychiatric outpatients. In accordance with the scope of this research project, the discussion addresses the following issues (a) conceptualization and measurement of mindful coping, (b) relationships between the use of mindful coping strategies and mental health, and (c) evaluation of interventions that develop mindful coping skills, as well as their capability to stimulate mindful coping and better mental health.

6.1 Conceptualization and measurement of mindful coping

Linking mindfulness with coping, dialectical behaviour therapy (DBT) was used as the connecting theoretical framework, as DBT provides theoretical argumentations for using mindfulness alongside other cognitive behavioral coping skills. Chiefly, this is done by identifying four main domains for working with psychopathology: cognition, affective disturbance, interpersonal relations, and impulsivity. In a broader view, these can be seen as coping skills for both people

suffering from psychiatric disorders and others in need of skills for dealing with general life stressors. With this as a point of departure, the conceptualization of mindful coping was a process involving, first, inquiring into which items could legitimately be part of the MCS. An item pool consisting of skills from DBT and items from brainstorming in an expert group of therapists was presented to a second expert group of academics (see Article I). The latter group especially focused on two tasks: whether the theoretically derived dimensions awareness, distraction, preventing negative emotions, and constructive self-distraction were suitable and within which dimension each item seemed to fit. Second, a preliminary empirical validation of the constructs was carried out; the 30 items believed to provide a basis for developing MCS were pilot tested within a patient group and a class of high school students not part of the study. The main aim was to check wording and phrases used. Some refinements were made in response to the pilot test. Third, the necessary statistical analyses to identify dimensions and subscales of the MCS were conducted. A four-factor solution identifying awareness, distraction, preventing negative emotions, and constructive self-assertion as dimensions of mindful coping gained support. In addition, correlation with the subscales of the BC questionnaire (Carver, 1997) mainly supported the notion of the MCS, as the mindful coping strategies mainly yielded the expected relationships with emotion- and problem-focused coping strategies, as well as avoidance. However, some specifications need to be mentioned regarding the MC strategies. The first mindful coping strategy,

awareness, aims to measure the mindfulness facet of the mindful coping process.[22] Quantitative analyses indicated that awareness correlated with both adequate problem- and emotion-focused strategies. This is also the only mindfulness strategy in the MCS. However, a few correlations with emotion-focused strategies involved inadequate coping (e.g., self-blame), and some correlations were with avoidant coping (e.g., self-distraction). As these correlations were rather weak, alongside the expected correlation with acceptance, it seemed that awareness may measure what it aims to measure. The latter three subscales of the MCS, not originally part of the mindfulness tradition, are believed to measure adequate coping *when done* mindfully.

[22] Scales developed for measuring mindfulness vary regarding sample, e.g., non-/meditators, adolescents/children, non-/clinical populations. Contributions are the Freiburg Mindfulness Inventory (FMI; Bucheld et al., 2001), the Mindful Attention Awareness Scale (MAAS; Brown & Ryan, 2003), the Kentucky Inventory of Mindfulness Skills (KIMS; Baer et al., 2004), the Cognitive and Affective Mindfulness Scale (CAMS; Feldman et al., 2004), the Cognitive and Affective Mindfulness Scale-Revised (CAMS-R; Feldman et al., 2007), the Southampton Mindfulness Questionnaire (SMQ; Chadwick et al., 2008), the Toronto Mindfulness Scale (TMS; Lau et al., 2006), the Philadelphia Mindfulness Scale (PHLMS; Cardaciotto et al., 2008), the Five Facet Mindfulness Questionnaire (FFMQ: Baer et al., 2006), the Child and Adolescent Mindfulness Measure (CAAM; Greco & Smith, 2011), and the Mindful Attention Awareness Scale – Adolescent (MAAS-A: Brown et al., 2011). The main reason for not using any of these in the current study was that some were not developed when this study began, and that the theoretical framework of DBT was chosen for measuring mindfulness as a facet of coping.

Therefore, distraction is believed to be adaptive coping when done mindfully. When investigated among the adolescent sample, this coping strategy correlated mainly with emotion-focused strategies from BC and had a weak correlation with problem-focused coping strategies (Article I). This was in line with expectations. Empirical testing of the measure of distraction as a coping strategy yielded some unexpected findings. The item generation was believed to provide items for constructive self-distraction. However, the empirical testing indicated that this strategy correlated not only with problem- and emotion-focused strategies (e.g., active planning and emotional support), but also with avoidance (e.g., denial). Furthermore, some correlations with emotion-focused coping were with inadequate coping strategies (e.g., self-blame). The correlation pattern with avoidance may be a response to specific aspects – either difficulties in distinguishing between healthy and unhealthy distractions or potential measurement problems such as using items that do not appropriately measure what they are intended to measure. Differentiating between constructive self-distraction and avoidance may in fact be problematic. Hence, it may be that in some cases what is thought to be a subscale measuring healthy distractions is in fact measuring avoidance. Distraction correlated reasonably with self-distraction, although somewhat weaker than expected. In addition, correlations with disengagement and denial were stronger than expected. Thus, it makes sense to question whether this strategy was measured appropriately. Regarding item formulation, these do in fact seem to capture what is believed to be constructive self-

distraction. Furthermore, the items do not seem to describe avoidant distractions. This may suggest that it is not necessarily the measurement itself that is insufficient. It seems that the challenges lie in differentiating constructive and inadequate distractions. These points are important for future studies.

As for preventing negative emotions, this coping strategy is meant to aid in building coping resources for future situations. This strategy seems to correlate more with problem-focused and somewhat emotion-focused coping. This strategy is carried out prior to a stressful situation so as to enter future stressful situations better prepared to cope with them. Examples include working out and increasing one's mastery. By taking care of one's physical health and/or increasing one's self-efficacy, one might be able to face stressors more adequately. This may lead to an understanding of the strategy as an objective in itself rather than a coping dimension. Furthermore, this strategy also correlates with inadequate emotion-focused coping (e.g., self-blame) and with avoidant coping (e.g., self-distraction). However, the correlations were few and weak. When done mindfully and for short periods of time, preventing negative emotions is believed to buffer against stress and may therefore be a strategy to increase future "good coping."

The final coping strategy, constructive self-assertion, involves optimizing one's chances of reaching one's objectives and, at the same time, being able to maintain or improve one's self-respect as well as one's respect for those with whom one communicates. This strategy

also seems to involve adequate coping in that it mainly involves problem-focused coping and somewhat adequate emotion-focused coping. Furthermore, this strategy correlated with inadequate emotion-focused coping (e.g., venting) and avoidant coping (i.e., self-distraction). The correlations were few and somewhat weak, except for venting. The latter could be a result of item wording in that venting also involves interpersonal communication.

One should be aware that different situations call for different coping strategies, and the strategies one experiences as adequate may change accordingly. This is also the case for the previously mentioned strategies. As for constructive self-assertion, this mindful coping strategy involves skills to reflect upon *prior to*, as well as during, an interpersonal encounter. Established measures of coping strategies put more emphasis on what one actually does *during* a stressful encounter. Hence, constructive self-assertion may, alongside preventing negative emotions, bring a new dimension to coping perspectives. Additionally, mindfulness may be seen as part of a larger coping process by introducing a new coping dimension. Regarding awareness, preventing negative emotions, and constructive self-assertion, the correlation patterns are mainly as expected considering what the strategies are meant to imply. Despite the somewhat unexpected finding regarding distraction, MC strategies seem to be reasonable and valid measures. The four-factor model of mindful coping strategies is the point of departure for the following, where mindful coping strategies are further elaborated.

6.2 MC strategies: some qualities suggested

In this section, each of the four mindful coping strategies is discussed by viewing each in light of findings from three studies of this thesis (Articles II through IV). They are linked to the mindful coping process, their relationship to mental health indicators is considered, and suggestions are provided regarding how and for whom such strategies may enhance good coping.

6.2.1 Awareness – a foundation for adequate coping?

After investigating the relationship between the reported use of awareness and indicators of poor mental health, results were only partially as expected and revealed no relationship to mental health, as those reporting higher use of awareness did not report fewer psychological symptoms (Article II). Furthermore, this strategy did not have the expected association with perceived stress as more use of awareness was not related to fewer psychological symptoms. Moreover, the association between perceived life strains (PLS) and psychological symptoms (PS) was stronger among adolescents reporting more use of awareness. In other words, the correlations indicate a tendency of more use of awareness to lead to a stronger relationship between PLS and PS. This latter finding could reflect that significant use of awareness may in fact increase the negative influence of negative life events. This seems to be further supported by findings

regarding the evaluation of the CC program (Article III), where quantitative tests showed a reduction in use of awareness for the intervention group. Findings contradicts to some extent studies of mindfulness in adolescents (e.g., Joyce et al., 2010; Marks et al., 2010) and is supported by others (e.g., Schonert-Reichl & Lawlor, 2010). One reason for the current findings may be that this strategy was less familiar to the adolescents. Another opposite reason may be that those reporting more use of awareness might have experienced heightened self-consciousness that may have been overwhelming. Mindfulness exercises are believed to increase the quality of the moment. Initially and short-term, this may lead to increased negative arousal (e.g., distress) (Kroese, 2005). It has been suggested that interventions that involve mindfulness meditation may produce a discontinuous pattern of change in which symptoms are likely to show worsening (Crane et al., 2010). It may also take some time before mindfulness practices accrue benefit (Crane et al., 2010). With patience and practice, acceptance over the long term may make the stressor less dominant and, thus, one may not feel as controlled by it as one might have felt previously (Kroese, 2005). However, qualitative findings have suggested that the adolescents to some degree did use awareness skills and that they did experience positive changes in coping due to these skills (Article III). It is also worth noting that few of the adolescents mentioned awareness as difficult. Furthermore, qualitative findings from the patient sample of this study indicated that awareness was useful and contributed to change in coping (Article IV). This was supported by the quantitative

findings, which revealed a significant increase in the use of this strategy and an increase in satisfaction with life with a reduction of psychological symptoms from pre-, to post-, and follow-up tests in this sample. Additionally, fewer mentioned awareness as difficult in this sample. Findings may indicate that the patients experienced awareness as useful, although some seemed to find it difficult to use. Perhaps most of the patients found it logical that using awareness may be adequate and beneficial when facing problems; however, they did not seem to practice it accordingly. That awareness was less frequently employed may also be because it became more automatic to the patients after practice (i.e., an intuitive and unconscious appraisal). After practicing mindfulness skills for a longer period, it may be that patients made this strategy part of their appraisal and, hence, in retrospect referred more to the coping strategies during secondary appraisal in preference to also mentioning becoming mindful prior to choosing further coping. Seeing this in relation to the adolescent sample, it might be that the patients were cognitively ready for getting the most out of awareness, in contrast to the adolescents who perhaps are at a stage in their cognitive development where becoming aware of internal and external stimuli may increase vulnerability toward each.

In short, this study does not contribute with empirical data regarding the appraisal process and how mindfulness may play a part in this process. Nor is it possible to emphasize one strategy as more important than others. What the findings indicate is that adolescents seem to differ somewhat regarding this strategy. If adolescents did use the

strategy correctly, this may support the notion that awareness makes youth "too aware" of themselves, which can be challenging considering their developmental phase (Eccles & Roeser, 2009). Although uncertainty regarding what developmental stage children need to have reached before mindfulness practice can begin, 7-12 years is suggested to be suitable (Thompson & Gauntlett-Gilbert, 2008). This age range is supported by others (Schonert-Reichl & Lawlor, 2010). The importance of attending age-related needs and contextual factors when adapting MBIs for younger participants have been emphasized (Burke, 2010). Furthermore, groups of adolescents are believed to require more rationale if they are to engage fully in mindfulness practices (Thompson & Gauntlett-Gilbert, 2008). However, an attempt should be made to increase the understanding of this mindful coping strategy in the CC program, with the goal that more practice could be necessary to make awareness more interesting for adolescents. That the follow-up was carried out within the same academic year made it difficult to determine how awareness may work – or not – for the same students at a point long after the program ended. Some inconsistencies in the quantitative and qualitative findings, as well as between the different samples, indicate a need for further inquiries to gain more knowledge on this specific topic.

6.2.2 Distractions – healthy or unhealthy?

When investigating the relationship between distraction and indicators of poor mental health, a distinct association between higher use and

more psychological symptoms was found (Article II). Furthermore, the link between PLS and PS was not lower for those who reported more use of distraction. In fact, correlations indicate that the relationship between PLS and PS was not influenced by more or less use of this strategy. These findings suggest that the strategy was not used for adaptive coping by adolescents. The reason may be that adolescents do not have the ability to distract themselves in an adaptive manner or that they are not cognitively prepared to make adequate use of this mindful coping strategy. Another reason may be that distraction was not properly measured, as mentioned above. Despite the attempt to capture use of constructive self-distraction, it may in fact have been avoidant behavior that was partially measured. In addition, as the study is cross-sectional, causality is not accounted for. However, items on this subscale are not believed to include unhealthy, or avoidant, distraction. Hence, the study lacks information on what kind of, and to what ends, adolescents used distraction. This gives room for the interpretation that youth facing more problems or challenges in life are more in need of distraction skills and hence report higher use of distraction. However, quantitative results from the evaluation study indicate that the adolescents do not have a positive change due to the program (Article III). One reason for this may be that their use of distraction in fact become avoidance, influencing their satisfaction with life and psychological symptoms in a negative manner; they may not be able to deal appropriately with their problems and challenges due to the distraction. Still, qualitative data suggest that the youth experienced

distraction as a useful strategy that somewhat contributed to a change in coping, but at the same time some experienced it as difficult. The latter seemed to mirror the difficulty in empirically distinguishing between healthy and unhealthy distractions. Inconsistencies in the relationship between distraction and depression have been demonstrated, and scholars have suggested that adaptive distraction occurs when distraction is used with other longer term strategies (Hilt et al., 2010). In this respect, it could be interesting to inquire whether the adolescents who learn awareness more properly could benefit from distraction in that it would become adaptive coping. In comparison to the patient sample where qualitative findings indicated that distraction and awareness were perceived to be the most useful coping strategies although less referred to as utilized, it may be that the patients were cognitively capable and ready to take advantage of distraction as an adaptive coping strategy. This is somewhat supported in that few described it as difficult. Furthermore, this may mean that the difficulties lie in transferring distraction to real-life situations, a familiar challenge with cognitive behavioral interventions. In short, cognitive level and proper use of awareness may in fact be suppositions for adequate use of distraction within the mindful coping process.

6.2.3 Being mindful of one's emotional life

In relation with mental health, indicators suggest that preventing negative emotions has stress-buffering properties; those who reported more use of this strategy also reported fewer psychological symptoms,

and the same students displayed a tendency toward a weaker link between PS and PLS (Article II). In other words, correlations indicate that more use of this strategy is associated with a weaker relationship between PLS and PS. Some may argue that preventing negative emotions is a result of coping in preference to a coping strategy per se. Here this strategy, which involves skills such as increasing one's sense of mastery and taking care of one's physical health, is believed to increase one's coping abilities and prepare oneself for future stressful situations. During the interventions, participants learn, among other things, how to reduce the influence of negative emotions and how experiencing one small positive incident mindfully on a daily basis may build more positive experiences in the long term. Current findings of the relationship between this strategy and mental health issues indicate that this strategy may be important to teach adolescents. However, quantitative data indicate no increase in use of this strategy, suggesting that adolescents did not embrace it (Article III). This was supported in qualitative data indicating that preventing negative emotions, overall, received markedly fewer references. One reason for this may be that this strategy was not new for the students; hence, the learning curve could not be expected to increase during the program. Furthermore, if this were the case, then it may be that some of the skills within this strategy were more or less a matter of course. Today, we are constantly reminded through channels such as the mass media and the internet of the importance of taking care of our physical health. Perhaps the participants do not reflect as much on this as it has become a part of

their lives to, for example, sleep right and work out. The same tendency of fewer references to preventing negative emotions was found in the quantitative data in the patient sample; however, qualitative data indicated that some made use of it whereas others found it difficult (Article IV). A possible explanation for this may be that it is quite challenging to learn emotion theory and practice how to be mindful of one's emotional life. This challenge may be present both for adolescents and psychiatric patients, as both groups are vulnerable in their own ways. For adolescents, this may revolve around cognitive development, hormonal changes in the body, and being in a place where one may experience emotions as overwhelming and perhaps uncertainty regarding how to deal with them. Integrating biological, psychological, and contextual processes are important when trying to understand adolescent development (Susman et al., 2003). Additionally, increased stress during pubertal transitions calls for better emotion regulation to decrease depressive symptoms (Hilt & Nolen-Hoeksema, 2009). The patient group was vulnerable, especially in terms of experiencing emotional- and stress-related problems, to such a degree that they sought professional help to deal with their problems. Another explanation for the findings regarding preventing negative emotions is that the participants may have found the strategy less appealing. One reason may be that this is "old news" for the participants; they have heard it all before, and have been or are practicing it already. Another reason may be that the programs did not fully exploit this strategy as it may be in need of even more practical

exercises, examples, and engaging activities. As one therapist said: *"Learning more about her emotional life was probably what my patient needed the most. Still, during the program she was not able to get in contact with her own emotional life. But after the program ended she continued to work hard on this part of the program, which has been really good for her. I meet other former participants as well. It seems to be a recurrent statement from them that as time goes by the more they use strategies from the MBC program."* Perhaps this strategy is one part of the program participants need to try out and reflect more upon for it to become more valued.

6.2.4 Self-assertiveness

Results suggest that constructive self-assertion was the most used mindful coping strategy among the adolescent sample (Article III). Results also showed a weak tendency toward use of this strategy to be associated with less psychological symptoms among adolescents reporting to have experienced two or more life strains during the last year (Article II). Moreover, the link between perceived life strains and psychological symptoms was found to be weaker among those who reported significant use of this strategy. These findings may indicate that constructive self-assertion has health-promoting qualities (Article II). Theoretical models of peer influences suggests that peer relationships help adolescents achieve more sophisticated social understanding and cognitive development through the development of empathy and understanding (Kerr et al., 2003). Although this latter

focus on empathy and understanding was not investigated in this study, the qualitative data in the intervention study supports the suggested health-promoting benefits of constructive self-assertion as this strategy was often referred to as contributing to change in coping; however, its utility was not emphasized (Article III). This may indicate that this mindful coping strategy consists of skills already known to the participants and that the program only confirmed what they already knew, making them more secure in trying out their knowledge in real-life situations. These arguments are supported by findings in the patient sample where constructive self-assertion was valued both in examples from daily life and as contributing to change (Article IV). Some did refer to this strategy as difficult. However, when taking a closer look into which skills from this strategy the patients described as beneficial, there was an emphasis on "saying no to requests." This, in fact, is difficult in many settings and for many persons and may be one reason for not valuing constructive self-assertion more and/or labeling it as difficult. It may also be that this strategy was less appealing theoretically, but easier to make use of in situations. Furthermore, situations calling for interpersonal communication skills are perhaps also more often experienced. Hence, there were more references to this strategy in examples, but they were not categorized as the most useful in retrospect.

6.2.5 MBC and CC: suitable for whom?

Regarding MBC, patients seemed to experience improvement. There may be several reasons for this. The positive change that the patients reported in the current study were expressed by use of effect sizes, among others. There are some uncertainties regarding benchmarking effect sizes in psychotherapeutic treatments, although suggestions have been made regarding adult depression (Minami et al., 2007). Smaller samples with participants experiencing naturally occurring changes may yield medium effect sizes. However, the positive experience with the MBC program that was expressed by those who completed it exceeds expected natural development as the latter has been said to give an effect size of .15 (Minami et al., 2007). Similarly, the effect sizes found in the patient sample of this study are in line with the benchmark for using the GSI as an indicator of poor mental ill health (d=.93) in studies of similar treatments although with somewhat shorter duration (Minami et al., 2007). When comparing treatments, it is important to have a closer look at whether the MBC program has additional factors that may lead to these changes. One aspect that needs to be mentioned again is the role of the individual consultations during program participation. The patients in the MBC program were prepared for participation either by their therapists or their GP and had the opportunity to meet individually with therapists throughout the program. This may have helped the patients link the new knowledge to their own lives. Such consultations may have improved motivation for working with the program, as well as aided in transferring learned

knowledge into real-life situations. This is also one manner in which the individual consultations that patients attended created uncertainty regarding cause of perceived change in coping – was it due to MBC, individual therapy, or both? There was no way to control whether therapists strictly focused on MBC during the consultations, despite this being emphasized in the instructions. The therapeutic alliance and the relationship between patient and therapist can influence the therapeutic process considerably, both positively and negatively, making the relationship perhaps as important as the content of the therapy. However, qualitative findings in this study do suggest that MBC may have a positive influence on participants. This is supported in the therapists' understanding of change in symptoms and in function of their respective patients as established by the S-GAF. Furthermore, participants' accounts of the MBC program as interesting and aiding in regard to coping also provides support for this. Others have also found that MBC for psychiatric outpatients and for substance abusers shows promising tendencies (Skåra et al., submitted; Braadland, 2011). In short, this thesis indicates that mindfulness-based interventions such as MBC may have a positive influence on participants who either seek or are in need of such programs and who are motivated and interested in what the programs have to offer. Future research with a more controlled design is necessary to suggest with more certainty whether the positive changes are due to MBC. Another reason for the positive change within the patient sample in this study could be due to regression toward the mean indicating that patients are believed to seek

help when they experience more symptoms and hence experience positive changes due to natural fluctuations in symptoms. Patients experiencing problems may be motivated because of their problems and, when attending MBC as a secondary initiative, the positive experience of the program increases.

When comparing the two samples, it is clear that the patients experienced more positive results than the adolescents; the latter seemed to be nonresponsive to the program. Regarding nonresponse, three main patient factors have been emphasized as contributing in CBT: poor motivation, complicated problems, and resistance (Lambert, 2011). Furthermore, cognitive theories on learning emphasize inner motivation as fruitful and necessary for learning new material. Using pedagogical methods such as metaphors and stories to learn adolescents mindful acceptance, as well as using teen-friendly cd's, have been suggested as suitable practices when introducing adolescents to mindfulness (O'Brian et al., 2008). Hence the lack of change in the student sample may be due to an absence of interest and motivation in the CC program. Another explanation may be that it is difficult to motivate for participation in secondary initiatives in preference to primary initiatives where a need is established prior to participation. Furthermore, due to lack of time before initiation, neither teachers nor students received much information regarding the program or the study prior to program commencement. Hence, some time was used to talk to both teachers and students at the beginning of and during the program regarding its purpose. As such, the CC program was wished on the

students and the teachers who had to relinquish hours of their courses. Lack of significant findings in short mindfulness training for adolescents have been present elsewhere, a finding partially explained by amount of practice outside the classroom (Huppert & Johnson, 2010). As homework practices was not accounted for in the current study, it remains unknown whether this have influenced the study's findings. Future studies should consider this aspect.

Additionally, the students did not receive individual consultations alongside program participation and therefore did not have someone who could help them transfer what they learned into situations that they could use. As we know the importance of the therapeutic relationship, it may also be that the students would have experienced the program differently if it had been carried out by their respective teachers. This is another interesting factor for future studies.

Explanations of somewhat divergent findings regarding the four mindful coping dimensions may be that the mindful coping strategies awareness and distraction are of a more abstract nature and hence more difficult to transfer into real-life situations. Regarding preventing negative emotions and constructive self-assertion, these may show a different pattern due to having more concrete and hence more cognitively manageable qualities. This study's evaluation of the two programs has suggested some changes that can be fruitful when carrying out interventions such as MBC or CC. A parallel can be drawn to universal versus targeted programs. Universal programs are carried

out amongst residents who do not seek help or are not singled out for the intervention (Offord, 2000). One main disadvantage of such programs relevant here, is how universal programs only provides small benefits to the individual making it hard to detect an overall effect of the program (Offord, 2000). Targeted programs are programs for recipients who are singled out for the intervention, which may have the advantage of being potentially efficient (Offord, 2000). Whereas targeted programs are tailored programs for a specific group (e.g., psychiatric outpatients), universal programs are meant to reach a broader group of individuals not screened for participation (e.g., students). This may explain some of the difference in findings between this study's target groups. Furthermore, a recent review of MBIs emphasizes that results only are generalizable to individuals motivated to participate (Fjorbach et al., 2011). It may also be legitimate to consider the expected change to be smaller for those the program has been wished upon (i.e., students) than self-selected participants (i.e., patients). This may support the notion that an absence of perceived positive changes in students is due to motivational factors, or lack thereof. In contrast to the patients' motivation for program participation due to a need for positive change (e.g., symptom relief), the adolescents, who are considered to be a "normal" population regarding pathology, attend CC as a primary initiative and hence the potential influence of the program is reduced.

