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Religiousness – Associations to Existential Well-Being and Social Support in a Secular Norwegian Context

Avhandling for graden philosophiae doctor

Trondheim, august 2015

Norges teknisk-naturvitenskapelige universitet
Fakultet for samfunnsvitenskap og teknologiledelse
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FORORD

Formålet med denne avhandlingen var å øke kunnskapen om sammenhengen mellom religiøsitet og helse i Norge gjennom å undersøke hvordan religiøsitet er forbundet med sosial støtte på den ene siden og eksistensielt velvære på den andre siden. Resultatene er basert på en spørreundersøkelse blant nordmenn gjennomført våren 2009. Avhandlingen består av en teoretisk innledning, samt tre artikler. I innledningen diskuteres funnene i et generelt perspektiv, mens de spesifikke funnene blir diskutert i hver av artiklene. Som en konsekvens av en slik oppbygning av avhandlingen vil noen gjentakelser forekomme.

Mange personer har vært viktige i prosessen mot ferdig avhandling. Jeg ønsker å takke mine veiledere, professor Geir Arild Espnes og professor Torbjørn Rundmo for all støtte, oppmuntring og evne til å dele av sin faglige kunnskap gjennom hele prosessen. Professor Geir Arild Espnes er medforfatter på to av artiklene i avhandlingen, og i den sammenheng vil jeg takke for gode refleksjoner underveis i arbeidet med disse. Jeg vil også takke Geir Arild Espnes for hans uvurderlige evne til å plassere andre i et positivt lys, noe som innebærer at han uttrykker en genuin og oppriktig tro på at alle kan lykkes, inkludert undertegnede. Professor Torbjørn Rundmos veiledning har vært avgjørende i mange faser av dette prosjektet. Spesielt vil jeg trekke frem veiledning i forbindelse med prosjektbeskrivelsen som førte fram til en ph.d.-stilling. Foruten hans engasjement hadde ikke dette prosjektet blitt en realitet. Jeg vil også takke Torbjørn Rundmo for mange lange veiledningstimer det siste året, med god tid til spørsmål og refleksjon knyttet til arbeidet med avhandlingens sammenskriving, samt hans generell sterke interesse for at andre skal lykkes, noe som gir fornyet motivasjon.

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Trondheim, 24.februar 2015

Marianne Nilsen Kvande

NORSK SAMMENDRAG

Bakgrunn: I en Skandinavisk sammenheng kan tradisjonell religiøsitet sies å ha hatt en nedgang de siste tjue årene, noe som har skjedd parallelt med økonomisk vekst og modernisering av samfunnet. Fordi religiøsitet og åndelighet er forbundet med bedre helse slik som økt velvære, kan mangelen av et eksistensielt rammeverk for mange være en utfordring. Selv om antallet internasjonale studier som omhandler sammenhenger mellom religion, åndelighet og helse har økt betraktelig siden 1990-tallet, har det vært gjennomført få studier i Norge. Vi trenger derfor mere kunnskap om dette feltet i en Norsk kontekst. Er det slik at religion henger sammen med helse, og på hvilken måte gjør det i så fall det?

Mål: Hensikten med denne avhandlinga var å øke kunnskapen om sammenhengen mellom religiøsitet og helse i Norge ved å undersøke hvordan religiøsitet er forbundet med sosial støtte på den ene siden og eksistensielt velvære på den andre siden. Spesifikke mål for avhandlinga var å undersøke om det var noen forskjell på grupper av religiøse- og ikke religiøse mennesker på deres nivå av opplevd sosial støtte, og videre om dette forholdet ble moderert av alder, kjønn, eller grad av berikelse fra ens livssyn. Det andre spesifikke målet var å undersøke om, og i så fall på hvilken måte optimisme og pessimisme er mellomliggende variabler i forholdet mellom religiøs mestring og eksistensielt velvære, og også om disse sammenhengene var like for mennesker med og uten langvarige helseproblemer. Det tredje og siste spesifikke målet var å undersøke om kirkedeltagelse og religiøse opplevelser var relatert til eksistensielt velvære på ulike måter for kvinner og menn.

Metode: Avhandlingen består av tre artikler med tverrsnittdesign, og er basert på data fra en spørreundersøkelse som omhandler religion og helse. Spørreskjemaet ble våren 2009 sendt per post til 3000 personer mellom 18-75 år som var tilfeldig trukket fra folkeregisteret. Av de spurte ønsker 653 personer å delta i studien, og responsraten var derfor på 22%.

Resultater: Eldre personer som betegner seg som ikke religiøse rapporterte å ha mere sosial støtte sammenlignet med religiøse personer. Blant de yngre var det slik at religiøse menn opplevde mere sosial støtte sammenlignet med menn som ikke var religiøse. For yngre kvinner var det motsatt. Religiøs mestring hadde en indirekte sammenheng med eksistensielt velvære gjennom pessimisme, men optimisme hadde ikke innvirkning på dette forholdet. Disse mekanismene var stort sett like for personer med og uten langvarige helseproblemer, men forholdet mellom religiøs mestring og eksistensielt velvære var sterkere for gruppen med langvarige helseproblemer. Generelt kan man si at gruppen av positive religiøse mestringsstrategier var relatert til høyere nivå av velvære, mens negative mestringsstrategier var relatert til lavere grad av velvære. Det siste funnet viste at mere frekvent deltagelse i kirken hadde sammenheng

med høyere nivå av eksistensielt velvære for menn, men ikke for kvinner. Flere negative religiøse opplevelser var relatert til en lavere grav av eksistensielt velvære for både kvinner og menn, mens flere positive religiøse opplevelser hadde sammenheng med økt eksistensielt velvære kun for kvinner.

Konklusjon: I en internasjonal sammenheng ser man at religiøsitet og åndelighet kan ha stor betydning for utvikling av helse. Resultatene fra denne avhandlingen er ikke helt konsistent med en slik fremstilling. I litteraturen finner man at religiøsitet ofte er en faktor som har betydning for grad av sosial støtte, og at religiøsitet via sosial støtte har betydning for folks helse. Man finner ikke en sammenheng mellom religiøsitet og sosial støtte i denne avhandlingen siden de som ikke var religiøse rapporterte generelt høyere nivå av sosial støtte sammenlignet med religiøse personer. På en annen side, fant man i tråd med internasjonale studier at religiøs mestring, deltagelse i kirken og religiøse opplevelser var forbundet med eksistensielt velvære. I tillegg ser man også i studier internasjonalt at religiøs mestring kan være funksjonelt for personer med langvarige helseproblemer. En sterkere sammenheng mellom religiøs mestring og eksistensielt velvære fant man også her. For videre studier blir det spesielt relevant å undersøke betydningen av religiøsitet for menns opplevelse av sosial støtte og velvære, samt på hvilke måter et ikke religiøst livssyn kan ha betydning for ens opplevelse av sosial støtte, og videre for folks helse.

SUMMARY

Background: In Scandinavia there seems to be a decline in traditional religiousness which has developed simultaneously with economic growth and modernization. As religiousness and spirituality are linked to beneficial health outcomes like greater well-being, lacking an existential framework may therefore posit a challenge to people's health and well-being. Although the number of scientific publications from studies on religiousness and health has grown considerably since the 1990s, few studies have been conducted in a Norwegian context. Consequently, more knowledge is needed in order to understand if and how religiousness and spirituality are related to health in a secular Norwegian context.

Aims: The overall aim of this thesis is to gain knowledge on the relationship between religiousness and health in Norway by examining associations between religiousness and social support, and between religiousness and existential well-being. Specifically, the thesis aims to explore if groups of religious people differ from non-religious people on levels of perceived social support, and further to determine if these differences are moderated by age, gender, or view of life enrichment. Furthermore, a second specific aim is to examine if and how optimism and pessimism mediates the relationship between religious coping and existential well-being and if these mechanisms differ for people with and without long-standing health problems. Finally, the last specific aim is to examine whether frequency of church attendance and religious experiences is related to existential well-being differently for women and men.

Methods: The present thesis has a cross-sectional design. It is based on data from a mailed questionnaire on religiousness and health distributed to a random sample of 3000 people from the Norwegian registry between the ages of 18-75. The questionnaire was distributed in the fall of 2009; 653 persons agreed to participate in the study, which represented a 22% response rate.

Results: Older non-religious people reported higher levels of perceived social support compared to older religious people. Among younger people, religious men reported higher levels of social support compared to non-religious men, while the opposite pattern was found for younger women. Religious coping was related to existential well-being through pessimism but not optimism. The relationship between religious coping and existential well-being were stronger for people with long-standing health problems, but the pattern of associations between religious coping and existential well-being were generally equal compared to people without long-standing health problems. Positive religious coping strategies were generally related to higher levels of well-being, while negative coping strategies were related to lower levels of well-being. Attending church more frequently was related to higher levels of existential well-being for men but not for women. Negative religious experiences were inversely related to existential well-being

for both men and women, while positive religious experiences were related to more existential well-being for women but not for men.

Conclusions: Compared to many studies that support the notion that religiousness and spirituality plays a significant role in the development of people's health, the results of the present thesis do not consistently support this view. As religiousness is often argued to be a facilitator of social support, representing a mechanism in which religion influence beneficial health outcomes, this relationship could not be supported in the present thesis as non-religious people generally reported higher levels of social support. On the other hand, the results supported a significant relationship between religious coping, frequency of church attendance, and existential well-being, which is consistent with international findings. As religious coping were more strongly associated to existential well-being for people with long-standing health problems is also consistent with international studies. Two findings of particular interest were the role of religiousness for men's social support and existential well-being and the association between a non-religious view of life and social support. These findings should be explored more in depth in further studies.

LIST OF PAPERS

Paper I

Kvande, M. N., Reidunsdatter, R., Løhre, A., Nielsen, M. E., & Espnes, G. A. (2015).

Religiousness and Social Support: A Study in Secular Norway. *Review of Religious Research, 57*(1), 87-109. doi: 10.1007/s13644-014-0171-4

Paper II

Kvande, M. N., Klöckner, C. A., Moksnes, U. K., & Espnes, G. A. (2015).

Do Optimism and Pessimism Mediate the Relationship between Religious Coping and Existential Well-Being? Examining Mechanisms in a Norwegian Population Sample. *International Journal for the Psychology of Religion*, *25*(2), 130-151. doi: 10.1080/10508619.2014.892350

Paper III

Kvande, M. N., Klöckner, C. A., & Nielsen, M. E.

Church Attendance and Religious Experiences: Differential Associations to Well-being for Norwegian Women and Men? *Submitted* to Sage Open, ISSN 2158-2440 on October 8, 2014

1 Introduction

1.1 Background and aims

1.1.1 Religiousness in Norway – why study relationships between religion and health?

At the core of the present thesis lies the question of the functional role of religion for the well-being of people. Religiousness and spirituality touch upon social dimensions as well as psychological and biological aspects of the development of health (A. B. Cohen & Koenig, 2003; Espnes & Smedslund, 2009; Sulmasy, 2002). There is also evidence that religiousness and spirituality are important for well-being in both chronically ill and healthy populations (Skevington, Gunson, & O'Connell, 2013). Similar to the experience of having control over one's life, having a sense of identity, feeling connected to other people, and having spiritual values is very important for overall well-being (Rutz, 2007). In a Scandinavian context in particular, the decline in traditional religiousness may lead to a lack of a number of existential factors that help guide the meaning-making process; conversely, having too many choices in regards to existential frameworks may lead to confusion and mental dysfunction (DeMarinis, 2003, 2006).

As only 5 per cent of the Norwegian population attends church weekly or more often (European Social Survey, 2010), and since 32 per cent of the population report being non-religious (Botvar, 2010), Norway seem to fit the description of a secular nation (Berger, 1999). Parallel to this, the Organisation for Economic Co-operation and Developments (OECD) Better Life Index (2013) shows that Norway performs well on many factors contributing to people's well-being. That is, Norwegians score higher than the average OECD nation in terms of income, employment, life expectancy, public trust, sense of community, and life satisfaction.

The above combination of secularism and economic growth has been the core subject in theories on modernization. For example, Sigmund Freud viewed religion as a protective factor for people's psychological health in the 1920s and argued that the key substitute to the functional role of devotion to deities was linked to gaining ground for scientific knowledge (Freud, 1927). Others have addressed the concept of religious transition, i.e., the decline of religiosity with rising levels of income (Gundlach &

Paldam, 2012; Paldam & Gundlach, 2013). It is argued that the relationship is such that religious beliefs are substituted by scientific knowledge, and religious institutions are replaced by secular institutions providing necessary goods such as education, healthcare, and social security (Gundlach & Paldam, 2012; Paldam & Gundlach, 2013). Other perspectives focus on change of individual religious values as a consequence of economic modernization – either as a result of increased existential security (Norris & Inglehart, 2004) or increased cognitive rationalization (Berger, 1969). Based on the above, does any significance of religion remain for people in a nation enjoying economic growth and high levels of well-being in several domains?

Although few people in Norway attend church on a regular basis, there is reason to believe that other domains of religiousness are still important to people. For instance, by analyzing data from the International Social Survey Program (ISSP) at three different points in time (1991, 1998, and 2008), Botvar (2010) showed that 68 per cent of the Norwegian population reported to have some kind of belief in God in 2008, including the 29 per cent who were agnostics. Altogether, belief in God among people has decreased by about 10 per cent since 1991. This is mainly due to a decrease of agnostics and people who believe in God without having any doubts, while the proportion of people believing in a higher power have remained stable between 1991-2008, which includes about 25 per cent of the population. Likewise, although institutionalized religion has become less frequent, privatized forms of religiousness may still be relevant for many European and Scandinavian people (Botvar & Schmidt, 2010; Heelas & Woodhead, 2005). Nevertheless, institutionalized religion has become less prominent in society, and people face many choices when forming their existential frameworks (DeMarinis, 2003, 2006). It is further argued that a lack of balance between central functional domains of religiousness like beliefs, bonding, behaving, and belonging may be problematic at both the societal and individual level (Hunt, 2003; Okulicz-Kozaryn, 2009; Paloutzian & Janigian, 1986). As religion becomes more private, the psychological functions of belonging in terms of generating self-esteem and in-group identity may be jeopardized (Hunt, 2003). Against this background there is a need to understand more about how religion is related to health for the general Norwegian population.

As there are many ways of dealing with existential concerns, religiousness in undoubtedly important in the lives of many people and helps them to come to grips with the ultimate questions in life (e.g., existential concerns on life and death). Likewise, religion may cause harm but also may be a benefit in people's lives, which is related to different ways of being religious (Pargament, 1997). The focus of the present thesis is to examine associations between religiousness and health, where health is defined as existential well-being and social support. The positive influence of religiousness on well-being and social support seem to be well established in the literature (H. G. Koenig, King, & Carson, 2012; H. G. Koenig, McCullough, & Larson, 2001). Furthermore, social support as the degree in which people feel backed up (i.e., feeling loved, provided with information needed, and practical help) is important to the development of health and may influence health both directly and indirectly (Rhodes & Lakey, 1999). Finally, several studies point to the influence of optimism and pessimism (Salsman, Brown, Brechting, & Carlson, 2005), gender (C. G. Ellison & Fan, 2008; Hintikka, 2001; Lewis, Shevlin, Francis, & Quigley, 2011), and situational factors like physical health problems (Pargament, Feuille, & Burdzy, 2011; Park, Lim, Newlon, Suresh, & Bliss, 2013) to the relationship between religiousness and well-being. As we lack knowledge on this in a Norwegian context we need to ask the following questions: Is religion related to changes in people's well-being and social support? Does religion influence well-being and social support by the same positive or negative patterns in a secular Norwegian context as shown in studies internationally? Also, do variations of optimism and pessimism mediate, and gender and long-standing illness moderate, the relationship between religiousness and health?

1.1.2 Aims of the thesis

The overall aim of the thesis is to gain knowledge on relationships between religiousness and social support and between religiousness and well-being in the secular context of Norway. As religious domains may be related to well-being and social support differently, the overall aim is to examine some of these associations. The specific aims of the thesis are as follows: to examine the difference in perceived social support among religious and non-religious people; to examine the role of optimism, pessimism, and long-standing health problems in the relationship between religious

coping and well-being; and to examine gender differences in the relationship between church attendance, religious experiences, and well-being.

The research literature examining how religion and health are related has grown considerably over the last two decades. Based on this research literature, models of causal pathways showing how religion may influence people's health have been proposed (Chatters, 2000; Jeff, 2010; H. G. Koenig et al., 2012, pp. 308-309). This view also guides the present thesis and is further elaborated in section 1.4 on theoretical perspectives and empirical evidence. Figure 1 show an overview of the relationships examined here (for detailed Figures on each paper, see section 1.4.4 on specific aims). The model reads from the left side showing how views of life may be founded on different primary sources. The primary sources in the present thesis include both secular views of life, which is founded on self and community, and a religious view of life founded on Christianity and/or the belief in or attachment to God. The source to someone's view of life will help determine if someone is religious or non-religious, a person's use of religious coping, frequency of church attendance, and religious experiences that may further influence social support and existential well-being. The thesis is based on this conceptual model. However, causal relationships between variables cannot be inferred in the present thesis as it is based on cross-sectional data.