Finally, research on MBIs and MABIs is complex, time-consuming, and resource demanding. This study has no data on which aspect of

MBC is more central than others in the MC process, and the opportunity for further detailed inquiries of each component is limited. Thus, there seems to be a connection with awareness and other adequate coping strategies, and this may increase the use of awareness. However, similar to other psychotherapeutic research, there is a need for further investigation regarding components of such interventions and how these components "work." Models of change explaining the effects of MBIs exert physical, psychological, and emotional effects, and each model posits one or more possible mechanisms of change (Grabovac et al., 2011); this makes it challenging to document specific effects of mindfulness practice alone or in combination with other intervention-specific components. The difficulty in understanding the mechanisms of action potentially producing change within MBIs has been supported by others (Fjorbach et al., 2011; Havermans, 2011; Schroevers et al., 2011; Hölzel et al., 2011; Coffey et al., 2010; Chiesa & Serretti, 2009; Coelho et al., 2007), and has also been recognized within regular psychotherapeutic research (e.g., Kazdin, 2007), as well as, supported in the lack of empirical evidence of the efficacy of these interventions in children and adolescents (Burke, 2010). In fact, more research regarding the nature of mindfulness, how it can best be measured, fostered and cultivated, and, applications and practical issues regarding interventions have been called for (Keng et al., 2011) Additionally, as different mindfulness practices may affect attention differentially (Semple, 2010) and the lack of enough indicators to conclude that any variety of MABIs is more efficacious than others

(Vøllestad et al., 2011), increases this challenge. Until specific effects of mindfulness practice are well documented, the "dodo-bird effect" (Rosenzweig, 1936) will be heard within some MBIs and MABIs research circles: *"Everyone has won, and all must have prizes"* (Carroll, 1962:412).[23]

[23] The dodo bird effect is a metaphor for the debate around uniform efficacy within the field of psychology (Wampold, 2001). In accordance with this effect, all psychotherapies produce equivalent outcomes regardless of their specific components. The quotation is from the novel "Alice in wonderland" and refers to the dodo bird's competition for getting a number of characters dry after becoming wet; they all had to run around a lake until they were dry. As no one measured how far each of them had run to get dry, nor how long, the dodo bird declared all as winners of the competition.

7 Conclusions

This thesis adds to the growing literature and research on mindfulness in that it establishes a link between the mindfulness and coping traditions, aiming to suggest how mindfulness can play a part in a larger process of coping. Basing this research on theory and a selection of coping skills developed mainly from DBT, it suggests new coping dimensions to the already established coping literature. After using this framework in an empirical investigation, the results indicated that mindfulness does seem to add a new dimension to the already existing coping literature worthy of further consideration. As the MC strategies lay before us now, findings suggest that interventions to enhance mindful coping seem to work differently for psychiatric outpatients than for a sample of ordinary adolescents. As a secondary initiative for a clinical group of adults, it does seem to cause a desirable change. However, as a primary initiative for non-clinical adolescents, it does not. Therefore, suggestions for improving the program have been offered. These findings are important in developing health-promoting plans and practices for adolescents and psychiatric outpatients.

7.1 Methodological considerations

Methodological challenges are discussed in detail elsewhere (see section 4.7). One main challenge was that the design of the effectiveness study for the MBC program lacked a control group, which

allowed for alternative attributions of findings regarding change such as to social desirability bias, placebo effects, non-specific therapeutic factors, group dynamics, or passage of time (Article IV). It would be desirable to compare participants in the MBC program with patients receiving treatment as usual (TAU) within the same DPS. It should be emphasized that qualitative data to some degree compensate for this lack in design in that they provide in-depth data of the program. Some limitations to this study should additionally be mentioned. One is that findings in the second study were based on a cross-sectional design, making it impossible to draw inferences regarding causality. Furthermore, other samples may have yielded different results. Perhaps a sample of clinical adolescents would contribute to findings more in line with this study's patient sample, as clinical samples seem to have more knowledge of mental health issues and more interest in learning how to cope with stressors. Additionally, measuring mindful coping should be mentioned as the MCS is an attempt to inquire into a relationship between mindfulness and coping. This means that other coping aspects could have been included. The measurement model of mindful coping should, therefore, be further developed and tested. Regarding the patients, the role of the individual therapist should be mentioned again as the therapeutic alliance may have influenced the participants either positively or negatively. However, regarding ethical considerations, it seemed illegitimate not to provide patients with an arena where they could confer individually with someone who knew the program and could aid the patient if any problems arose during

participation. Differences in group dynamics both within and between groups may also have influenced participants and the learning atmosphere. Smaller groups of motivated participants sharing similar problems (patients) may have a better learning environment than those in larger groups perhaps not as motivated to participate (students). Finally, other differences between the patient and student samples regarding program participation may have influenced the data. Examples are the solid cooperation between therapists and group leaders at the DPS and the opportunity for patient participants to attend an information meeting on MBC to which they could invite and hence involve someone close to them who may have provided further support. In contrast, there was no cooperation either among teachers at school or between teachers and the researcher regarding CC. Nor did the students have a meeting at which they could involve others in the course.

7.2 Further research needs

This study contributes to knowledge regarding how and to whom interventions including mindfulness and coping can be introduced. It also stimulates further research, some of which is mentioned here.

Findings in this study indicate that using distraction as an adaptive coping strategy can be difficult as it may turn into avoidance and hence maladaptive coping. The literature on distraction as "good" coping is somewhat scarce, and further inquiries on where the line is drawn between distraction as adaptive and distraction as avoidant coping is

needed. This may lead to crucial information regarding how to stimulate mindful distraction and how to better teach such distraction to populations who might benefit from it.

Regarding the populations in this study, it could be interesting to study CC as a secondary initiative within a clinical adolescent sample. It may be that CC is evaluated differently within a clinical sample, as youth who are in treatment, or in need of treatment, may be more interested in and more motivated to participate. Regarding the patients, the need for longitudinal studies and controlled experimental studies has already been mentioned. In both samples, it would be interesting to investigate further the perceived change in coping, especially in terms of other areas where potential change may be visible. For example, do parents, peers, teachers, friends, partners, colleagues, or other significant others detect any changes in the participant? Does support from close relationships play a part in the use of mindful coping strategies or in detecting changes? Additionally, motivational factors are suggested as an important area for future studies of mindfulness interventions to collect information about for whom and why (or why not) such interventions may be appropriate.

Finally, this study cannot claim that MBC causes changes beyond either traditional CBT or other MBIs or MABIs. Potentially, similar changes could be caused either by pure mindfulness interventions or by CBT alone. The theoretical point of departure as depicted in Figure 1 suggests that the combination of mindfulness and other coping

strategies increases positive changes in coping. However, it could be that some of the changes seen in this study were caused either by the mindfulness training alone or primarily by the other cognitive behavioral strategies. It could also be that some participants perceived positive changes due to mindfulness practices whereas others experienced changes due to the other coping strategies. Hence, one could ask if similar results would exist if awareness was placed differently in the program, for example, at the end. Finally, it may also be that the combination of mindfulness and other coping strategies does not lead to more profound changes than the two alone as one may think that the two parts overlap. To compensate for this shortcoming, future studies should compare one group of participants in traditional mindfulness training with one group of participants receiving a course in the other coping strategies and compare the results to the study of MBC.

7.3 Final remarks

By linking mindfulness to cognitive perspectives on coping, a theoretical model for the mindful coping process has been suggested. Although this backdrop was notsuitable for empirical investigations here, it has played an important part as a theoretical point of reference. Empirically, this study has contributed by suggesting mindful coping strategies and investigating their relationships with indicators of mental health. Additionally, evaluations of interventions believed to stimulate mindful coping and improve mental health have provided indications

regarding how such interventions may be carried out to aid participants in finding effective ways of coping. When carrying out this work, the main methodological emphasis has been on quantitative methods. However, bringing a mixed methods perspective into the research process has been a fruitful change of course in terms of a better critical realistic stance on the findings. Taking the study's research questions into account, a mixed methods approach seems appropriate and may broaden our knowledge base regarding mindfulness in coping and in interventions promoting adaptive coping. Findings in mixed methods may be convergent, divergent, or contradictory. Contradictory findings lead to extra reflection beyond what would have been expected, revised hypotheses, and further research (Lund, 2005a). These have been components of this study and they have tentatively been accounted for.

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Part II

List of Articles

Article I

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Article II

Tharaldsen, K. B., Bru, E., & Wilhelmsen, I. (2011). Mindful coping and mental health among adolescents. *International Journal of Mental Health Promotion, 13*(2), 21-31.

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Article I

Tharaldsen, K. B., & Bru, E. (2011). Validation of the mindful coping scale, *Emotional and Behavioural Difficulties, 16*(1), 87-103.

Introduction

Findings from a new report, “Helsetilstanden i Norge - Folkehelserapport 2010" (The State of Public Health in Norway - Public Health Report 2010) state that chronic diseases have become the major challenge for public health in Norway today. Amongst such diseases are mental health problems which, according to the World Health Organization, are the foundation for well-being and effective functioning for an individual as well as for a community. This shows to the importance of promoting mental health issues. Mindfulness origins from Eastern meditation practises but has, in western medical and psychological literature, emerged as an effective treatment for both psychological and somatic symptoms (Crane et al., 2008; Brown, Ryan & Creswell, 2007; Grossmann, Niemann, Schmidt & Walach, 2004; Baer, 2003), with the aim of increasing one’s well-being. A widely accepted definition of mindfulness is that “[it is] paying attention in a particular way: on purpose, in the present moment, and nonjudgmentally (…) [nurturing] greater awareness, clarity, and acceptance of present-moment reality” (Kabat-Zinn, 1994, p. 4), and hence is an inner discipline for learning to meet and enter with awareness the challenges inherent in taking care of ourselves and others (Santorelli, 1999). Studies suggest that mechanisms of mindfulness involve both relaxation and important shifts in cognition, emotion, biology, and behaviour that work to improve health (Greeson, 2008). Mindfulness was initially introduced to secular therapeutic settings through Kabat-Zinn’s (1982, 1990) program of mindfulness-based stress reduction and Linehan’s (1993 a,b) dialectical behaviour therapy (Shapiro, 2009), followed by other western scientists such as Segal, Williams and Teasdale’s (2002) program of mindfulness-based cognitive therapy for depression, and Hayes, Strosahl and Wilson’s (1999) acceptance and commitment therapy. In later years mindfulness has also been introduced to other areas and to various populations with the aim of promoting mental health, such as to youths with psychological symptoms (Singh, Lancioni, Joy, Winton, Sabaawi,

Wahler & Singh, 2007; Zylowksa, Ackerman, Yang, Futrell, Horton, Hale, Pataki & Smalley, 2008; Biegel, Brown, Shapiro & Schubert, 2009) and other groups with mental health problems (Kristeller & Hallett, 1999; Singh, Singh, Sabaawi, Myers & Wahler, 2006; Hanstede, Gidron & Nyklicek, 2008). Regarding work on mindfulness-based interventions for children, this is still in its infancy; however the methods of acceptance and mindfulness may prevent problems in children if applied to pain, anxiety, or depression (Hayes & Greco, 2008). Mindfulness-based interventions for children may also more specifically have practical applications to assisting children with severe emotional behavioural disorder (SEBD) to regulate their emotions and improve their patterns of thought, basically by letting the children in a non-judgemental manner experience thoughts as only thoughts, and feelings as just feelings. Mindfulness could additionally be used by staff working with children with severe emotional behavioural disorder, as it teaches them to regulate their own emotions, decrease stress levels, and experience ongoing situations in a non-judgemental manner. Mindfulness may allow us to react more creatively to the present moment, in preference to acting on reactions that start the cycle of rumination (Williams et al., 2007), and mindfulness-based interventions are more specifically suited to enabling those with a recurrent or chronic conditions to work differently with their specific vulnerability in addition to gain skills with the aim of enable effective ongoing management of their condition (Crane, 2010). Hence finding ways to measure and monitor mindfulness is highly relevant in general as well as relevant to the SEBD field specifically, and therefore an important area for study.

The concept of mindfulness refers to a process of bringing a certain quality of attention to moment-by-moment experience (Kabat-Zinn, 1990). This capacity, among others, is developed using various meditation techniques that originate from spiritual practices as taught in Buddha's time (Hanh, 1975). Mindfulness practises can be divided into three main parts, that is, meditation, body scan, and yoga (Kroese, 2005). Within mindfulness meditation,

which is the main method, focus is awareness of one's breath. The method differs from autogenic techniques in that one takes a stance as an observer of the breath in preference to controlling it. This is a relaxation technique in itself, as well as a technique that may help the individual to become capable of interrupting and/or diverting the attention from negative automatic thoughts or ruminating thoughts that otherwise may decrease one's well-being. Mindfulness teaching and practices involves three main elements (Crane, 2008); the development of awareness through both formal and informal practices, a framework which is characterised by kindness, curiosity and willingness to be in the present moment, and an embodied understanding of the vulnerable self.

In recent years scale measurements have been developed with the aim of measuring mindfulness (Freiburg Mindfulness Inventory (FMI): Bucheld et al., 2001; Mindful Attention Awareness Scale (MAAS): Brown & Ryan, 2003; Kentucky Inventory of Mindfulness Skills (KIMS): Baer et al., 2004; Cognitive and Affective Mindfulness Scale (CAMS): Feldman et al., 2004; Cognitive and Affective Mindfulness Scale-Revised (CAMS-R): Feldman et al., 2007; Southampton Mindfulness Questionnaire (SMQ): Chadwick et al., 2008; Toronto Mindfulness Scale (TMS): Lau et al., 2006; Philadelphia Mindfulness Scale (PHLMS): Cardaciotto et al., 2008). The majority of these measure a general level of mindfulness and treat mindfulness more trait-like (such as the FMI, the MAAS and the CAMS), some are designed for and/or developed with participants practising meditation (such as the FMI and the TMS), some consider mindfulness a unidimensional construct (such as the FMI, the MAAS and the SMQ) while others regard mindfulness a bi- or multifaceted construct (such as the KIMS, the CAMS, the TMS and the PHLMS), and only one scale aims to assess the attainment of the mindfulness state (the TMS). None of the mentioned scales approach mindfulness as a way of coping or as a part of the coping process explicitly, that is, linking the general level of mindfulness explicitly to other well-known coping skills. For instance, the

SMQ (Chadwick et al., 2008) was developed with the aim of measuring degree of mindfulness when experiencing distressing thoughts and images. It does not, however, present other adequate coping options than that of being mindful regarding the distress, that is, other coping options that may become available to the individual through being mindful. Thus, as mindfulness makes the individual capable of being in the present moment as it is, in preference to reacting habitually to it (Brown et al., 2007), it can be viewed as an effective means to cope with various challenges. In later years mindfulness has become increasingly emphasised within therapeutic contexts (Kabat-Zinn, 1990; Linehan, 1993a, 1993b; Hayes et al., 1999; Segal et al., 2002). One of these interventions, Dialectical Behavioral Therapy (DBT), integrates mindfulness with coping skills from behavioural therapy (Linehan 1993a, 1993b). We thus argue that mindfulness could be viewed as a part of a coping process and that there is a need for measurements of coping by mindfulness. The aim of this article is, therefore, to document the development of a mindful coping scale based upon the theoretical approach of DBT.

A conceptual framework of mindful coping

Most definitions of mindfulness highlight two key constructs: behavior that is conducted and how the behavior is conducted (Cardaciotto et al., 2008). More specifically, common to the definitions of mindfulness are these four components: the ability to regulate attention, an orientation to present experience, awareness of the experience, and attitude of acceptance (nonjudgment) towards the experience (Feldman et al., 2007). Despite discrepancies in its content, the two-component definition by Bishop et al. (2004) of mindfulness has been acknowledged as an important contribution. The first component focuses on the self-regulation of attention so that it is maintained on immediate experience. This involves sustained attention, skills in switching back to the experience if the mind

wanders, and non-elaborative awareness of thoughts, feelings and sensations. Furthermore, all mindfulness-based approaches have in common that they can lead the individual to re-evaluate and hence facilitate a shift in the goals of self-regulation, which again can result in the abandonment of problematic goals in favour of more functional and/or realistic goals (Crane et al., 2008). The second component involves approaching one's experience with an orientation of curiosity and acceptance, regardless of the valence and desirability of the experience. In all, mindfulness meditation provides a context of de-centered perspective from which a person may experience a broader range of events which again may help regulate and inform behaviour in ways that was earlier unavailable (Williams, 2008).

Dialectical Behaviour Therapy (DBT) is a variant of cognitive behavioural therapy that adopts mindfulness based coping skills (Linehan, 1993a, b). In short, "dialectical" refers to the specific world view upon which DBT is based, comprising main characteristics such as interrelatedness and wholeness (i.e. a holistic system perspective of reality implying that analyses of parts have limited value unless related to a whole), polarity (i.e. reality is complex and processual as it is comprised of internal opposing forces that, when integrated, bring forward a new set of opposing forces), and continuous change (i.e. tension between the polarities within each system produces change) (Linehan, 1993a).[1] Skills taught within DBT to cope with different forms of tension are: control of attention, interpersonal effectiveness skills (i.e. effectiveness in interpersonal conflicts), emotion modulation skills (i.e. regulate emotions), as well as distress tolerance skills (i.e. tolerate emotional distress) (Linehan, 1993a, b). DBT emphasises mindfulness as psychological and behavioural versions of meditation skills taught in Eastern spiritual training practiced by the quality of awareness one brings to activities in the current moment, and at the same time emphasise mindfulness as core skills for the intervention in its entirety (Linehan, 1993 a, b). Hence, the DBT-approach

[1] "Dialectics" refers not only to a philosophical world view but also to a treatment approach or strategies used by therapists to effect change (Linehan, 1993a); however, as DBT treatment is not the main topic here per se the definition of the term is not further elaborated on.

to mindfulness and coping constitutes the foundation upon which mindful coping is operationalised in the following development and validation of the Mindful Coping Scale (MCS). The MCS consists of four aspects. Firstly, as mindfulness is a quality of our awareness that provides an adequate point of departure for meeting with challenges through acceptance, "Awareness" is a central aspect of the MCS. Implicit in mindful awareness are qualities such as observing and describing the present in a non-judgemental manner, emphasising acceptance of what is. This may reveal new coping options otherwise unconsidered. In the MCS mindfulness qualities are tentatively revealed through a focus on awareness-training, e.g. observing, describing, and well-known qualities of the mindful state, e.g. non-judgement, acceptance, as these qualities decrease disturbed cognition (Lieb et al., 2004). Secondly, another sector of mental ill-health, impulsivity, can be reduced by learning distress tolerance such as distraction. When done mindfully and over a short time period distraction can provide a necessary break from a stressor so that one can tolerate emotional distress when change is slow or unlikely (Lieb et al., 2004). Such distraction is thought to increase the individual's ability to bear pain skilfully (Linehan, 1993a), e.g. distracting one self from the present to avoid impulsive and potential destructive thoughts and/or actions. Distracting oneself from a current situation experienced as a crisis, is first step towards acceptance and awareness as it improves our ability to tolerate distress in preference to act impulsively on it. Furthermore, distraction may be useful when affect is overwhelming and there is no immediate task at hand (Beck, 1995), and those who engage in activities allowing for distraction from rumination and sad feelings are more likely to experience more short-lived depressive moods (Segal et al., 2002). That distraction may be a superior preliminary strategy has also been stated elsewhere (Nolen-Hoeksema et al., 1993) although studies have indicated that these should be active and engaging in preference to passive and non-engaging (Abela et al., 2002). Hence the MCS view the second aspect, "Distraction" through mindful

distractions, either mentally or physically, as representing a prolonging of the preceding mindful approach making distraction an adequate coping strategy. Thirdly, in DBT mindfulness is also emphasised as important regarding emotion regulation (Linehan, 1993a) The latter may decrease the occurrence of affective disturbance, as all people are susceptible to emotional reactivity when under stress (Linehan, 1993a). DBT emphasise several categories of emotion regulation, however, as several of them are either very similar to mindfulness-qualities or context-specific mainly those focusing on building coping resources by reducing vulnerability to emotional reactivity are included here. Hence "Preventing negative emotions" is a third aspect of the MCS containing qualities that may increase positive feelings as well as activities limiting vulnerability to negative emotions. Examples are activities to increase positive feelings in daily life as a means to enhance the experience of positive feelings in addition to effective physical coping such as engaging in a physical activity. Finally, relational aspects of mindfulness have been emphasised in different manners (e.g. Kramer 2007). Within DBT, mindfulness is emphasised regarding communication (Linehan, 1993a), and coping skills are related to increasing stable relationship and avoiding unstable ones as well as to effective ways of achieving one's objectives while simultaneously maintaining relationships and self-esteem. Following this, the MCS identify methods for establishing and/or maintaining stable relations through efficient verbal communication, and "Constructive self-assertion" is therefore the fourth aspect of the MCS. It contains qualities of preparation and being aware of either an upcoming or an ongoing interpersonal situation where it is necessary to stay focused on one's objectives while attending to one's self-esteem and the quality of the relationship at hand. When done mindfully such conversation is effective both prior to as preparation and when in situations where it is necessary.

Following from the above, we argue that the four aspects of awareness, distraction, preventing negative emotions, and constructive self-assertion are important to increase our

understanding of the coping process embedded in the mindful coping concept. By relating the concepts of mindfulness and coping further through theories of appraisal in the following discussion, the actual coping facet of mindfulness is tentatively shown theoretically. As the MCS is based upon theories from which DBT has been developed, as well as the intervention's implications, the following approach towards the mindful coping concept seems appropriate.

Nomological network validation: implementing a conceptualization of coping based on appraisal theory

A main objective regarding construct validity is to investigate the relationship between the theoretical and empirical realm. One means to prove that a measure has construct validity is by developing a nomological network (Cronbach & Meehl, 1955). A nomological network consists of interlocking "laws" which constitute a theory and includes both theoretical and empirical frameworks, as well as showing how these frameworks are linked (Cronbach & Meehl, 1955). As such, construct validation cannot be claimed unless the network makes contact with observations (Cronbach & Meehl, 1955). In short, validation by nomological network may be performed by estimating correlations of a measure of interest with other already validated measures expected to contain either synonymous or antonymous constructs. Positive correlations with the synonymous constructs, and negative correlations with the antonymous constructs, indicate a valid measurement model. As part of the validation of the proposed measure of mindful coping, associations with an established measurement of coping strategies based on appraisal theory will be conducted. Coping strategies can be divided into three main categories: problem-focused, emotion-focused and avoidance coping (Lazarus & Folkman, 1984). Both problem-focused and emotion-focused strategies are adequate efforts to manage demands appraised as taxing one's resources. While the first type involve direct

efforts to modify the problem at hand, the latter type involve regulating emotion surrounding the stressful event (Lazarus & Folkman, 1984). Hence, problem-focused coping is an active strategy, while emotion-focused is passive. The avoidant coping strategy is specifically used in relation to problems experienced as either inaccessible to change or of importance (Folkman et al., 1986). We argue that mindfulness can aid coping not only by allowing more adaptive responses, but also by making several adequate coping responses available to the individual. This has also been argued elsewhere (Crane et al., 2008; Shapiro et al., 2006; Foster, 2007). Furthermore, mindfulness can be helpful in terms of initial coping by providing the individual with increased emotional insight. The latter involves distress both about one's awareness of a previously hidden unconscious conflict and about one's willingness to apply such an insight effectively (Lazarus, 1999). As awareness is one key principle of mindfulness, the relationship is obvious. The same goes for the will to apply the emotional insight, as this can be related to acceptance, another key mindfulness principle. Mindfulness can also aid in the appraisal process itself. Following Lazarus (1999), appraisal comes either by deliberate and conscious effort or in other more automatic and unconscious ways. Mindfulness can be seen as an initial coping effort as one enters a mindful state or mode, with the aim to more constructively choose further functions of coping. In other words, mindfulness is a state entered with the objective of making a secondary appraisal as adaptable to the demands as possible.

This implies that mindful coping stimulates problem-focused and/or emotion-focused coping. As such, awareness can both provide a foundation for problem-focused coping and constitute a conceptual link with problem-focused coping. To some degree it may also correlate positively with emotion-focused strategies, as it is thought to entail qualities such as acceptance and opening for reappraisal, the latter indicating changing appraisal and coping in both behavior and cognitive coping (Lazarus, 1999). Furthermore, as awareness can create an

inner distance providing a buffer before acting, there seems to be a causal relation between awareness and appraisal. This indicates that awareness may correlate higher with the other aspects of the MCS than what is the case between the latter three aspects. Distraction can additionally provide a basis for problem-focused coping; however, it may contain elements of both emotion-focused coping and avoidance. The reason for that is that some emotion-focused strategies facilitate approach towards the stressor, whereas others promote avoidance (Stanton & Franz, 1999). As part of a mindful coping process, distraction is expected to create mental distance from a stressor and, therefore, mainly correlates positively with emotion-focused strategies. Preventing negative emotions is overall related to emotion-focused coping, as its focus is on emotions and one's handling of them. It can, however, provide a foundation for problem-focused coping in terms of doing something actively to prevent and prepare for future negative affect. Finally, constructive self-assertion is primarily a problem-focused coping strategy, as it entails an active strategy of focusing on effective communication with others by being aware of useful verbal skills for achieving one's objectives and for maintaining good relationships with others.

Methods

Operationalization of mindful coping

The initial phase of the operationalization of the mindful coping construct was to use this theoretical framework to develop a measure for coping with challenges, thus creating an item pool. The main objective of creating an item pool is to systematically sample all content potentially relevant to the target construct (Clark & Watson, 1995), that is, the mindful coping construct. In this phase two expert groups were consulted. To create an initial item pool by brainstorming, 4 therapists familiar with DBT and similar interventions that integrate mindfulness and coping were asked to write down questions and/or statements they believed

could measure the construct. This expert group consisted of psychiatric nurses, a specialist in psychiatry and a social worker who all worked in the same psychiatric clinic. They were all highly motivated to participate in the process of item generation. Their common experience is based on working individually with patients attending interventions containing elements of mindfulness and cognitive psychology, and they have all worked within psychiatric institutions no less than 15 and no more than 30 years respectively. None of them are trained in DBT, but they are all familiar with the intervention through seminars. Their background differs in respect to work areas within psychiatry. Some have more focus on work with outpatients, another has experience from institutions for youths, and yet another has experience also from working with inpatients. No limitations were placed on either number of items or content. All items were introduced to a second expert group comprising 7 academics. Their educational background varied from psychology, change management, nursing and social science. However, they were all trained in, and had firsthand experience with, instrument development. This expert group met twice. Its first meeting led to a discussion about the legitimacy of using the four aspects mentioned above as dimensions or subscales for a measurement for mindful coping, as well as which items the measurement could consist of and their wording. The four dimensions were accepted, and the items were placed within each dimension. The suggested items were then revised, with the aim of reintroducing them to the same group. Items considered to be irrelevant or ambiguous to our theoretical approach, were excluded and/or revised during the second meeting. One suggestion was to give short examples on some items to clarify their formulation for the respondents. The list of items was further reduced after a discussion regarding which items that best represented the domain of the components from our theoretical approach. A decision was made to use a 5 point Likert-scale (1 = *never/hardly ever*, 5 = *always*). The group decisions were based on a general consensus. The item pool of 30 items, based on theoretical arguments as well as results from

the expert groups, was expected to provide a basis for developing a measurement that primarily measures the four aspects of the mindful coping construct as theoretically developed from DBT.

The next step was to pilot test the proposed instrument. It was tested both within a group of psychiatric outpatients and a class of high school students. The respondents in the pilot tests were specifically asked to comment on the formulation of items to check for risks of misunderstandings. Some minor adjustments were made in response to their feedback.

Sample

A sample of students from two high schools was recruited to empirically test the measurement model for mindful coping. Both schools have approximately the same number of students, and students from all streams were represented. One school is located in the district, and the other is close to one of the bigger cities in the region. Both schools recruit students from a variety of social strata and cover all courses of study. Moreover, differences in student samples between schools in Norway are relatively moderate (Marks, 2006). The current sample is therefore considered to be relatively representative of Norwegian youth in general. The students' ages ranged from 16 to 20 years. The questionnaire was returned by 750 respondents which give a response rate of 85%. The data set was reviewed for the quality of responses. Some respondents indicated by written statements in the questionnaire that they had been poorly motivated for filling out the questionnaire in a serious manner. These respondents were removed from the dataset. In addition respondents with more than 25% of missing items on the MCS-subscales were removed from analyses involving MCS-items, resulting in a sample of 690 respondents for these analyses. In addition 13 respondents with missing responses to both items on the Brief COPE-subscales were removed from analyses involving this scale. The majority of student with low quality responses attended vocational

courses of study (84%) and were males (77%). The final sample comprised 51.2% males, 48.8% females, 47.9% vocational course students and 52.1% general educational course students.

Procedure

The school administered the survey in accordance with written instructions from the researcher and the questionnaire was completed during school hours. Statistical analyses included Cronbach's alpha, Pearson product moment correlations, and descriptive analyses performed using the SPSS 15 program (Norusis, 2008), as well as confirmatory factor analysis (CFA) using Amos 16 (Arbuckle, 2007). The relationship between the MCS and an inventory measuring coping was investigated using Pearson product-moment correlation coefficient.

Percentage of missing data varied between 3.0% and 5.8% for MCS-items and between 0.1% and 2.0% for the Brief Cope items. Missing data were replaced by the series mean scores.

Criteria for the confirmatory factor analysis

Goodness of fit of the model is based on criteria regarding the parsimony goodness-of-fit index (PGFI) as introduced by James et al. (1982). When assessing the overall model fit, the PGFI includes the complexity of the hypothesized model representing the goodness-of-fit of the model (GFI) and the model's parsimony in a single index (Byrne, 2001). It has been argued that the PGFI provides a more realistic evaluation of the hypothesized model (Mulaik et al., 1989). As parsimony-based indexes have lower values than what is traditionally held to be acceptable for other indices of fit (Byrne, 2001), it has been suggested that GFI indexes in the .90s and parsimonious-fit indices in the .50s can be expected (Mulaik et al., 1989). One of

the most informative criterions in covariance structure modelling is the root mean square error of approximation (RMSEA; Byrne, 2001). RMSEA values less than .05 indicate a good fit, while values of .08 represent reasonable errors of approximation in the population (Browne & Cudeck, 1993). It has been argued that with large sample size, a value of .06 or less indicates a good fit (Hu & Bentler, 1999). Values ranging from .08 to .10 indicate mediocre fit, while values grater than .10 indicate poor fit (Byrne, 2001). Another index used in the present research is the Tucker-Lewis index (TLI; Tucker & Lewis, 1973), which shows values close to .95 are indicators of a good fit (Hu & Bentler, 1999). Finally, the comparative fit index (CFI) is a goodness-of-fit statistic taking sample size into account. A value >.90 has been considered to represent a well-fitting model (Bentler & Yuan, 1992); however, this value has been revised closer to .95 (Hu & Bentler, 1999). A value in between can, therefore, be considered acceptable.

Nomological network validation

The construct validity will also be investigated by correlating the MCS with an inventory that measures coping on the basis of appraisal theory. The Brief Cope (Carver, 1997) was chosen for this purpose, as it assesses several coping responses known to be relevant to adequate and inadequate coping strategies and makes minimal time demands on participants. The Brief Cope (BC), a measurement modified from the COPE inventory (Carver, Scheier & Weintraub, 1989), is an inventory of 14 subscales, each with two items. Coping scales include problem-focused strategies (e.g. active coping), emotion-focused strategies (e.g. emotional support), and avoidant strategies (e.g. substance use). Reported reliability values in terms of alpha values range from .50 to .90 (Carver, 1997); in the current study coefficients of reliability ranged from .44 to .86. If the MCS and the BC are variants of the same construct, the instruments are expected to correlate positively on problem-focused

coping. For the same reasons, negative correlations are expected to be found with avoidant coping. Correlations with BC's emotion-focused coping strategies are expected to be of varying degrees as such strategies have both adequate and inadequate qualities (Stanton & Franz, 1999).

Results

Factor analyses

The Mindful Coping Scale (MCS) was constructed with four subscales to assess four different aspects of mindful coping: *awareness, distraction, preventing negative emotions,* and *constructive self-assertion*. In order to evaluate the unidimensionality or homogeneity of the four subscales we conducted exploratory factor analysis (EFA) of the items constituting each component. The four factors accounted for 56 percent of the total variance in items with eigenvalues ranging from 1.73 to 6.44. Explained variance ranged from 5 to 26 percent. However, some items showed less than desirable factor loadings, and based on evaluation of the loadings and theoretical considerations, seven items were deleted from the scale, leaving a total of 23 items.

(Table 1)

Confirmatory factor analysis

Confirmatory factor analysis with four latent variables represented by observed variables, shown in Table 1, yielded a fair fit (RMSEA = 0.07; 90% CI 0.063-0.072). Modification indices suggested that the error terms for the observed variables (items) "Create inner distance to observe the situation" and "Create inner distance to describe the situation," as well as "Request (ask) in a manner which maintains a good relation" and "Request (ask) in

a manner which maintain focus on my objectives" should be correlated. When the model was modified as suggested, the results indicated a close fit (PGFI = 0.74, GFI = 0.93, TLI = 0.92, CFI = 0.93, RMSEA = 0.05; 90% CI 0.047-0.057). The coefficient of correlation between the error terms were 0.58 and 0.41, respectively. The 23-item, four-factor model provided an acceptable level of goodness of fit (*Chi-square* = 632.2, *df* = 222). To further investigate the discriminant validity of the scale we conducted a confirmatory factor analysis comparing a one-factor solution to the 4-factor solution. The results of the alternate one-factor solution clearly indicated a poor fit (PGFI = 0.53, GFI = 0.64, TLI = 0.47, CFI = 0.52, RMSEA = 0.13; 90% CI 0.05-0.06) and hence an inacceptable level of goodness of fit (*Chi-square* = 3063.4, *df* = 230).

(Table 2)

Internal consistency for the four subscales was tested using the Cronbach's alpha approach, which indicates the reliability of the subscales. The coefficient alphas of the four subscales ranged from 0.76 to 0.85, all meeting the criterion of an alpha level of minimum 0.7 (Nunnally & Bernstein, 1994). The relationship between the subscale scores was investigated using Pearson product-moment correlation coefficient. The coefficients of correlations ranged from 0.43 for the correlation of *awareness* with *constructive self-assertion*, through 0.23 for the correlation of *distraction* with *constructive self-assertion*. The MCS-subscale *awareness* correlates more strongly with *distraction, preventing negative emotions,* and *constructive self-assertion* than any of the correlations between the latter three subscales. Results are shown in Table 2.

Mean scores ranged from 2.36 (*distraction*) to 2.95 (*constructive self-assertion*). There was a significant tendency for females to report more use than males of both *awareness*

(females: 2.82 (0.67); males: 2.56 (0.85); $p < 0.001$) and of *distraction* (Females 2.63 (0.75); males: 2.08 (0.79); $p < 0.001$). For the other two MCS-subscales, no significant differences in mean scores were found.

Correlation between the mindful coping scale (MCS) and the brief cope (BC)

(Table 3)

The MCS-subscale *awareness* correlated mainly with problem-focused and emotion-focused coping from the BC-inventory. *Distraction* correlated strongest with emotion-focused coping and somewhat with avoidant coping. Correlations with problem-focused coping were weak. The MSC-subscale *preventing negative emotions* correlated mainly with problem-focused coping from the BC-inventory, as well as with some strategies from emotion-focused coping. Correlations with avoidant coping were weaker. Regarding *constructive self-assertion*, its' strongest correlations with the BC-inventory were with problem-focused coping and somewhat with emotion-focused coping. Correlations with avoidant coping were weaker. Correlations are shown in Table 3.

Discussion

The main objective of this research was to develop and validate a scale measuring coping facets of mindfulness. The rationale for a four-factor model was based on the theoretical fundament of Dialectical Behavior Therapy (DBT), that is, the four aspects of affect, cognition, impulsivity, and relationships, as well as the skills for regulating them. It follows from this that the approach to mindful coping is not necessarily completed, as there may be other angles of incidences to this construct. However, here it is argued that the

statistical analyses support the initial four-factor model. The dimensionality of the measurement of mindful coping was investigated using both exploratory and confirmatory factor analysis. After already mentioned modifications of the measurement model, confirmatory factor analysis indicated close fit of the hypothesized measurement model of mindful coping. This finding supports the validity of the MCS. Moreover, Cronbach's alphas ranged from 0.76 through 0.85 for the different MCS-subscales, indicating good internal consistencies of the subscales.

Results also showed that the mindful coping dimension *awareness* yielded the strongest associations with the other aspects of MCS. As awareness (mindfulness) is argued to be initial secondary appraisal, thus stimulating problem-focused coping by constituting the fundamental latent variable in the MCS, *awareness* not only explained most of the variance but also had the highest correlation with *distraction*, *preventing negative emotions*, and *constructive self-assertion*. As the correlations and the explained variance supported our expectations, this finding also supports the validity of the MCS as awareness opens for coping strategies within *distraction, preventing negative emotions,* and *constructive self-assertion*.

A further validation entailed an investigation of associations between the MCS and coping strategies as assessed by the Brief Cope (BC). The BC inventory entails subscales of three main categories of both adequate and inadequate coping strategies (problem-focused, emotion-focused, and avoidant coping). In line with our theoretical assumptions, the results showed that the MCS-aspect *awareness* was associated with problem-focused coping. We assumed that taking a step back and becoming more aware of the situation at hand could be conceptually overlapping with or constitute a basis for problem-focused coping, such as active, planned action or the seeking of instrumental support. On the other hand, this aspect of mindful coping showed mainly low or even negative associations with avoidance coping and some positive correlations with emotion-focused coping. Correlations with emotion-focused

coping were expected as awareness entails qualities of both acceptance and appraisal, as mentioned earlier. All in all, it seems that awareness entails a basis for good coping, thus supporting the validity of the subscale *awareness*.

The subscale *distraction* was expected to correlate moderately with problem-focused and emotion-focused coping strategies. The subscale correlated somewhat weaker than expected with problem-focused strategies, whereas correlations with emotion-focused strategies were in line with expectations. The weak and positive correlation with acceptance was expected, as one has to accept the situation at hand to use distraction adequately as a coping strategy. A mindful distraction can be used to wind oneself down in a situation causing stressful feelings, for example by discussing the situation with other people or expressing emotions. On the other hand, the relatively strong correlations with behavioral disengagement or denial were unexpected. These correlations could be a consequence of a confusion of ideas. In some cases avoiding a stressor, when done mindfully and over a short period of time, may give a person a distance to the problem and necessary room for thought before acting, in this case making distraction an emotion-focused coping strategy. Engaging in distraction in this manner is different from avoidant coping and has been distinguished from such by being labelled “healthy distraction” (Salovey et al., 1999), referring to appropriate distracting behavior with functional value. Distraction as denying the experienced stress is avoidance, but the strategies seem to be difficult to distinguish empirically. The same argument can explain the weak correlation with similar strategies within the same scale. One inference that can be drawn from this is that distraction is not a one-dimensional concept, but it may contain either partially avoidance or healthy distractions that are difficult to distinguish from avoidance coping. The above may point to a further need for investigation and discussion of distraction as adequate coping and for its qualities.

The current research supported the two other factors, that is, *preventing negative emotions* and *constructive self-assertion*. As expected, both correlated stronger with problem-focused coping strategies than with emotion-focused strategies. The majority of correlations with emotion-focused strategies regarding the subscale *preventing negative emotions* were weaker. This can be explained by the implicit time aspect regarding this form of coping and that *preventing negative emotions* measures other forms of coping than the BC. Preventing negative emotions refers to what can be done to prevent future stressors to become overwhelming, such as making sure to get enough sleep, eat right, and work out. Strategies presented in BC refer mainly to coping strategies used after the stress has occurred, indicating that the BC does not cover coping-building strategies sufficiently, such as what people do to increase coping resources as preparation for future situations. Still, stronger positive correlations were as expected, that is, with problem-focused coping strategies. The subscale *constructive self-assertion* also had fewer positive correlations with the BC, which may be because the first subscale refer to strategies used prior to, or when in, a potential stressing situation with another person. In contrast, the BC refers to what people do either for themselves or towards others with the aim of releasing an already-experienced stressor. However, positive correlations were as expected, that is, strongest with problem-focused coping. Other positive correlations with emotion-focused strategies varied as expected, as those representing interpersonal strategies correlated stronger than others. Overall, the subscale showed weaker correlations with avoidant coping strategies from the BC.

In sum, the authors argue that correlations between the MCS scale and the BC scale are concept-related and as expected, indicating that they support the validity of the MCS. Furthermore, the MCS seems to add important coping strategies regarding planned action (secondary appraisal) not present in BC, such as reducing vulnerability to negative feelings (*preventing negative emotions*) and constructive communication (*constructive self-assertion*).

Therefore, the authors argue that the current research not only supports already established strategies for coping, but also gives rise to a new dimension of coping, that is, mindful coping. An intriguing result from the analysis concerns distraction as coping strategy and whether it can function as good coping or if it indicates avoidant coping. It seems that the line between distraction as healthy and avoidant coping is a fine one. The authors believe that distraction, when done mindfully and over a short period of time, in fact is a healthy coping strategy. However, when done unmindfully and over a longer period of time, it shifts into avoidance (Linehan, 1993a; Stanton & Franz, 1999). From this, further investigations are needed, considering whether or not this double-edged coping strategy can be measured at all.

Descriptive statistics indicate that constructive self-assertion was the most used mindful coping strategy in this student sample, whereas distraction was the least commonly used. Results also suggest that females more commonly than males use distraction and awareness as coping strategies. More frequent use of awareness may indicate that females to a higher degree focus on the stressor. The tendency for females to report more use of distraction may indicate that an increased use of awareness opens for more use of distraction. This is in line with results that indicated that *awareness* yielded stronger associations with other aspects of MCS, including *distraction*. Regardless, the presence of gender differences contributes to the MCS' validity. For the other two MCS-subscales, no significant differences in mean scores were found.

Conclusion

The development of the MCS was theoretically driven from a theory of mindful coping based on a DBT-perspective, and the scale was constructed with four subscales to assess four different aspects of mindful coping: *awareness*, *distraction, preventing negative emotions*, and *constructive self-assertion*. Results from factor analyses supported the proposed

measurement model and Cronbach's alphas indicated good internal consistency for the four sub-scales. Furthermore, correlations with instrument for measuring coping were mainly in accordance with our expectations. The above supports the validation of our instrument. There were indications, however, that a more thorough investigation of the subscale *distraction* is necessary. Correlations showed potential ambiguity regarding the use of distraction as a coping strategy. The authors are hopeful that future studies will contribute to the discussion of distraction as healthy or unhealthy coping. Furthermore, that mindfulness meditation can lead to a re-evaluation and hence facilitation of a shift in the goals of self-regulation, which again can result in the abandonment of problematic goals in favour of more functional and/or realistic goals, shows to the potential helpfulness of mindfulness. And as mindfulness also could be used by staff[2] working with young children and/or children with SEBD, ways of measuring the concept through the development of scales for populations of children under the age of the current sample as well as for young people with (S)EBD are important areas for future studies.

Methodological Considerations

The use of a student sample may limit the generalisability of our findings. However, several authors have argued that mindfulness is a naturally-occurring characteristic likely to show meaningful variations in populations both with and without meditation experience (Brown & Ryan, 2003; Kabat-Zinn, 2003). Others have also used student populations when developing mindfulness measures (Baer et al., 2004; Cardaciotto et al., 2008). It has additionally been argued that the use of nonclinical populations provides evidence for the theoretical model presented (Cardaciotto et al., 2008), which is also emphasized here. The same argument legitimizes the age-range and the various streams the student sample belongs

[2] See Crane (et al., 2010) for a further discussion on teacher training for the delivering of mindfulness-based interventions.

to, which can strengthen the study's emphasis of mindful coping being a construct with differential roles in psychological functioning as well as not being limited to mental illness. Hopefully future studies that apply the MCS to other populations will contribute to the instrument's generalizability as well as strengthen the representativeness of the sample in the current study.

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Table 1: Loadings of each item on the latent variables from confirmatory factor analysis (n = 690).

Dimensions & Items	Factor 1	Factor 2	Factor 3	Factor 4
Awareness *("When faced with difficult choices, I try to:")*				
Find a balance between reason and emotion	.70			
Consider what is actually going on, not how I wish it should be	.69			
Take a non-judgemental stance	.68			
Create inner distance to observe the situation	.65			
Focus on one thing at a time	.62			
Create inner distance to describe the situation	.60			
Distraction *("To get through difficult moments, I:")*				
Use my touching (touch something comfortable)		.75		
Use my vision (look at something beautiful)		.74		
Use my smelling (smell a scent I like)		.69		
Use my tasting (eat something I like)		.69		
Use my hearing (listen to something I enjoy)		.67		
Affect my emotions (by creating another emotion)		.58		
Use inner pictures (imagine calming scenes)		.54		
Preventing negative emotions *("To prevent negative feelings to arise, I:")*				
Increase my sense of mastery (do something I am good at)			.66	
Stay active			.67	
Work out (get enough exercise)			.64	
Eat right (not too much or too little; food that is good for me)			.62	
Sleep right (not too much or too little)			.51	
Constructive self-assertion *("When making requests or rejections, I try to:")*				
Reject (say no) in a manner which maintains a good relation				.83
Reject (say no) in a manner which maintains my self-respect				.78
Reject (say no) in a manner which maintains my objective				.65
Request (ask) in a manner which maintains a good relation				.65
Request (ask) in a manner which maintains focus on my objectives				.61

Table 2: Mean values, standard deviation, Cronbach's alpha, and correlations of MCS-subscales (*n*=690).

	Awareness	Distraction	Preventing negative emotions	Constructive self-assertion
Number of items	6	7	5	5
Mean	2.69	2.36	2.69	2.95
SD	0.77	0.82	0.82	0.84
Cronbach's alpha for factors	.83	.85	.76	.84
Correlations with *awareness*		.38**	.38**	.43**
Correlations with *distraction*			.25**	.23**
Correlations with *constructive self-assertion*				.34**

** $p < .001$

Scoring range: 1 – 5.

Table 3: Correlations between sub scales of the Mindful Coping Scale and the Brief Cope (n = 677).

	Mindful Coping Subscale			
Brief Cope Subscale	**Awareness**	**Distraction**	**Preventing negative emotions**	**Constructive self-assertion**
Problem-focused coping				
Active coping	.48**	.14**	.31**	.29**
Planning	.47**	.27**	.28**	.34**
Instrumental support	.38**	.29**	.26**	.24**
Emotion-focused coping				
Emotional support	.39**	.36**	.23**	.22**
Acceptance	.41**	.13**	.23**	.30**
Reframing	.43**	.23**	.31**	.25**
Venting	.36**	.35**	.15**	.29**
Religion	.19**	.18**	.06	.06
Humour	.22**	.15**	.12**	.25**
Self-blame	.25**	.35**	.06	.17**
Avoidance coping				
Self-distraction	.27**	.37**	.11**	.21**
Disengagement	.03	.26**	-.07	.05
Denial	.09*	.32**	.02	.02
Substance use	-.08*	.08*	-.09*	-.06

* $p < .05$; ** $p < .001$.

Article II

Tharaldsen, K. B., Bru, E., & Wilhelmsen, I. (2011). Mindful coping and mental health among adolescents. *International Journal of Mental Health Promotion, 13*(2), 21-31.

F E A T U R E

Mindful Coping and Mental Health among Adolescents

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Key words: mindfulness; coping; mental health; adolescents

Introduction

In western countries, including Norway, there is a high prevalence of mental health problems among adolescents (FHI, Rapport 2009 p8). As the life-time prevalence of depressive disorders by late adolescence is approximately 20–25%, those reporting more distress symptoms or depression are at greater risk of psychiatric illness in adulthood (Oppedal & Roysamb, 2004). This points to the importance of knowing about the amount of stress that young people experience and how they cope with it. It has also been stated that the demands adolescents face are exceeding the coping resources that they perceive are available (Allen & Hiebert, 1991). Stressful events may affect not only child and adolescent welfare, but also the developmental process itself (Trad & Greenblatt, 1990). This study is an attempt to provide

A B S T R A C T

The aim of the research described here is to provide knowledge of adolescents and their coping strategies through the construct of mindful coping. Little is known about the contributions of mindfulness to the enhancement of mental health in adolescents. Inspired by dialectical behaviour therapy (Linehan, 1993a, b), we discuss the mindful coping process and investigate how different aspects of this process are related to mental health in a non-clinical adolescent sample. The empirical approach consisted of a cross-sectional study of 652 high-school students from two high schools, covering all streams. The relations between the four proposed mindful coping aspects – awareness, distraction, preventing negative emotions and constructive self-assertion – with psychological symptoms (PS), as well as how these four aspects moderated the relationship of perceived life strains (LS) with PS, were studied. The results show that coping by preventing negative emotions and constructive self-assertion were associated with fewer PS and/or weaker association between LS and PS, whereas coping by use of distraction was related to more PS and did not moderate the association between LS and PS. Finally, coping by use of awareness was related to a stronger association of LS with PS. The results only partly supported our expectations, providing challenging and important knowledge for future research on mindful coping in adolescents.

knowledge on adolescents and their coping strategies by investigating how aspects of mindful coping are related to psychological symptoms, and how such coping might moderate the relationship between stress exposure and psychological symptoms.

Recently, mindfulness has been introduced to young people with psychological symptoms (Singh *et al*, 2007; Zylowksa *et al*, 2008; Biegel *et al*, 2009) and other groups with mental health problems (Kristeller & Hallett, 1999; Singh *et al*, 2006; Hanstede *et al*, 2008). Little is known, however, about how the various qualities of mindfulness might contribute to enhancement of mental health, especially for adolescents in the general population. To contribute to the development of such knowledge, the aim of this study is to investigate how various aspects of mindful coping are related to mental health in a non-clinical adolescent sample. Inspired by perspectives on the effective qualities of mindfulness and the theoretical foundation upon which dialectical behaviour therapy (Linehan, 1993a, b) was developed, we argue that mindfulness is part of the coping process by making adequate coping more accessible to individuals, and includes such aspects as awareness, distraction, preventing negative emotions and constructive self-assertion.

Mindful coping

In the medical and psychological literature mindfulness has emerged as an effective treatment for psychological and somatic symptoms (Brown *et al*, 2007; Grossmann *et al*, 2004; Baer, 2003), and studies suggest that the mechanisms of mindfulness involve both relaxation and important shifts in cognition, emotion, biology and behaviour that work to improve health (Greeson, 2008). The introduction of mindfulness into secular therapeutic settings was initially through Kabat-Zinn's (1982, 1990) programme of mindfulness-based stress reduction and Linehan's (1993a, b) dialectical behaviour therapy (Shapiro, 2009). Dialectical behaviour therapy (DBT) explicitly relates mindfulness and coping through practical skills training (Linehan, 1993b), and so we use DBT as a point of departure for operationalisation of the mindful coping construct. As for behavioural skills targeted in DBT treatment (emotion regulation, interpersonal effectiveness, distress tolerance, mindfulness), these correspond closely to core issues of adolescent development (Rathus & Miller, 2002). DBT is based on the assumption that psychopathology involves four main sectors of psychological problems: disturbed cognition, affective disturbance, impulsivity and unstable relationships. Hence we use parts of the four sectors to provide a foundation for the following four aspects of the mindful coping process: 1) awareness, 2) distraction, 3) preventing negative emotions and 4) constructive self-assertion.

As mindfulness makes the individual capable of being in the present moment as it is, in preference to reacting habitually to it (Brown *et al*, 2007), mindfulness is believed to reduce cognitive vulnerability to reactive modes of mind that might heighten stress and emotional distress or that might otherwise perpetuate psychopathology (Lau *et al*, 2006). Mindfulness practices are believed to increase awareness of patterns of thoughts, emotions and actions, and qualities of mindfulness are related to that of acceptance as a core element in this form of awareness. Discussions have centred on how mindfulness increases the individual's ability to choose how to react to internal and/or external demands, although linking it to the facets of coping has been more or less implicit. However, recently there has been increased focus in the literature on the relation between mindfulness and coping (Tharaldsen & Bru, 2011; Weinstein *et al*, 2008; Feldman *et al*, 2007; Brown *et al*, 2007; Broderick, 2005; Shapiro *et al*, 2006).