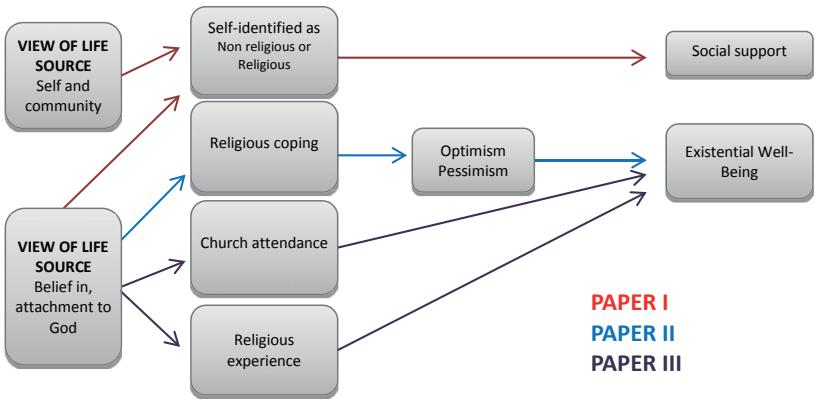

Figure 1. *A conceptual model showing overview of main variables and the relationships among them as examined in each of the three papers of the thesis.*

1.2 Definitions

1.2.1 Religion

In the present thesis religion is defined as "*beliefs, practices and rituals related to the transcendent, where the transcendent is God, Allah, HaShem, or a Higher Power in Western religious traditions, or to Brahman, manifestations of Brahman, Buddha, Dao, or ultimate truth/reality in eastern traditions*" (H. G. Koenig et al., 2012, p. 45). The mystical and supernatural are often involved as are beliefs about life after death and rules on how to behave in social groups. The beliefs, behaviors, rituals, and ceremonies may be performed or held both within private and public settings, but they all are derived from traditions that have been established over time. Religion is also defined as "*an organized system of beliefs, practices, and symbols designed (a) to facilitate closeness to the transcendent, and (b) to foster an understanding of one's relationship and responsibility to others in living together in a community*" (H. G. Koenig et al., 2012, p. 45).

The above definitions view religion as a multidimensional phenomenon in which several domains rather than one domain is highlighted. For instance, it shows how religion has to do with something sacred. It has to do with how we cognitively relate to existential questions. Also, it has to do with how we feel about and experience the sacred and likewise how we act in terms of religious practices and rituals. This way, religion is related to the sacred and involves beliefs, practices, and rituals. The present thesis is limited to only a few domains of religion. That is, people are grouped by their own definition of being religious or non-religious, and the dimensions of religious coping, church attendance, and religious experience are also addressed (Figure 1).

Opposed to a multidimensional definition of religion, others have focused more on single dimensions in their definition of religion. For instance, religion may be defined as the feelings, acts, and experiences related to the sacred (James, 1902); others view religion to be whatever we do to deal with fundamental existential concerns (Batson, Schoenrade, & Ventis, 1993). The present thesis examines several dimensions of religiousness in association to existential well-being and social support. Therefore, a definition of religion embracing both substantial and functional aspects was therefore preferable to encompass religion as a multidimensional phenomenon. Furthermore, as

the core of studying religion and health associations is asking if and how religion has a functional role to health, functional aspects needed to be included in a definition of religion. As religion is viewed as a broad concept, including both public and private framing, spirituality may not easily be viewed as different from religion. However, the definition of religion provided here emphasizes to a greater extent the behavioral dimension in terms of religious practices, whereas the concept of spirituality does not emphasize this dimension.

1.2.2 Spirituality

Spirituality associates with many different qualities compared to religion. Spirituality is said to be more emotional and addressed inwards with less emphasis on authorities (A. Edwards, Pang, Shiu, & Chan, 2010). Spirituality may also be a transcendent relationship with something divine beyond the self (Emmons, 1999). By examining different definitions, C. Cook (2004) found spirituality to be associated with components like relatedness, transcendence, humanity, soul, meaning, authenticity, and (non) religiousness among several others. In a U.S. study aiming to map definitions of religion and spirituality among people with various religious backgrounds, spirituality was described as personal and experiential, where belief in God or experiencing closeness to the transcendent was especially important. Religion, on the other hand, included personal beliefs as well as organizational practices (Zinnbauer et al., 1997). On the other hand, the same study showed that most people (74 per cent) considered themselves to be both religious and spiritual, and there was a modest but significant correlation between religion and spirituality (Zinnbauer et al., 1997).

As spirituality may be defined as something distinct from religion but also closely related to it, touch upon an ongoing dispute among scientists (Zinnbauer, Pargament, & Scott, 1999). Often a polarization between religion and spirituality is communicated as follows: organized religion versus personal spirituality, substantive religion versus functional spirituality, and negative religion versus positive spirituality (Zinnbauer et al., 1999). Others have argued that connotations of religion may often include conflict, expectations, hypocrisy, rigidity, evangelism, and church-state separation, and they often put more focus on the negative aspects (H. G. Koenig et al., 2012, pp. 37-38).

Zinnbauer et al. (1999) argue that the understanding of spirituality should be integrated with religion, and Pargament's (1997) definitions are posited to serve that purpose. Pargament (1997) define spirituality as "a search for the sacred", while religion is defined as "a search for significance in ways related to the sacred". Spirituality then, lies at the core of religion and represents the direct link to the sacred, while religion highlights the paths chosen by the individual to search for significance in ways related to the sacred (Zinnbauer et al., 1999). Like Pargament (1997), H. G. Koenig et al. (2012) view spirituality to be interrelated with religion and that their common feature is the transcendent. Spirituality is recognized by the search for the transcendent as well as having discovered the transcendent. Furthermore, spirituality begins before and extends beyond organized religion (i.e., attending services, funerals, christenings, weddings). The present thesis is based on this definition of spirituality. The true spiritual person is thus the deeply religious one – one who is distinguished from those who are not deeply religious but where religion is an important part of their life, and who is also distinguished from the secular person who is neither religious nor secular (H. G. Koenig et al., 2012, p. 46).

One reason for the detailed definitions of both religion (see section 1.2.1 on religion) and spirituality held by H. G. Koenig et al. (2012) is that it serves the purpose of creating a common ground for how these concepts are understood among scientists who perform research on religion, spirituality, and health. Especially for spirituality, its definitions often overlap with that of mental health constructs like relatedness, humanity, and meaning, and when this happens it may produce tautological explanations of statistically significant relationships between spirituality and health (H. G. Koenig et al., 2012). Therefore, to strictly operationalize religion and spirituality to not overlap with mental health constructs has been important to ensure validity in the present thesis.

1.2.3 View of life

View of life in the present thesis is understood as a collective term for different existential frameworks; these existential frameworks are the different ways in which all human beings come to grips with the fundamentals in life. For instance, according to Yalom and Josselson (2013), peoples' existential dilemmas are closely tied to the fact

that we are “finite creatures”, and in the process of trying to define and choose our way of life in the most meaningful way, people need to deal with what they call “ultimate concerns”, meaning freedom, isolation, meaning, and death. Ones view of life may be expressed in different ways, but one example may be the distinction between attitudes of hope and trust versus despair and pessimism (Stifoss-Hanssen & Kallenberg, 1998). Central to these expressions are the person's assumptions about the world and other people, which again is closely related to the individual value system (Jeffner, 1982). One's view of life may be based on secular, religious, and/or spiritual teachings (Figure 1).

1.2.4 Concepts and their level of specificity and practical use

The three separate papers that constitute this thesis specify religion, spirituality, and view of life as representing different levels. In Paper I, we made a distinction between religious and non-religious views of life by asking the study participants to identify to which group they belong. Consequently, we do not know if by religion, people define it to include a relationship with the transcendent or not, or if a relationship with the transcendent is important for some people placing themselves in the non-religious group. Thus, in Paper I we view religious and non-religious views of life broadly, which may or may not reflect the definition of religion, spirituality, and view of life elaborated in the three previous sections. In Papers II and III, the main focus is the religion and health mechanism of a theistic Christian religion. Thus the concepts of religion and spirituality are specified at a detailed level as we used measurement scales on religious coping, church attendance, and religious experience (see section 2.2 on measures).

The concept of religion will be used more frequently than the concept of spirituality in this thesis. However, as the concepts are interrelated, they may also be used interchangeably when empirical findings are presented. As the definition of spirituality reflects the deeply religious individual, some dimensions of religion used in this thesis will reflect that. For instance, spiritual religious coping and religious experience may reflect a personal and intimate relationship between the person and the transcendent.

Religiosity and religiousness will be used interchangeably throughout the thesis as both concepts share the same definition as in section 1.2.1 on religion.

1.2.5 Health

In 1977, Engel criticized the biomedical definition of disease development for leaving no attention to social, psychological, or behavioral dimensions. Although biomedicine has been successful in producing scientific knowledge on the etiology, pathogenesis, and treatment of diseases, it has been criticized for being too reductionist in its perceptions of disease and illness (Engel, 1977; Schwartz, 1982). That is, the development of disease is solely caused by abnormalities in the body and that mental phenomena is unrelated to that of bodily functions (Engel, 1977). The perception of health is within this frame of thinking often thought of as the opposite of disease; in other words, no disease equals health. With the biopsychosocial model introduced by Engel in 1977, a more contextual and organic way of thinking of health and illness became evident (Schwartz, 1982). A phenomenon (e.g., health, illness, disease) is thus perceived as relational and is caused by several factors rather than one single factor; also, various combinations of multiple factors may lead to a new phenomenon, explaining new "wholes" (Schwartz, 1982).

Perceiving health to be something more than just the absence of disease was acknowledged by the World Health Organization (WHO) already in 1946 when health was defined as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (WHO, 1946). WHO's definition is criticized for not being realistic as a state of complete physical, mental, and social well-being applies to the few, if any, rather than the many (Jadad & O'Grady, 2008; Larson, 1999; Smith, 2008; What is health?, 2009). Although WHO presents a rather utopic and broad definition of health and fails to explain the specific meaning of central concepts (e.g., social well-being), it represents a comprehensive and holistic definition focusing on positive aspects of health (Larson, 1999). In the present thesis, health is viewed as a dynamic biopsychosocial process emphasizing a person's social and personal resources as well as physical capacity. According to this view, health is defined as "the ability to adapt and to self-manage", which may be identified in the physical, mental, and social domains of health (Huber et al., 2011). Thus, Huber et al. (2011) elaborate on the three domains as follows. In the *physical domain*, a person may adapt to situations by reestablishing homeostasis through changes in behavior or physiological responses in the body. If these behavioral or physiological changes are not adequate coping

strategies, it will wear on the body and possibly cause illness. In the *mental domain*, Antonovsky's (1987) concept of "sense of coherence" is closely related to a person's capacity to deal with life. A strong sense of coherence recognizes someone who perceives the course of life to be understandable, someone who is confident that they have the resources available to deal with various demands, and someone who views a situation to be meaningful. This subjective capacity to adapt is explained to improve subjective well-being. In the *social domain*, health is related to functioning in social activities and social roles and involves the process of balancing a relationship between the opportunities and limitations of a person. For instance, by adapting to long-standing health problems, people may nevertheless participate in social activities and experience health through a high level of well-being and quality of life (Huber et al., 2011). From a biopsychosocial approach to health and illness, the physical, mental, and social domains are viewed as interrelated with each other. Shortly, this means that bodily processes may influence mental processes and vice versa (Halligan & Aylward, 2006).

Based on the above frame of reference, health is perceived as something more than the absence of disease or illness. Health is viewed as a process of managing life (within physical, mental, social domains) compared to a static end state and may be reflected through feelings of well-being and quality of life. In the present thesis, two health outcomes are examined in association to religiousness: existential well-being and perceived social support (Figure 1). To have a sense of existential well-being includes a perception of life as meaningful and having optimistic thoughts about the future and life in general. While existential well-being directly reflects upon the ability to adapt and self-manage, perceived social support may be viewed as separate from social well-being and quality of life. However, social support is closely interrelated with health (S. Cohen, 2004; House, Landis, & Umberson, 1988; Thoits, 2011).

1.3 Developments of research on religion, spirituality, and mental health

1.3.1 International context

James's (1902) publication of *The Varieties of Religious Experiences*, a collection of lectures held at the University of Edinburgh from 1900-1902, is an important marker for

the beginnings of a psychology of religion and spirituality (Hood, Spilka, & Hill, 2009). This period, lasting until the late 1920s, has been described as a period of *rise* followed by a *fall* in interest in the psychology of religion, which is partly due to the development and success of Behaviorism. Here Behaviorism is an approach in psychology mainly concerned with studying the observable behaviors of people (Beit-Hallahmi, 1974)[1]. A regained interest in the psychology of religion was however evident for the 1950s and is related to two factors: the extended effort of few early scholars to develop the field; and increased attention among psychologists to study real-life phenomenon (Emmons & Paloutzian, 2003). The start of new empirical advancements in regards to the use of psychometrics to study religiousness and health came with Gordon Allport's concepts of *intrinsic* and *extrinsic* religion (Kirkpatrick & Hood, 1990). Intrinsic religious individuals are those who live their religion, who is in harmony with their beliefs, and for who religion is of great significance. Extrinsic religious individuals are characterized as those who use religion to fulfill some basic needs, like *"security and solace, sociability and distraction, status and self-justification"* (Allport & Ross, 1967, p. 434). Not only did a distinction between intrinsically and extrinsically religious individuals show different ways of being religious, but it also supported a significant association between these types of religiousness and other phenomena like that of prejudiced attitudes (Allport, 1954; Allport & Ross, 1967). These were important findings because they helped develop the idea that religiousness was not only a multidimensional phenomenon but depending on certain expressions was also related to other social phenomena.

The earliest scholars of the psychology of religion (e.g., William James, Sigmund Freud, Granville Stanley Hall) included religion and spirituality in encompassing theories on human behavior and mental functioning (Hood et al., 2009). James (1902) distinguished between the *healthy-minded*, meaning someone who focuses on the good and positive in the world, and the *sick-souled*, meaning someone who is more concerned with evil and suffering. Although this distinction represented advanced theoretical perspectives in the beginning of the 20th century, it took another 80

[1] Objections to the rise-and-fall perspectives have been raised by Wulff (1998) who argues that this description is constructed by American academic psychologists and that the period after late 1920 was fruitful for the psychology of religion in a European context referring to psychoanalytic perspectives as well as the Dorpat school of religious psychology.

years for the conceptualization of religion to be sophisticated enough so that causal mechanisms explaining how religion may influence health could be proposed (Oman & Thoresen, 2002).

Contemporary research on religion and spirituality may take different perspectives, and three branches are described by Belzen and Hood (2006). The first perspective deals with how religiousness influences other phenomena. For instance, how may religion cause changes in people's well-being or quality of life? The second perspective deals with the process in which someone becomes religious, does not become religious, or remains religious. Finally, the third perspective deals more with a single religious phenomenon and the psychological factors involved in its process of development. Examples given of the third type of research are studies of mystical experiences, religious art, liturgy, and pilgrimage (Belzen & Hood, 2006, p. 9). The present thesis falls within the first line of research and is further limited to religion's functional role in relation to social support and well-being. This line of research is often characterized by the use of mainstream psychological methods using questionnaires, tests, and scales as well as using concepts developed in mainstream psychology (Belzen & Hood, 2006). Like most research conducted from this perspective, the present thesis uses quantitative methods within the empiricist-analytical tradition as to ensure compatibility to other similar studies within the field.

Historically, religion has for the most part been treated as a proxy variable until the late 80s, while studies since 1990 have had religion and spirituality as their primary interest (Oman & Thoresen, 2002). The mid-1990s represent the start of further advancements in research on religion, spirituality, and health as a considerably number of papers was published at this time (H. G. Koenig, 2012). Consequently, this period is recognized for the evolution of several systematic programs of research in religion and health. It is also recognized for its better quality of the empirical research (i.e., research designed to answer questions on religion-health associations, inclusion of control variables, and random selection of study participants). Also during this time, several fields have marked their interest in religion and health, (e.g., psychoneuroimmunology and clinical practices) (Chatters, 2000). As the evidence supporting the influence of religiousness and spirituality on health have accumulated, the different categories of factors that possibly link religion and health are found to be (1) lifestyles and health

behaviors, (2) social resources, (3) coping resources and behaviors, (4) attitudes, beliefs, and emotional states and feelings, and (5) generalized beliefs about the world (Chatters, 2000). Others have described a mechanism in addition to these four: the superempirical and/or psi influences (Oman & Thoresen, 2002). By the latter pathway we ask if health benefits are caused by the direct influence of a supernatural force. In other words, it is what Oman and Thoresen (2002, p. 371) describe as the influence above and beyond any influence on health through health behaviors, social support, or psychological states.

The five categories of factors linking religiousness and health presented by Chatters (2000) is similar to others who have proposed models or explained the causal pathways from religion and spirituality to health (C. G. Ellison & Levin, 1998; George, Ellison, & Larson, 2002; H. G. Koenig et al., 2012; Oman & Thoresen, 2002) . The present thesis is limited to the three pathways of social resources; coping resources and behaviors; and attitudes beliefs and emotional states and feelings which were outlined by Chatters (2000). These pathways are based on results from empirical studies in which some studies are further elaborated in section 1.4 on theoretical perspectives and empirical evidence.

1.3.2 National context

As scientists in the United States pursued an objective scientific understanding of the psychology of religion, the trend in Europe is described as more philosophical, theological, and inspired by subjective phenomenology (Hood & Spilka, 2013). As early Norwegian pioneers, the psychologist Harald and his brother, theologian and religion psychologist Kristian Schjelderup, marked the start of Norwegian researcher's interests in psychoanalytic approaches to the psychology of religion with their descriptions of religious experiences in three main types: father religion, mother religion, and self-religion (Wikström, 1993). Today, existential perspectives in psychotherapy have recently been developed at the Modum Bad clinic inspired by objection relations theory, affect theory, existential psychotherapy, and narrative theory (Austad & Stålsett, 2007). As opposed to the rest of Scandinavia with the establishment of different schools of psychology of religion (at Lund University, Uppsala University, Åbo Akademi, University of Helsinki) in the 1980s, no important school of the

psychology of religion was developed in Norway (Wikström, 1993). Nevertheless, since the 1990s the field has experienced flourishing development as several studies have been published. A few examples are studies on religious rituals (Danbolt, 1998; Danbolt & Stifoss-Hanssen, 2007; Stifoss-Hanssen & Danbolt, 2010), clinical psychology (Stålsett, Engedal, & Austad, 2010a, 2010b), and on religiousness, psychoses, and schizophrenia (Danbolt, Møller, Lien, & Hestad, 2011; Hustoft, Hestad, Lien, Møller, & Danbolt, 2012). These studies fit well within Belzen and Hood's (2006) third category of research in the psychology of religion concerning a single phenomenon and psychological factors. Belzen and Hood's (2006) first category concerning the relationship between religiousness and other phenomena have also been performed in a Norwegian context. However, as just a very few of these studies are quantitative studies examining associations between religiousness, spirituality, and mental health in particular, most of the studies conducted since the 1990s are reviewed here with the purpose of showing the status quo of Norwegian research on religiousness, spirituality, and health.

Starting in the early 1990s, Fønnebø conducted several studies on lifestyle and mortality, cardiovascular disease, and cancer among Seventh-day Adventists (1992a, 1992b; 1994). In a cross- sectional study, 247 Seventh-day Adventists were matched with controls from the population study on cardiovascular disease conducted in Norway from 1973-1987. Seventh-day Adventists were less likely to smoke and had significantly lower levels of serum cholesterol, and female Adventists had significantly lower blood pressure (Fønnebø, 1992a). Seventh-day Adventists were also found to have a lower mortality rate between 1962 and 1986 compared to the general population. This relationship was due to significantly lower mortality rates caused by cardiovascular disease among Adventists compared to the population. Mortality rates due to cancer were significantly lower among male Adventists younger than 75 years (Fønnebø, 1992b). Finally, by linking data on Seventh-day Adventists to that of several health registries, Fønnebø (1994) found a significantly higher birth weight among the newborns of Seventh-day Adventist women compared to the general population. Significantly lower cholesterol levels were found for Adventists of both genders, while Adventist men had a significantly lower mortality rate.

In a similar fashion, about twenty years later, Sørensen, Danbolt, Lien, Koenig, and Holmen (2011) examined if higher frequency of church or prayer house attendance was related to lower levels of both diastolic and systolic blood pressure by using data from the population health study in Nord-Trøndelag (HUNT3) with inhabitants aged 20 years or older. After controlling for a range of potential confounders (i.e., age, education, cardiovascular disease, diabetes, anti-hypertension medication, anxiety, depression, neuroticism, extraversion, and social support), results showed a negative significant relationship between frequency of church or prayer house attendance and level of diastolic and systolic blood pressure for both genders.

Sørbye, Sørbye, and Elgen (2006) examined the relationship between religiousness, health behaviors, and self-rated health based on a population study conducted among inhabitants in Oslo, the capitol of Norway in 2000-2001. Christian participants who attended a religious meeting at least once a month and who found strength and comfort in their religious faith reported to have more friends, consumed less alcohol, and smoked fewer cigarettes compared to those not attending religious meetings or found comfort in their faith. However, despite significant differences in health behaviors, they did not differ significantly on self-rated health.

As studies on religiousness, spirituality, and physical health or lifestyle in Norway are few, they share similarities in using large quantitative datasets based on the population. Norwegian studies on religiousness and mental health on the other hand are both qualitative and quantitative; thus, the purpose of the studies, study populations, and definitions of religiousness may be different, leaving the findings less easy to compare to each other.

Stifoss-Hanssen (1992, 1994, 1996) studied rigid and flexible types of religiousness where a rigid orientation is less compliant and open when dealing with complex religious beliefs compared to the flexible orientation. By comparing the religiousness of 56 neurotic patients to that of a psychologically healthy comparison group of 70 people, he found that the neurotic patients were significantly more rigid than healthy individuals (Stifoss-Hanssen, 1994). The neurotic patients were less flexible in their religious beliefs compared to the healthy group (Stifoss-Hanssen, 1994). Kaldestad (1995, 1996) also conducted studies on psychiatric patients; he found a significant positive association between the quest orientation and psychopathology

(Kaldestad, 1995). Quest is recognized by an insecure orientation to religion involving seeking, doubting, and religious attitudes that are often changing.

Others have asked if religiousness may help people cope when faced with cancer. In a study of 253 hospitalized cancer patients, most participants reported that they found support in their faith. Patients with poor prognoses reported to find significantly more support in their faith compared to patients with less severe prognosis. Furthermore, religiousness had a positive significant association with quality of life and less hopelessness. Religiousness was however not significantly related to survival (Ringdal, 1996). In another study of 107 patients diagnosed with Hodgkin's Lymphoma in the time period from 1988 to 1994, results showed that a cancer diagnosis may strengthen religious beliefs and contribute to coping with the disease (Torbjørnsen, Stifoss-Hanssen, Abrahamsen, & Hannisdal, 2000).

Finally, several studies are also conducted on religiousness and mental health using population studies. Årnes, Kleiven, Olstad, and Fønnebø (1996) examined the relationship between religious affiliation and mental health of inhabitants in Finnmark County in northern Norway in 1990. Members of the Church of Norway reported significantly better mental health (i.e. low levels of loneliness, depression, sleep problems, dissatisfaction, and problems with coping) than members of religious minorities and non-members. Problems with coping and less satisfaction with life were most frequent among non-members. Non-members and a Christian minority (Læstadians) had the highest levels of insomnia, and Læstadians were more frequent users of tranqulizers. Also, fewer Læstadians rated their physical and psychological health as excellent. All of these differences were significant. Like the study on blood pressure and frequency of church attendance by Sørensen, Danbolt, et al. (2011) cited earlier, the most recent work on religiousness and mental health have also used data from HUNT3. In HUNT3, 3715 participants had experienced death in their immediate family during the last year; among these, Sørensen et al. (2012) found that church attendance significantly moderated depression. For bereaved women, going to church less often was significantly related to less depression, while the opposite pattern was found for men. Among the non-bereaved, both frequent and less frequent church attendance was significantly related to less depression with the exception of men who went to church more than three times per month. Sørensen et al. (2012) merged the data

from HUNT3 with the Cancer Registry of Norway and found no significant relationship between religious coping (i.e., seeking God's help) and life satisfaction or quality of life. However, when compared to cancer-free controls a short time after diagnosis, a higher prevalence of religious coping was found for men diagnosed with cancer.

Taken together, studies from Norway seem to support a positive association between religiousness and health like that of health habits, blood pressure, and quality of life. Also, an inverse relationship is found between religiousness and loneliness, depression, etc. However, religious minorities (i.e., Læstadians) and people struggling with anxiety seem to be related to worse health and/or a more rigid and unsecure relationship with their religiousness. Viewed broadly, results from studies conducted in Norway seem to fit that of studies conducted internationally. However, the studies reviewed here are mostly cross-sectional and therefore cannot support arguments of causality. Also, studies in Norway are few, and the mechanisms connecting religiousness to health are less explored. Therefore, cross sectional studies may still be of great value to carry out in Norway, but it is also important to explore some of the general causal relationships supported in the literature. As mentioned in section 1.3.1 on religiousness and health in an international context, the present thesis touches upon three pathways of mechanisms: social resources; coping resources and behaviors; and attitudes, beliefs, emotional states, and feelings. These pathways are further addressed in section 1.4, starting with religiousness and social support.

1.4 Theoretical perspectives and empirical evidence

1.4.1 Religiousness and social support

In his landmark study on social networks among people living in the parish of Bremnes, Norway, Barnes (1954) described the social relationships between people to be based on kindship, friendship, and acquaintances. He called this phenomenon class network, which was recognized by people participating in joint social activities and by giving and receiving help from each other. More than thirty years later, House, Umberson, and Landis (1988) proposed definitions of several concept related to social relationships in order to guide further research on the meaning and functional role of social relationships in different situations and to study how different aspects of social support was related to

each other. Social networks are concerned with the characteristics of a relationship and social integration and isolation concerning quantity of social ties; this is also related to relational content. As the relational content may hold functional qualities like demands, conflicts, social regulation, or control on one side, social support represents supportive aspects of a relationship, which may promote health and reduce stress on the other side (House, Landis, et al., 1988). The present thesis addresses a person's perceived level of social support that is most important for their health and well-being (Rhodes & Lakey, 1999). Social support may however be defined as both *enacted* (i.e., the actual support provided by others by some objective measures) and *perceived* social support (i.e., a person's perception that social support is available to them) (Lakey & Cohen, 2000). The relational content of perceived social support is defined by four main categories: emotional, instrumental, informational, and appraisal support (House, 1981). Respectively, what this means is that a person's social relationships are characterized by feelings of empathy, love and trust; by receiving direct practical help provided by friends, family, colleagues, and neighbors; by receiving advice and information that may help a person deal with a situation; and by providing the person with knowledge and information that is helpful for self-evaluation. In the work of developing valid psychometric measurement scales of perceived social support, the four main categories presented by House (1981) seem sustainable, despite having different dimensional distributions of social support. Examples of this are the Inventory of Socially Supportive Behaviors (Barrera & Ainlay, 1983; Gottlieb & Bergen, 2010) and the Medical Outcomes Study Social Support Survey (MOS-SSS) (Robitaille, Orpana, & McIntosh, 2011; Sherbourne & Stewart, 1991). The latter was used to assess social support in the present thesis. In addition to perceived social support, structural aspects of social relationships for which House at al. (1988) names social integration/isolation was also addressed in this thesis. This included the number and what types of social a person has; these characteristics reflect whether the person is socially integrated or isolated. The concept of structural and functional social support is used in this thesis, and it extends the meaning of social support presented by House et al. (1988) to also include structural elements.

The substantial elements of enacted and perceived support as well as the relationship between them have been especially important for developments of theories

that explain the role of social support for people's health. Rhodes and Lakey (1999) address the development of the stress-buffering paradigm (i.e., social support provides a mean to cope with stress, which consequently influences health and well-being), but argues that as empirical research find social support to consist of smaller subcomponents that is differently related to outcomes, there is a need to widen our understanding of social support and the mechanisms linking social support to health. Two important points are addressed by Rhodes and Lakey (1999). First, the stress-buffering hypothesis may fall short in explaining all the processes of social support because enacted support only explains about 10 per cent of the variation in perceived support. As the stress-buffering hypothesis view perceived social support as a causal consequence of enacted support, the weak relationship between the two is problematic. Furthermore, enacted and perceived support differs in their association to health; that is, enacted support is either weakly but positively related to health or positively related to distress. Perceived support on the other hand has a strong positive association to better health (i.e., more well-being and less distress). Second, perceived support is likely to depend on several mechanisms, both of which explain perceived support and how these distinct processes are related to health. Perceived social support depends on characteristics with the perceiver, the supporter, and the interaction between the perceiver and the supporter. For example, perceived social support depends on the perceiver's extraversion, interpretation bias, and style of attachment.

As the stress-buffering hypothesis is not able to account for all mechanisms linking social support and health, relational regulation theory is an alternative perspective that addresses the often observed direct relationship between perceived social support and health (Lakey & Orehek, 2011). Relational regulation is defined as the desired effect, action, or thought that results from interacting with or thinking about specific other people and occurs primarily through conversation and shared activities with others (Lakey & Orehek, 2011). Central to this perspective is that relational influences occur depending on aspects with the supporter as well as the person receiving the support. That is, the provider influences the perceiver's thoughts or actions or may affect them in an atypical manner or in a manner different from what the perceiver usually experiences from other providers. Furthermore, relational influence does not depend on the level of stress, but it is rather based on daily interactions between people.

Although the stress-buffering hypothesis and the relational regulation theory hold different explanations for how social support influence health (i.e., indirect versus direct effects), both perspectives focus on the positive influence of perceived social support on health (Lakey & Orehek, 2011). As the primary focus of the present thesis is not to test a theory of social support per se but rather to examine the correlation between religiousness and social support, empirical findings on religiousness and social support are elaborated next.

The influence of religiousness on health may be explained by a mediating variable of social support. This model is supported by several findings (Chatters, 2000; C. G. Ellison & Levin, 1998; George et al., 2002; H. G. Koenig et al., 2012; Oman & Thoresen, 2002). In the early 1990s, however, it was argued that although many claimed religious participation (i.e., attending services, meetings, social activities of the church) to enhance a person's social resources, there existed little evidence of such a relationship at that time (C. G. Ellison & George, 1994). This motivated a population-based study on people from the Southeast U.S., in which results showed that frequent churchgoers had larger social networks, had more contact with coreligionists (i.e., people with same religious belonging), experienced more social support, and was more satisfied with the quality of their social relationships compared to infrequent churchgoers (C. G. Ellison & George, 1994). The study controlled for a range of factors known to possibly influence one's perception of social support (e.g., gender, race, age, income, and education). Furthermore, another U.S. study using data from 337 participants of the General Social Survey showed that social support negatively mediated the relationship between church participation and depression (Nooney & Woodrum, 2002). It is claimed that the social support provided by coreligionists are exceptionally supportive as close bonds develop between people in the congregation (C. G. Ellison & Levin, 1998). Due to the heterogeneity in congregations in terms of religious beliefs and values, people's feelings of cohesion and a sense of affiliation with a caring group may be strengthened (Moreira-Almeida, Lotufo Neto, & Koenig, 2006). Such claims may be a reason for why some studies have focused on comparing the health benefits from religiousness to that of secular social support. A U.S. population study of older Americans compared secular to church-based social support among 548 churchgoers and found that support provided by coreligionists buffered the impact of

financial strain on self-rated health. This relationship was however only evident among older Blacks and not among older Whites (Krause, 2006). Another U.S. study conducted among 93 older White Americans compared their perception of social support received from fellow church attenders to social support received from secular friends. In this study, no significant differences were found between the social support provided by fellow churchgoers compared to that of secular friends (McFadden, Knepple, & Armstrong, 2003). These results were in line with Krause's (2006) findings where White Americans had no benefit from support from their coreligionists.

The above empirical studies on church attendance and social support may not be easily compared to Norwegians as the weekly church attendance is 5 per cent (European Social Survey, 2010) compared to 43 per cent in the U.S. (Gallup, 2010). Furthermore, the two countries also differ in regards to ethnic diversity. Then, is it possible that other dimension of religiousness apart from church attendance may lead to higher level of perceived social support? Several findings have found other dimensions of religiousness to positively correlate with social support. For instance, in a study of 1126 older Black and White Americans, the findings showed that associations between church attendance, social support, and self-rated health may be presented as a comprehensive overall picture of mechanisms. Thus, attending church frequently as opposed to rarely was related to feelings of cohesive congregations that were associated to greater emotional and spiritual support from coreligionists. Furthermore, support from others increased the likelihood of feeling close to God (i.e., meaning that the person experienced having a close personal relationship with God, that God is present in everyday life, and that God is listening). Being close to God was significantly associated with greater optimism, and greater optimism was significantly associated with better self-rated health (Krause, 2002). Although this study was cross-sectional and consequently causal inferences cannot be made, one explanation may be that feeling close to God may influence people's perception of social support provided by others. Actually, prayer fulfillment and intrinsic religiousness was related to social support in a cross sectional study of 217 university students from Kentucky, U.S. (Salsman et al., 2005). Intrinsic religiousness was also positively related to social support for a group of 89 non-orthodox Jews from the U.S. This relationship was however not supported for the 123 orthodox Jews (Pirutinsky et al., 2011).

From the above studies, the association between religiousness and social support is not only based on the dimension of church attendance. Social support may also be associated with other dimensions that are more private as opposed to public. In the present thesis, religious people were compared to non-religious people on level of perceived social support. Both religious and non-religious people reported to what extent they felt their view of life was enriching, and the level of enrichment was accounted for in the analysis in Paper I. Although by this design we are not able to address, for instance, church attendance or intrinsic religiousness in particular, the self-identification of people as either religious or non-religious may be helpful in order to gain overall knowledge of differences in perceived social support, for religious as well as non-religious people.

1.4.2 Religiousness and well-being

Coping, religious coping and well-being

Coping may be 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 & Folkman, 1984, p. 435). Appraisals are the mediators between the person and the environment and constitute three types: primary appraisals, secondary appraisals, and reappraisals. *Primary appraisals* deal with the initial evaluation of a situation as possibly threatening, irrelevant, or a source to well-being. When a situation is perceived as threatening, s*econdary appraisals* are triggered where the person evaluates one's options for dealing with the situation and how effective these resources might be. *Reappraising* a situation is a continual process where primary and secondary appraisals are evaluated as the situation evolves. This may include changing or redefining the initial appraisals; thus previous stressful circumstances may often, but not necessarily, be viewed as challenging or irrelevant (Lazarus & Folkman, 1984).

The process of coping is naturally linked to the concept of stress. From a sociological perspective, stress may be understood as the disturbing agent, and strain may be understood as the collective reaction to stress (Lazarus, 1993). A cornerstone in theories on stress is the physiological perspective of "Systemic stress" presented by

Selye (1976). Unlike a sociological understanding of the concept of stress as a disturbing agent, Selye denoted the disturbing agent to be a stressor, while stress was understood as the basic reaction pattern to stressors. He believed that this pattern of reactions was always the same regardless of the type of stressor. This was called the general adaptation syndrome (GAS) and develops across three stages. The alarm reaction in the initial shock phase is characterized by physiological changes in the body (e.g., hormonal changes, increased heart rate). Secondly, the stage of resistance is a result of continually stimulation of the stressor that results in an adaptation of the organism, and the physiological changes in the body disappear. Finally, if the capabilities of the organism to adapt to the stressor are no longer viable, it will result in the stage of exhaustion (Krohne, 2001). The capacity of the living organism to adapt to stressors were viewed as a "finite quantity" in which the magnitude were argued to depend largely on genetic factors (Selye, 1950).

With the development of the transactional model in the 1980s (Lazarus & Folkman, 1984), stress was then understood as the relationship between the person and the environment in which personal meaning was important in the evaluation process, that is, how the stressor (i.e., the disturbing agent) was considered by the person to be a harm, threat, challenge, or benefit (Lazarus, 1993). In later perspectives an increasingly dynamic view of stress and coping became influential which also addressed how a stressor was transformed to a person's experience of being distressed. The stress experience in humans was later found to almost always be mediated by cognition (Krohne, 2001). Furthermore, what also became of increasingly interest to later theorists on stress was the mediating influence of coping mechanisms to the relationship between stress and the outcomes of stress (Krohne, 2001). The importance of cognitive factors was later emphasized in the transactional coping theory by Lazarus and Folkman (1984), where the concepts of appraisals and coping is central, as explained initially.