Coping has been defined as:

> *constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person* (Lazarus & Folkman, 1984 p141).

Following appraisal theory, Lazarus (1999) emphasises that the individual's cognitive appraisal of transactions with the environment is crucial for the individual's experience of stress and hence coping options. The premise of the theory is that individuals are continuously and constantly appraising their relation(s) with the environment and its implications for their well-being (Lazarus, 1999). Reappraisals involve a process in which one's original appraisal is changed in response to new environmental data, coupled with one's reactions to the stressor (Garland *et al*, 2009). Appraisals and reappraisals generate coping processes, and these processes are viewed as cognitive-motivational processes influencing and/or changing relational meanings (Lazarus, 1999). Mindfulness may aid coping in allowing more adaptive appraisals and thus make more adequate coping responses available to the individual (Garland *et al*, 2009; Weinstein *et al*, 2008; Foster, 2007; Shapiro *et al*, 2006).

Shapiro *et al*, (2006) proposes that Bishop and colleagues' (Bishop *et al*, 2004) definition of mindfulness brings about a shift in perspective to one of re-perceiving. Re-perceiving is synonymous with decentring, among others, as it refers to the ability to observe thoughts and/or feelings as temporary

events in the mind, in contrast to true self-reflections that necessitate responses. Decentring and positive reappraisals are thus distinct, yet related, constructs (Garland *et al*, 2009). Whereas reappraising involves alternate appraisals of stressing events through construction of new relational meanings of stressful encounters, re-perceiving is defined as merely the ability to disidentify from the content of consciousness and hence perceive moment-to-moment experience with greater clarity and objectivity. The link between reappraisal and re-perceiving is that mindful decentring or re-perceiving opens one to the cognitive shift entailed in reappraisals and so to the possibility of positive reappraisals (Garland *et al*, 2009). Thus mindfulness may aid coping by giving the individual the chance to decentre current demands and may, along with other mechanisms of mindfulness such as self-regulation, make the individual more capable of responding adequately to the situation at hand. Similar arguments have been presented elsewhere (Garland *et al*, 2009; Foster, 2007; Mace, 2007).

Mindful coping and mental health

Mindful coping is here linked to mental health through the four mindful coping aspects mentioned above. First, mindfulness practices are expected to have a positive effect on disturbed cognition, as mindfulness creates a distance from whatever is occurring and hence opens one to a more constructive approach to challenges of cognition. Mindfulness can thus be seen as an initial coping effort because one enters a mindful state with the aim of choosing more constructively further functions of coping. We believe that awareness opens one to different aspects for evaluation and hence increases the individual's further coping options through the already-mentioned qualities such as decentring and re-perceiving. Cognitive theory assumes that cognition affects emotions, and mindful awareness of the present moment and acceptance of what the present entails are, therefore, likely also to reduce affective disturbance by generation of more constructive cognitions. Constructive cognitions will also decrease the risk of rash or impulsive reactions.

Second, impulsivity may also be reduced by learning adequate distractions. When done mindfully and over a short time, distractions can provide a necessary break from a stressor so that one can tolerate emotional distress until an adaptive coping strategy is found (Lieb *et al*, 2004). Adequate distractions entail actively turning one's attention away from stressors towards pleasant or neutral thoughts and actions (Nolen-Hoeksema, 1991), and the relation between mental health and distraction, are, in this study, based on distraction as 'healthy distraction' (Salovey *et al*, 1999), that is, a short-term coping strategy providing a break from the stressor. Mindful distractions, either mental or physical, are thought to increase the individual's ability to bear pain skilfully (Linehan, 1993a).

Third, a main challenge in affective disturbance is the tendency to experience negative affect. A central aspect of mindful coping is therefore to instigate activities that prevent negative emotions; this is related to well-being through the positive influence that mental and physical preparation for future situations that necessitate coping may have on psychological well-being. Through qualities that emphasise physical well-being and increase one's sense of mastery, the relation between mental health and building coping resources is based on the effect of physiological health on psychological well-being through sleep (Ford & Kamerow, 1989; Vgontzas & Kales, 1999; Sivertsen *et al*, 2009), dietary patterns (Hallahan & Garland, 2005; Samieri *et al*, 2008; Oddy *et al*, 2009), physical activity (Fox, 1999; Motl *et al*, 2004; Craft & Perna, 2004; Stathopoulou *et al*, 2006; Blumenthal *et al*, 2007; Stein *et al*, 2007; Sagatun *et al*, 2007; Deslandes *et al*, 2009; Larun *et al*, 2009), as well as on theories of self-efficacy (Haidt & Rodin, 1999; Bandura 2006).

Finally, relational aspects of mindfulness have been emphasised in various ways (Linehan, 1993a; Kramer, 2007). In DBT, skills are related to increasing stable relationships and avoiding unstable ones by focusing on effective ways to achieve one's objectives while simultaneously maintaining relationships and self-esteem. When done mindfully, such conversation is effective both before, as preparation, and during situations where such knowledge is necessary. Constructive self-assertion is also related to social support and self-esteem. Enhancing self-esteem is enhancing a protective factor against stress, and self-esteem is for adolescents, among others, enhanced by developing a base of positive interactions with adults and others (Smith & Carlson, 1997). High self-esteem protects against psychological and psychosomatic symptoms (Tayler & Stanton, 2007) and is a quality of constructive self-assertion through its focus on maintaining and/or improving one's self-respect. Learning how to communicate clearly is considered a social skill that protects against stressors (Smith & Carlson, 1997) and is believed to provide adolescents with the ability to resist peer pressure, among other things. It is here argued that increasing adolescents' constructive self-assertion also increases their social support, another significant coping resource (Taylor & Stanton, 2007).

Overall, the four mindful coping aspects presented here are believed to protect against mental ill-health by protecting against the negative influence of life stress. The aim of this study is to investigate this assumption by examining

the relations between these aspects of mindful coping and psychological symptoms, and whether or not these aspects moderate associations between perceived life stress and psychological symptoms.

Methods

Sample

A sample of students from two high schools was recruited. One school was in a rural area, and the other was close to one of the bigger cities in the region. The schools had approximately the same number of students, covered all courses of study and recruited students from a variety of social strata. Because differences in student samples between schools in Norway are relatively moderate (Marks, 2006), the sample could be considered representative of young Norwegians in general. Student ages ranged from 16 to 20 years. The questionnaire was returned by 750 respondents, a response rate of 85%. The dataset was reviewed for the quality of responses. Respondents were removed from the dataset if they indicated by written statements in the questionnaire that they had been poorly motivated to fill in the questionnaire in a serious manner. Missing data was replaced by the scores for nearby points.

The percentage of missing data varied between 3.0% and 5.8% for the Mindful Coping Scale (MCS: Tharaldsen & Bru, 2011) and between 4.3% and 7.5% for the Symptom Checklist-90-Revised (SCL-90-R: Derogatis, 1983), the measurements used in this study (see below). Respondents with more than 25% of missing items on the scales were removed from analyses, resulting in a sample of 652 respondents for the analyses. The majority of students with low-quality responses attended vocational courses of study and were males. The final sample comprised 49.1% males and 50.9% females; 44.9% were on vocational courses and 55.1% were on general educational courses.

Procedure

The school administered the survey in accordance with written instructions from the researcher. As adolescents can be regarded as a vulnerable group and considering that the measurements tap areas of specific concern for adolescents, ethical considerations were important. Students and parents received written information about the study. Students above the age of 18 were provided with opportunities to decline participation at any stage in the research process, as were parents of students under the age of 18. Informed consent was given by all participants before data collection; for participants under the age of 18, informed consent was given by their parents. The questionnaire was completed during school hours. Statistical analyses included descriptive statistics, Cronbach's alpha, Pearson product–moment correlation and multiple regression analysis, all performed using the SPSS 15 program (Norusis, 2008). In the multiple regressions measures of the aspects of mindful coping, as well as variable assessing, perceived life strains were included as independent variables. In addition, interaction terms between the measures of mindful coping and perceived life strains were included to investigate how aspects of mindful coping moderated the relationship between perceived life strains and psychological symptoms. Finally, to be able to control for possible confounding variables and to increase internal validity, year of birth, gender and courses of study were controlled for.

Measurements

Mindful Coping Scale (MCS: Tharaldsen & Bru, submitted) The MCS is a 23-item, self-report questionnaire measuring four aspects of mindful coping, and is based on theory of mindfulness and coping from a dialectical behaviour therapy perspective (Linehan, 1993a, b). The rationale for the model measurement is based on the four aspects of affect, cognition, impulsivity and relationships, and on strategies for regulating them. The scale was constructed with four sub-scales to assess four aspects of mindful coping: 'Awareness', 'Distraction', 'Preventing negative emotions' and 'Constructive self-assertion' (see Appendix for subscales and item wording). Implicit in 'Awareness' are mindfulness qualities such as observing and describing the present in a non-judgemental manner, emphasising acceptance of what is. Within 'Distraction', qualities of constructive distraction in terms of 'healthy distractions' (Salovey *et al*, 1999) are emphasised, because they allude to appropriate distracting behaviour with functional value and so can decrease impulsive actions that might produce more problems than they solve and be an obstacle to bearing pain skilfully to cope with it better. 'Preventing negative emotions' contains qualities that may increase positive feelings and includes activities that reduce vulnerability to negative emotions. Finally, 'Constructive self-assertion' contains qualities that prepare and increase awareness of either a forthcoming or an ongoing interpersonal situation with the aim of acting efficiently.

Each item is rated on a 5-point Likert scale (1 = *never/hardly ever,* 5 = *always*). Reported reliability values in terms of alpha values ranged from 0.76 to 0.85. The coefficients of correlations ranged from 0.43 for the correlation of 'Awareness' with 'Constructive self-assertion' to 0.23 for the correlation of 'Distraction' with 'Constructive self-

assertion'. The four factors accounted for 56% of the total variance in the items. Eigen values ranged from 1.73 to 6.44, while explained variance ranged from 5–26% . Results of confirmatory factor analysis indicated a close fit for the four-factor model (PGFI = 0.74, GFI = 0.93, TLI = 0.92, CFI = 0.93, RMSEA = 0.05; 90% CI 0.047-0.057). The MCS coefficients of reliability ranged from .75 to .84 in this study.

Symptom Checklist-90-Revised (SCL-90-R: Derogatis, 1983)
The SCL-90-R is a 90-item, self-report symptom inventory measuring current psychological symptom status. Each item is rated on a 5-point scale of distress (0 = *not at all*, 4 = *extremely*). The scale includes nine primary symptom dimensions (somatisation, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism) and three global indices of distress, of which the Global Severity Index (GSI) is the most important because it is the best single indicator of the current level or depth of disturbance (Ogles *et al*, 1996). The GSI was used in this study. Higher GSI scores indicated higher overall distress. The SCL-90-R has been found to have high reliability in terms of alpha values. In this study the coefficient of reliability was .98.

Perceived life strains
For this study, perceived life strains during the previous 12 months were measured by a checklist constructed on the basis of a negative life event list for adolescents and a list of long-lasting adversities (Ystgaard, 1997). The checklist comprises six items containing the following life events: remarriage or divorce of parents, unemployment of parent(s), serious illness or injury for either the adolescent or someone close to him/her, and other perceived life strains. In addition the checklist comprises four items concerning the following adversities: academic problems, problems concerning friends, problems concerning parents and problems concerning teachers. Respondents were asked to indicate whether or not they had experienced any of the perceived life strains presented on a two-step scoring format (*yes* or *no*).

Results

Descriptive analyses

The MCS-items were rated on a 5-point Likert scale, and mean scores ranged from 2.34 ('Distraction') to 2.95 ('Constructive self-assertion'). 'Perceived life strains' had a scoring range of 1–10 and mean score was 1.52. The results are shown in ***Table 1***, below. More than half (56.3%) reported no perceived life strains in the preceding 12 months, 21.6% reported one negative event, and 22.1% reported two or more perceived life strains. The largest number of reported strains or adversities was six.

TABLE 1 ***Descriptive Statistics of Independent Variables (N = 652)***

Subscales*	Mean	s.d.**	Scoring range
Perceived life strains	1.52	1.67	1–10
Awareness	2.68	0.78	1–5
Distraction	2.34	0.82	1–5
Preventing negative emotions	2.68	0.83	1–5
Constructive self-assertion	2.95	0.85	1–5

**Perceived life strains and MCS-subscales; **Standard Deviation*

Correlation between independent variables

The MCS-subscales 'Distraction' and 'Awareness' correlated with the control variable 'Gender'. The MCS-subscale 'Constructive self-assertion' had the highest score. The coefficients of correlations ranged from 0.00 for the correlation of 'Perceived life strains' with 'Preventing negative emotions', to 0.43 for the correlation of 'Awareness' with 'Constructive self-assertion'. As for 'Perceived life strains', the highest correlation was with the MCS-subscale 'Distraction'. Results are shown in ***Table 2***, overleaf.

Associations of mindful coping and perceived life strains, with psychological symptoms

'Perceived life strains' showed the strongest bivariate as well as multivariate association with scores for GSI, indicating that the more the reported perceived life strains, the more symptoms of mental ill-health there were (***Table 3***, overleaf). Regarding the MCS subscales, 'Distraction' yielded the strongest multivariate and bivariate associations with GSI scores, and the associations were positive, indicating that more reported use of distraction was associated with more psychological symptoms. On the other hand, scores for 'Preventing negative emotions' were statistically significant, although they had modest negative associations with GSI scores, reflecting a slight tendency for students reporting much use of this coping strategy to report fewer psychological symptoms. Among the whole sample, associations of 'Constructive self-assertion' and 'Awareness' with GSI scores were found to be non-significant. However, among the sample of students reporting two or more perceived life strains, a weak negative association was found for 'Constructive self-assertion' and a weak positive association was found for 'Awareness'. These findings are in line with the statistically significant coefficients for the interaction terms, including

TABLE 2 *Correlation Matrix for the Independent Variables (N = 652)*

	Gender	Age	Course of study	Perceived life strains	Awareness	Distraction	Preventing negative emotions
Age	-.02	–					
Course of study	-.08	-.23**	–				
Perceived life strains	-.14	.02	-.06	–			
Awareness	-.17**	-.15**	.11*	.07	–		
Distraction	-.36**	-.07	.05	.21	.38**	–	
Preventing negative emotions	.01	-.10*	.07	.00	.39**	.25**	–
Constructive self-assertion	-.07	-.18**	.20**	.04	.43**	.24**	.34**

*p<.05; **p<.01

these two variables and scores for 'Perceived life strains' yielded by the regression model for the whole subject sample.

Interaction terms were included in the regression model mainly to detect whether associations between 'Perceived life strains' and the GSI were significantly dependent on scores on the MCS-subscales. The results showed significant interactions for 'Awareness', 'Preventing negative emotions' and 'Constructive self-assertion'. Follow-up analyses were performed to investigate the differences in association between scores for 'Perceived life strains' and GSI among the 10% of students with the lowest vs. highest scores on 'Awareness', 'Preventing negative emotions' and 'Constructive self-assertion'. Gender, age and course of study were entered as covariates. Among the 10% of students with the lowest scores for 'Awareness', the coefficient of partial correlation between 'Perceived life strains' and GSI was 0.31 ($N = 67$; $p < 0.05$), compared with 0.66 ($N = 62$; $p < 0.01$) among the 10% of students with the highest scores for 'Awareness'. For 'Preventing negative emotions', the coefficient of partial correlation was 0.53 ($N = 77$; $p < 0.01$) among the 10% with lowest scores, compared with 0.39 ($N = 73$; $p < 0.01$) among the tenth with the highest scores. Finally, among the tenth with the lowest scores for 'Constructive self-assertion', the partial correlation was 0.67 ($N = 73$; $p < 0.01$), compared with 0.35 ($N = 65$; $p < 0.01$) among the tenth with the highest scores.

TABLE 3 *Beta-coefficients and Pearson Product Moment Coefficient and Results from Multiple Regression for Associations of Control and Independent Variables with GSI-scores† among the Whole Sample (N = 652) and the Sub-Sample of Students Reporting Two or More Perceived Life Strains (N = 263)*

	GSI scores			
	The whole sample		Students reporting two or more perceived life strains	
	β	*r*	β	*r*
Gender	-0.05	-0.20**	-0.06	-0.15*
Age	-0.04	0.00	-0.04	0.00
Course of study	-0.05	-0.07	-0.06	-0.07
Perceived life strains	0.41**	0.49**	0.34**	0.38**
Awareness	-0.06	0.06	0.09	0.09
Distraction	0.31**	0.37**	0.29**	0.29**
Preventing negative emotions	-0.14**	-0.07	-0.19**	-0.14*
Constructive self-assertion	-0.01	0.02	-0.12*	-0.09
Awareness x Perceived life strains	0.10**			
Distraction x Perceived life strains	0.04			
Preventing negative emotions x Perceived life strains	-0.09*			
Constructive self-assertion x Perceived life strains	-0.13**			
R^2-change interaction terms	0.028**			
R^2	0.369**		0.272**	

† *General Symptoms Index scores; * p< .05; ** p< .01*

Discussion

The main aim of this study was to investigate the possible contribution of mindful coping to the enhancement of mental health in a non-clinical adolescent sample. Generally, it was expected that much use of mindful coping would be associated with fewer psychological symptoms. Our expectations were only partly supported, however.

Concerning prevention of negative emotions, the pattern of results was in line with expectations, although the associations were rather weak. There was a slight tendency for students who reported more use of this coping strategy to report fewer psychological symptoms, as well as a tendency of perceived life strains to be less closely linked to such symptoms in these students. Both these findings suggest that this strategy, emphasising the influence of physiological health on psychological well-being, has a stress-buffering property. Such findings were expected, since the traits of increasing mastery (Haidt & Rodin, 1999; Bandura 2006), awareness of dietary patterns (Hallahan & Garland, 2005; Samieri *et al*, 2008; Oddy *et al*, 2009), sleep patterns (Ford & Kamerow, 1989; Vgontzas & Kales, 1999; Sivertsen *et al*, 2009), exercise and staying active (Fox, 1999; Motl *et al*, 2004; Craft & Perna, 2004; Stathopoulou *et al*, 2006; Blumenthal *et al*, 2007; Stein *et al*, 2007; Sagatun *et al*, 2007; Deslandes *et al*, 2009; Larun *et al*, 2009) have been found to be associated with psychological well-being.

Based on the influence of social support and self-esteem on mental health (Taylor & Stanton, 2007; Smith & Carlson, 1997; Ystgaard, 1997; Haidt & Rodin, 1999; Bandura 2006), it was expected that the coping strategy 'Constructive self-assertion' would, through effective communication, serve to uphold or increase social support and self-esteem. Expected to reduce the effect of negative life events, social support may provide a buffer against such experiences. The finding of a significant tendency for perceived life strains to be less closely linked to psychological symptoms among students who reported more use of constructive self-assertion supports this notion. As crisp and clean communication is considered a social skill that protects against stressors (Smith & Carlson, 1997), those who report using it more may experience greater self-esteem as well as more positive interactions with others, which again may increase their social support, also considered a significant coping resource (Taylor & Stanton, 2007). Overall, the results supported the mental health promotion property of this aspect of mindful coping.

Based on those theories of mindfulness which assert that awareness in the form of decentring and re-perceiving may improve coping and mental health (Shapiro *et al*, 2006; Garland *et al*, 2009), high scores for awareness were expected to be related to fewer psychological symptoms and to relative weak associations between perceived life strains and psychological symptoms. However, the results indicated that more use of awareness was not associated with fewer psychological symptoms but with stronger associations between perceived life strains and psychological symptoms. These unexpected findings could imply that, in adolescence, much use of awareness may not reduce, but rather increase, the negative effects of stressors. One reason for this may be that awareness brings attention to the present moment, either good or bad, so the young person might become aware not only of good thoughts and/or feelings, but also of perceived life strains. The latter may bring about self-consciousness regarding experienced life difficulties which makes the young person more sensitive to such experiences, and hence increase psychological symptoms. This is in line with the assumption that self-focus tends to elevate existing internal states (Carver & Scheier, 1981) and that people who are made self-aware when depressed are at increased risk of prolonged depressive symptoms through increased rumination, which is expected to maintain not only an existing depressive mood but also other negative moods (Morrow & Nolen-Hoeksema, 1990).

Another explanation may be that awareness may be difficult to grasp for this age group, especially regarding the implicit acceptance within mindful awareness. With regard to accepting awareness, it has been suggested that acceptance may be counterproductive, in that allowing an emotional response to occur could expose individuals to overwhelming negative affect, which again may augment the negative emotional and cognitive consequences of the processing of distressing material (Dunn *et al*, 2009). It has also been argued that acceptance may be both an adaptive or active and maladaptive or resigning coping reaction (Nakamura & Orth, 2005). Active acceptance means acknowledgement of a difficult situation and dealing with it constructively. Resigning acceptance involves abandonment of outward-directed actions, combined with negative expectations for the future. Active acceptance is thus a form of emotion-focused coping and has been positively related to mental health, while resigning acceptance has been negatively related to mental health (Nakamura & Orth, 2005). However, it may be that the young people in this sample were not aware of this distinction and therefore interpreted the form of awareness presented as resigning acceptance or helplessness. It may also be that the young people find it more difficult to relate to the present moment in a more neutral and less action-orientated manner, feeling that lack of concrete action equals resigning acceptance. It has been debated whether mindfulness merely leads to less use of avoidant coping strategies or, additionally, to more use of approach coping (Weinstein *et al*, 2008; Sears

& Kraus, 2009), questioning how explicit a coping strategy awareness may be. Finally, the sample was not trained in using awareness, which could also explain our findings, and could indicate that a period of time spent in practising awareness perhaps might be beneficial for this sample. Regarding our finding that those who report no perceived life strains benefit from awareness, the reasons may be that it is easier to accept challenges and problems of various kinds when the situation or demands are not too overwhelming.

Our expectation that distraction would be related to fewer psychological symptoms was based on theories of 'healthy' distractions (Salovey *et al*, 1999) that refer to active attempts to deal with a stressful situation by focusing on and/or engaging in an alternative and more pleasurable activity (Livneh *et al*, 2001; Skinner *et al*, 2003). Discussions have centred on the effectiveness of distraction on distress tolerance and/or mood (Linehan, 1993a, b; Morrow & Nolen-Hoeksema, 1990; Nolen-Hoeksema *et al*, 1993; Broderick, 2005; Eber & Tesser, 1992; Hamilton & Ingram, 2001). In our study, the association of distraction with psychological symptoms was the opposite of what was expected. There was a distinct association between high reported use of distraction and high scores on psychological symptoms. There was no tendency for associations of perceived life strains with such symptoms to be weaker among students reporting much use of distraction. Hence the results do not support a stress-buffering property of distraction in this adolescent sample. There may be several reasons for this. One may be that the young people are not trained in this strategy. Another explanation may be that the young people have not developed the necessary skills for using distraction adequately, that is mindfully and strictly short-term. From a cognitive perspective, it is crucial that distraction is exercised in an intentional manner, and that is as a short-term break from stressors. If used for longer periods of time, distraction may lead to avoidance (either active or passive), and the suppressed thoughts and/or feelings will at some point return with renewed strength. In such cases, what are intended to be 'healthy distractions' become 'unhealthy distractions' and so the young person may use distraction inadequately as a coping strategy.

Methodological considerations

The study is not based on general populations, and use of a student sample may in general have implications for the study. It has been said that adolescents' self-reports of their own affective states correspond better with independent psychiatric assessments than others' reports (Rutter, 1986). However, it must be taken into account that the sample had not been adequately trained in these aspects of mindful coping. For instance, an alternative and methodological explanation for the positive relation between distraction and mental ill-health may be that the more problems or challenges young people face, the more they are in need of distraction. As the study has a cross-sectional design, causal inferences cannot be drawn between distraction and psychological symptoms; it might be that those experiencing more symptoms of mental ill-health use more distraction, and not necessarily the other way around. In other words, if adolescents feel depressed or in a negative mood, they might try to ease symptoms by distracting themselves from the stressors.

It seems to be difficult to distinguish empirically adequate and inadequate distractions. It is important to be explicit about not only how distraction is defined, but also how to use it. If so, it would be interesting to investigate whether the young people will benefit from mindful distractions over a longer period of time. This is also the case for the other three aspects of mindful coping.

Conclusion

The results suggest that the four aspects of mindful coping introduced in this study could work in different ways. Awareness and distraction differ from preventing negative emotions and constructive self-assertion in that the two former are of a more abstract quality. Possibly the young people are cognitively unprepared for, or too young to make use of, awareness and distraction. Preventing negative emotions and constructive self-assertion have a stronger connection or resemblance to social skills training, so such coping strategies may be more comprehensible, concrete and cognitively manageable, and thus easier for young people to use to deal with stressful encounters.

The fact that the results suggest that use of awareness and distraction may be associated with more psychological symptoms is both challenging and important. It may indicate that, when interventions for non-clinical adolescents are developed that consist of any of the four coping aspects discussed here, clear definitions and explanations of adequate use and training, especially in awareness and distraction, may be necessary. Further research is needed to learn more about the relation between distraction and its relation to mental health, especially considering the contrasting research findings on this topic. This has also been stated elsewhere with regard to mindfulness training and distractive coping and its influence on distress in other populations (Jain *et al*, 2007). Our findings may also indicate that one should be careful about introducing awareness and distraction as coping strategies for adolescents at all. In any case, the

developmental stage of the young people should be taken into consideration, and further inquiries should be made about the four mindful coping aspects presented here. A longitudinal study could contribute to this.