Pargament (1997) recognized that a person's orienting system may be highly influential in the process of coping. Based on Lazarus and Folkmans transactional perspective, he developed a theory of religious coping. Pargament and colleagues defined religious coping as *"a multidimensional construct designed to assist people in a search for a variety of significant ends in stressful times: a sense of meaning and purpose, emotional comfort, personal control, intimacy with others, physical health,*

and spirituality" (Pargament, Smith, Koenig, & Perez, 1998, p. 711). Although religion and coping are viewed as separate entities, meaning that religion is not only a mean to deal with difficulties and that coping cannot be separated from a perceived stressor, one core aspect of Pargament's coping theory is the convergence of religion and coping. In order to cope with a situation the person's appraisals or evaluations of the situation are based on one's orienting system which consists of a person's habits, values, relationships, generalized beliefs, and personality (Pargament, 1997, p. 100). Religion then becomes available as a means for coping if religion is an *available* part of the orienting system as well as if it is perceived as a *compelling* way to cope. Pargament (1997) explains compelling to mean the experience of *what makes sense* in a particular situation constituted by both cognitive and emotional factors.

As shown from the above, not only is it evident that the experience of stress depends on personal meaning, but different ways of dealing with the stress experience may lead to different outcomes. Although religion may be a compelling way to cope for many people, religious coping is multidimensional, and empirical findings shows that some forms of religious coping seem to benefit people's health more than others.

As recognized by Pargament (1997) as well as Lazarus and Folkman (1984), people cope differently with adversities. Patterns of problem-focused and emotion-focused strategies are a well-documented distinction between types of coping. Shortly explained, problem-focused strategies are recognized by the person's effort towards changing what is possible to change in a situation, i.e., being directed inwards to the self or outwards to aspects of the environment. Emotion-focused strategies are recognized by the person trying to avoid or decrease emotional distress. Such strategies may include "avoidance, minimization, distancing, selective attention, positive comparisons (i.e. to present a bad situation in a positive way), and wresting positive values from negative events" (Lazarus & Folkman, 1984, p. 150). Although religious coping is not limited to being exclusively emotion-focused, it has been recognized to be important in such regards (H. G. Koenig, George, & Siegler, 1988). As a range of religious coping methods are mentioned in the literature, many of them include emotion-focused strategies such as spiritually based coping, religious participation, and avoidance coping (Pargament et al., 2011). Specifically, a U.S. study on religious coping and well-being based on interviews from 103 sexually assaulted women showed that religion was

reported to be important in the process of coping for most women (Ahrens, Abeling, Ahmad, & Hinman, 2010). Doing good deeds was the most frequently used coping strategy reported by 86 per cent of the women. This type of coping involves participating in church meetings, giving help to others, or trying to live a more loving life. Spiritually based coping was reported by 85 per cent of the women and included an experience of being loved by God (i.e., in coping with the event, to what extent did you experience God's love and care?) or receiving strength from God (i.e., in coping with the event, to what extent did you realize that God was trying to strengthen you?). The third most frequent coping strategy was avoidance coping. This type of coping involves leaving the situation to God to deal with and was reported by 81 per cent of the women. Furthermore, higher levels of spiritual coping, doing good deeds, and seeking religious support was significantly associated with increased psychological well-being and negatively associated with depression. Furthermore, higher levels of discontent coping, pleading, and avoiding a situation was significantly associated with symptoms of depression (Ahrens et al., 2010).

The above shows that associations between methods for religious coping and health and well-being may show different patterns. Some of the many methods of religious coping correlate with each other, and these methods cluster into positive and negative religious coping, which is associated with how people adapt to adversities (Pargament, 1997). To illustrate, a U.S. study of religious coping among people who experienced the Oklahoma City bombing, college students dealing with major life stressors, and elderly coping with serious illness showed that people used religious coping in a way that were divided between positive and negative patterns (Pargament et al., 1998). These patterns were constituted by a range of already identified methods of religious coping that associated differently to people's adjustment to adverse situations. This includes among other coping efforts to redefine a stressor as beneficial or a punishment through religion, seeking support from God to solve a situation or passively waiting for God to solve ones problems, seeking relief from a stressor by focusing on religion or seeking a connectedness with the transcendent, and feeling confused or dissatisfied with God and the situation (Pargament et al., 1998). Thus, positive religious coping is defined by having a confident benevolent world view, experiencing a spiritual connection with a transcendent force, and by being spiritually connected to other

people. On the other hand, negative religious coping is recognized by struggling to conserve significance in life related inwards to oneself or outward to other people and to one's relationship with the transcendent. Also central to the study by Pargament et al. (1998) was the finding that positive religious coping was more frequently reported compared to negative religious coping. Furthermore, positive religious coping was significantly associated with greater cooperativeness, spiritual growth, and fewer symptoms of distress, while negative religious coping was significantly related to more emotional distress and poorer quality of life. Other studies report on results similar to the findings reported above. In a study conducted in the U.S. on religious and non-religious people coping with the death of a near friend, 96 undergraduate students showed that religious coping was a significant mediator for intrinsic/extrinsic religiosity, time since death, and unfairness of death to the outcomes of sad affect and guilt, distress, or personal growth (Park & Cohen, 1993). The pattern was such that higher levels of religious pleading coping were significantly associated with sad affect and guilt as well as distress. Lack of religious spiritual support was also significantly related to distress. Likewise, the more a person was engaged in doing good deeds the more distress they experienced. On the other hand, coping by positive reinterpretation of an event was significantly related to personal growth. Finally, in a recent U.S. prospective study involving patients with chronic heart failure the researchers aimed to investigate the influence of seven dimensions of religion and spirituality including religious coping to three different dimensions of well-being: physical, mental, and existential. Religion and spirituality were not related to physical well-being; also, they were weakly related to mental well-being and were consistently related to existential well-being. In the prospective analysis controlling for well-being at baseline, each of the seven dimensions of religion and spirituality was significantly related to at least one dimension of existential well-being; also, for positive religious coping it was significantly and negatively related to spiritual stress (Park et al., 2013). These results are consistent with the general pattern of significant associations, as shown in a review by Pargament et al. (2011). Positive religious coping is consistently and positively related to well-being and sometimes inversely related to poor functioning like anxiety, depression, and pain. Negative religious coping has an opposite pattern of association as it is generally positively related to poor functioning and sometimes inversely related to

greater well-being. Six dimensions of religious coping are included in the present thesis (Paper II), in which three dimensions may be grouped into positive religious coping (e.g., spiritually based coping, doing good deeds, interpersonal religious support) and negative religious coping (e.g., discontent, plead, religious avoidance). Although positive and negative religious coping seem to be consistently related to more versus less beneficial health outcomes, respectively, little is known about how and if religious coping is related to well-being in a Norwegian context. Furthermore, as already shown in this section, Pargament (1997, pp. 91-127) describe the process of coping to be based on resources as well as burdens of a person's orienting system. The orienting system is based on individual differences among people like habits, values, relationships, generalized beliefs, and personality. Depending on the nature of these resources it may influence on the coping process differently. Optimism and pessimism may be understood as a resource or burden in the coping process. Consequently, the present thesis aimed to examine the indirect relationship between religious coping and well-being by including optimism and pessimism as mediating variables in the models tested in Paper II. By testing this model it will provide new knowledge of whether religious coping is related to existential well-being directly and to what extent a person's degree of optimism and pessimism may be important to possibly explain this relationship.

Optimism and pessimism in coping when religion is important

Dispositional optimism, a person's tendency to hold generally positive expectations of outcomes of future events, is consistently associated with greater well-being (Carver & Scheier, 2003; Carver, Scheier, & Segerstrom, 2010; Scheier & Carver, 1985, 1992). One explanation for the relationship between optimism and well-being may be the way optimists cope with adversities, both in terms of choosing the most beneficial coping strategies in diverse situations and in terms of changing strategies when they are no longer the better choice (Park, Moore, Turner, & Adler, 1997; Scheier & Carver, 1985). Within the theoretical perspective of expectancy value models of motivation, people's behaviors are explained in terms of their valued *goals* and *expectancies*. The goals may range from being highly valued to less valued, and thus people will view these goals as desirable or undesirable (Scheier & Carver, 1992). Furthermore, in the process of attaining a goal, people may experience great confidence and doubt influencing how

they are able to approach the situation. This individual difference is expressed through people's disposition towards being more or less optimistic and pessimistic.

Optimists are generally more engaged in approach- and problem-focused coping than in avoidance- and emotion-focused coping (Nes & Segerstrom, 2006). Some studies focusing on the mediating role of coping strategies in the relationship between optimism/pessimism and adjustment to adversities showed that individual differences may influence coping strategies which furthermore will influence the outcome (Bolger & Zuckerman, 1995). For instance, in a 2-year follow-up study, coping strategies were explored as possible mediators between the predictors of optimism, psychological control, and self-esteem to the adjustment to life in college. Optimism was shown to have both a direct and indirect positive influence on adjustment and a negative influence on avoidant coping strategies (Aspinwall & Taylor, 1992). Other studies based on people from different populations have shown that optimism is related to positive health outcomes and that pessimism is related to negative health outcomes. This pattern of associations is found in a study of pregnant women on anxiety, positive states of mind, and substance use (Park et al., 1997), among breast cancer patients on posttraumatic growth and quality of life (Büyükaşik-Çolak, Gündoğdu-Aktürk, & Bozo, 2012; Schou, Ekeberg, & Ruland, 2005), and among couples failing in vitro fertilization (Litt, Tennen, Affleck, & Klock, 1992).

Coping strategies may also be interrelated with optimism and pessimism in which they influence each other (Connor-Smith & Compas, 2002; David, Montgomery, & Bovbjerg, 2006). In a study on psychological distress in surgical breast cancer patients, two models were tested: one included coping as a mediator between optimism/pessimism and distress and another included optimism/pessimism as a mediator between coping and distress. Findings showed that optimism and pessimism mediated the relationship between coping and distress, whereas coping did generally not function as a mediator between optimism/pessimism and distress (David et al., 2006). As pointed out by David and colleagues (2006), the findings could be due to optimism and pessimism being "components of secondary appraisal processes" (David et al., 2006, p. 6). As secondary appraisals are evaluations of available resources for dealing with a situation, it has some similarities to generalized expectancies of outcomes of

future events, which is the definition of optimism and pessimism held by Scheier and Carver (1985).

In this thesis, optimism and pessimism are examined as mediating variables in the relationship between religious coping and well-being. Although it is possible that optimism and pessimism are interrelated with religious coping, leaving both variables as the causes as well as the effects, it was here chosen to conceptualize optimism and pessimism as effects of religious coping. This is due to the view that religion may facilitate optimism, which is addressed in the next section. From a broad perspective, few studies have examined the relationship between religiousness and optimism and pessimism, and even fewer studies have examined optimism and pessimism as mediators between religiousness and any health outcome. By addressing this gap in the literature, the present thesis contributes to gaining knowledge of if and how optimism and pessimism may be relevant for explaining the relationship between religious coping and well-being, or if religious coping is directly related to well-being.

It is argued that “religion is deeply intertwined with optimism” (Tiger, 1979, p. 40), and that societies in which religion is an important factor need cultures of optimism to sustain themselves (Bennett, 2011). The reason for this, according to Bennett (2011), is religion's functional role with regards to creating meaning, which is closely tied to divine justice and ultimate destiny. By this view, religion is said to be intertwined with optimism due to the doctrines of religion. Focusing more on the social aspects of religion, Eckstein (2000) argued that sharing values and beliefs with other people may create a sense of belonging and furthermore may facilitate optimism. The link between religion and optimism is continually supported in the literature. For instance, members of nine major religions in the U.S. were divided into fundamentalists, moderates, and liberals. Fundamentalists were significantly more optimistic than moderates as were moderates compared to liberals. The authors argue that these findings may be due to fundamentals that focus heavily on positive aspects in their liturgies and sermons and having a greater religious involvement (Sethi & Seligman, 1993, 1994). Furthermore, a study on church-based social support and health conducted among 1126 older African Americans and White Americans showed that frequent church attendance was significantly associated with greater optimism. However, the effect was strongly moderated by race, showing a positive association between church attendance and

optimism for African Americans, while a slight decline in optimism was associated with frequent church attenders among White Americans (Krause, 2002). In a study of 241 younger adults at a university in Singapore, a significant positive relationship was found between attachment to God (i.e., a person perceiving to have a strong emotional bond to God) and optimism. Attachment to God explained variance in optimism over and above that of attachments to parents (Sim & Loh, 2003). Yet another study carried out among 240 younger American university undergraduates showed that religiousness as indicated by service attendance, prayer, and levels of self-reported religiousness and spirituality was positively associated with optimism. This relationship was however partly moderated by meaning in life (i.e., a perception of meaning and purpose in life) (Steger & Frazier, 2005). In addition to positive associations between religiousness and optimism in the general populations mentioned above, others have found significant associations between religiousness and optimism and pessimism among African Americans (Mattis, Fontenot, Hatcher-Kay, Grayman, & Beale, 2004) and in medically ill patients (e.g., those with cancer) (Edmondson, Park, Blank, Fenster, & Mills, 2008) and among people with cardiac disease (Ai, Peterson, Bolling, & Koenig, 2002).

Some studies have examined how religious coping is related to optimism and pessimism (Ai et al., 2002; Ai, Peterson, & Huang, 2003; Carver et al., 1993; Cotton et al., 2006; Salsman et al., 2005), and most of them support a significant positive association between religious coping and optimism. Of these studies, religious coping is measured in different ways, from coping with prayer to using the COPE instrument (Carver, Scheier, & Weintraub, 1989), in which turning to religion is one of several ways to cope (e.g., active coping, planning, and social support). The Brief Religious Coping Scale (Brief RCOPE; Pargament et al., 1998) that separates positive and negative ways of coping was used in the study by Ai et al. (2003) and by Cotton et al. (2006). A significant positive relationship was found between positive religious coping and optimism for both studies, while the study by Cotton et al. (2006) also found a significant negative relationship between negative religious coping and optimism. Patients with HIV/AIDS were examined in one study (Cotton et al., 2006), and war refugees in the other (Ai et al., 2003).

There is a lack of studies examining the mediating role of optimism and pessimism between religious coping and well-being. However, one study examined the

mediating role of optimism for other factors related to religiousness and life satisfaction. This study was based on 217 U.S. university students in which optimism mediated the relationship between intrinsic religiousness and prayer fulfillment to the outcome of life satisfaction (Salsman et al., 2005).

As for studies in general coping, scholars have shown a balanced interest in the role of both optimism and pessimism, in which some studies have examined optimism and pessimism as two separate dimensions (David et al., 2006; Nicholls, Polman, Levy, & Backhouse, 2008; Thompson & Gaudreau, 2008). Within psychology of religion and spirituality, and for religious coping in particular, studies have treated optimism and pessimism as a lower and higher end of one dimension (Ai et al., 2002; Ai et al., 2003; Carver et al., 1993; Cotton et al., 2006; Salsman et al., 2005). Optimism and pessimism should however be examined as distinct constructs because convergent validity is repeatedly demonstrated in several studies (Chang, Maydeu-Olivares, & D'Zurilla, 1997; Glaesmer et al., 2012; Herzberg, Glaesmer, & Hoyer, 2006). Consequently, when examining optimism and pessimism in relationship to other factors, it is important to consider both of these constructs.

The literature on religious coping has developed separate from that of general coping (Schottenbauer et al., 2006). A reason for this may be that scholars of the psychology of religion and spirituality have typically asked different questions compared to scholars in general coping. As Pargament and Raiya (2007) reflect upon a decade of research on religious coping, they discuss the uniqueness of the religious coping process. In that regard, potential confounding variables that may significantly influence the relationship between religious coping and well-being have been of great interest. Consequently, the purpose of adding potential confounding variables in statistical models has been used to find out if religion influences people's well-being over and above that provided by other factors (e.g., social support, personality, and social status). Less attention is given to examine if potential confounders may have a role as mediators in explaining how religion may influence health and well-being. Not only is it important to gain knowledge on other factors that may play an important role in explaining why religious coping may lead to greater well-being, but the implications of this knowledge may be important for developing clinical practices and theories on religion and health connections.

Religious coping with everyday hassles and severely stressful events

Why are so many people leaving religion if it makes people happy? This paradox was addressed by Diener, Tay, and Myers (2011) in their study of 155 nations worldwide. They found that highly religious people were more likely to be found in nations with difficult living conditions (e.g., low life expectancy and widespread hunger). Under these conditions, religiousness was related to greater social support, respect, meaning, and subjective well-being. Conversely, nations with more favorable living conditions had a lower prevalence of religion. Religious and non-religious people also experienced the same amount of subjective well-being (Diener et al., 2011). Does religion then serve only the deprived?

There is no simple answer to this. Religion is relevant to all of the human experience, and consequently religion is more than a way to cope with stress (Pargament, 1997, p. 142). Thus, it may be as Pargament (1997) argues, that religiousness is expressed more when people have more stressful experiences compared to less stressful experiences. One U.S. study directly addressed this issue by interviewing 753 people who had experienced a life crisis during the year previous to the study. As people differed in terms of mental health problems related to their life crisis, their pattern of organized religious activity and prayer also differed. Generally, people prayed significantly more often when they experienced more severe mental health problems as opposed to less severe problems. Furthermore, severe mental health problems were related to less participation in organized religious activities. Thus, mental health problems were positively related to prayer, suggesting that the more people struggle, the more they turn inward for coping (Lindenthal, Myers, Pepper, & Stern, 1970). Numerous studies have also specifically aimed to investigate religious coping in populations with long-term health problems like cancer and heart disease (H. G. Koenig et al., 2012). Many of these studies have found religion and spirituality to be important factors for coping with their disease. One study of 32 Canadian breast cancer survivors found that a relationship to God (i.e., *"a psychological working internal model of a sort of person that the individual imagines God to be"* [Lawrence, 1997, p. 214]) and religious coping behaviors were important factors in long-term adjustment to breast cancer. About 1/3 of the women perceived their cancer as very severe, 1/3 perceived it as fairly severe, and 1/3 perceived it to be slightly severe (Gall, Miguez de

Renart, & Boonstra, 2000). Another study conducted in Michigan, U.S. with 309 patients undergoing major cardiac surgery found that positive religious coping was related to less distress after surgery through the mediators of perceived social support and hope. Negative religious coping was related to more distress through the same mediators (Ai, Park, Bu Huang, Rodgers, & Tice, 2007). Finally, a Danish study of 111 severely ill lung cancer patients found an inverse relationship between negative religious coping and quality of life, whereas a relationship between positive religious coping and quality of life was not supported (Pedersen, Pargament, Pedersen, & Zachariae, 2012).

Religious coping is also shown to be important for people in dealing with daily stressors (Belavich, 1995), but lack of such relationships are also supported (Plante, Saucedo, & Rice, 2001). However, the latter study examined strength of faith rather than explicitly religious coping, which may have influenced the results. Based on the above, religious coping seemed to be more pronounced when people are faced with events that are perceived as particularly stressful. This seems to be the case even in nations with high standards of living. As already mentioned in section 1.1.1 on background, Norwegian studies find religion to be helpful for people coping with cancer in particular (Ringdal, 1996; Sørensen, Dahl, et al., 2012; Torbjørnsen, 2011). On the other hand, little is known about religious coping in the general population and especially in a secular context. Consequently, the present thesis addressed this gap of knowledge in Paper II by conducting a study of religious coping on the Norwegian general population. Furthermore, as religious coping is shown to be helpful for people facing long-standing health problems, it was also of interest to examine differences in structural relationships between religious coping, optimism, pessimism and existential well-being for the general population compared to people with health problems.

Religious experiences and well-being

Religious experiences have been closely associated with emotions[2] (Otto, 1959; Schleiermacher & Crouter, 1996). Religious experiences are however not synonymous

[2] An emotion consists of neural circuits and neurobiological processes, a response system, and a feeling in which motivates and organize a person's cognitions and actions. Cognitive appraisals and cognitions are central in interpretation of a feeling state, expressions of emotions, and the communication of emotions socially. Emotions may also motivate behavior (Izard, 2010).

with an emotion. An emotion needs to be denoted meaning and be defined as a religious experience by the person (Glock & Stark, 1965). Perceptions and sensations are likewise important in communication with a divine essence.

Religious experiences may range in intensity across four levels: a confirming experience, a responsive experience, an ecstatic experience, and a revelational experience (Glock & Stark, 1965). While the confirming experience and the responsive experience represent more common experiences, and sensations related to the transcendent, ecstatic, and revelational experiences are less common, more powerful perceptions and sensations characterized by an intimate relationship with the divine can be perceived as a two-way interaction (Glock & Stark, 1965, pp. 39-67). The present thesis adresses the confirming and the responsive experience. Such experiences are also called personal religious experiences and concerns the influence of the transcendent on someone's personal life (King, 1967). Having such personal religious experiences includes having a sense of presence and close relationship with the transcendent. In addition to some dimensions of religious coping (e.g., spiritual religious coping, pleading coping), religious experiences also represent the spiritual domains of religiousness as it is more emotional and addressed inwards. A person's religious experiences may therefore be interpreted as a spiritual dimension that is more or less, or not at all, based on religious traditions that have been established over time (see section 1.2.1 on religion and 1.2.2 on spirituality). Religious experiences may therefore be understood as a religious dimension that truly illustrates the interrelation between religion and spirituality because their common feauture is the transcendent.

A positive correlation between religious experiences and well-being is supported in the literature. In one study consisting of two samples of 195 and 338 French seniors, the aim was to examine the psychometric properties of the daily spiritual experience scale. In addition to the results showing good psychometric properties of the scale, spiritual experiences were positively correlated with self-rated health and life satisfaction (Bailly & Roussiau, 2010). Furthermore, a U.S. study based on data from the General Social Survey in 1998 and 2004 aimed to examine whetеher daily spiritual experiences were associated with well-being in the general population (C. G. Ellison & Fan, 2008). Several interesting findings emerged from this study. By controlling for gender, age, education, martial status, and income, results showed a significant positive

relationship between spiritual experiences and indicators of well-being like exitement with life, happiness, satisfaction with self, and optimism. In line with these findings, there was no evidence of a significant positive correlation between having daily religious experiences and distress. Furthermore, there was also little eveidence of a mediating role of daily spiritual experience in the relationship between religious practices and well-being. This supports that daily spiritual experiences may be important for people's well-being (C. G. Ellison & Fan, 2008).

The relationship between religious experiences and well-being may be explained by the broaden-and-build theory, which posits that positive emotions build personal resources of enduring quality in terms of broadening an individual’s thought-action range (Fredrickson, 1998; Fredrickson & Branigan, 2005). The reason for this is that positive emotions expand the scope of attention, cognition, and actions (Isen, Niedenthal, & Cantor, 1992; Isen, 2002; Isen, Daubman, & Nowicki, 1987). The qualities of a broadened attention, cognition, and action range further associates with greater flexibility, creativity, integration, and openness to information (Fredrickson, 2001). Furthermore, positive emotions are linked to more helpful and generous behavior, sociability, friendliness, reduction of interpersonal conflicts, and improved coping (See Isen, 2002 for a review).

Positive emotions also foster the experience of positive emotions in the future. When people become more flexible in terms of coping with adversity as a result of a broadened thought-action repertoire, positive emotions build psychological resilience (i.e., a persons ability to quickly and efficiently recover from stressful experiences) that improves emotional well-being (Fredrickson, 2001). This way, cognitive theories of coping adds to the broaden-and-build theory of emotions and may explain the reciprocal relationship between religiousness in a broad sense, including religious coping, experiences, and behaviors and how these factors are related to well-being. The notion that resilience and coping builds on positive emotions is supported by empirical studies. Results from a U.S. study of 86 university students showed that differential levels of positive emotions caused changes in levels of resilience across a four-week period, and positive emotions predicted both increased levels of resilience and life satisfaction (Cohn, Fredrickson, Brown, Mikels, & Conway, 2009). Likewise, another U.S. prospective study of 185 undergraduate university students found a significant positive

relationship between positive emotions and positive coping and between positive emotions and interpersonal trust (Burns et al., 2008).

The facilitating effect of emotions on cognitions and actions depends on the positive nature of the emotion. Negative affective experiences are shown to narrow one's attentional focus and further influence the person's processing of other stimuli (Chajut & Algom, 2003; Gable & Harmon-Jones, 2010). However, the varying level of motivational intensity between negative affective experiences may impact one's attentional focus differently. In an experimental study on how negative affect may influnce our attention, results showed that sadness (i.e., a low intensity emotion) caused a broadened attentional scope, while disgust (i.e., a high intensity emotion) narrowed the participants' attentional scope (Gable & Harmon-Jones, 2010). Others have also argued that the influence of negative emotions as opposed to positive emotions on cognitive processes is more complex (Ashby, Isen, & Turken, 1999).

As shown in this section on religious experiences and well-being, empirical studies studies seem to support a positive significant correlation between religious experiences and well-being. There is also reason to believe that religion may cause positive emotions leading to increased well-being (Chatters, 2000), and the broaden-and-build theory may explain this mechanism. As women may seem to cope with adversities by influencing emotions more so than men (Rosenfield & Mouzon, 2013), the present thesis aimed to examine whether gender moderated the association between religious experiences and existential well-being (Paper III). For example, religious experiences are shown to be positively related to happiness and self-satisfaction for women, but not for men (C. G. Ellison & Fan, 2008). Likewise, both weekly religious attendance and spiritual experiences were related to greater well-being for women, while only religious attendance predicted greater well-being for men (Maselko & Kubzansky, 2006). Based on this information, religious experiences may be more important for the well-being of women compared to men. As no Norwegian study has adressed questions of differences across gender on religious experiences and well-being, there is a great need for studies that examine this relationship in a secular context. This may also stimulate further studies on the link between religious experiences and well-being by explicitly testing the broaden-and-build theory of emotions. In a wider

perspective, the role of emotions in many dimensions of religiousness is an interesting area for further studies.

Church attendance and well-being

Several authors have argued that regular church attendance is related to survival (Strawbridge, Cohen, Shema, & Kaplan, 1997; Strawbridge, Shema, Cohen, & Kaplan, 2001). However, critiques of study designs have raised questions concerning the validity of these findings, and consequently Strawbridge et al. (2001) aimed to disentangle the mechanisms of association by examining data from a prospective U.S. population study across 30 years. The role of health behaviors, mental health, and social relationships were examined in order to understand how church attendance may affect survival. Findings showed that attending church was related to establishing healthy behaviors, improving mental health (i.e., preventing depression), and maintaining or improving good social relationships. These effects appeared in conjunction with more frequent attendance. Studies on well-being have shown similar results. C. G. Ellison, Boardman, Williams, and Jackson (2001) reviewed and tested several of the most commonly assumed mechanisms for which church attendance may influence health, including that of social and psychological resources (e.g., self-esteem) and direct influences. The study was based on data from the 1995 Detroit Area Study including 1139 adults. In addition to confirming the mediating role of social and psychological resources between church attendance and well-being, higher frequency of church attendance was also significantly related to greater well-being, which also supported a direct relationship. These results are consistent with later studies. In a U.S. prospective study of church attendance and health over the lifespan involving 456 men, church attendance accounted for about 15% of the variation in subjective well-being (L. B. Koenig & Vaillant, 2009). The study controlled for previous health status, including that of functional abilities and self-rated physical health, substance use, mood, social class, and level of education. Regular church attendance may also facilitate frequent religious experiences and strengthen beliefs, which explain the direct association between frequent church attendance and positive health outcomes.

There seems to be more than one explanation for the positive relationship between regular church attendance and physical, mental, and social domains of health

(C. G. Ellison et al., 2001; L. B. Koenig & Vaillant, 2009; Strawbridge et al., 1997; Strawbridge et al., 2001), that is, church attendance may improve health indirectly by promoting good health behaviors, social support and religious experiences, and directly by protecting against depression and by facilitating positive mental health. Gender may however moderate this relationship. Not only do women seem to be more religious than men across all dimensions of religiousness (see section 1.4.3 on age, gender, and education), but women also seem to benefit the most from their involvement in religion. For instance, studies from both Northern Ireland (Lewis et al., 2011) and Finland (Hintikka, 2001) find a stronger relationship between attending religious services and more well-being and less depression for women compared to men. This pattern of association is however not consistent as at least two studies show that being religiously involved was more beneficial for men in terms of predicting self-rated health, well-being, optimism, and self-esteem (Krause, 2002; Maselko & Kubzansky, 2006; McFarland, 2010). In Norway, a population-based study showed lower depression rates for men than for women who attended church regularly after losing a loved one (Sørensen, Danbolt, et al., 2012). Based on the above it may be that gender moderates the positive association between frequent church attendance and well-being. However, as the empirical findings are inconsistent, it seems less clear how gender may influence the direction and strength of the association between frequency of church attendance and well-being. One explanation may be that as women usually tend to their social networks to cope more often than men do (Rosenfield & Mouzon, 2013), attending church may serve as a provider of social support. On the other hand, it may also be that the church represents an arena for establishing close social bonds for men. This is particularly interesting as studies showing a greater benefit for men by attending church usually include measures of church attendance that extend beyond that of service attendance – for example, participation in prayer groups, meetings, and bible study groups (Krause, 2002; Maselko & Kubzansky, 2006; McFarland, 2010). The moderating role of gender in the relationship between church attendance and well-being is the focus of Paper III in the present thesis. This is an important area to study in order to gain knowledge on the different roles that religious behaviors may have for women and men in a secular society.

1.4.3 Religiousness and age, gender and education

The influence of age, gender, and education on the relationship between religion and health were accounted for in this thesis by two main approaches: by including these factors as moderators or as controls. By adding age, gender, and education to the present models, it was possible to examine both the moderating mechanisms in which they may influence the religiousness-health connection and also to differentiate the influence of age, gender, and education by adding these factors as controls. The reason for this is that religiousness and spirituality may be experienced differently depending on someone's age, gender, and education, both in regards to proportions of people who would define themselves as religious and also with regards to the different ways in which people act, think, and feel their religion. The choice of potential moderators and controls was not a random decision; instead, they are based on previous empirical findings that link age, gender, and education to religiousness. As the papers in the present thesis have had different objectives, a natural consequence has been that for instance the gender variable is conceptualized as either a control variable or a moderator variable. More specifically, in Papers I and III, gender differences were specifically addressed as part of the research questions. Other research questions are explored in Paper II. Specifically, we examined the general mechanisms between religious coping and existential well-being by including optimism and pessimism as mediators. In summary, the choice of denoting a variable a control or a moderator has depended on the objectives of the specific papers. Before we address the factors of age, gender, education, and their relationship to religiousness separately, Beit-Hallahmi and Argyle (1997) illustrate that some groups of people are likely to be more religious than others, including if you are a women, above 50 years, poor, or living alone.

Although religiousness is not limited to people of a specific age group, studies find a positive correlation between age and religiousness (Argue, Johnson, & White, 1999; Wink & Dillon, 2001). Thus older people tend to be more religious than younger people. There may be several reasons for this, and developmental changes throughout the lifespan may posit one set of explanations (Wink & Dillon, 2001). For instance, among older people changes in the physical body may posit new developmental challenges in how they trust their own capabilities (Erikson, Erikson, & Kivnick, 1986). A healthy development related to loss of autonomy is according to Erikson and Erikson

(1998) recognized by gerotranscendence – a shift from focusing on the material and physical aspects of life to internal focus that includes the experience of a communion with the universe and a redefinition of the perception of life and death (Tornstam, 1989). Although the perspectives of Tornstam (1989) and Erikson and Erikson (1998) may apply more to the oldest old (i.e., 80-90 years) than to younger people, the awareness of human mortality may also be pronounced earlier in life. With concerns of the ultimate dilemma of life and death, there is an increased tendency to focus inward to the self that may foster spiritual growth (Wink, 1999). The increased chances of experiencing bereavement, disease, and other challenging life situations as one becomes older are also linked to spirituality, as spirituality in such situations will be more pronounced and valuable to the person (Wink and Dillon, 2001).

In addition to developmental changes, cohorts or period effects may also explain the positive relationship between age and religiosity (Schwadel, 2011). Cohort effects occur when the way people are socialized is unique for their time of birth, whereas period effects are the unique cultural and social events that may affect everyone regardless of age in a specific time period. In an effort to untangle the influence of developmental, cohort, and period effects, Wink and Dillon (2002) performed a population based prospective study among a younger and an older cohort from California, U.S. born in 1919/21 and 1928/29. The 130 participants were interviewed at three points in time from their 30s to their mid-70s. Overall, people grew an interest in spirituality as they became older. However, the developmental patterns differed across cohorts and genders. The younger cohort was interested in spirituality at an earlier time in their life compared to the older cohort. Furthermore, women became interested in spirituality at an earlier age and developed their interest at a faster rate compared to men (Wink & Dillon, 2002). The study by Wink and Dillon (2002) show that spiritual development is related to growing older, but individual differences and the historical context in which people are socialized is also important. Another population based prospective study among 1187 people from the U.S. population was conducted to compare the effects of age, periods, and cohorts (Argue et al., 1999). The participants were aged 18-55 years in the first interview in 1980, and the last and third interview was conducted in 1992 on the same participants aged 30-67 years. Similar to the study by Wink and Dillon (2002), results showed that age was related to religiousness even when

the effects of cohorts and life events were taken into account. Furthermore, the influence of cohorts seemed to have little or no influence, whereas a period effect resulted in a decline in religiousness between 1980 and 1988 (Argue et al., 1999).

There is however support for the effects of cohorts on religiousness in a Norwegian context. Botvar (2010) used data collected at three points in time from 1991 to 2008 in "The International Social Survey Programme (ISSP)". They found that during a period of seventeen years, the difference between young adults and older individuals concerning church attendance had decreased. As younger and older people become more equal, it may reflect that whatever practices people have concerning church attendance in their younger age are maintained as they grow older. All of the above findings seem to suggest that people of different ages do differ as older people seem to be more religious and spiritual compared to younger people. What is less clear, however, is why that is. As developmental changes seem to be well supported, period and cohort effects may also interchange. This interchange may also depend on the context in which religiousness is practiced. Whichever mechanisms are valid in which context, it nevertheless seems reasonable to include age as a moderator or control in any research on religiousness and spirituality.

Women seem to be more religious than men. Based on the World Values Survey (WVS) in 1991/92 or 1995/96, Stark (2002) found that in 48 out of 49 countries in the Christian world as well as in 35 out of 36 countries in the non-Christian world, women were more religious than men. The WVS included a universal item asking people "whether you go to church or not, would you say you are a religious person". Other studies confirm the same gender pattern by including other facets of religion like service attendance, religious coping, religious affiliation, and importance of religion. On each of these facets from the WVS in 1990/93, women in the U.S. and Italy were more religious compared to men (Freese, 2004). That women are more religious than men across a wide range of dimensions is also argued by Batson et al. (1993). For instance, women are found to be more orthodox in their beliefs as well as more involved in church activity (Beit-Hallahmi & Argyle, 1997). These gender differences were also supported in a Norwegian population study in which women were both more intrinsically and extrinsically religious than men for the cohort born in 1924/25 (Sørbye et al., 2006). Nevertheless, one study on college students in the U.S. failed to detect any

differences across gender on behavioral dimensions of religiousness (Stoppa & Lefkowitz, 2010). Likewise, neither religious beliefs nor behaviors differed across gender among both social- and natural scientists in the U.S. (Ecklund & Scheitle, 2007). Although the majority of studies find women to be more religious than men, some empirical findings are not consistent with that view. Due to these inconsistencies gender should be included in any study on religiousness.