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APPENDIX: Subscales and item wording of the Mindful Coping Scale (MSC)

Subscales and items

Awareness (*'When faced with difficult choices, I try to:'*)

- Find a balance between reason and emotion
- Consider what is actually going on, not how I wish it were
- Take a non-judgemental stance
- Create inner distance to observe the situation
- Focus on one thing at a time
- Create inner distance to describe the situation

Distraction (*'To get through difficult moments, I:'*)

- Use my touching (touch something comfortable)
- Use my vision (look at something beautiful)
- Use my smelling (smell a scent I like)
- Use my tasting (eat something I like)
- Use my hearing (listen to something I enjoy)
- Affect my emotions (by creating another emotion)
- Use inner pictures (imagine calming scenes)

Preventing negative emotions (*'To prevent negative feelings to arise, I:'*)

- Increase my sense of mastery (do something I am good at)
- Stay active
- Work out (get enough exercise)
- Eat right (not too much or too little; food that is good for me)
- Sleep right (not too much or too little)

Constructive self-assertion (*'When making requests or rejections, I try to:'*)

- Reject (say no) in a manner which maintains a good relationship
- Reject (say no) in a manner which maintains my self-respect
- Reject (say no) in a manner which maintains my objective
- Request (ask) in a manner which maintains a good relation
- Request (ask) in a manner which maintains my objective

Article III

Tharaldsen, K. B. (In press). Mindful Coping for Adolescents: Beneficial or Confusing? *Advances in School Mental Health Promotion*

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Article IV

Tharaldsen, K. B., & Bru, E. (In press). Evaluating the Mindfulness-Based Coping Program MBC: An Effectiveness Study with a Mixed Model Approach. *Mental Illness.*

Abstract

Background: Because more than 450 million people worldwide suffer from mental disorders, interventions that promote mental health have been called for. Mindfulness-based coping (MBC) is an intervention based on coping skills from cognitive behavioral therapy integrating mindfulness practices. The aim of this study was to examine the effectiveness of the MBC program for psychiatric outpatients. **Design and methods:** The study employed a mixed research method with a qualitative approach using semi-structured patient interviews and clinical assessments from patients' therapists and a quantitative approach using instruments measuring mindful coping, mental ill health, and life satisfaction. The study sample included 38 psychiatric outpatients from a district psychiatric outpatient service (DPS) in Norway. **Results:** Results suggested that although use of the different skills varied, participants had a positive experience with the program and positive changes in psychological functioning were observed. **Conclusion:** Findings provide knowledge regarding the design of interventions integrating mindfulness to promote more adequate psychological coping.

Introduction

Mental health is considered the foundation of individual well-being and the effective functioning of a community.[1] However, more than 450 million people worldwide suffer from mental disorders, whereas many more experience mental problems.[1]Although Norway has fewer problems regarding mental health than other European countries, issues such as symptoms of anxiety and depression, sleep deprivation, and reduced coping ability are widespread in the Norwegian population.[2] Based on studies from Norway and other Nordic countries, important measures in promoting the population's mental health include support groups, self-help groups, and psycho-educative programs[3] aiming to empower individuals.

The discussion above points to a need for interventions that aid people in coping with emotional and/or stress-related problems so as to prevent and treat such problems. One such intervention is mindfulness-based coping (MBC).[4] MBC is an intervention based on coping skills from cognitive behavioral therapy (CBT) that integrates mindfulness practices to help psychiatric outpatients deal with emotional and stress-related problems. The main objective of this effectiveness-focused study was to evaluate the MBC program by using a mixed model design.

Background

MBC was developed with the aim of providing a transdiagnostic group-based program for psychiatric outpatients.[4] MBC aims to help participants with inter- and intrapersonal emotional and stress-related problems, and draws heavily upon two established and documented traditions within psychiatric health services: mindfulness and CBT. Mindfulness as a state-like quality refers to being in the present moment, intentionally and without judgment toward whatever the moment brings in the way of thoughts, feelings, or bodily sensations. Kabat-Zinn's[5] commonly used definition of mindfulness describes it as "paying attention in a particular way: on purpose, in the present moment, and non-judgmentally," explaining mindfulness as a dynamic process of life that includes both intra- and interpersonal aspects.[6] The use of mindfulness in integrative medicine[7] was first presented through mindfulness-based stress reduction (MBSR) for patients with chronic pain disease[8,9] and soon followed by dialectical behavior therapy (DBT) for women with a borderline personality disorder,[10,11] acceptance and commitment therapy (ACT) for psychotherapy in general,[12] and mindfulness-based cognitive therapy (MBCT) for preventing a relapse of depression.[13] These four interventions are collectively referred to as "third wave cognitive therapies,"[14] and much of the current psychological literature on mindfulness is based upon these therapies and the cognitive operationalization of mindfulness they have provided.

The last decades have seen increasing research into mindfulness and mindfulness-based psychological interventions.[15,16,1718,19,20,21] Numerous variants of these four mindfulness-based interventions (MBIs) have since been developed using modified content and targeting other populations.[6] Such mindfulness-based approaches vary in their components, although they all include meditation practices, behavioral practices, cognitive strategies, and/or emphatic strategies,[22] as does MBC. Cognitive behavioral coping skills in MBC are mainly derived from the skills training program of DBT, which is part of the more complex and holistic treatment program for the DBT target group. However, the dialectical approach, a main focus in the DBT program, was removed from MBC, as was the training in certain skills specific to the DBT target group; however, other exercises were added. The main reason for such adjustments was to design MBC as a transdiagnostic group program specifically for psychiatric outpatients with emotional and stress-related problems.

Following the above, the main themes of MBC are mindfulness exercises, skills for coping with distressing situations and negative emotions, and practical training in handling relations. One specific focus of MBC is awareness training, emphasizing nonjudgmental acceptance of situations and emotional experiences connected to them. Such awareness is thought to bring forth more adaptive coping strategies. Research has demonstrated the importance of interpretation of stressful encounters compared to the situation experienced as stressful, and how the latter has less influence on emotional outcome of the situation than the former. Furthermore, some researchers have suggested that appraisal processes may affect outcomes directly[24] and that a focus on appraisal processes in preference to mere coping may have a positive influence on how one perceives stress.[25] Although not differentiating as clearly between the appraisal process and coping, this is consistent with Lazarus'[26] perspective on the meaning of appraisal in coping with stress. In the short term, awareness-training can lead to decreased rumination and less impulsive action in that one does not allow

negative thoughts, feelings, or impulses to guide one's life or actions. More specifically, it may reduce potential self-blame and rumination, as well as general distress. In the long term, this may further lead to an accepting attitude toward difficult situations and emotions that arise in life. This acceptance is likely to enhance the appraisal of problematic thoughts, actions, and/or situations; in turn, this may allow for more adequate coping.

The use of coping skills for constructive self-distraction is another specific topic in the MBC program, referring to so-called "healthy distractions,"[27] (i.e., mindful and short-term). This involves using distractions to better tolerate negative arousals, but without falling into long-term avoidance. In the short run, by creating necessary mental breaks from distressing situations, mindful distractions help one to avoid acting impulsively and perhaps inadequately, which may lead to self-criticism and negative thinking. This makes it possible to get through distressing situations when for some reason it is inappropriate to deal with the distress immediately. Thus, constructive self-distraction can allow participants to retain coping resources for long-term adequate coping. Regulating affect by learning coping skills that help prevent unnecessary negative emotions from arising is also a specific part of MBC. Such skills do not imply the avoidance of negative emotions, but mindfully building one's coping resources for future reference through taking care of oneself. By learning emotion theory and how emotions work, participants become aware of what emotions can do for and to them. Furthermore, learning how to regulate emotional activation and to seek experiences that increase positive emotions can build coping resources for future coping. In other words, psycho-education on emotions teaches participants skills that help them moderate negative emotions in the short term, as well as skills to increase positive experiences, providing a long-term positive change.

The final specific topic is constructive self-assertion, which emphasizes awareness of one's goals in a given situation, and adequate and mindful interpersonal communication. By

learning to create a balance among one's own needs, social relations, and self-respect, participants learn how to optimize the fulfilling of their own needs while maintaining social relations; they come to value their own meanings. Participants become aware of and reflect on these topics and learn skills to enhance interpersonal situations by improving their arsenal of relational skills (e.g., saying no to requests). Becoming more assertive and aware of what relations with others imply, both good and bad, may increase participants' sense of mastery in relation to others and furthermore encourage participants to employ health-promoting strategies, such as social support. In short, learning to adequately handle relations leads to positive changes in both the short and long term. Thus, the mindful coping aspects of the MBC program can be experienced as useful to participants in terms of both short-term and long-term coping. This can further contribute to positive changes via increased functioning and reduced symptoms of mental ill health.

Generally there has been limited attention in psychotherapy research into understanding therapy processes and patients' perspectives, especially within cognitive behavioral interventions.[28] In line with this, effectiveness-focused research seems to be appropriate for the current study. Effectiveness-focused research involves explaining what makes a treatment work.[29] This implies an emphasis on consumer benefit[30] as well as a broader approach to clinical practice with respect to process and dynamics rather than mere outcome research. By examining how the target group experiences MBC, it may be possible to make the program more motivating and suitable for that target group. The goal of this effectiveness-focused study was therefore to evaluate different aspects of the MBC program and how participants experience these aspects by qualitatively exploring participants' own comprehension of useful skills and potential experience of subjective change and by quantitatively investigating participants' change in symptoms of mental ill health and subjective well-being. Research questions were: Do participants find skills taught useful and,

if so, what skills do participants refer to as useful? Do participants make use of mindful coping skills in daily life and, if so, what skills do they use in daily life and in what situations? Finally, is participation in the MBC program associated with a reduction in symptoms of mental ill health and an increase in psychological functioning?

Design and Methods

One objective for mixing methods is to achieve complementarity, that is, "broader, deeper, and more comprehensive social understandings by using methods that tap into different facets or dimensions of the *same complex phenomenon.*"[31] In the current study, by using a concurrent embedded strategy[31] within a mixed model design,[32] treatment outcome as measured by different instruments (quan) was nested within a study of participants' accounts of MBC (QUAL).

Intervention

Mindfulness-Based Coping

MBC is a manualized educative mindfulness-based coping skills training program developed for psychiatric outpatients[4] at a district psychiatric outpatient service (DPS) located in a district in southwest Norway. DPSs in Norway have responsibility for establishing local mental health care programs to provide services for users in their local environment. MBC was offered as a transdiagnostic group program with the aim of teaching participants coping skills for general life stressors. MBC consisted of 27 weekly group meetings of six to eight participants based on four modules, that is, mindfulness, stress management, affect regulation, and handling of relations. Regarding the mindfulness tradition, MBC was inspired especially

by MBSR and MBCT. Specifically, the 3-minute breathing space, cognitive therapy exercises (e.g., thoughts and feelings exercise), and deliberately bringing difficulties to mind in sitting meditation derive from MBCT. From MBSR, poems such as "The Guesthouse" by the Sufi poet Rumi, exercises using mindfulness in everyday life, exercises for experiencing the present moment mindfully, and 'the raisin exercise' were incorporated into MBC. DBT skills training inspired MBC in terms of structuring the program, in part using mindfulness skills, selected skills for distress tolerance and emotion regulation, and use of homework sheets for skills taught. Additionally, inspiration for using stories, fairytales, and metaphors to highlight important subjects came from ACT, as did the emphasis on acceptance and avoidance. In short, with a main emphasis on skills from the DBT skills training program, parts of MBSR, MBCT, DBT, and ACT believed to be beneficial for the target group were adjusted with the aim of developing the MBC program. The use of short stories, cases, quotations, visualization techniques, comic strips, and role playing were emphasized within MBC. In addition, other coping skills and homework focusing on coping skills inspired MBC, such as investigating personal stressors using worksheets and building coping resources.[33] Each meeting lasted 2 hours and 45 minutes and began and ended with a short mindfulness meditation. Topics discussed were elaborated on through pedagogical methods such as storytelling, reading poems, role playing, discussing quotations, and solving cases related to psychosocial problems. Homework sheets were handed out at each meeting. Because the group members were not allowed to discuss particular private matters such as diagnosis, a therapist was appointed to each participant. Each participant had 10 to 12 meetings with his or her therapist throughout the duration of the program. The objective of participating in individual consultations during the program was to ensure that the participant was able to relate skills from the program to his or her problems; thus, the program was the main topic during these consultations. The educational background of the therapists with patients in the program was

varied, including psychiatric nurses, psychiatrists, psychologists, and social workers. All had experience of working individually with patients attending interventions with elements of mindfulness and cognitive psychology, and, they had all worked within psychiatric institutions no fewer than 15 and no more than 30 years. Criteria for inclusion in the program were the participants' own wish to participate, a therapist's recommendation, a specific and explicit need for at least one of the components of the MBC program (e.g., skills for interpersonal communication), commitment to participate in all modules, a reasonable level of functioning in terms of being able to analyze one's own thought processes, feelings, and actions, as well as status as an outpatient at the clinic at least for the duration of the program. Criteria for exclusion were psychotic patients or patients whose therapists did not believe would benefit from the program, patients with current drug or alcohol abuse, currently suicidal patients, or other patients for whom it was believed that the program in any way constituted a risk factor. Group leaders had all undertaken an MBC instructor training. Their educational background was varied, including nurses, psychologists, occupational therapists, and pedagogues. Two group leaders shared responsibility for each group, and, were present in each MBC-group.

Participants

Purposeful procedures for sampling were used. Participants referred to MBC experienced continual problems of an emotional and stress-related character, including a relational component, and skills from the program were thought to ease these problems. Patients with a serious depressive disorder were not referred to the program, but patients who, for instance, experienced emotional and stress-related distress with depressive symptoms in intercommunicative situations were considered suitable for the program. The main

recruitment criteria were the participants' potential for improving their ability to handle relations, regulate their affect, and manage their stress. All participants were referred from the municipal health services to the same district psychiatric outpatient service. Most of the patients were diagnosed with anxiety, depression, or stress-related disorders, such as bereavement, burnout, and/or relational problems. Group participants were informed about the current study by the research leader and their group leader. Participants in each group were enrolled concurrently, and between-groups enrollment was sequential. Fifty-four participants were included and allocated to seven MBC groups. Sixteen participants dropped out during the course of the program; two were hospitalized, seven experienced severe life changes that challenged program participation (e.g., new family member, change in job/school situation, relocation), two were known to have difficulties fulfilling their commitments, one abused medical drugs, one gave religious beliefs as the reason for dropping out, and three gave no reasons at all. In all, 38 participants finished the program (84.2% female and 15.8% male, M_{age} = 40.4 years, age range 21-72 years). -, . All 38 participants who finished the program were scored by their respective therapist pre- and post-intervention on level of mental ill health in terms of symptoms and functioning.

Measures

Interviews

An interview guide was developed for a semi-structured interview, focusing on participants' reflections on expectations of the program, what coping skills they found useful and in what ways, which skills they found less useful and/or difficult, as well as whether or not they experienced any changes in thoughts or actions as a result of learning coping skills.

***Global Assessment of Functioning – Split Version (S-GAF)*[34]**

The S-GAF is based on the Global Assessment of Functioning (GAF) scale.[35] The GAF scale aims to measure 'adaptive functioning' by having therapists score their patients on psychiatric symptoms and social and occupational functioning levels on a scale of 0 to 100. The main purposes are to reflect the need for psychiatric treatment and to measure treatment outcome.[36] The S-GAF was developed assuming that the scoring of functioning and symptoms refers to different clinical aspects of a psychiatric patient's condition. This split version is divided into one symptom (GAF-S) and one function score (GAF-F), each on a scale from 0 to 100 with a 10-point range. According to Karterud,[34] GAF-F scores ranging from 81 through 100 indicate that the patient functions extremely well regarding work, social activities, leisure, and interpersonal relations. Scores ranging from 61 through 80 indicate an adequate functioning level for patients not currently ill, including passing and situational conditioned functioning without necessarily alarming others. Scores ranging from 41 through 60 show increasing impairment of functioning that is conspicuous to and has consequences for others, including patients not yet recovered to a normal level of functioning after a psychiatric illness. On the GAF-S, scores ranging from 81 through 100 cover joy of life and wellness in relation to minor distressing experiences. Scores ranging from 61 through 80 indicate moderate reactions of distress to easier and limited symptoms. Scores ranging from 41 through 60 indicate evident psychiatric symptoms; the strength of the symptoms will increasingly be a serious nuisance and worry for the patient and people close to the patient experience him or her as in need of psychiatric treatment, although the patient is not considered psychotic. None of the participants in the current study scored below 40, and scores below 40 are therefore not elaborated on. Studies have shown that S-GAF scores from single independent raters hold acceptable reliability.[36]

***Mindful Coping Scale*[37]**

The Mindful Coping Scale (MCS) is a 23-item, self-report questionnaire. The scale was constructed with four subscales to assess four different aspects of mindful coping: awareness, distraction, preventing negative emotions, and constructive self-assertion. Each item was rated on a 5-point Likert scale (1 = *never/hardly ever,* 5 = *always*). Scale validity was acceptable (*Chi-square* = 632.2, *df* = 222) and reported reliability values in terms of alpha values ranged from 0.76 to 0.85.[38] Cronbach's alphas for the MCS subscales ranged from .73 to .82 in the current study.

***Symptom Checklist-90-Revised*[38]**

The Symptom Checklist-90-Revised (SCL-90-R) is a 90-item, self-report symptom inventory measuring current psychological symptom status. Each item is rated on a 5-point scale of distress (0 = *not at all*, 4 = *extremely*). The scale includes nine primary symptom dimensions (somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation, psychoticism) and three global indexes of distress, of which the Global Severity Index (GSI) is the most important because it is the best single indicator of the current level or depth of disturbance.[39] The GSI was used in this study. Higher GSI scores indicated higher overall distress. The SCL-90-R has proven to have high reliability in terms of alpha values. In the current study, the coefficient of reliability was .98.

***The Satisfaction with Life Scale*[40]**

The Satisfaction with Life Scale (SWLS) is a 5-item measure of subjective well-being, assessing global satisfaction with life. The 7-point Likert scale ranges from 1 (*strongly disagree*) to 7 (*strongly agree*), and scores are calculated by summing item ratings to obtain a total. The SWLS has been found to have favorable psychometric properties. The coefficient of reliability was .91 in the current study.

Ethics

The current study was formally approved by the Regional Ethical Committee (Norwegian abbreviation: REK Vest) and has official permission from the Personal Data Registers Act § 9 (Norwegian abbreviation: NSD). Prior to study participation, oral and written information was provided and informed consent forms were distributed to participants. The information and consent form emphasized that participation was strictly voluntary and that participants at any point in time could withdraw their consent. That some participants chose to do so indicates that the participants experienced the study as voluntary. To ensure anonymity, all names mentioned in this study are fictional.

Procedure

Data collection was concurrent. For practical reasons, patient interviews were conducted by the individual participant's therapist at the clinic. All therapists attended a meeting on how to conduct the interviews. If agreed by the participant, the interview was tape recorded in addition to the interviewer taking notes. Each interview required 30 to 45 minutes to carry out. All interviews were conducted within a month after the program ended. Interviews were coded and transcribed verbatim. S-GAF was scored after individual consultations by participants' therapists pre- and post-intervention. All therapists were experienced in scoring S-GAFs on patients. Therapists enclosed the respective scores in envelopes, serving the purpose of keeping scores from the researcher and group leaders until post-intervention. Quantitative data were gathered pre-intervention, post-intervention, and at a three-month follow-up. The respective group leaders administered the survey in accordance with verbal and written instructions from the researcher. The questionnaires were completed after group meetings. The questionnaire required approximately 45 to 60 minutes to complete.

Data Analysis

A parallel mixed analysis was conducted. With the assistance of NVivo 8 Software,[41] qualitative data were analyzed by content analysis. Software tools for computer-based qualitative research provide measures of convenience and efficiency because packages such as NVivo increase the overall level of organization of projects involving qualitative research.[42] To identify skills labelled as useful, how these skills were used in daily life, and the potential experience of change, participants' qualitative data were quantified and references to either skills or module were counted into the predefined categories of awareness, constructive self-distraction, preventing negative emotions, and constructive self-assertion. In accounts where references were made to several modules or to skills from different modules, each reference was counted within the category to which it belonged. Researchers have suggested that counting qualitative data and narrative descriptions may provide more meaning.[43] Furthermore, to understand contextual details, accounts of situations in which participants made use of the skills or modules were explored. Quantitative measures were analyzed by comparing scores at different time points. Statistical analyses of quantitative data included descriptive statistics, reliability statistics (Cronbach's alpha), and repeated measures analyses, all conducted using the SPSS 18 program.[44] In addition, effect sizes were calculated by use of Cohen's *d* estimation. Individual effect sizes were calculated using the formula for Cohen's *d*, but with the individual change score as numerator.

Results

Qualitative Results

Awareness-training

Results from qualitative analyses showed that the majority of participants referred to skills from awareness as useful to them, and, "mindful breathing exercises" and "moment-to-moment experience" were most frequently mentioned. Awareness-skills were also chiefly represented when describing use of skills in situations from everyday life. One participant stated that *"(...) it was at least a way to think 'wow, you are alive, you experience this once in your life, use what you can to experience as much as possible.' And I was fortunate enough to attend the movie festival in Haugesund* [city in Norway] *almost right away. (...) and if it wasn't for me thinking mindfulness it wouldn't have been as great. Instead I would've been a bit scared and lost in that kind of environment. But I was there with glowing eyes and had a wonderful weekend"* (Hulda). Awareness was also referenced to as contributing to change, as in the following example: *"I have experienced very large changes in my own thoughts and actions after the program. I manage to stop.* [I then] *consider what are emotions and what are facts"* (Lena). Another participant stated: *"Now I breathe before I act and before I have to deal with difficult questions. I can actually use my breath to get through difficult situations, and also by taking one moment at a time. I use that part of mindfulness a lot. It has kind of become a part of me after participating in the program, I think. But sure, it was the part we worked with continuously through the program so it just fell into place; there was room for it in my life (...). Right now I mostly use breathing exercises. (...) I have also been good at letting things go. Not clinging to them"* (Sofie).

Constructive Self-Distraction

Regarding useful skills, constructive self-distraction was also mainly referred to. Skills for coping with acute stress, such as "distraction" and "doing something pleasant for oneself," and skills for coping with chronic stress, such as "breathing exercises for acceptance," were emphasized. When describing use of skills in situations from daily life, constructive self-distraction was chiefly represented. One statement pointed to coping with acute distress: *"I deal with stressing situations by sitting down and breathing. When bad thoughts arise, I use distraction skills to get my thoughts on something else"* (Karen). An example of coping with chronic distress through acceptance was the following account: *"I have to mention* [name of son]. *The fact that he was leaving* [for Afghanistan] *was something that I had been dreading very much, just the fact that I had to say goodbye to him. But it turned out ok. I decided that this situation should not get the best of me, I am going to deal with this, I don't want him to see that I get problems with my neck because of this,* [and] *I am going to cope with it. And I did, it was fine. How it turns out after he has left, we don't know"* (Maria). Regarding experience of change in coping "distraction for coping with acute stress" and the skill of "acceptance for coping with chronic stress" were emphasized Examples are: *"I manage to create a distance and see that it's not necessary to use that much energy.* [I] *benefit from leaving the situation, both mentally and physically"* (Ada) and *"(...) on several occasions I manage to choose acceptance although I don't like the situation"* (Linn).

Preventing negative emotions

Preventing negative emotions had fewer references than the other mindful coping strategies, with no specific skills pointing out. This strategy was somewhat referenced to as difficult. Few participants referred to situations in which they had used skills from preventing negative emotions. Still, one example was the following account: *"My husband and I had decided to*

have a quiet conversation, just the two of us. He came home from work and said that some friends had asked him to help them do some work on their building site. My husband said that he wished to work on the site and postpone our conversation. I was mindful of the feeling I experienced and named it. I calmly said: "I don't like this." We talked quietly together, and after a little while I thought that it would be ok for him to go to the site. He chose not to do so and called his friends and postponed the work. We had a great conversation later on that evening, the two of us" (Lena). Skills from preventing negative emotions were the least emphasized as contributors to change, with no specific skill being pointed out as more important. An example is that *"the program has helped me in that I now become less angry when the children defy me"* (Lena). Another participant pointed to difficulties in giving examples of using skills from this module: *"I trust my own feelings more, I can be right even though others don't feel the same.* [It is] *difficult to give a concrete example"* (Kate).

Constructive Self-Assertion

Also constructive self-assertion had somewhat fewer references compared to awareness and constructive self-distraction, and, was referenced to as being somewhat difficult. The skills referenced to as most useful were "rejecting requests" and "being self-assertive", with an example being: *"*[I] *notice the change in my own ways, especially when it comes to saying no.* [I] *experience that people find it ok"* (Mira). One participant stated that skills for constructive self-assertion had helped in that *"I feel that I'm capable of expressing myself in a different manner, solving problems more easily, and that I'm much more confident in my own opinions"* (Edna).

Experience of change, difficult skills, and program expectations

Qualitative findings showed that almost all of the participants (N = 32) expressed that they experienced changes in thoughts or actions as a consequence of participating in the program.