Unlike the general finding that women seem to be more religious than men on all dimensions of religiousness and across several time periods, the influence of education on religiousness seems to be highly complex. From the rise of science and modernization in general, advocates of the secularization perspective in the 1970s and 1980s were quite certain of the decline of religion as a direct consequence of more people obtaining formal education (Albrecht & Heaton, 1984). The view that education may be related to some aspects of a person's religious or spiritual outlook is backed up by several empirical findings. For instance, one study based on data collected in 1969 and 2005 among natural and social scientists from U.S. universities found that researchers had become even more secularized, both for attendance and affiliation (Ecklund, Park, & Veliz, 2008). However, an important aspect with academic scientists in particular is that they are less likely of religious socialization, and hence an effect of education on religiousness would be weaker compared to other groups (Ecklund & Scheitle, 2007). Another study based on prospective survey data from the Canadian general population collected at four instances from 1971 to 2001 found that higher levels of education lead to lower levels of religious affiliation later in life (Hungerman, 2014). Although the findings above are in support of the negative influence of education on religiousness, this pattern of relationship is not uniformly supported. That is, education may be positively related to religiousness for some periods in time and for some dimensions of religiousness. For instance, based on data from the General Social Survey (GSS), Hungerman (2014) shows that both a negative (from 1972-1998) and a positive (from 1998-2008) association between education and religiousness was evident. This difference was however shown for religious attendance only. By extending to examining other outcomes like religious participation, belief, and affiliation altogether in the 1998 GSS, Schwadel (2011) found education to be positively related to religious participation, devotional activities like praying, and to

finding religion to be important in daily life. Education was also related to believing in a higher power as opposed to relating to the concept of God. Likewise, belief in life after death was more likely with higher levels of education. Education did not however influence withdrawal from religious affiliations, but education had a strong positive influence on switching to a mainline Protestant denomination (i.e., churches tending to be more liberal compared to other Protestant denominations). Based on the above findings by Schwadel (2011), an attenuating effect on religiousness was not supported, which is in line with Hungerman (2014) who pointed to the same positive relationship between education and religiousness in the time period since 1998. In addition to an increase of some dimensions of religiousness according to level of education, there is also evidence that education may influence *how* people are religious. Thus, does education stimulate to a change toward a different expression and/or content of a person's religiousness? In fact, others have also claimed that religious beliefs may be transformed through college years, increasing the likelihood of identifying with the concept of spirituality rather than mere institutionalized religiosity (Cherry, DeBerg, & Porterfield, 2001). The relationship between education and religiousness could also be further complicated by empirical findings showing that education effects religiousness differently at the individual level compared to the group level. One study based on data from the General Social Survey in the U.S. (i.e., for people born after 1945) and the World Values Survey from 69 countries found a positive correlation between religious participation and education at the individual level, but a negative correlation for groups of different denominations (Glaeser & Sacerdote, 2008). The explanation for this, as argued by Glaeser and Sacerdote (2008), is that education is negatively related to religious beliefs. But since religious beliefs are partially socially formed and strongly influenced by the views of peers and parents, it may cause the relationship between education and beliefs to become much stronger when aggregated on a group level of religious affiliation. When the negative impact on religious beliefs become much stronger it may reverse or attenuate the positive relationship between education and religious participation (Glaeser & Sacerdote, 2008).

The influence of education on religiousness is likely to be complex as supported by the different empirical findings above. It seems likely that religious participation is not as pronounced for people with higher levels of education. Furthermore, the time of

investigation may influence the pattern of associations. Likewise, the relationship between education and religiousness may also depend on which dimensions of religiousness are examined. Consequently, it seems likely that education may influence people's religiousness either positively or negatively. People's level of education was therefore included as a control variable in all three papers in the present thesis.

1.4.4 Specific aims

Paper I

Although attending church is found to be associated with forming close social ties to other people (T. D. Hill, Burdette, Regnerus, & Angel, 2008; Krause, 2002; Lim & Putnam, 2010; Strawbridge et al., 2001; Szaflarski, 2001), more private forms of religion like intrinsic religiousness (Pirutinsky et al., 2011; Salsman et al., 2005) and prayer fulfillment (Salsman et al., 2005) are also positively associated with social support. In Norway, larger proportions of the population seem to self-identify as religious (35 per cent) (Botvar, 2010), or use religion for coping (nearly 50 per cent) (Sørensen, Lien, Holmen, & Danbolt, 2011) more often than attending church, which on a weekly basis was 5 per cent in 2010 (European Social Survey, 2010). Although the private forms of religiousness are more prevalent than attending church, a large proportion of Norwegians base their view of life on secular principles. No studies on religiousness and social support have been reported for the Norwegian population, and internationally we lack knowledge on both secular and religious views of life and possible differences in their association to perceived social support. Therefore, the specific aim of Paper I is as follows:

- To examine the association of perceived social support with religiousness within three different age groups, and examine whether the effect of religiousness on social support depends on view of life enrichment and gender (Figure 2).

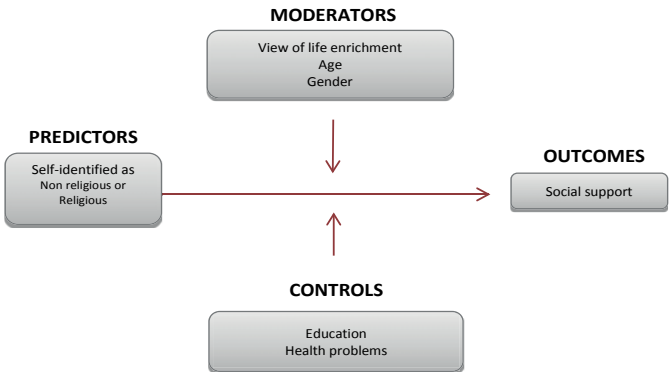

Figure 2. *A conceptual model showing variables and the relationships among them as examined in Paper I.*

Paper II

Religious coping has been repeatedly shown to enhance people's well-being, especially among people facing long-term health problems, bereavement, or other severely stressful situations (Ahrens et al., 2010; H. G. Koenig, Pargament, & Nielsen, 1998; Park et al., 2013; Park & Cohen, 1993; Pedersen et al., 2012). Knowledge on how individual differences like dispositional optimism and pessimism may influence the relationship between religious coping and well-being is, however, less known. These are important relationships to study in order to develop clinical practices and influence theoretical advancements. As far as we know, no other studies conducted internationally or in a Norwegian context have examined the relationship between religious coping and well-being and the role of optimism and pessimism to this relationship. Therefore, the specific aim of Paper II is as follows:

- To examine the roles of optimism and pessimism in the relationship between religious coping and existential well-being, and to investigate the potential moderating role of long-standing health problems to this relationship (Figure 3).

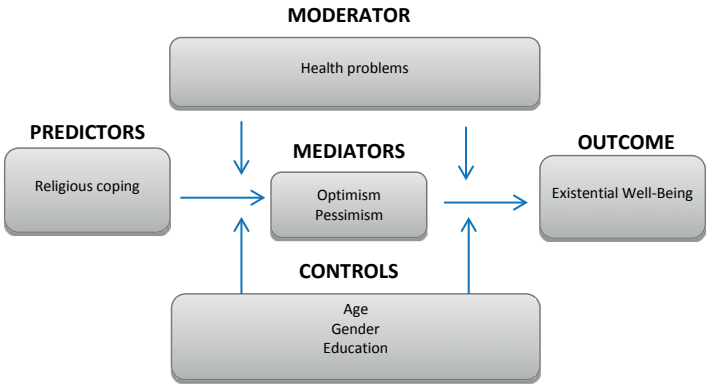

Figure 3. *A conceptual model showing variables and the relationships among them as examined in Paper II.*

Paper III

Women are perceived as more affective, and men as more active, in their expression of religion (Sullins, 2006). This may be related to why studies find gender to moderate the relationship between religiousness and mental health (C. G. Ellison & Fan, 2008; Hintikka, 2001; Krause, Ellison, & Marcum, 2002; Lewis et al., 2011). Although findings are divided, women have been generally found to benefit more from religion than men on both church attendance and religious experiences (C. G. Ellison & Fan, 2008; Hintikka, 2001; Lewis et al., 2011). The results are however not undivided, and findings in a Norwegian context seem to highlight a stronger association with mental health and social support for men in comparison to women (Kvande, Reidunsdatter, Løhre, Nielsen, & Espnes, 2015; Sørensen, Danbolt, et al., 2012). As few studies examine the moderating influence of gender on the relationship between religiousness and well-being, the present study is the first to do so in a Norwegian context and may therefore add to the existing literature on gender differences. Thus, the aim of Paper III is as follows:

- To examine gender differences in the relationship between church attendance and well-being as well as between religious experiences and well-being while controlling for the influence of education, age, and long-standing health problems (Figure 4).

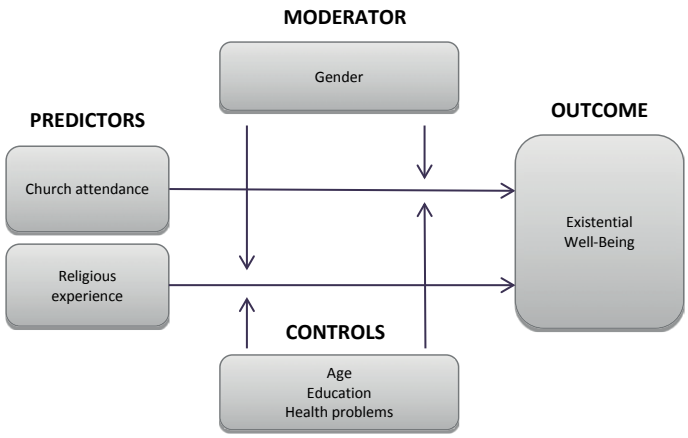

Figure 4. *A conceptual model showing variables and the relationships among them as examined in Paper III.*

2 Method

2.1 Procedure and sample

Cross-sectional data was collected from the Norwegian population by conducting a postal questionnaire survey in 2009. Based on the collected data, the present thesis aimed to investigate how religiousness is related to social support and existential well-being. The participants were randomly selected from the Norwegian population; first, 2500 persons aged 18-75 were drawn, and then 500 persons aged 60-75 were drawn to increase the number of older participants. A company named EDB Business Partner performed the random selection of participants from the Norwegian registry.

A comprehensive questionnaire was distributed to the 3000 randomly selected persons. A prepaid envelope for returning the questionnaire was included in each mailing, as were information on the purpose of the study, that participation was voluntary, that all information regarding participation was confidential, and that data would be depersonalized no later than 2014. Four weeks after the first mailing, those who had not yet returned the questionnaire received a reminder by post, including another questionnaire, all information about the study, and a prepaid envelope.

Of the 3000 mailed questionnaires, 57 were returned due to unknown addresses or death, 29 persons declined participation for unknown reasons, and 653 chose to participate in the study by returning the questionnaire, resulting in a response rate of 22%. Paper I included 72% (n=470) of the participants, as only participants reporting to be religious or non-religious were included. Papers II and III included 83% (n=539) of the total sample due to 17% (n=114) of the respondents reporting “not applicable” to more than 66% of the items addressing religiousness.

2.2 Measures

Figure 5 shows an overview of all measures that were used in this thesis. This includes both single item measures and psychometric measurement scales. A prerequisite for conducting scientific research with the use of psychometric measures is the assessment's validity. Consequently, good psychometric properties and an evaluation of the validity of the instrument were viewed as important steps in the research process. As none of the measurement scales that were used in this thesis had been translated to Norwegian, they

were translated by three bilingual academics in psychology, health psychology, and sociology of religion. We separately reviewed the translations, and then we evaluated any deviated portions to obtain the most precise item meaning as possible. A short description of all measures is provided in sections 2.2.1 to 2.2.9.

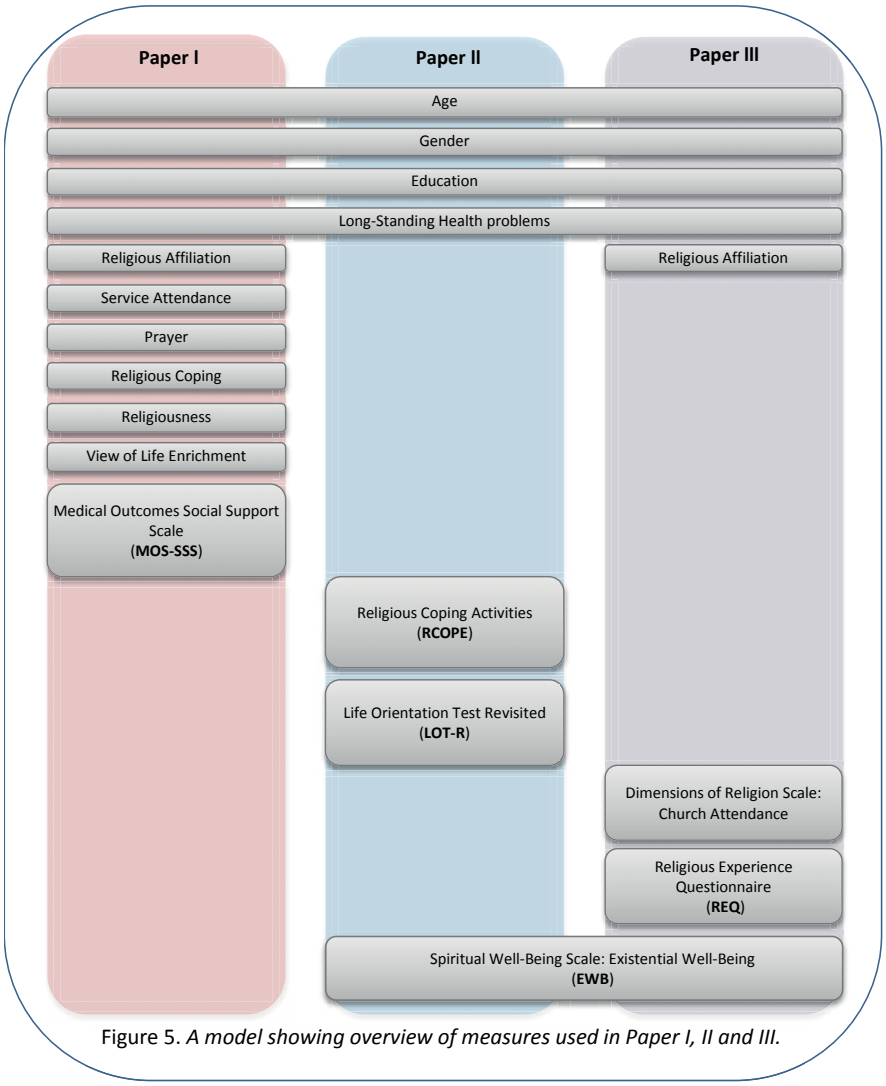

Figure 5. *A model showing overview of measures used in Paper I, II and III.*

2.2.1 Demographics

The *demographic* variables included age, gender, and education; each was measured by the same single item in all papers. Age was measured by year of birth and was prior to any analysis converted to the participants' age by number of *years.* Education was measured by three choices: *(1) primary school, (2) high school, (3) and college/university.*

2.2.2 Long-standing health problems

Long-standing health problems were measured by a single item asking "Do you suffer from any long-standing (at least one year), limiting somatic or psychiatric illness, disease or disability that has affected you in your daily life?" with a dichotomous response option (*Yes, No*).

2.2.3 Religiousness and view of life

Religious affiliation, service attendance, prayer, religious coping, religiousness, and *view of life enrichment* were assessed by one single item each. All of these measures were applied in Paper I only, except for religious affiliation which was also applied in Paper III. Before asking questions on *religious affiliation,* we investigated the largest religious communities in Norway in 2008 from Statistics Norway (http://www.ssb.no/english/). Based on this information we asked respondents "are you member of a religious community" with eight response options: *(1) Church of Norway, (2) Evangelical Lutheran Free Church, (3) Roman Catholic Church, (4) Pentecostal movement, (5) Islamic community, (6) Norwegian Humanist Association, (7) No membership, (8) Other membership (open-ended question). Service attendance* was measured by using one item from the King and Hunt (1972) subscale on Congregational Involvement. We asked "During the last year, how many Sundays on average per month have you attended service?" with response options: *(1) none, (2) one, (3) two, (4) three, (5) four, and (6) not applicable.* The response options were further collapsed into four categories: *none, one-two, at least three times,* and *not applicable*. *Prayer* was assessed by one item from the K. J. Edwards (1976) revised version of the Religious Experience Questionnaire (see P. C. Hill & Hood, 1999). Participants were asked to rate the question "I pray privately in places other than church" rated from 1-8: *(1) never, (2)*

almost never, (3) rarely, (4) occasionally, (5) often, (6) almost always, (7) always and (8) not applicable. The response options were further grouped in three categories: *Pray Low* (never, almost never, rarely, occasionally), *Pray High* (often, almost all the time, always), and *Not Applicable. Religious coping* was measured by asking "I seek God's help when in need of strength and solace" with response options: *(1) never, (2) almost never, (3) rarely, (4) occasionally, (5) often, (6) almost always, (7) always and (8) not applicable.* The response options were grouped in three categories: C*oping Low* (never, almost never, rarely, occasionally), *Coping High* (often, almost always, always), and *Not Applicable*. This religious coping item has been used earlier in a large population-based study in Nord-Trøndelag (HUNT3), Norway, although with different response options (Sørensen, Dahl, et al., 2012; Sørensen, Lien, et al., 2011). *Religiousness* was measured by asking participants "Independent of membership in a religious community and participation in religious activities, would you define yourself as *a religious person, a non-religious person, convinced atheist, or don't know?"* Atheists were included in the non-religious group. *View of life Enrichment* was measured by the following question: "Do you find your view of life enriching?" It was rated on a four-point scale: *(1) not at all,(2) a little, (3) a lot, (4) quite a lot.* View of life was dichotomized into *low* (not at all, a little) versus *high* (a lot, quite a lot) enrichment from view of life. The item has not been used previously and was developed for the purpose of this study in order to reflect how important a person experienced their view of life to be.

2.2.4 Social support

Social support was measured by using the scales in the Medical Outcomes Social Support Survey (MOS-SSS) (Sherbourne & Stewart, 1991). The scales comprise 19 items divided by four dimensions of functional support: emotions/informational support, tangible support, positive social interaction, and affectionate support. The items are rated on a Likert type scale ranging from 1 to 5. The specific response options were *(1) never, (2) rarely, (3) occasionally, (4) often, (5) very often,* where high numbers indicated more support. The MOS-SSS additionally included one item on structural support asking "About how many close friends and relatives do you have (people you can feel at ease with and can talk to about what is on your mind)?"

2.2.5 Religious coping

In addition to the single item used to assess religious coping listed in section 2.2.3, *religious coping* was also measured by using the Religious Coping Activities Scale (RCOPE) (Pargament et al., 1990). The scale includes 29 items distributed among six dimensions of religious coping, including spiritually-based coping, good deeds, discontent, interpersonal religious support, pleading, and religious avoidance. Each item was measured on a Likert type scale with the following response options: *(1) not at all, (2) somewhat, (3) quite a bit, (4) a great deal, and (5) not applicable*. High numbers indicate a more frequent use of religious coping.

2.2.6 Optimism and pessimism

Optimism and *pessimism* were measured using The Life Orientation Test Revisited (LOT-R) (Carver & Scheier, 2003; Scheier & Carver, 1985; Scheier, Carver, & Bridges, 1994). The scale is comprised of 10 items including four fillers. Three of the items measured optimism (OPT), and three items measured pessimism (PES) on a Likert type scale with the following response options: *(1) I disagree a lot, (2) I disagree, (3) Neither/nor, (4) I agree a little, (5) I agree a lot*. The two-dimensional structure separating OPT and PES was used in this study because it has previously been supported in the literature (Glaesmer et al., 2012; Herzberg et al., 2006).

2.2.7 Church attendance

Church attendance was measured by one dimension from the Dimensions of Religion Scale of King and Hunt (1972). Three items comprise the dimension of church attendance asking participants how frequent they engage in three aspects of church attendance, including Holy Communion, Sunday worship service, and general church attendance. The categories of possible response options differed between the three items. The first item, "How often have you taken Holy Communion during the past year?" exhibited the following possible responses: *(1) never, (2) seldom, (3) occasionally, (4) fairly regularly, (5) regularly, and (6) not applicable*. The second item, "During the last year, how many Sundays per month on average have you gone to a worship service?" exhibited the following possible responses: *(1) none, (2) one, (3) two, (4) three, (5) four, and (6) not applicable*. The final item, "If not prevented by

unavoidable circumstances, I attend church" exhibited the following possible responses: *(1) never, (2) seldom, (3) monthly, (4) weekly, (5) several times a week, and (6) not applicable*. The three items together comprised the dimension of church attendance.

2.2.8 Religious experiences

Religious experience in terms of a personal affective relationship with God was measured by using The Religious Experience Questionnaire (REQ) (K. J. Edwards, 1976). The scale consists of twelve items ranged on a Likert type scale with the following response options: *(1) never, (2) almost never, (3) rarely, (4) sometimes, (5) often, (6) almost all the time, (7) always,* and *(8) not applicable*. The present thesis differentiates between positive and negative religious experiences.

2.2.9 Existential Well-being

One dimension from The Spiritual Well-Being Scale (SWB)[3] was used to measure existential well-being (C. W. Ellison, 1983; Paloutzian & Ellison, 1982). The SWB is composed of ten items equally distributed between the dimensions of existential well-being (EWB) and religious well-being (RWB); the dimension of EWB was used for the purpose of this thesis. EWB concerns existential questions related to meaning, satisfaction, and purpose in life. The items were rated on a six-point Likert scale with the following response options: *(1) strongly agree, (2) agree, (3) somewhat agree, (4) somewhat disagree, (5) disagree,* and *(6) strongly disagree.*

2.3 Statistical analysis

All three papers in this thesis are based on the same data with a cross-sectional design, meaning that the data was collected at one point in time with the purpose of comparing two or more groups of people on selected dependent variables (De Vaus, 2014). As the primary goal of the present thesis was to gain knowledge on religiousness and health associations at the Norwegian national level, a cross-sectional survey was chosen due to the design advantages for reaching that goal. This includes collecting a dataset with many participants with a variety of variables to explore a range of associations and with

[3] English SWBS © 1982, C.W. Ellison and R.F. Paloutzian. Norwegian translation SWBS © 2011, R.F. Paloutzian. All rights reserved.

a great variety of participants (e.g., varying gender, age, education, income, employment, and town of residence). To analyze the survey data, both IBM SPSS version 20.0 for Windows and the Mplus package 7.1 were used (IBM, 2011; Muthén & Muthén, 1998-2012). P-values less than 0.05 were considered significant for all analyses. The study was approved by the regional committees for medical and health research ethics in Sør-Trøndelag County (REC Central), and the collection of data was approved by The Norwegian Data Inspectorate.

Although the majority of people in Norway are members of the Church of Norway, it was expected that religion by other domains (e.g., religious experience) would have relatively low prevalence in the population. Consequently, a response option of "not applicable" was added to all scale items concerning religiousness. When the collected data was later screened, it seemed that a large amount of people checked "not applicable" interchangeably with lower ends of the Likert scale response options. Consequently, in both Papers II and III we excluded the participants with large amounts of "not applicable" responses, while for those with small amounts we used the full information maximum likelihood estimation (FIML) in Mplus. This way, item non-response was collapsed with responses of not-applicable. As one of the most robust methods for handling missing data, FIML estimates parameters for the missing data based on information in present data (Schlomer, Bauman, & Card, 2010). By the FIML method, all data from all other variables in the proposed models will result in estimated parameters while performing the analyses. No actual data is imputed, but the parameters are calculated as if they were.

Paper I also included variables with missing data. As all variables in this study had less than 5% missing data except for "Long-standing health problems", which had 8.5% missing data, we used listwise deletion. Less than 5% missing data is considered ignorable, and analyses are consequently not likely to be biased (Schafer, 1999). As the variable of "Long-standing health problems" exceeded the 5% cutoff, the missing values of this variable were replaced by the median. Although the replacement of missing values by single-imputation methods may add some error to the models, the advantages of retaining the sample size as well as the use of standard methods and software would still be possible (Schafer & Graham, 2002). Nevertheless, potential bias as a consequence to median replacement was considered less critical due to the role of

"Long-standing health problems" being a covariate variable in the model as well as the relatively small proportion of missing responses.

How to deal with missing data will first of all depend on types of missingness. In reference to Rubin (1976), Schafer and Graham (2002) clarifies the often misunderstood distinction between data missing at random (MAR) and data missing completely at random (MCAR). Briefly, MAR means that a missing value could not be related to the value of a variable in which data is missing. The missing value could still be related to observed data and be considered MAR. MCAR, on the other hand, is a more restrictive type of MAR, which means that the missingness is neither related to the value of the missing variable, nor the value of any other observed variable. If the proportion of missing data is small and the data is MCAR, the use of listwise deletion is appropriate. However, as multivariate analyses would leave only a smaller proportion of data present, listwise deletion was not considered an appropriate approach in Papers II and III. Therefore, Little's MCAR test was conducted to determine the patterns of missing data (Little, 1988). By including 202 variables from the questionnaire (Paper II and III), or including all model variables (Paper I), the results from Little's MCAR test showed that the data was MCAR. That is, the missingness did not depend on variables in the data set (Paper II and III). In Papers II and III, this test was performed treating both item non-response and "not applicable" responses as missing values. However, MCAR is much like an assumption rather than a determination, as missingness may be caused by unknown reasons not accounted for in our study. One example may be the respondents who answered "not applicable" to most items concerning religiousness. What these people *may* have in common is that they were not able to relate to the target question because they did not believe in God, and consequently they could not relate to any experience of God. According to Schafer and Graham (2002), this situation would not be strictly considered neither MAR nor MCAR, but the procedures for dealing with missing responses would be the same as for MAR situations, that is, the approaches of maximum likelihood and Bayesian multiple imputation. The reason for this is that we should not be concerned about the missingness related to characteristics of a phenomenon that does not exist. In other words, we do not need to worry about if missingness is related to some aspect of religious experience if religious experience is nonexistent. This shows that although Little's MCAR test does not produce any

significant results, the evaluation of data being MAR and MCAR depends on several attributes of the data.

In Papers I, II, and III, descriptive statistics included calculation of means and standard deviations for the continuous variables, and frequencies were used for categorical variables. In Papers I and III, continuous variables were tested for differences in means by Student t-test, and Pearson`s chi-square was used to calculate for significant differences on categorical variables. In Paper III, gender differences of the study variables were tested using both Students' t-test of the aggregated observed variables in SPSS, in addition to testing for differences on latent means in Mplus.

Cronbach's alpha coefficient was calculated to evaluate the internal consistency among items in each of the scale dimensions in Papers I through III. A Cronbach's alpha of at least .70 is considered satisfactory (Nunnally, 1978). However, as the number of items and number of dimensions which the items constitute will influence the calculation of Cronbach's alpha, general guidelines should not be considered a strict rule without exceptions (Cortina, 1993). That is, based on average item intercorrelations, number of dimensions, and number of items, Cortina (1993) found that for six items separated in three dimensions had a Cronbach's alpha of .49 even though the average item intercorrelation was .70. Based on this information, a criterion of Cronbach's alpha of at least .70 was not viewed as a criterion for the scale dimensions used in the present thesis. In the case of both RCOPE and LOT-R used in Paper II, and for REQ used in Paper III, Cronbach's alpha was between .60 and .70. It was nevertheless considered satisfactory given the few items included in some scale dimensions.

Analysis of covariance (ANCOVA) was conducted using General Linear Models (GLM) in Paper I. The GLM underlies many types of analyses including that of regression analysis, but because our three independent variables were all categorical, and we controlled for other variables in our model, we chose the term ANCOVA. However, the meaning of the term covariates in ANCOVA is defined as any *continuous* variable that is controlled for in the analysis (Field, 2009). In our case, however, covariate means any variable we control that was included in our model. Our use of the ANCOVA is also non-experimental because our participants were not randomly assigned to "treatment" (meaning the independent or grouping variables). Independent

of whether the covariate or the control variable is continuous or categorical, in GLM ANCOVA the regression of one or several covariates on the dependent variable is calculated first. Following this, the means and the linear effect on the dependent variable is adjusted before the analysis of variance is performed (Tabachnick & Fidell, 2006).

Structural equation modelling (SEM) was conducted to test the models in Papers II and III. SEM can be described as a general modelling technique used to test for complex relationships between continuous variables at the latent level (Geiser, 2013). Among the advantages of SEM is that the latent variable models disattenuates the measurement error from the observed single indicators. Consequently, the relationship between variables in the structural model will not be distorted by measurement errors. Furthermore, SEM also has advantages in regards to explicitly testing mediating relationships between variables. This is opposed to conventional statistical methods like regression, where a series of analyses is usually preformed in which the mediating effect of a variable is logically derived rather than calculated (Zhao, Lynch Jr., & Chen, 2010). Testing for mediation was the main goal of Paper II. Multiple group SEM was however performed in both Papers II and III, which means that separate models of each group are specified within the same overall model. In Paper II, the degree of moderation by long-standing health problems was evaluated by comparing the two groups on the measurement and structural model. Measurement equality between the two groups was ensured by restricting the loadings of items on their respective latent constructs to be equal. In Paper III, the multiple group SEM models were tested for significant differences across gender. The measurement and structural models were also compared in this study, and structural differences across gender were examined by comparing several invariant models to that of variant models. An invariant model is a more restrictive model where specific parameters are constrained to be equal across groups, whereas a variant model is less restrictive and the parameters are free to vary. If the invariant model has a better fit to the data, it means that the groups do not differ from each other.

To evaluate the fit of the hypothesized SEM models to the empirical data, and to compare one model to another, several fit indices were used, including the Chi square statistics, the comparative fit index (CFI), the Tucker-Lewis index (TLI), the residual

mean squared error of approximation (RMSEA), the Bayesian information criterion (BIC), and modification indices. Each fit index provides information on different aspects of model fit, and therefore several indices could be evaluated together. The following description of the different model fit tests used in the present thesis is based on Geiser (2013, p. 45) and Hooper, Coughlan, and Mullen (2008).

Chi-square test (χ^2)

The Chi-square goodness-of-fit statistic assesses the discrepancy between the covariance matrix and the mean vector in the population to the covariance matrix and the mean vector implied by the model. If the test is statistically significant, the null hypothesis is rejected. Consequently, the hypothesized model does not have an exact fit with the population. As the Chi-square test has increased chances of turning significant with larger sample sizes (Barrett, 2007), an evaluation of model fit should also include other fit indices. In addition, the relative/normalized chi-square (χ^2/df) by Wheaton, Muthén, Alwin, and Summers (1977) minimize the impact of sample size. High ratios of 5.0 (Wheaton et al., 1977) as well as low ratios of 2.0 (Tabachnick & Fidell, 2006) have been recommended as cut offs. Consequently, in the present thesis the normed chi-square are evaluated along with other fit indices, but the ratio should be no higher than 5.0.

Comparative Fit Index (CFI)

The CFI compares the fit of the baseline model (independence model) to the fit of a target model; it belongs to a group of tests called "Incremental fit indices". These types of fit indexes may be compared to R^2, and the fit of the models is evaluated on a continuum from zero to one, where zero indicates the worst possible model. A CFI of .90 and above should be reached to accept the model (Hu & Bentler, 1999).

Tucker-Lewis Index (TLI)

The TLI is also an incremental fit index that compares a baseline model to a target model. The cut-off value for a satisfactory fit is equal to a TLI of .90 (Hu & Bentler, 1999).

Residual Mean Squared Error of Approximation (RMSEA)

As opposed to the CFI and the TLI, the RMSEA may be grouped within "absolute fit indices". Calculations of the RMSEA are based on a comparison of the target model to no model at all, as opposed to a comparison to a baseline model (Hooper et al., 2008). It is assumed that the best possible fitted model has a value of zero. According to Steiger (2007), fit values less than .07 indicates adequate fit, and values less than .03 indicates excellent fit.

Model modification

Model modifications may be used to improve model fit (Tabachnick & Fidell, 2006). In the present theses we used the modification index provided by Mplus to examine a less than satisfactory fitted model in Paper III. Modifications are recommended to be kept at a minimum, if they are used at all, and should be theoretically justified (Geiser, 2013).

Bayesian Information Criterion (BIC)

BIC is a comparative fit index, meaning that the value of the BIC may be interpreted when comparing several different models. If units change by >10 for BIC across two models, it indicates that the model with the lowest BIC fits the data better (Kass & Raftery, 1995). BIC was used in Paper III for model comparisons.

3 Results

3.1 Summary of Paper I

Title: *Religiousness and Social Support: A Study in Secular Norway*

Published in: *Review of Religious Research, 57*(1), 87-109. doi: 10.1007/s13644-014-0171-4

Aims: The qualities and the quantities of people's social support networks are presented in the literature as a factor that may explain how religiousness is related to health. Thus, larger networks and closer bonds between coreligionists are argued to be one of the reasons for differences between religious and non-religious people regarding both their mental and physical health. Nevertheless, few studies focus on factors that may influence people's perception of their social support as opposed to the ways social support may influence health. Therefore, the main aim of this study was to examine the association of perceived social support with religiousness and to investigate if these relationships differed depending on age, gender, and view of life enrichment.

Methods: Data from a Norwegian population sample (n=470) aged 18-75 years was used. Analysis of covariance (ANCOVA) was conducted to test for main and interaction effects of religiousness, gender, and view of life enrichment within younger (n=136), middle-aged (n=161) and older (n=158) adults.

Results: The results showed that the relationship between religiousness and social support differed by age and was moderated by gender and by one's view of life enrichment. Among older adults (60-75 years), non-religious participants reported significantly higher levels on all five dimensions of social support compared to religious people, and affectionate support, positive social interaction, and tangible support depended on people's level of enrichment from their view of life. In contrast, no significant differences in social support were found for middle-aged adults (40-59 years). Significant gender differences in social support were found among younger adults (18-39 years), as religious men reported more tangible and emotional support compared to non-religious men, while the opposite was found for women.

Conclusion: A general positive relationship between religiousness and social support was not supported by the present study. The pattern of association differed across age groups. In the case where differences among non-religious and religious people were found, older non-religious individuals with high view of life enrichment and younger religious men seemed to report higher levels of social support compared to their counterparts.

3.2 Summary of Paper II

Title: *Do optimism and Pessimism Mediate the Relationship between Religious Coping and Existential Well-Being? Examining Mechanism in a Norwegian Population Sample*
Published in: *International Journal for the Psychology of Religion, 25*(2), 130-151. doi: 10.1080/10508619.2014.892350

Aims: Religious coping is shown to be influential to people's well-being, but the role of individual differences in terms of dispositional optimism and pessimism is however less studied. In the secular context of Norway, we investigated the mediating roles of both optimism and pessimism in the relationship between six dimensions of religious coping activities and existential well-being. As religious coping may be particularly pronounced for people struggling with health problems, an additional goal of the study was to examine if long-standing health problems moderated the relationship between religious coping, optimism and pessimism, and existential well-being.

Methods: Structural equation modelling (SEM) and multiple group SEM was conducted to test the proposed models among a Norwegian population sample (n= 539) aged 18-75 years.

Results: Results from structural equation models showed different mechanisms for optimism and pessimism. When optimism was included as a mediator, the RCOPE factors of spiritually-based coping, support, avoidance, and deeds had a significant positive direct effect on EWB. Conversely, when pessimism was tested as a mediator, the RCOPE factors of spiritually-based coping, support, avoidance, and discontent had a significant negative indirect effect on well-being through

pessimism. The results from our multiple-group structural equation models generally supported our expectations that the relationships between religious coping, optimism, pessimism and well-being were stronger for those with health problems compared to those without health problems.

Conclusion: Pessimism generally mediates religious coping and well-being, whereas optimism does not. The patterns of these relationships are the same, but they are more pronounced for people experiencing long-standing health problems.