Only two participants did not; one replied a plain *"no"* (Jane) and the other *"not really"* (Thea). Participants who did experience changes referred to those changes as consequences of practicing skills mainly from awareness, constructive self-assertion, and constructive self-distraction. Some participants experienced changes that could not have been foreseen. As one participant stated: *"I don't have anxiety anymore.* [I] *am in a process with my doctor to reduce* [my] *medication.* [The] *challenges in everyday life don't get as big anymore.* [I] *am better at taking care of myself.* [I am] *planning to remove my disability aid.* [I] *believe this is all thanks to the program"* (Randi). Half of the references to skills as difficult were restricted to mindful coping themes, not going into detail on concrete skills, as mentioned by one patient: *"Affect regulation was a bit more vague"* (Tom). Almost half of the participants stated that skills experienced as difficult were only difficult initially and that their understanding increased during the program's course; for example, *"saying no was difficult, but* [is] *easier now"* (Mira). Participants' expectations of the program were categorical in terms of either having expectations ($N = 24$) or not ($N = 10$). The majority of the participants had high expectations of the program, and almost all of these expectations were met ($N = 21$); for example, *"I had huge expectations for stress management. It gave me some tools I use daily"* (Karen). Expectations centered on coping skills to manage specific problems in daily life, such as *"learning ways to deal with my problems and get an easier everyday life, especially regarding stress management and handling of relations"* (Kate). Most of the participants with no expectations did not go into further detail than, for example, *"not really. Started with a white sheet"* (Olga), *"no"* (Jane), and *"not big"* (Tom). One participant stated: *"I didn't have any expectations.* [I] *just decided that 'I'm going to try this program.'* [I] *came to the first meeting with an open mind and from day one the course was fantastic. I have had much use of what I've learned.* [It was a] *great help for me in my situation. I'd say it was a*

turning point in my life" (Lena). None of the participants expressed disappointment with their program participation. Results are shown in Table 1.

Insert table 1 about here

In sum, regarding the research questions, participants referred mostly and almost equally to constructive self-distraction and awareness. Constructive self-assertion had half as many references, and preventing negative emotions half as many as constructive self-assertion. Neither constructive self-distraction nor awareness was referred to as frequently in examples of skills as usefulness. Nor were the two modules referred to frequently as contributors to change in comparison to usefulness. Regarding constructive self-assertion, more references were made in participants' examples of skills used rather than to its usefulness and almost half as many references were made to this module as a contributor to change. In regard to preventing negative emotions, almost half as many references were made to examples of skills used and as a contributor to change than to usefulness. Difficult skills, as such, received few references.

Quantitative Results

Insert table 2 about here

Results from quantitative analyses are shown in Table 2. Results indicate that participants increased their use of mindful coping skills during the course period and that the increment in coping skills was maintained during the follow-up period. Changes from pre- to post- and follow-up tests yielded Cohen's *d* coefficients ranging from 0.59 through 1.01, indicating that increments in the use of mindful coping strategies were relatively large. Moreover, scores for life satisfaction suggest that participants improved their sense of satisfaction with life during the intervention period and that the sense of satisfaction was even more enhanced during the follow-up period. Changes from pre- to post- and follow-up tests yielded Cohen's *d*s ranging from 0.50 through 0.77, indicating a relatively large increase in life satisfaction. Individual effect sizes for the Satisfaction with Life Scale (SWLS) for pre- post- changes showed medium effect sizes of 0.5 or higher among 42.9% of the patients, and large effect sizes of 0.8 or higher among 25.7% of the patients. Accordingly, scores for the Global Severity Index (GSI) dropped significantly during the course period and even more during the follow-up period; changes from pre- to post- and follow-up tests yielded Cohen's *d*s ranging from -.54 through -.88 changes in sample mean scores. For the Global Severity Index (GSI) pre-post changes yielded medium individual effect size scores of 0.5 or higher among 57.1% of the patients, and large effect size scores of 0.8 or higher among 28.6%. Corresponding percentages for pre-follow-up-changes were 57.7% and 34.3%, respectively.

Insert table 3 about here

Both GAF-S and GAF-F scores showed a significant increase from pre- to post-intervention (see Table 3). The number of participants categorized as having adequate or good functioning

increased from 15 in the pre-test to 28 in the post-test, whereas the number of participants categorized with evident symptoms decreased from 27 to 14. GAF-S changes of 4 points or more are considered a reliable change[36], whereas changes of 10 points or more indicate change of symptomatic or functional level. Analyses showed that 71.1% had a GAF-S improvement of 4 points or more, whereas 39.5% of the patients had a S-GAF improvement of 10 points or more. Corresponding percentages for GAF-F were 73.7% and 36.8%, respectively.

Discussion

The main objective of the current research was to evaluate the effectiveness of the mindfulness-based coping program using a mixed model design. Research questions related to the perceived usefulness of skills, utilization of skills, and changes in psychological well-being.

Useful Mindful Coping Skills and Skills Used in Daily Life

Overall, the qualitative findings indicate that participants perceived skills related to awareness and constructive self-distraction as most useful. This finding probably reflects that these aspects of mindfulness are the core of the program and hence were introduced initially and continuously practiced and discussed throughout the program. It is also possible that awareness and constructive self-distraction skills were perceived as the most novel and unique elements of the intervention, compared to other approaches to coping in which the patients may have participated.

Concerning the utilization of awareness and constructive self-distraction skills, findings were more mixed. The quantitative data suggest a significant increase in the use of awareness and self-distraction from pre- to post-intervention, an increase that was maintained in the follow-up assessment three months after the intervention ended. On the other hand, qualitative data contained markedly fewer references to the use of awareness in examples from daily life and constructive self-distraction skills than to the perceived usefulness of such skills. Regarding awareness, findings could reflect that awareness is a relatively abstract state of mind that can be challenging to implement in stressful situations. The discrepancy between reported usefulness and examples of use could also be due to the fact that the ability to be in the present moment, as well as to tolerate stressful feelings and bodily sensations, could be closely related to the individual's personality or even biological features[45,46] and, therefore, difficult to change. Similarly, complicated problems and resistance,[47] highly avoidant patients,[48] and other difficulties related to pathology[28] in CBT interventions may hinder patients from tuning in to their own experiences. These arguments may also apply to constructive self-distraction for chronic distress. However, findings are a bit puzzling, since distraction skills for acute distress were designed to be concrete and easy to implement in daily life situations.

Findings indicate that participants see potential for the use of awareness and constructive self-distraction skills, although some modifications of the MBC program may be necessary to make these skills more applicable to participants. Mainly drawing from experiences with CBT, Lambert[47] distilled the motivational patient factor as one main factor promoting nonresponse to treatment, especially in regard to homework assignments. This is supported elsewhere.[48] Hence, an emphasis on educative aspects within MBC could be adequate to increase applicability of skills presented. Therefore, a potential fruitful perspective on the aspect of motivating for change is Roger's[49] learner-centered teaching,

emphasizing among other factors a focus on background and experiences of the learner, making the learning process relevant to the learner, and facilitating open-mindedness for learning. Managing motivation and ambivalence in a group format has been called a "therapeutic art"[50] and may be challenging. Suggestions for improving memory of coping skills learned include having clients take notes during sessions, writing reminders regarding homework, using written assignments between sessions, and engaging in behavioral experiments;[48] in other words, one should focus on the program as a learning process rather than a therapeutic intervention. This can perhaps inspire MBC group leaders to focus even more on the learning process and to use pedagogic initiatives to make awareness and constructive self-distraction more transferable from the course setting and, hence, more applicable in the real world. The relational and social context in which patients make sense of difficulties conflicting with CBT models[28] can make it problematic for participants to generalize what they have learned. One modification regarding MBC could be to ensure that group leaders are more cognizant that awareness and constructive self-distraction skills can be difficult to apply in stressful situations between sessions. The difficulty of changing long-established habits in a short time is another challenge learned from CBT.[28] Within MBC, one should probably put stronger emphasis on establishing concrete and realistic goals for behavior change and encourage participants to practice between meetings, in both relaxed and stressful situations. A stronger emphasis on smaller goals between sessions (e.g., improve relational skills) as well as having a superior goal with participation (e.g., acceptance of stressor such as diagnosis) may help participants reach their goals of change step by step and increase their sense of mastery. Furthermore, emphasizing mindfulness practices between sessions may make awareness more applicable to participants.

Findings concerning the prevention of negative emotions and constructive self-assertion demonstrated a somewhat different pattern. As for awareness and self-distraction,

the quantitative data suggest a significant increase in the use of these coping strategies from before to after the intervention, whereas the qualitative data indicate moderate perceived usefulness of coping strategies related to the prevention of negative emotions and constructive self-assertion compared to awareness and self-distraction. Moreover, for constructive self-assertion, references to examples of use were at the same level as for awareness and self-distraction, whereas references to examples of use of strategies to prevent negative emotions were few, with perceived usefulness more frequent than for awareness and self-distraction. In this way, the qualitative findings suggest that participants found these aspects of the MBC program less appealing than awareness and self-distraction, but less difficult to apply when they realized the relevance of these approaches to coping. Regarding preventing negative emotions, the low reference rate may be due to the more theoretical design of these subjects in the MBC program compared to other subjects. Another reason for the few references regarding usefulness may be that the more concrete skills for preventing negative emotions, such as working out and eating and sleeping right, are skills participants were familiar with prior to the program and, therefore, they may not have seen the use in relearning these skills. The same may apply to constructive self-assertion skills. The relatively high use of constructive self-assertion may be because communication skills are of a practical and concrete nature and participants can relatively easily put them to use in real-life situations. Results suggest that in contrast to the themes of awareness and self-distraction, the challenge related to the topics of preventing negative emotions and constructive self-assertion is making these topics more appealing. Stimulating positive emotions to a higher degree within preventing negative emotions as well as increasing the numbers of cases discussed within constructive self-assertion could be fruitful initiatives to accommodate this goal.

Regarding the contexts for using skills, the findings suggest that skills were used both for intra- and interpersonal problems, specifically in terms of how to express one's meaning

and reduce rumination. Participants reported mainly using skills from the program in everyday situations, with an effort to cope with difficulties regarding work situations, school-related problems, and/or problems with family and friends. The use of skills reported in participant accounts were for coping with both emotional distress, such as when dreading work for different reasons, and self-assertion in interaction with others, such as being more confident in one's own opinions and/or feelings and expressing these opinions and feelings. Furthermore, several participants mentioned a mix of both skills, such as being able to stress less regarding amount of work and hence being able to structure and also share workloads with colleagues. Others mentioned being aware of one's own needs in the family and not only doing chores for and helping others, but also being *"selfish in a positive manner"* (Mira). This may indicate that the MBC program provided participants with skills for general and everyday problems, helping them in both emotion-based and problem-focused coping. However, some participants' accounts also pointed to skills helpful in more specific contexts, such as Maria's working to accept her son leaving for Afghanistan, or skills practiced with the objective of coping through acceptance of diagnoses or other areas experienced as difficult in that participants "avoided avoidance" and faced their problems.

Changes in Perceived Life Satisfaction and Psychological Symptoms

Both qualitative and quantitative results indicate that participants experienced better functioning, increased life satisfaction, and reduced psychological symptoms after the intervention, and quantitative data indicate that this improvement was maintained or even increased in the three-month follow-up period. It was not possible to include a control group in the present study and one should, therefore, be cautious in attributing this change to the MBC intervention. One cannot rule out that the positive change in psychological functioning

is due to naturally occurring fluctuations or changes in participants' life situation (e.g., history or maturation).[51] Analyses of individual effects showed that almost half of the patients experienced evident enhancement in quality of life and more than half experienced a reduction in psychological symptoms. Almost three out of four patients were scored by their respective therapists as better in terms of functioning and symptoms, and, almost half of the patients were scored by their therapists as bettering level of functioning and symptoms on the S-GAF scale. This suggests that the majority of patients experienced improvement of their condition that could be considered clinical significant. In accordance with this, in Keng et al.'s[15] review of empirical studies of mindfulness' impact on psychological health, a clear convergence of findings from correlational studies, clinical intervention studies, and laboratory-based, experimental studies suggests a positive association between mindfulness and psychological health and that mindfulness training brings about positive psychological changes such as increased subjective well-being, reduced psychological symptoms and emotional reactivity, and improved regulation of behavior. Moreover, the fact that the qualitative data in the current study demonstrated that (at least) some participants attributed changes in psychological functioning to increased use of coping skills introduced by the MBC intervention lends support to the notion that participation in MBC may have induced the positive changes in psychological symptoms, functioning, and life satisfaction. Changes in GAF scores suggest a move toward a normal score for the majority of participants, potentially pointing to clinical significance. The overall goal of clinical significance refers to data from the research that can be utilized by clinicians, however, no simple formula exists for determining the necessary amount of change experienced by the individual in order to judge the change as clinically significant.[52] Here it has been shown to a suggested individual effect size to account for this, as well as, a significant group effect size. Results from the follow-up

further suggest that participants learned skills they use successfully on their own after completion of the program.

Conclusions

Findings provide knowledge regarding the design of interventions that integrate mindfulness so as to promote enhanced psychological coping. One important finding is that skills related to the ability to be in the present moment tolerating stressful feelings and bodily sensations (awareness), as well as coping skills in adequate self-distraction, may be quite difficult for participants to implement in real-life situations. Interventions to promote mindful coping should, therefore, emphasize the presentation of skills that have been adapted to the needs and prior experiences of participants. It is also likely to be crucial to provide training in such skills in realistic situations. Concerning strategies to prevent negative emotions and promote constructive self-assertion, the challenge seems to be connected to presenting the strategies in ways that appeal to participants and allowing participants to realize that these strategies can be effective in preventing or coping with stressful life situations.

Despite these potentials for improvement, findings suggest that participants had a positive experience with the MBC program. Participants seemed to have learned and to some degree adopted useful coping skills. These reported changes in coping skills could underlie the observed positive changes in psychological functioning. However, to draw conclusions about the effects of MBC on psychological functioning among people with emotional or other stress-related psychological problems, studies with randomized controlled designs are warranted. A longer follow-up period would also be important to gain information regarding long-term effects of the intervention.

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Table 1. *Qualitative Results: Number of Participants' References to the Mindful Coping Themes Regarding Useful Skills, Difficult Skills, Skills Used in Daily Life, Skills Experienced as Contributing to Change, and References in Total (N=34).* (The number of participants giving references is given in brackets below the number average references made.)

	Useful skills	Difficult skills	Skills used	Contribution to Change	**References in total**
Awareness	55	6	21	16	**98**
	(33)	(5)	(16)	(16)	**(34)**
Constructive self-distraction	66	6	26	14	**112**
	(29)	(6)	(19)	(12)	**(32)**
Preventing negative emotions	14	8	8	10	**40**
	(11)	(7)	(7)	(10)	**(20)**
Constructive self-assertion	21	8	26	14	**69**
	(17)	(8)	(18)	(13)	**(27)**

Table 2. *Quantitative Results: Mean Scores and Standard Deviations for Study Variables at Pre-, Post-, and Follow-Up Test, as well as Results of Analyses of Changes from Pre-Test to Post-Test and Pre-Test to Follow-Up Test.*

	Pre-Test		Post-Test		Follow-Up		Pre-Post Changes				Pre-Follow-Up Changes			
	M	SD	M	SD	M	SD	*N*	F	p	*d*	*N*	F	p	*d*
Mindful Coping														
Awareness	2.93	.64	3.48	.45	3.40	.46	36	21.31	.000	1.01	32	18.10	.000	.85
Distraction	2.51	.65	2.92	.53	2.96	.49	36	15.56	.000	.69	32	18.67	.000	.79
Preventing negative emotions	3.14	.76	3.57	.55	3.50	.47	36	15.74	.000	.66	32	6.68	.015	.59
Constructive self-assertion	3.21	.65	3.67	.54	3.67	.50	36	28.05	.000	.77	30	8.24	.008	.80
Mental health indicators														
Life satisfaction	3.50	1.40	4.20	1.40	4.56	1.34	35	10.96	.002	.50	32	15.96	.000	.77
GSI	1.28	.58	.94	.69	.75	.62	35	18.01	.000	-.54	31	30.27	.000	-.88

Table 3. *Clinical Assessment: Mean Scores and Standard Deviations for Study Variables at Pre- and Post-Test, as well as Results of Analyses of Changes from Pre- to Post-Test (N=38).*

	Pre-Test		Post-Test		Pre-Post Changes		
	M	SD	M	SD	F	p	*d*
GAF-F	60.39	9.85	67.82	9.91	17.84	.000	.75
GAF-S	57.26	7.70	65.55	9.29	38.46	.000	.98

Appendix A: Questionnaire

Brief Cope - Norsk

Det er mange måter å takle påkjenninger på. Vi ber deg her svare på hva du vanligvis gjør og tenker når du opplever belastende situasjoner og hendelser. Det er klart at ulike hendelser krever ulike måter å gjøre tingene på, men forsøk å finne fram til det du vanligvis gjør når du opplever mye "stress".

(Sette kun ett kryss per linje.)

1.		Vanligvis gjør jeg ikke dette 1	Vanligvis gjør jeg litt av dette 2	Vanligvis gjør jeg en del av dette 3	Vanligvis gjør jeg mye av dette 4
a)	*Jeg tyr til arbeid eller andre aktiviteter for å få tankene vekk fra tingene.*	☐	☐	☐	☐
b)	*Jeg konsentrerer innsatsen min om å gjøre noe med den situasjonen jeg er i.*	☐	☐	☐	☐
c)	*Jeg sier til meg selv, "dette er ikke virkelig".*	☐	☐	☐	☐
d)	*Jeg benytter alkohol eller medikamenter for å føle meg bedre.*	☐	☐	☐	☐
e)	*Jeg får følelsesmessig støtte fra andre.*	☐	☐	☐	☐
f)	*Jeg gir opp å forsøke å håndtere det.*	☐	☐	☐	☐
g)	*Jeg prøver å gjøre noe for å forbedre situasjonen.*	☐	☐	☐	☐
h)	*Jeg nekter å tro at det har skjedd.*	☐	☐	☐	☐
i)	*Jeg snakker om ting for å få ubehagelige følelser til å forsvinne.*	☐	☐	☐	☐
j)	*Jeg tar imot hjelp og råd fra andre.*	☐	☐	☐	☐
k)	*Jeg benytter alkohol og/eller medikamenter for å komme gjennom det.*	☐	☐	☐	☐
l)	*Jeg prøver å se det i et annet lys, for å få det til å virke mer positivt.*	☐	☐	☐	☐

		Vanligvis gjør jeg ikke dette	Vanligvis gjør jeg litt av dette	Vanligvis gjør jeg en del av dette	Vanligvis gjør jeg mye av dette
		1	2	3	4
m)	*Jeg kritiserer meg selv.*	☐	☐	☐	☐
n)	*Jeg prøver å lage en strategi for hva jeg skal gjøre.*	☐	☐	☐	☐
o)	*Jeg mottar trøst og forståelse fra andre.*	☐	☐	☐	☐
p)	*Jeg gir opp forsøket på å mestre det.*	☐	☐	☐	☐
q)	*Jeg ser etter noe godt i det som skjer.*	☐	☐	☐	☐
r)	*Jeg vitser med det.*	☐	☐	☐	☐
s)	*Jeg gjør noe for å tenke mindre på det, slik som å se på TV, lese, dagdrømme, sove eller handle.*	☐	☐	☐	☐
t)	*Jeg aksepterer realiteten i det at det faktisk har skjedd.*	☐	☐	☐	☐
u)	*Jeg uttrykker mine negative følelser.*	☐	☐	☐	☐
v)	*Jeg prøver å finne trøst i religion eller tro.*	☐	☐	☐	☐
w)	*Jeg prøver å få råd eller hjelp fra andre mennesker om hva jeg skal gjøre.*	☐	☐	☐	☐
x)	*Jeg lærer meg å leve med det.*	☐	☐	☐	☐
y)	*Jeg tenker hardt på hvilke ting jeg bør gjøre.*	☐	☐	☐	☐
z)	*Jeg klandrer meg selv for ting som har skjedd.*	☐	☐	☐	☐
æ)	*Jeg ber eller mediterer.*	☐	☐	☐	☐
ø)	*Jeg spøker med situasjonen.*	☐	☐	☐	☐

Mindful Coping Scale – norsk

Under presenteres påstander basert på konkrete teknikker man kan benytte seg av for å komme gjennom vanskelige hendelser i livet. Kryss av for i hvor stor grad du *faktisk benytter deg* av de ulike teknikkene når du støter på ulike problem i hverdagen.

1) Oppmerksomhet:
Når jeg står overfor vanskelige valg, prøver jeg følgende for å ta en avgjørelse:

		Aldri/ nesten aldri	Sjelden	Av og til	Ofte	Alltid
a)	Å ta et indre steg tilbake for å observere situasjonen	☐	☐	☐	☐	☐
b)	Å ta et indre steg tilbake for å beskrive situasjonen	☐	☐	☐	☐	☐
c)	Å innta et fordomsfritt standpunkt	☐	☐	☐	☐	☐
d)	Å fokusere på en ting om gangen	☐	☐	☐	☐	☐
e)	Å finne en balanse mellom fornuft og følelser	☐	☐	☐	☐	☐
f)	Å tenke gjennom hva som faktisk skjer, ikke hvordan jeg synes det burde være	☐	☐	☐	☐	☐

2) Konstruktiv selv-distraksjon:
For å komme gjennom vanskelige øyeblikk, distraherer jeg meg selv ved:

a) *Å påvirke følelsene mine*
(Som å gjøre noe som fremmer en annen følelse enn den jeg har, for eksempel å lese følelsesladete bøker/fortellinger/gamle brev, se følelsesladete filmer/skrekkfilmer/komedier, høre på følelsesladet musikk/morsom musikk/religiøs musikk/korpsmusikk, etc.)

Aldri/ nesten aldri	Sjelden	Av og til	Ofte	Alltid
☐	☐	☐	☐	☐

b) *Å bruke synet*
(Som å kjøpe vakre blomster, pynte opp et rom, tenne stearinlys for å se på flammen, dekke et flott bord, besøke et kunstmuseum, se på naturen rundt meg, kikke på stjernene, gå tur i byens fineste strøk, stelle neglene, se på fine bilder i en bok.)

Aldri/ nesten aldri	Sjelden	Av og til	Ofte	Alltid
☐	☐	☐	☐	☐
1	2	3	4	5

c) *Å bruke hørselen*
(Som å høre på vakker/behagelig/forfriskende/spennende musikk, lytte til naturens lyder, synge favorittsangen min, nynne på en behagelig melodi, spille et instrument, være bevisst de lydene som kommer min vei.)

Aldri/ nesten aldri	Sjelden	Av og til	Ofte	Alltid
☐	☐	☐	☐	☐

d) *Å bruke luktesansen*
(Som å ta på meg favorittparfymen/-kremen, spraye duft i luften, tenne duftelys, fylle en skål med potpurri, koke kanel, bake kjeks/kaker/brød, lukte på blomster, gå tur i naturen og være bevisst på den friske luften jeg puster inn.)

Aldri/ nesten aldri	Sjelden	Av og til	Ofte	Alltid
☐	☐	☐	☐	☐

e) *Å bruke smakssansen*
(Som å nyte et godt måltid, drikke beroligende urtete/varm sjokolade eller liknende, spise dessert, ha krem i kaffen, prøve nye issorter, spise peppermyntedrops/favoritt-tyggegummi, få tak i spesiell mat jeg vanligvis ikke bruker penger på.)

Aldri/ nesten aldri	Sjelden	Av og til	Ofte	Alltid
☐	☐	☐	☐	☐

f) *Berøring*
(Som å ta et boblebad, legge rent på sengen, klappe en hund/katt, få massasje, sette bena i bløt, smøre meg inn med fuktighetskrem, legge en kald klut på pannen, synke ned i en komfortabel stol, børste håret lenge, gi noen en klem.)

Aldri/ nesten aldri	Sjelden	Av og til	Ofte	Alltid
☐	☐	☐	☐	☐

g) *Indre bilder*
(Som å forestille meg veldig avslappende scener, et hemmelig rom inni meg selv, en trygg plass, å se for meg at alt går bra, å lage en fantasiverden som er beroligende/vakker, å la alle sårende følelser forsvinne.)

Aldri/ nesten aldri	Sjelden	Av og til	Ofte	Alltid
☐	☐	☐	☐	☐

3) **Forebygge negative følelser:**
For å forstå følelsene mine, for å minske sjansen for at negative følelser oppstår, og for å minske negative følelser jeg erfarer, gjør jeg følgende:

a) *Har et balansert kosthold*
(Som å verken spise for mye eller for lite, og å holde meg unna mat som virker inn på følelsene mine.)

Aldri/ nesten aldri	Sjelden	Av og til	Ofte	Alltid
☐	☐	☐	☐	☐

b) *Har en god søvnrytme*
(Som å sørge for at jeg får nok søvn til å føle meg bra, og å lage meg et søvnprogram dersom jeg har vansker med å sove.)

Aldri/ nesten aldri	Sjelden	Av og til	Ofte	Alltid
☐	☐	☐	☐	☐
1	2	3	4	5

c) *Trener*
(Som å utføre en form for trening hver dag, gjerne 20 minutter med hardtrening.)

Aldri/ nesten aldri	Sjelden	Av og til	Ofte	Alltid
☐	☐	☐	☐	☐

d) *Bygger opp egen mestringsfølelse*
(Som å gjøre noe hver dag som får meg til å føle meg kompetent og at jeg har kontroll over mine følelser.)

Aldri/ nesten aldri	Sjelden	Av og til	Ofte	Alltid
☐	☐	☐	☐	☐

e) *Holder meg aktiv*
(Som å være aktiv og nærme meg det som er vanskelig, å gjøre noe som får meg til å føle meg kompetent og selvsikker.)

Aldri/ nesten aldri	Sjelden	Av og til	Ofte	Alltid
☐	☐	☐	☐	☐

4) Konstruktiv selvhevdelse:
Hvis jeg ønsker å fremme en forespørsel til andre eller avslå en forespørsel fra andre, gjør jeg følgende:

a) Spør noen om noe på en måte som gjør at jeg bevarer en god relasjon

Aldri/ nesten aldri	Sjelden	Av og til	Ofte	Alltid
☐	☐	☐	☐	☐

b) Spør noen om noe på en måte som gjør at jeg ofte oppnår det jeg ønsker

Aldri/ nesten aldri	Sjelden	Av og til	Ofte	Alltid
☐	☐	☐	☐	☐

c) Avslår (sier nei) på en måte som gjør at jeg opprettholder selvrespekten

Aldri/ nesten aldri	Sjelden	Av og til	Ofte	Alltid
☐	☐	☐	☐	☐

d) Avslår (sier nei) på en måte som gjør at jeg bevarer en god relasjon

Aldri/ nesten aldri	Sjelden	Av og til	Ofte	Alltid
☐	☐	☐	☐	☐

e) Avslår (sier nei) på en måte som gjør at jeg oppnår det jeg ønsker

Aldri/ nesten aldri	Sjelden	Av og til	Ofte	Alltid
☐	☐	☐	☐	☐
1	2	3	4	5

SWLS - norsk

Nedenfor står fem utsagn om tilfredshet med livet som et hele. Vis hvor godt eller dårlig hver påstand stemmer for deg og ditt liv ved å sette ett kryss på hver linje under det tallet som du synes stemmer best for deg.

1. Hvor godt stemmer disse utsagnene for deg?

	Stemmer dårlig 1	2	3	4	5	6	*Stemmer perfekt* 7
a) På de fleste måter er livet mitt nær idealet mitt	☐	☐	☐	☐	☐	☐	☐
b) Mine livsforhold er utmerkede	☐	☐	☐	☐	☐	☐	☐
c) Jeg er tilfreds med livet mitt	☐	☐	☐	☐	☐	☐	☐
d) Så langt har jeg fått de betydningsfulle tingene jeg ønsker i livet	☐	☐	☐	☐	☐	☐	☐
e) Hvis jeg kunne leve på nytt, ville jeg nesten ikke forandret på noe	☐	☐	☐	☐	☐	☐	☐

SCL-90-R

1.

På de følgende sidene finner du listet opp en rekke plager og problemer som man av og til har. Les nøye gjennom hvert enkelt spørsmål – eller påstand – én for én, og sett ring rundt det svaralternativ som best beskriver *hvor mye hvert problem har plaget deg eller vært til besvær i løpet av de siste 7 dager*, i dag medregnet.

EKSEMPEL

I løpet av de siste 7 dager, Hvor mye har du vært plaget av:	Ikke i det hele tatt	Litt	Måtelig	Ganske mye	Veldig mye
0. Vondt i kroppen	(0)	1	2	3	4

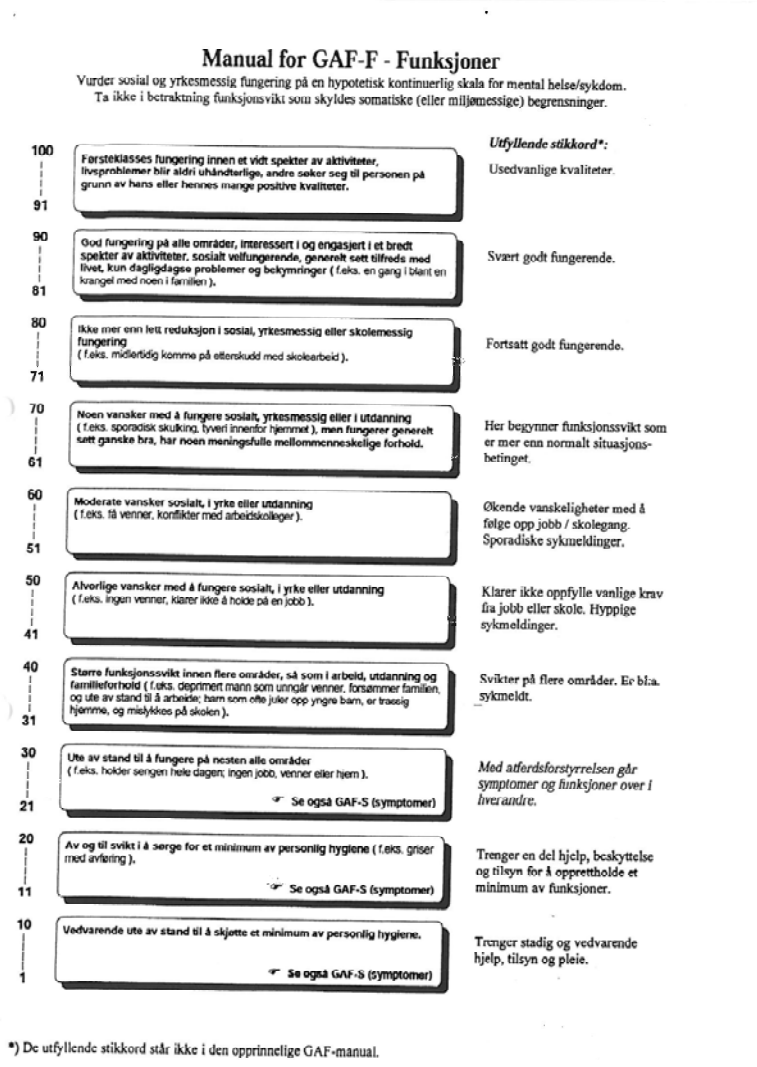
I løpet av de siste 7 dager, hvor mye har du vært plaget av:	Ikke i det hele tatt	Litt	Måtelig	Ganske mye	Veldig mye
1. Hodeverk	0	1	2	3	4
2. Nervøsitet eller indre uro	0	1	2	3	4
3. Gjentatte ubehaglige tanker som ikke vil gi slipp	0	1	2	3	4
4. Matthet eller svimmelhet	0	1	2	3	4
5. Tap av seksuell lyst og interesse	0	1	2	3	4
6. Føler deg kritisk mot andre mennesker	0	1	2	3	4
7. Tror at en annen person kan kontrollere tankene dine	0	1	2	3	4
8. Føler at andre er skyld i de fleste av dine problemer	0	1	2	3	4
9. Vansker med å huske saker og ting	0	1	2	3	4
10. Bekymringer over slurv og uforsiktighet	0	1	2	3	4
11. Blir lett forarget eller irritert	0	1	2	3	4
12. Smerter i hjerteregionen eller bryst	0	1	2	3	4
13. Føler deg redd på åpne plasser eller på gaten	0	1	2	3	4
14. Føler deg energifattig eller langsommere enn vanlig	0	1	2	3	4

I løpet av de siste 7 dager, hvor mye har du vært plaget av:	Ikke i det hele tatt	Litt	Måtelig	Ganske mye	Veldig mye
15. Tanker om å ta ditt liv	0	1	2	3	4
16. Hører stemmer som andre ikke hører	0	1	2	3	4
17. Skjelvinger	0	1	2	3	4
18. Føler at mennesker flest ikke er til å stole på	0	1	2	3	4
19. Dårlig matlyst	0	1	2	3	4
20. Gråter lett	0	1	2	3	4
21. Føler deg blyg eller engstelig i forhold til det motsatte kjønn	0	1	2	3	4
22. Føler deg liksom lurt i en felle eller fanget	0	1	2	3	4
23. Blir plutselig redd uten grunn	0	1	2	3	4
24. Ukontrollerbare raseriutbrudd	0	1	2	3	4
25. Føler deg engstelig for å gå hjemmefra alene	0	1	2	3	4
26. Klandrer eller bebreider deg selv for saker og ting	0	1	2	3	4
27. Smerter i korsryggen	0	1	2	3	4
28. Føler at det er vanskelig å få ting gjort	0	1	2	3	4
29. Føler deg ensom	0	1	2	3	4
30. Føler deg nedtrykt	0	1	2	3	4
31. Uroer og bekymrer deg for mye over saker og ting	0	1	2	3	4
32. Føler deg uten interesse for ting	0	1	2	3	4
33. Føler deg engstelig og redd	0	1	2	3	4
34. Føler deg lett såret	0	1	2	3	4
35. Føler at noen mennesker leser dine private tanker	0	1	2	3	4
36. Føler at andre ikke forstår deg eller bryr seg om deg	0	1	2	3	4
37. Føler at andre mennesker er uvennlige eller at de misliker deg	0	1	2	3	4
38. Må gjøre ting meget langsomt for å være sikker på at det blir riktig	0	1	2	3	4
39. Har hjertebank eller føler at hjerteslagene nærmest løper av gårde	0	1	2	3	4
40. Har kvalme eller urolig mage	0	1	2	3	4
41. Føler deg underlegen eller mindreverdig	0	1	2	3	4

I løpet av de siste 7 dager, hvor mye har du vært plaget av:	Ikke i det hele tatt	Litt	Måtelig	Ganske mye	Veldig mye
42. Verk eller ømhet i musklene	0	1	2	3	4
43. Føler at andre iakttar deg eller snakker om deg	0	1	2	3	4
44. Har vanskeligheter med å sovne	0	1	2	3	4
45. Må kontrollere det du gjør en eller flere ganger	0	1	2	3	4
46. Problemer med å kunne bestemme deg	0	1	2	3	4
47. Føler deg engstelig for å reise med buss, trikk, tog, o.l.	0	1	2	3	4
48. Pustebesvær eller besvær med å få luft	0	1	2	3	4
49. Varme- eller kuldetokter gjennom kroppen	0	1	2	3	4
50. Må unngå bestemte saker, plasser eller situasjoner fordi de gjør deg engstelig	0	1	2	3	4
51. Blir "tom" i hodet	0	1	2	3	4
52. Nummenhet og prikking i deler av kroppen	0	1	2	3	4
53. Klump i halsen	0	1	2	3	4
54. Føler håpløshet med henblikk på fremtiden	0	1	2	3	4
55. Konsentrasjonsproblemer	0	1	2	3	4
56. Føler deg svak i deler av kroppen	0	1	2	3	4
57. Føler deg anspent eller oppjaget	0	1	2	3	4
58. Føler deg tung i armer og ben	0	1	2	3	4
59. Tanker om døden eller hvordan det er å dø	0	1	2	3	4
60. Spiser for mye	0	1	2	3	4
61. Føler ubehag når andre mennesker iakttar eller snakker om deg	0	1	2	3	4
62. Har tanker som ikke er dine	0	1	2	3	4
63. Føler trang til å slå, skade eller gjøre andre vondt	0	1	2	3	4
64. Våkner tidlig om morgenen	0	1	2	3	4
65. Føler en slags trang mht. å måtte utføre visse handlinger flere ganger eller å måtte utføre dem på en helt bestemt måte – f.eks. berøre visse ting, telle eller vaske	0	1	2	3	4
66. Urolig eller forstyrret søvn	0	1	2	3	4
67. Kjenner impulser til å slå i stykker eller smadre ting	0	1	2	3	4

I løpet av de siste 7 dager, hvor mye har du vært plaget av:	Ikke i det hele tatt	Litt	Middels	Ganske mye	Veldig mye
68. Har tanker eller ideer som andre ikke har, eller ikke forstår seg på	0	1	2	3	4
69. Føler deg meget sjenert eller forsagt når du er sammen med andre	0	1	2	3	4
70. Føler ubehag når du omgås mange mennesker på en gang, f.eks. i butikker eller på kino	0	1	2	3	4
71. Føler det som om alt mulig er anstrengende	0	1	2	3	4
72. Angst- eller panikkanfall	0	1	2	3	4
73. Føler ubehag ved å spise eller drikke ute blant folk, f.eks. på kafé, bar eller restaurant	0	1	2	3	4
74. Havner ofte i heftige diskusjoner eller i krangel	0	1	2	3	4
75. Føler deg nervøs når du må være alene	0	1	2	3	4
76. Synes at andre ikke setter nok pris på det du gjør	0	1	2	3	4
77. Føler deg ensom, selv når du er sammen med andre	0	1	2	3	4
78. Føler deg så urolig at du ikke kan sitte stille	0	1	2	3	4
79. Føler deg verdiløs	0	1	2	3	4
80. Føler at noe vondt eller leit kommer til å hende deg	0	1	2	3	4
81. Skriker og roper eller kaster ting	0	1	2	3	4
82. Er redd for å skulle besvime når du er ute blant folk	0	1	2	3	4
83. Føler at folk vil komme til å utnytte deg om de får sjansen til det	0	1	2	3	4
84. Har seksuelle tanker og forestillinger som bekymrer deg	0	1	2	3	4
85. Har tanker om at du bør straffes for syndige ting du har gjort	0	1	2	3	4
86. Har skremmende tanker og forestillingsbilder	0	1	2	3	4
87. Tanker om at noe er alvorlig feil med kroppen din	0	1	2	3	4
88. Føler deg aldri nær noe annet menneske	0	1	2	3	4
89. Skyldfølelse	0	1	2	3	4
90. Tror at det er noe i veien med din forstand	0	1	2	3	4

Appendix B: Global Assessment of Functioning



Manual for GAF-F - Funksjoner

Vurder sosial og yrkesmessig fungering på en hypotetisk kontinuerlig skala for mental helse/sykdom.
Ta ikke i betraktning funksjonsvikt som skyldes somatiske (eller miljømessige) begrensninger.

		Utfyllende stikkord:*
100 – 91	**Førsteklasses fungering innen et vidt spekter av aktiviteter, livsproblemer blir aldri uhåndterlige, andre søker seg til personen på grunn av hans eller hennes mange positive kvaliteter.**	Usedvanlige kvaliteter.
90 – 81	**God fungering på alle områder, interessert i og engasjert i et bredt spekter av aktiviteter, sosialt velfungerende, generelt sett tilfreds med livet, kun dagligdagse problemer og bekymringer** (f.eks. en gang i blant en krangel med noen i familien).	Svært godt fungerende.
80 – 71	**Ikke mer enn lett reduksjon i sosial, yrkesmessig eller skolemessig fungering** (f.eks. midlertidig komme på etterskudd med skolearbeid).	Fortsatt godt fungerende.
70 – 61	**Noen vansker med å fungere sosialt, yrkesmessig eller i utdanning** (f.eks. sporadisk skulking, tyveri innenfor hjemmet), **men fungerer generelt sett ganske bra, har noen meningsfulle mellommenneskelige forhold.**	Her begynner funksjonssvikt som er mer enn normalt situasjons-betinget.
60 – 51	**Moderate vansker sosialt, i yrke eller utdanning** (f.eks. få venner, konflikter med arbeidskolleger).	Økende vanskeligheter med å følge opp jobb / skolegang. Sporadiske sykmeldinger.
50 – 41	**Alvorlige vansker med å fungere sosialt, i yrke eller utdanning** (f.eks. ingen venner, klarer ikke å holde på en jobb).	Klarer ikke oppfylle vanlige krav fra jobb eller skole. Hyppige sykmeldinger.
40 – 31	**Større funksjonssvikt innen flere områder, så som i arbeid, utdanning og familieforhold** (f.eks. deprimert mann som unngår venner, forsømmer familien, og ute av stand til å arbeide; barn som ofte jukser opp yngre barn, er trassig hjemme, og mislykkes på skolen).	Svikter på flere områder. Er bl.a. sykmeldt.
30 – 21	**Ute av stand til å fungere på nesten alle områder** (f.eks. holder sengen hele dagen; ingen jobb, venner eller hjem). ☞ **Se også GAF-S (symptomer)**	*Med atferdsforstyrrelsen går symptomer og funksjoner over i hverandre.*
20 – 11	**Av og til svikt i å sørge for et minimum av personlig hygiene** (f.eks. griser med avføring). ☞ **Se også GAF-S (symptomer)**	Trenger en del hjelp, beskyttelse og tilsyn for å opprettholde et minimum av funksjoner.
10 – 1	**Vedvarende ute av stand til å skjøtte et minimum av personlig hygiene.** ☞ **Se også GAF-S (symptomer)**	Trenger stadig og vedvarende hjelp, tilsyn og pleie.

*) De utfyllende stikkord står ikke i den opprinnelige GAF-manual.

Manual for GAF-S - Symptomer

Vurder psykisk symptombelastning på en hypotetisk kontinuerlig skala for mental helse/sykdom.
Ta ikke i betraktning symptomer som skyldes somatiske (eller miljømessige) begrensninger.

		Utfyllende stikkord:*
100 – 91	**Ingen symptomer.**	Glede, kreativitet, livsgnist.
90 – 81	**Ingen eller minimale symptomer** (f.eks. lett angst foran en eksamen).	Jevnt og godt humør. Lettere stressymptomer.
80 – 71	**Hvis symptomer foreligger er de forbigående og forståelige reaksjoner på psykososiale påkjenninger** (f.eks. konsentrasjonsvansker etter en krangel i familien).	Moderate stresssymptomer.
70 – 61	**Noen lette symptomer** (f.eks. deprimert sinnstemning og lettere søvnløshet).	Her begynner mer avgrensede symptomer av lengre varighet.
60 – 51	**Moderate symptomer** (f.eks. avflatede følelser og omstendelig språk, sporadiske panikkanfall).	Symptomene begynner nå å bli tydelig for andre.
50 – 41	**Alvorlige symptomer** (f.eks. selvmordstanker, alvorlige tvangsritualer, hyppige butikktyveri).	Alvorsgraden tiltar. Klart behandlingstrengende.
40 – 31	**Endel forstyrrelse i realitetstesting, kommunikasjon, dømmekraft, tankevirksomhet eller stemningsleie** (f.eks. talen er iblant ulogisk, uklar eller irrelevant).	Psykosegrense, men rommer også andre svært alvorlige symptomer.
30 – 21	**Adferden er betydelig påvirket av vrangforestillinger eller hallusinasjoner, eller alvorlig svikt i kommunikasjon eller dømmekraft** (f.eks. av og til usammenhengende tale, svært upassende adferd, stadige selvmordstanker). ☞ **Se også GAF-F (funksjoner)**	Psykotiske *atferdsforstyrrelser* og beslektede tilstander.
20 – 11	**En viss fare for å kunne skade seg selv eller andre** (f.eks. selvmordsforsøk uten klar forventning om å dø; ofte voldelig; manisk oppstemthet), **eller grov svikt i kommunikasjon** (f.eks. stort sett usammenhengende eller stum). ☞ **Se også GAF-F (funksjoner)**	Utilregnelighet og utageringsfare. Skadebegrensende tiltak er nødvendig.
10 – 1	**Vedvarende fare for å skade seg selv eller andre alvorlig** (f.eks. gjentatte voldshandlinger), **eller alvorlig selvmordshandling med klar forventning om å dø.** ☞ **Se også GAF-F (funksjoner)**	Alvorligste psykopatologiske tilstander. Trenger konstant hjelp, tilsyn og beskyttelse over tid.

*) De utfyllende stikkord står ikke i den opprinnelige GAF-manual.

*) De utfyllende stikkord står ikke i den opprinnelige GAF-manual.

Appendix C: Perceived Life Strains

Spørreskjemanummer: _____

Livshendelser
Vi er nå interessert i å få vite noe om hva slags livshendelser, både **positive og negative**, du har opplevd i løpet av **de siste 12 månedene**. Kryss av om du har opplevd noen av hendelsene som er listet opp under, og kryss deretter av for svaralternativet som best beskriver dine følelser i forbindelse med hendelsen.

	Ja	Nei	Svært negativt /vondt	Negativt /vondt	Blandede følelser	Positivt /godt	Svært positivt /godt
1. Gjengifte eller ny samboer hos foreldre	☐	☐	☐	☐	☐	☐	☐
2. Skilsmisse eller separasjon hos foreldre	☐	☐	☐	☐	☐	☐	☐
3. Foreldre blitt arbeidsløs eller uføretrygdet	☐	☐	☐	☐	☐	☐	☐
4. Alvorlig sykdom eller skade hos deg selv	☐	☐	☐	☐	☐	☐	☐
5. Alvorlig sykdom eller skade hos noen som står deg nær	☐	☐	☐	☐	☐	☐	☐
6. Andre negative livshendelser	☐	☐	☐	☐	☐	☐	☐

Belastninger
Har du i løpet av **de siste 12 månedene** hatt noen av disse langvarige belastningene? Sett kryss for de belastningene du har opplevd, og kryss deretter av for hvor hardt denne belastningen har gått inn på deg.

	Ja	Nei	Svært negativt /vondt	Negativt /vondt	Blandede følelser
1. Faglige problemer på skolen	☐	☐	☐	☐	☐
2. Problemer i forhold til venner	☐	☐	☐	☐	☐
3. Problemer i forhold til foreldrene dine	☐	☐	☐	☐	☐
4. Problemer i forhold til en eller flere lærere	☐	☐	☐	☐	☐

Appendix D: Interview guide, shortened version

Informasjon til pasienten:

Som tidligere deltaker på kurs i Mindfulness-based Coping (MbC) i regi av Gruppepoliklinikken ved Dalane distriktspsykiatriske senter, sitter du på viktig informasjon om nytteverdien av kurset. Denne informasjonen er viktig for ansatte på senteret, særlig i forbindelse med det pågående forskningsprosjektet ”Mestring av Psykiske Helseplager”.

MbC er et undervisningskurs som tar sikte på å opplære deltakere i ulike mestringsferdigheter til hjelp for å løse ulike hverdagslige problem. Dette innebærer at du som deltaker selv har vært ansvarlig, gjerne i samarbeid med din behandler, til å prøve ut de forskjellige ferdighetene og finne frem til de som passer for deg. Dette intervjuet har til hensikt å få frem dine erfaringer med kurset. *Vi er også interessert i å få frem din mening om hvilke sider ved kurset som har vært viktige for deg, for slik å oppnå informasjon om senterets videre arbeid med psykisk helsefremmende arbeid.* Spørsmålene tar utgangspunkt i en intervjuguide som er utarbeidet før intervjuet. Dersom det er i orden for deg vil samtalen bli tatt opp på bånd.

A Generelt om din kursdeltakelse

1. Hvordan fikk du første gang informasjon om kurset (venner, behandler, kolleger, etc.)?
2. Hadde du gått i individuell behandling forut for din kursdeltakelse?

   Ja ☐ Hvis ja, hvor lenge?

   Nei ☐

3. Hvor forberedt var du, og hvordan ble du forberedt, på å gå på kurs (tidligere deltakere du kjenner, behandler, etc.)? Hadde dette en innvirkning på din deltakelse (engasjement, interesse, hvorvidt du deltok, etc.)?
4. Hadde du noen forventninger til kurset? I så tilfellet, hva var disse? Ble eventuelt disse innfridd (hvis ja, hvordan? Hvis nei, hvorfor ikke?)?
5. Har du tidligere egenerfaring med psykiatrien?

   Ja ☐ Hvis ja, hvordan (år, innleggelse, behandlingsformer, etc.)?

   Nei ☐

B Spesifikt om dine erfaringer med kurset

6. Er det deler av kurset som har vært særlig nyttig for deg?
   (Her kan intervjuer gi eksempler på ferdigheter fra kursets moduler, slik at pasienten får "frisket opp" hukommelsen for at

en eventuell endring skal fanges opp. Overskrifter på ferdigheter lært innen hver modul er nevnt under, til hjelp for intervjuer. Se gjerne dagbokskort for siste møte på hver modul for en mer detaljert beskrivelse.)

Eks.: Mindfulness Stressmestring Affektregulering Relasjonshåndtering

7. Har kurset introdusert deg for ferdigheter som har vært vanskelige å tilegne seg, eller som du ikke har hatt nytte av?
8. Har du opplevd endring av egne tanker og eller handlinger atferd som følge av MbC-kurset? Gi eksempler.
9. Fortell om en (eller flere) hverdagslig situasjon som du opplevde at du taklet bedre etter kurset (hvis ja, hvordan)?
10. Har kurset hatt noen negative virkninger for deg?

C Bakgrunnsinformasjon

11. Alder
12. Kjønn
13. Utdanning
14. Arbeidssituasjon
15. Andre behandlingstilbud du har benyttet deg av i tidsrommet hvor du har deltatt på MbC-kurs? Eventuelt tilsvarende tilbud du har erfaring med fra tidligere?

Debrifing

Det takkes for intervjuet, spør om noe er uklart.

Er det noe pasienten ønsker å utdype?

Er det noe pasienten ønsker å trekke tilbake?

Hvordan opplevde pasienten intervjuet?

Appendix E: Formal approvals

Approval from REK Vest

UNIVERSITETET I BERGEN
Det medisinske fakultet
Harald Hårfagresgt. 1
Postboks 7804, 5020 BERGEN

UNIVERSITY OF BERGEN
Faculty of Medicine
Harald Hårfagresgt. 1
P.O. Box 7804, N-5020 BERGEN

Regional komité for medisinsk forskningsetikk
Vest-Norge (REK Vest)
Postadr.: Universitetet i Bergen, Postboks 7804, 5020Bergen
Besøksadr.: Haukeland Universitetssjukehus, Sentralblokken, 2. etasje, rom 4617
Tlf.: 55 97 84 97 / 55 97 84 98 / 55 97 84 99
E-post: rek-vest@uib.no

http://www.etikkom.no/REK/

Bergen, 12.09.06.
Sak nr. 06/8539

Dr. philos. Aslaug Mikkelsen
Universitetet i Stavenger
SV-fakultetet
4036 STAVANGER

Ad prosjekt: "Mestring av psykiske helseplager" (178.06).

Det vises til din søknad om etisk vurdering datert 03.08.06. REK Vest vurderte studien i møte den 31.08.06.

Komiteen har følgende merknader:

- Det er uklart om det er kvalitetssikring eller forskning en legger opp til i dette prosjektet. Studiens forskningsspørsmål bør beskrives tydeligere.
- Studien er lagt opp svært omfattende og komplisert med i alt hele seks grupper. Særlig med tanke på at det mangler styrkeberegning, fremstår studien som metodisk sett svak. Det må utarbeides en styrkeberegning.
- I studien vil en inkludere både pasienter og skoleelever. Det virker problematisk å kombinere disse gruppene. REK Vest mener en bør ta bort elevgruppen.
- Prosjekt-medarbeiderne mangler klinisk kompetanse til å håndtere dem av deltakerne som har problemer.
- Formålet med studien ser ut til å være misvisende beskrevet i rekrutteringsskrivet. Studiens formål er vel å måle effekten av tiltaket "Mindfullness-based Coping"?
- I avsnittet i rekrutteringsskrivet om "Du bestemmer selv" må en også opplyse om retten til å tilbakekalle samtykket.
- Siste setning i rekrutteringsskrivet er appellerende og bør strykes.
- De skjemaene en ønsker å benytte virker kompliserte å fylle ut. Hvor gjennomprøvd er skjemaene?

En ber om tilbakemelding.

Vennlig hilsen

Arnold Berstad
leder

Arne Salbu
sekretær

UNIVERSITETET I BERGEN
Regional komité for medisinsk forskningsetikk, Vest-Norge (REK Vest)

Dr. philos. Aslaug Mikkelsen
Universitetet i Stavenger
SV-fakultetet
4036 STAVANGER

Deres ref	Vår ref	Dato
	178.06-06/2907	17.12.2006

Ad. prosjekt: " Mestring av psykiske helseplager" (178.06)

Det vises til brev datert 27.11.2006, REK Vest vurderte v/leder saken.

Komiteen takker for god gjennomarbeidet tilbakemelding og har ingen flere merknader.

Studien er da endelig klarert fra denne komiteen sin side.

Vi ønsker dere lykke til med gjennomføringen og minner om at komiteen setter pris på en sluttrapport, eventuelt en kopi av trykt publikasjon når dette foreligger.

Med vennlig hilsen

Jon Lekven
leder

Anne Berit Ølmheim
sekretær

Postadresse
Postboks 7804
5020 Bergen

rek-vest@uib.no
www.etikkom.no/REK
Org.no. 874 789 542

Regional komité for medisinsk forskningsetikk, Vest-Norge
Telefon 55 97 84 97 / 98 / 99

Besøksadresse
Haukeland
Universitetssykehus

REK
REGIONALE KOMITEER FOR MEDISINSK OG HELSEFAGLIG FORSKNINGSETIKK

Region:	Saksbehandler:	Telefon:	Vår dato:	Vår referanse:
REK vest	Øyvind Straume	55978497	18.04.2012	2010/216/REK vest
			Deres dato:	Deres referanse:
			17.04.2012	

Vår referanse må oppgis ved alle henvendelser

Kjersti Balle Tharaldsen
Sjukehusveien 38

2010/216 Mestring av psykiske helseplager

Vi viser til innsendt prosjektendringsskjema for ovennevnte studie mottatt 17.04.2012. Søknaden er behandlet av sekretariatet i REK Vest på fullmakt, med hjemmel i helseforskningslovens § 11.

Forskningsansvarlig: Helse Stavanger HF
Prosjektleder: Kjersti Balle Tharaldsen

Ønsket endring
Prosjektleder ønsker å forlenge prosjektperioden med fem måneder, til mai 2012.

Vurdering
REK Vest har ingen innvendiger til forelagt søknad om prosjektendring.

Vedtak
Prosjektendringen godkjennes i samsvar med forelagt søknad

Med vennlig hilsen,

Øyvind Straume
seniorkonsulent

Kopi til: *forskning@sus.no*

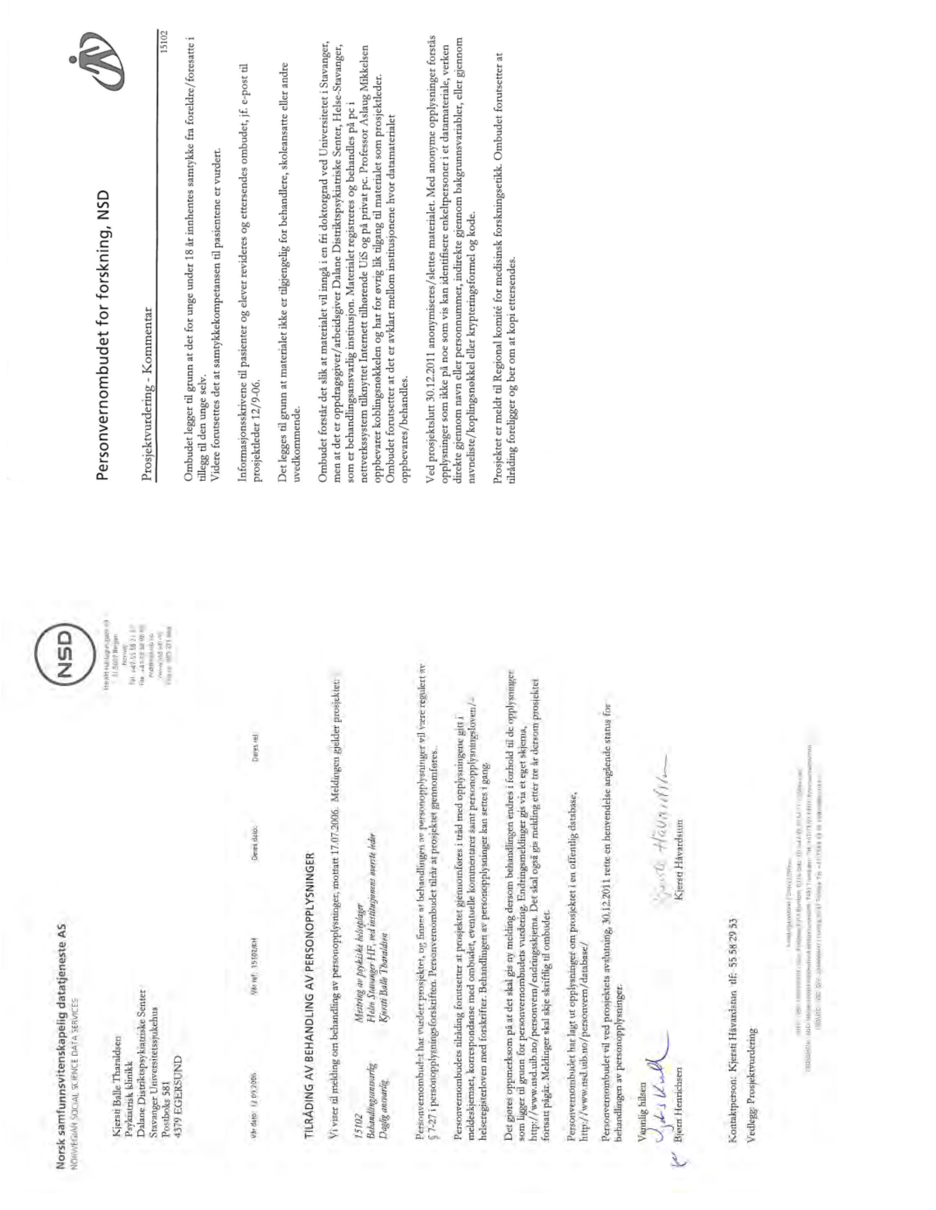
Klageadgang
Du kan klage på komiteens vedtak, jf. forvaltningslovens § 28 flg. Klagen sendes til REK [region]. Klagefristen er tre uker fra du mottar dette brevet. Dersom vedtaket opprettholdes av REK Vest, sendes klagen videre til Den nasjonale forskningsetiske komité for medisin og helsefag for endelig vurdering.

Besøksadresse: Haukeland Universitetssykehus, Sentralblokken, 2. etg, Rom 4617
Telefon: 55975000
E-post: rek-vest@ub.no
Web: http://helseforskning.etikkom.no/

All post og e-post som inngår i saksbehandlingen, bes adressert til REK vest og ikke til enkelte personer

Kindly address all mail and e-mails to the Regional Ethics Committee, REK vest, not to individual staff

Approval from NSD



Norsk samfunnsvitenskapelig datatjeneste AS
NORWEGIAN SOCIAL SCIENCE DATA SERVICES

NSD

Kjersti Balle Tharaldsen
Psykiatrisk klinikk
Dalane Distriktspsykiatriske Senter
Stavanger Universitetssjukehus
Postboks 581
4379 EGERSUND

Vår dato: 12.09.2006 Vår ref: 15102/KH Deres dato: Deres ref:

TILRÅDING AV BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 17.07.2006. Meldingen gjelder prosjektet:

15102	*Mestring av psykiske helseplager*
Behandlingsansvarlig	*Helse Stavanger HF, ved institusjonens øverste leder*
Daglig ansvarlig	*Kjersti Balle Tharaldsen*

Personvernombudet har vurdert prosjektet, og finner at behandlingen av personopplysninger vil være regulert av § 7-27 i personopplysningsforskriften. Personvernombudet tilrår at prosjektet gjennomføres.

Personvernombudets tilråding forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondanse med ombudet, eventuelle kommentarer samt personopplysningsloven/-helseregisterloven med forskrifter. Behandlingen av personopplysninger kan settes i gang.

Det gjøres oppmerksom på at det skal gis ny melding dersom behandlingen endres i forhold til de opplysninger som ligger til grunn for personvernombudets vurdering. Endringsmeldinger gis via et eget skjema, http://www.nsd.uib.no/personvern/endringsskjema. Det skal også gis melding etter tre år dersom prosjektet fortsatt pågår. Meldinger skal skje skriftlig til ombudet.

Personvernombudet har lagt ut opplysninger om prosjektet i en offentlig database, http://www.nsd.uib.no/personvern/database/

Personvernombudet vil ved prosjektets avslutning, 30.12.2011 rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen

Bjørn Henrichsen Kjersti Håvardstun

Kontaktperson: Kjersti Håvardstun tlf: 55 58 29 53

Vedlegg: Prosjektvurdering

Personvernombudet for forskning, NSD

Prosjektvurdering - Kommentar

15102

Ombudet legger til grunn at det for unge under 18 år innhentes samtykke fra foreldre/foresatte i tillegg til den unge selv.
Videre forutsettes det at samtykkekompetansen til pasientene er vurdert.

Informasjonsskrivene til pasienter og elever revideres og ettersendes ombudet, jf. e-post til prosjektleder 12/9-06.

Det legges til grunn at materialet ikke er tilgjengelig for behandlere, skoleansatte eller andre uvedkommende.

Ombudet forstår det slik at materialet vil inngå i en fri doktorgrad ved Universitetet i Stavanger, men at det er oppdragsgiver/arbeidsgiver Dalane Distriktspsykiatriske Senter, Helse-Stavanger, som er behandlingsansvarlig institusjon. Materialet registreres og behandles på pc i nettverkssystem tilknyttet Internett tilhørende UiS og på privat pc. Professor Aslaug Mikkelsen oppbevarer koblingsnøkkelen og har for øvrig lik tilgang til materialet som prosjektleder. Ombudet forutsetter at det er avklart mellom institusjonene hvor datamaterialet oppbevares/behandles.

Ved prosjektslutt 30.12.2011 anonymiseres/slettes materialet. Med anonyme opplysninger forstås opplysninger som ikke på noe som vis kan identifisere enkeltpersoner i et datamateriale, verken direkte gjennom navn eller personnummer, indirekte gjennom bakgrunnsvariabler, eller gjennom navneliste/koplingsnøkkel eller krypteringsformel og kode.

Prosjektet er meldt til Regional komité for medisinsk forskningsetikk. Ombudet forutsetter at tilråding foreligger og ber om at kopi ettersendes.

Endringsskjema

for endringer i forsknings- og studentprosjekt som medfører meldeplikt eller konsesjonsplikt
(jf. personopplysningsloven og helseregisterloven med forskrifter)

Meldeskjema sendes per post, e-post eller faks, i ett eksemplar, til:

Norsk samfunnsvitenskapelig datatjeneste AS
Personvernombudet for forskning
Harald Hårfagres gate 29
5007 BERGEN

personvernombudet@nsd.uib.no / Telefaks: 55 58 96 50 / Telefon: 55 58 21 17

Vennligst les veiledning bakerst

1. BEHANDLINGSANSVARLIG[i]

Institusjon: Dalane distriktspsykiatriske senter		Dato for innsending: 29.05.2007	
Adresse: Postboks 581		Poststed: 4379	Poststed: Egersund

2. DAGLIG ANSVAR[ii]

Navn (fornavn - etternavn): Kjersti Balle Tharaldsen			
Arbeidssted (avdeling/seksjon/institutt): Dalane DPS, Psykiatrisk poliklinikk (Gruppepoliklinikken)		Stilling/grad: Kursleder/Cand.Polit. med lektorkompetanse	
Adresse – arbeidssted: Postboks 581		Poststed: 4379	Poststed: Egersund
Telefon: 5151 2165	Telefaks: 5151 2169	Mobil: 9188 0150	E-postadresse: Kjersti.b.tharaldsen@uis.no

3. VED STUDENTPROSJEKT[iii]

Navn (fornavn - etternavn) på studenten:			
		Grad:	
		Poststed:	
Telefon:	Telefaks:	Mobil:	E-postadresse:

4. PROSJEKTNUMMER OG PROSJEKTTITTEL

Nummer: 15102

Tittel: "Mestring av psykiske helseplager"

5. ENDRING

Viser til samtale av 25.05.07 med en av deres saksbehandlere, og viser til følgende justering i prosjektet.

Som en del av studien utvikler jeg et eget måleinstrument på "mindfulness coping". Både kontroll- og eksperimentgruppen min er liten, men holdbar, i forhold til powerberegninger for å gjennomføre selve studien. Det vil imidlertid være ønskelig å validere dette måleinstrumentet med ulike tiltak for faktoranalyser. Dette krever imidlertid et større utvalg.

Etter råd fra mine veiledere ber jeg derfor om aksept for å gjennomføre sperreskjemakartleggingen for samtlige elever eller et utvalg elever på en videregående skole (N = 660-1000). Elevene vil bli orientert om formålet med studien og om at det selvsagt er frivillig å delta på denne undersøkelsen. De vil også bli bedt om å signere en samtykkeerklæring tilsvarende den NSD og etisk komité allerede har godkjent.

En større kartlegging vil styrke prosjektet og gjøre det mulig å sammenlikne instrumentet og mine begreper med tidligere benyttede begrep og skalaer på tilgrensende områder som "coping style" til Carver, Scheier & Weintraub (1989) og Folkman & Lazarus (1988) med flere. Dette er viktig for den satsningen på lærin og mestring som både Universitetet i Stavanger og Stavanger Universitetssjukehuset har.

Er det spørsmål i forbindelse med utfylling av skjemaet, ta gjerne kontakt med Personvernombudet hos NSD, telefon 55 58 21 17

6. SPESIELLE TILLATELSER[iv]

Er endringen meldt til Regional komité for medisinsk forskningsetikk?	☐ Ja ☒ Nei	Hvis ja, legg ved eller ettersend kopi av tilråding (Se punkt 7)
Gjør endringen at prosjektet nå blir fremleggelsespliktig for Regional komité for medisinsk forskningsetikk (inkludert melding om forskningsbiobank)?	☐ Ja ☒ Nei	Hvis ja, legg ved eller ettersend kopi av tilråding
Gjør endringen det nødvendig å søke om dispensasjon fra taushetsplikt for å få tilgang til data?	☐ Ja ☒ Nei	Hvis ja, legg ved eller ettersend dispensasjon

7. TILLEGGSOPPLYSNINGER

Viser til telefonsamtale av 25.05.2007 med Selbu ved REK Vest. Han avviklefte nødvendigheten av at ovennevnte justering i prosjektet "Mestring av psykiske helseplager" meldes etisk komité. Selbu bekrefter imidlertid meldeplikt av nevnte endring til NSD. Opplysning om endring er likevel sendt REK Vest som orienteringssak (se vedlegg) ifølge med orienteringer om andre mindre endringer. Da dette kun er generelle orienteringer om prosjektet ser jeg det ikke som nødvendig å ettersende kopi av komiteens eventuelle bekreftelse på mottatt orienteringsskriv til NSD foruten på forespørsel.

benytter anledningen til å orientere om at det til høsten startes opp en ny gruppe med pasienter, som også vil bli bedt om å delta på sperreskjemakartleggingen. ...ås for å øke styrken i de resultat som foreligger ved kursets slutt. Antall poliklinisk pasienter som deltar i prosjektet stiger derfor fra totalt 24 til totalt 32 (med forbehold om eventuelle frafall). Viser til tidligere korrespondanse med REK Vest og NSD hvor prosjektet ble godkjent og hvor en økning i antall respondenter ble forespeilet, og anser dette derfor som en ren orienteringssak.

Videre har prosjektet fått nye veiledere. Som følge av at prosjektets hovedveileder, professor Aslaug Mikkelsen, tiltrer som rektor ved Universitetet i Stavanger fra og med august 2007, har professor Edvin Bru, Senter for Atferdsforskning ved Universitetet i Stavanger, tilredt som ny hovedveileder. Videre er professor Ingvar Wilhelmsen ved Universitet i Bergen biveileder for prosjektet. Dette til orientering.

8. ANTALL VEDLEGG

Legg ved eventuelle nye vedlegg (forespørsel, intervjuguide, registreringsskjema, sperreskjema, tillatelser og lignende).	1 (Orienteringsskriv til REK Vest)

Er det spørsmål i forbindelse med utfylling av skjemaet, ta gjerne kontakt med Personvernombudet hos NSD, telefon 55 58 21 17

Endringsskjema

for endringer i forsknings- og studentprosjekt som medfører meldeplikt eller konsesjonsplikt
(jf. personopplysningsloven og helseregisterloven med forskrifter)

Meldeskjema sendes per post, e-post eller faks, i ett eksemplar, til:

Norsk samfunnsvitenskapelig datatjeneste AS
Personvernombudet for forskning
Harald Hårfagres gate 29
5007 BERGEN

personvernombudet@nsd.uib.no / Telefaks: 55 58 96 50 / Telefon: 55 58 21 17

Vennligst les veiledning bakerst

1. BEHANDLINGSANSVARLIG[i]

Institusjon:		Dato for innsending:
Dalane distriktspsykiatriske senter		07.02.2008
Adresse:	Postnr.:	Poststed:
Postboks 581	4379	Egersund

2. DAGLIG ANSVAR[ii]

Navn (fornavn - etternavn):		
Kjersti Balle Tharaldsen		
Arbeidssted (avdeling/seksjon/institutt):		Stilling/grad:
Dalane DPS, Psykiatrisk poliklinikk (Gruppepoliklinikken)		Kursleder/Cand.Polit. med lektorkompetanse
Adresse – arbeidssted:	Postnr.:	Poststed:
Postboks 581	4379	Egersund
Telefon:	Telefaks:	Mobil:
5151 2166	5151 2169	9188 0150
E-postadresse:		
Kjersti.b.tharaldsen@uis.no		

3. VED STUDENTPROSJEKT[iii]

Navn (fornavn - etternavn) på studenten:		
		Grad:
	Postnr.:	Poststed:
Telefon:	Telefaks:	Mobil:
E-postadresse:		

4. PROSJEKTNUMMER OG PROSJEKTTITTEL

Nummer: 15102

Tittel: "Mestring av psykiske helseplager"

5. ENDRING

Viser til foregående endringsskjema datert 29.05.06 (punkt 7), og ønsker herved å orientere om følgende justering i prosjektet:
Som beskrevet i forrige skjemas punkt 7, ble det høsten 2007 startet opp nye pasientgrupper i tillegget Mindfulness-based Coping (MbC). Disse ble bedt om å delta på spørreskjemakartleggingen tilknyttet PhD-prosjektet "Mestring av Psykiske Helseplager", med det formål å øke styrken i de resultat som foreligger ved kursets slutt. Våren 2008 er det igjen oppstart av nye MbC-grupper for pasienter, som også vil bli bedt om å delta. I nevnte spørreskjemakartlegginger. Prosedyrene følges som beskrevet i tidligere korrespondanse vedrørende prosjektet.

Antall poliklinikske pasienter som deltar stiger derfor til en maksimal *n* på 56, fordelt på 7 grupper. Det har imidlertid vært noe frafall i de første gruppene, hvilket innebærer at *n* p.t. forventes å bli maksimum 44 (med forbehold om eventuelle frafall fra de siste gruppene). Viser til mitt orienteringsbrev til REK Vest av 27.11.06 (kopi ble sendt NSD ved forrige endringsskjema) hvor en økning i *n* ble forespeilet dersom pågangen til kurset var stor nok.Nevnte økning er endelig.

6. SPESIELLE TILLATELSER[iv]

Er endringen meldt til Regional komité for medisinsk forskningsetikk?	☐ Ja ☒ Nei	Hvis ja, legg ved eller ettersend kopi av tilråding (Se punkt 7)
Gjør endringen at prosjektet nå blir fremleggelsespliktig for Regional komité for medisinsk forskningsetikk (inkludert melding om forskningsbiobank)?	☐ Ja ☒ Nei	Hvis ja, legg ved eller ettersend kopi av tilråding
Gjør endringen det nødvendig å søke om dispensasjon fra taushetsplikt for å få tilgang til data?	☐ Ja ☒ Nei	Hvis ja, legg ved eller ettersend dispensasjon

7. TILLEGGSOPPLYSNINGER

Opplysning om endring er sendt REK Vest som orienteringssak (se vedlegg). Da dette kun er generelle orienteringer om prosjektet ser jeg det ikke som nødvendig å ettersende kopi av komitéens eventuelle bekreftelse på mottatt orienteringsskriv til NSD, forutsn på forespørsel.

Viser til tidligere korrespondanse med REK Vest og NSD hvor prosjektet ble godkjent og hvor en økning i antall responderter ble forespeilet, og anser dette derfor som en ren orienteringssak.

8. ANTALL VEDLEGG

Legg ved eventuelle nye vedlegg (forespørsel, intervjuguide, registreringsskjema, spørreskjema, tillatelser og lignende).	1 (Orienteringsskriv til REK Vest)

Er det spørsmål i forbindelse med utfylling av skjemaet, ta gjerne kontakt med Personvernombudet hos NSD, telefon 55 58 21 17

Endringsskjema

for endringer i forsknings- og studentprosjekt som medfører meldeplikt eller konsesjonsplikt

(jf. personopplysningsloven og helseregisterloven med forskrifter)

Meldeskjema sendes per post, e-post eller faks, i ett eksemplar, til:

Norsk samfunnsvitenskapelig datatjeneste AS
Personvernombudet for forskning
Harald Hårfagres gate 29
5007 BERGEN

personvernombudet@nsd.uib.no / Telefaks: 55 58 96 50 / Telefon: 55 58 21 17

Vennligst les veiledning bakerst

1. BEHANDLINGSANSVARLIG[i]

Institusjon: Dalane distriktspsykiatriske senter			Dato for innsending: 08.01.2010
Adresse: Sjukehusveien 38			Postnr.: 4370 Poststed: Egersund

2. DAGLIG ANSVAR[ii]

Navn (fornavn - etternavn): Kjersti Balie Tharaldsen			
Arbeidssted (avdeling/seksjon/institutt): Dalane DPS, Psykiatrisk divisjon (Gruppepoliklinikken)			Stilling/grad: PhD-kandidat og kursleder / cand.polit. med lektorkompetanse
Adresse – arbeidssted: Sjukehusveien 38			Postnr.: 4370 Poststed: Egersund
Telefon: 51512165	Telefaks: 51512169	Mobil: 91880150	E-postadresse: kjersti.b.tharaldsen@uis.no

3. VED STUDENTPROSJEKT[iii]

Navn (fornavn - etternavn) på studenten:			
			Grad:
			Postnr.: Poststed:
Institusjon:	Telefaks:	Mobil:	E-postadresse:

4. PROSJEKTNUMMER OG PROSJEKTTITTEL

Nummer: 15102

Tittel: "Mestring av psykiske helseplager"

5. ENDRING

Som følge av at jeg skal ut i fødselspermisjon i februar 2010, bes det herved om godkjenning av endring i tidligere forespeilet sluttdato for prosjektet. Sistnevnte var desember 2011. Denne datoen bes forlenget til slutt av desember 2012.

6. SPESIELLE TILLATELSER[iv]

Er endringen meldt til Regional komité for medisinsk forskningsetikk?	☒ Ja ☐ Nei	Hvis ja, legg ved eller ettersend kopi av tilråding
Gjør endringen at prosjektet nå blir fremleggelsespliktig for Regional komité for medisinsk forskningsetikk (inkludert melding om forskningsbiobank)?	☐ Ja ☒ Nei	Hvis ja, legg ved eller ettersend kopi av tilråding
Gjør endringen det nødvendig å søke om dispensasjon fra taushetsplikt for å få tilgang til data?	☐ Ja ☒ Nei	Hvis ja, legg ved eller ettersend dispensasjon

7. TILLEGGSOPPLYSNINGER

Tilråding av REK Vest må ettersendes som følge av at endringsmeldingen til REK Vest ble sendt elektronisk i dag.

Ettersom endring i prosjektets sluttdato kommer etter at all datainnsamling er gjennomført, har endringen ingen praktiske konsekvenser for datainnsamlingens respondenter.

8. ANTALL VEDLEGG

Legg ved eventuelle nye vedlegg (forespørsel, intervjuguide, registreringsskjema, spørreskjema, tillatelser og lignende).	

Er det spørsmål i forbindelse med utfylling av skjemaet, ta gjerne kontakt med Personvernombudet hos NSD, telefon 55 58 21 17