3.3 Summary of Paper III

Title: *Church Attendance and Religious Experience: Differential Associations to Well-Being for Norwegian Women and Men?*
Submitted to: *Sage OPEN*, ISSN 2158-2440 on October 8, 2014

Aims: Previous works have shown that gender may moderate the relationship between religiousness and mental health. Although associations between religiousness and mental health may be more pronounced for women, the results from empirical findings are conflicted in both a national and international context. Thus, the goal of the present study was to examine gender differences on the association between church attendance and well-being and between religious experience and well-being.

Methods: Data was collected from the Norwegian general population, including 295 women and 233 men aged 18-75 years. Multiple group structural equation modelling (SEM) was used to examine differences between genders.

Results: The results showed that the structural models for women and men did not differ significantly on the global level. However, the model for women and men showed different significant relationships between the variables. Church attendance was related to more existential well-being, and negative religious experiences were related to less existential well-being for men. For women, positive religious experiences were related to more existential well-being, and negative religious experiences were related to less existential well-being.

Conclusion: The present finding partly supports that active religiousness is related to well-being for men, while affective religiousness is related to well-being for women. However, further studies are needed to obtain more confidence in the findings.

4 Discussion

4.1 General discussion

4.1.1 Religiousness in a Norwegian context – general findings

The overall aim of the present thesis was to gain knowledge on relationships between religiousness and well-being as well as between religiousness and social support in a Norwegian context. Thus, of main interest was to examine the particular functional role of religion and spirituality to that of people's well-being and social support. Do religion and spirituality have any significance to people's life in a secular Norwegian context? The results from the present thesis show that religiousness *is* related to health. However, the pattern of associations is twofold: On one hand, the results showed that religious coping, church attendance, and religious experiences were related to existential well-being; on the other hand, when comparing groups of religious versus non-religious views of life, the non-religious groups reported higher levels of social support. Consequently, the general findings of the present thesis both confirmed general patterns of relationships similar to other international studies, but they also give reasons to question the role of religiousness in facilitating social support as an important predictor of health and well-being.

First, throughout the introduction numerous studies were cited that support the influence of religiousness on people's development of health. Most of this research supports a positive correlation between religiousness and beneficial health outcomes. Both in the 2001 and the 2012 edition of the "Handbook of Religion and Health" (H. G. Koenig et al., 2012; H. G. Koenig et al., 2001), the authors claim that a majority of studies within the field supports a positive relationship between religiousness and health outcomes like that of quality of life and well-being and also that of a buffering role of religiousness against detrimental consequences of stress, depression, and anxiety. The results from Paper II and III support this general pattern of associations where religious coping, church attendance, and religious experiences were related to existential well-being in a pattern that fits with international studies. For instance, Paper II showed that people who reported spiritually based coping also experienced more existential well-being, whereas discontent coping were related to less existential well-being. Other

studies show similar results, especially studies distinguishing between positive and negative religious coping (Pargament, 1997; Pargament et al., 1998). Thus, our study may be compared to that of others since spiritually based coping is a positive coping strategy, while discontent is categorized as a negative strategy (H. G. Koenig et al., 1998; Pedersen et al., 2012). Similar to other findings, religious coping was more strongly related to existential well-being for people with severe health problems. This is not unexpected since several Norwegian studies find religious coping to be helpful for people diagnosed with cancer (Ringdal, 1996; Sørensen, Dahl, et al., 2012; Torbjørnsen, 2011). Viewed differently, since most studies on religious coping involve samples defined by their struggles with severe disease or other demanding life situations, the present findings extend this knowledge. That is because our findings support that within a general population without long-standing health problems, religious coping is still related to existential well-being. This may indicate that even in dealing with everyday hassles, some people may use religion to cope with adversities that may promote existential well-being.

Second, in Paper III we found church attendance and religious experiences to be associated with existential well-being. This is also in line with the findings of others (Bailly & Roussiau, 2010; C. G. Ellison et al., 2001; C. G. Ellison & Fan, 2008; L. B. Koenig & Vaillant, 2009). The pattern of relationships was such that more frequent church attendance and positive religious experiences were positively related to existential well-being, while negative religious experiences were related to less existential well-being. Nevertheless, the pattern of relationships was influenced by gender. Although our results were ambiguous, they were similar to other findings on, for instance, church attendance and existential well-being (Krause et al., 2002; McFarland, 2010) where men seemed to benefit more than women. Other findings support a greater benefit of church attendance for women (Hintikka, 2001; Lewis et al., 2011). The diverging findings in the literature could be related to different ways of assessing church attendance. That is, some studies show that men seem to benefit more than women when church attendance includes service attendance as well as other activities of the church like prayer groups, meetings, and bible study groups (McFarland , 2010; Maselko & Kubzansky, 2006). Contrary, women seem to benefit more when

church attendance is assessed by frequencies of service attendance (Hintikka, 2001; Lewis et al., 2011).

Third, two aspects are important when comparing the findings of Paper I to other findings in general and to the Norwegian context and this thesis in particular. First, as we found that non-religious people reported more social support than religious people, this is contrary to findings in other contexts where religiousness is linked to extended networks and close social bonds with other people (George et al., 2002; H. G. Koenig et al., 2012). Social support is also highlighted in several models or proposed pathways through which social support may influence health (Chatters, 2000; C. G. Ellison & Levin, 1998; George et al., 2002; H. G. Koenig et al., 2012; Oman & Thoresen, 2002). Nevertheless, Diener et al. (2011) show that religion as a facilitator for social support varies across nations depending on the overall role of religion in that particular context. From these findings it is likely that religion as a facilitator for social support may be weaker in a secular context that is recognized by high standards of living and that is not challenged by low life expectancy or widespread hunger. This leads us to the second aspect of the findings in Paper I. Results generally did not confirm a positive relationship between religiousness and social support. Although religiousness and non-religiousness is measured by people self-identifying in this paper, it highlights a potential influence of non-religious views of life to people's perceptions of their social support networks. Especially, a non-religious view of life perceived as highly enriching was related to higher levels of perceived social support. It was not possible due to limitations of the data in the present thesis to further explore substantial aspects of a non-religious view of life. It is therefore highly relevant for future studies to examine more in depth the significance of non-religious views of life in a Norwegian context. This is also quite interesting as members of the Humanist Association or atheists did not constitute the majority of people in the non-religious group. Nevertheless, across all papers, several factors influenced the relationship between religiousness and social support or existential well-being. The influence of gender was one factor in which the patterns of associations may be bound to context.

4.1.2 Religiousness – Is it of greater benefit for men in a Norwegian context?

Women seem to be more religious than men in most contexts (Stark, 2002). This is also supported by our findings. More women than men were religious than non-religious, and women have positive religious experiences more often than men do. However, men and women attend church and have negative religious experiences equally often. Consequently, our findings are not uniform compared to previous findings supporting women to be more religious than men (Batson et al., 1993; Beit-Hallahmi & Argyle, 1997; Freese, 2004; Sørbye et al., 2006). Nevertheless, as our target interest in the present thesis was to examine potential functional roles of religiousness based on its associations to social support and existential well-being, these relationships may also differ across gender irrespective of whether women or men are more religious.

Results from Paper I showed that being religious was related to more social support for younger men (18-39 years) and lower levels of support for younger women. Likewise, in Paper III, church attendance and negative religious experiences were associated with existential well-being. For women, positive and negative religious experiences were related to existential well-being, while church attendance was not related to existential well-being. It should be noted that there was no significant difference between the models for men and women at the global level although their structural paths differed. All in all, the findings support a more pronounced role of religiousness for the social support and well-being for men compared to other studies that support a stronger relationship for women (C. G. Ellison & Fan, 2008; Hintikka, 2001; Lewis et al., 2011; Maselko & Kubzansky, 2006). However, other findings in a Norwegian context seem to show the same pattern of gender differences equal to the findings in the present thesis. For instance, by comparing women and men after losing a loved one, higher church/prayer house attendance rates were associated with less depression for men, while lower rates were associated with less depression for women (Sørensen, Danbolt, et al., 2012). Furthermore, among Norwegian cancer patients, men seemed to use religious coping more so than women, but religious coping was not related to life satisfaction or disease-specific quality of life (Sørensen, Dahl, et al., 2012). Similar differences in religious coping across genders were also found in a Danish study (Hvidtjørn, Hjelmborg, Skytthe, Christensen, & Hvidt, 2013).

Based on the above, it is challenging to reach a consensus on the role of religiousness for men's health in a Norwegian and Scandinavian context. Both international studies in general and Scandinavian studies in particular differ in both the religiousness dimensions and measures designed to tap into the dimensions as well as the particular health "outcomes" included. However, in Paper III we argue that it seems like men may benefit more than women from church attendance when measures of church attendance tap into activities that include more than merely service attendance, like participation at church meetings. This argument is supported by others who argue that emotional support may be easier for men to accomplish with coreligionists than people outside the church (Krause et al., 2002). The self-identification of religious versus non-religious individuals in Paper I do not tap into more specific dimensions of religiousness, for example, church attendance. Nevertheless, our findings that younger religious men have higher levels of both tangible and emotional support may be in line with the findings of Krause et al. (2002). Consequently, our findings may not be particular for a Norwegian context, but they may rather add to knowledge on the role of participating in church for men's health when participation extends beyond service attendance.

Although the findings of gender differences in this thesis may highlight the relationship between religiousness and health for men in particular, the patterns for women are also interesting. That is, younger religious women experienced less tangible support than their non-religious counterparts (Paper I), and furthermore the findings in Paper III show that church attendance was not related to existential well-being for women. At least two studies have shown that participation in a congregation may be more challenging to women than to men (Krause et al., 2002; Maselko & Kubzansky, 2006). Consequently, our findings may fit this view. Nevertheless, positive religious experiences were related to existential well-being for women but not for men in Paper III. This may indicate that a more private and affective aspect of religiousness (spirituality) is more important for women's existential well-being.

Do men seem to benefit more from religiousness compared to women in a Norwegian context? All in all, the role of religion for men's social support and existential well-being seem to be more pronounced in this thesis compared to the findings of others. However, it seems like studies conducted in an international context

fit with our findings when the specific domains and measurement scales are taken into account. Overall, the findings may indicate that behavioral and identity-based domains of religiousness are related to social support and well-being for men, while the affective domains have a stronger association to well-being for women. Consequently, men and woman may benefit from different domains of religiousness, rather than having all stronger associations for men compared to women.

4.1.3 The uniqueness of religion

Hills and Argyle (1998) examined how musical experiences compared to religious experiences were related to happiness among 230 members of musical groups, churches, or both. The most important indicator for happiness was the social support generated by both religious and musical experiences. Additionally, the unique aspect with religious experiences and the relationship to the transcendent were however inversely related to happiness with a weak effect. This particular study supports two paths of association between religiousness and health as elaborated in section 1.3.1 on international context: the indirect path in which the association of religiousness to health is through any other factor, and the direct path supporting the uniqueness of religion and spirituality.

Results from the present thesis support both direct and indirect relationships between religion and health. The influence of the individual differences of optimism and pessimism was specifically examined in Paper II. Results showed that pessimism was a mediator between religious coping and existential well-being, while optimism was generally not. Viewed broadly, this means that various individual differences (e.g., personality) may influence religion and health associations differently or not at all.

A target question within the research field on religion and health is that of the uniqueness of religion. As studies continue to confirm that several other factors may serve as the explanatory link between religion and health associations (e.g., social support, coping, health behaviors), the following question remains: Is religion a relevant phenomenon to address? By asking the question “Is religion nothing but…?” Pargament (2002) stresses the difference between explaining why religion may be related to health and well-being and explaining religion away. The latter refers to reducing religion to nothing but “basic psychological phenomena” like that of a protector against anxiety or

a provider of social support (Pargament, 2002). As the focus of the present thesis have been that of religions functional role, it may contribute to reducing religiousness to a phenomenon of "nothing but". In the present thesis religion and spirituality are viewed as both unique and as basic psychological phenomena. That is, although the definition of religiousness held in this thesis concerns the beliefs, behaviors, or rituals related to the transcendent, religiousness has different dimensions that may tap into the spirituality of the person (e.g., religious and spiritual experiences). That is, attending religious services may be viewed as a ritual related to the transcendent, but some people may partake in these rituals without reference to the transcendent. Consequently, the influence of religiousness on health may be due to basic psychological phenomena. Both direct and indirect relationships may contribute to explaining the mechanisms that relate religion to health. In methodological terms, until every direct relation between religiousness and health is fully mediated by other factors, the uniqueness of religion is supported. On the other hand, although all associations between religiousness and health were fully attenuated by other factors, religiousness may still be a "unique" phenomenon in how it associates with other factors. For example, social support may fully mediate the relationship between church attendance and well-being. A practical implication would be to include the whole phenomenon rather than focusing on social support as an isolated explanatory variable to better health. This point is argued by Pargament (2002) who further states that religiousness presents in itself a distinct aspect of life that may give great significance to existence.

Viewed broadly, the results from the present thesis seem to support both direct and indirect relationships between religiousness and health. Additionally, the role of religious coping for the group of "healthy" people also supports that religion is not only a mean to cope in severe difficult life situations, but as it remains important for people in their everyday life, it supports a view of religion as unique (Paper II). The particular role of social support for explaining relationships between religion and health in a secular context is questionable and should be addressed in further studies. Although Paper I shows that non-religious people generally have higher levels of social support, it may not say anything about the role of social support on the relationship between, for instance, church attendance and existential well-being. Further studies may give insight into direct and indirect mechanisms between church attendance and well-being

including social support. We also need to know more about the different roles of religiousness for men and women. The different roles could here be asking if women and men who actively participate in a congregation perceive their social support differently which further may have different consequences to their health. We also learned from Paper II that coping by receiving support from clergy or other church members was related to existential well-being both directly and indirectly through pessimism. Consequently, it would be of further value to examine the interrelation between particular support from the congregation and social support in general and how these factors were related to health. In order to do so, prospective studies are preferred because they could help establish possible causal relationships between variables. Finally, it seems relevant for further studies to examine the substantial elements in the non-religious view of life, especially for those reporting their view of life to be highly enriching. For instance, to what extent do existential questions constitute this non-religious view of life, and what is the role of individual differences and personality?

4.2 Methodological considerations

4.2.1 Internal and external validity

In terms of determining causal relationships between variables, experimental designs have an advantage, but experimental designs are harder to perform in some situations compared to others (T. D. Cook et al., 1979). Because religious and spiritual views of life extend to a range of domains in people's lives, it would be impossible and also unethical to "proscribe" religious beliefs, behaviors, or feelings to one group and compare the health of this group to another. Furthermore, although determining that the cause was related to the effect, the direction of the relationship may be harder to argue as the cause should precede the effect in time. An apparent obstacle would be to determine at what point in time did religiousness occur? A contextual aspect may be relevant to address in that regard. By analyzing data from the International Social Survey Programme, Høeg (2010) found that Norwegian parents highly valued that their own religious beliefs would influence their children's beliefs and practices. Religiousness on all domains would therefore develop in close collaboration with the development of disposition to optimism and pessimism. Consequently, reversed

causality of the study variables in the present thesis may therefore be possible. For instance, in Paper II we examined the mediating role of optimism and pessimism on the relationship between religious coping and existential well-being. Here, we assume that the different ways in which people cope with adversities will influence their levels of optimism and pessimism; furthermore, they may determine the person's experience of existential well-being. It may however be possible that the variables are related to each other in a reverse mechanism such that optimism and pessimism may influence religious coping. Therefore we can here only assume that the variables influence each other as outlined in the present thesis based on previous empirical findings and theoretical proposals.

Critics of research on religion and health pinpoint the general problems in this field struggling to untangle indications of causal mechanisms from simple correlations. For instance, it is possible that researchers have failed to control for possible confounding variables and for multiple comparisons as shown by Sloan, Bagiella, and Powell (1999). Additionally, lack of consistency of findings is also mentioned as a potential threat to the scientific value of the field regarding practical implications of the findings (Sloan et al., 1999). Although this was argued fifteen years ago, more recent literature highlights the same methodological challenges to the field (Sloan, 2006, 2009). Although the present thesis by its cross-sectional correlational design is to leave no inferences about the causality of the relationship between variables, there is a better practice to accommodate its shortcomings. According to T. D. Cook et al. (1979), when dealing with cross-sectional correlational designs it is vital to have knowledge on plausible alternative explanations, to have valid measures of factors related to these alternative explanations, and to specify models that statistically adjust for alternative explanations. Throughout the introduction of this thesis it is shown that theoretical perspectives and empirical findings have led to developments of proposed causal models that aim to explain the range of influence that religiousness may have for the development of people's health (Chatters, 2000; C. G. Ellison & Levin, 1998; H. G. Koenig et al., 2012). An important aspect here is that although the relationships are argued to be causal, a possible bidirectional relationship between religiousness and health is also acknowledged. From the above information, the point is that despite general critiques to religion and health research, by relying on present theory and

empirical findings as well as testing for alternative mechanisms between variables, the likelihood of ensuring validity of the findings increase.

Confounding and third variable effects. The relationship between variables x and y are *confounded* if a third variable z is correlated with y (and sometimes x) (MacKinnon, Krull, & Lockwood, 2000; Skog, 1998). To account for alternative interpretations of the findings in this thesis, several variables were included in the models, including age, gender, level of education, view of life enrichment, long-standing health problems, optimism, and pessimism. Depending on the research questions, these variables were denoted differently (i.e., controls, moderators, mediators). While controls and moderators may influence the strength and direction of the relationship between variables x and y, mediators are variables that explain the relationship between x and y. Consequently, mediators are part of a chain of causal events, whereas controls and moderators are not. Mediation is when an independent variable causes a mediator which in turn causes the dependent variable (MacKinnon et al., 2000). Any mechanism in which a third variable may influence the relationship between an independent and a dependent variable posits a threat to the validity of a study. Although many potential confounders are accounted for in the present thesis, there may still be factors not accounted for that may serve as confounders and cause spurious relationships.

Selection bias concerns the systematic difference between the people participating and those who are not participating in a study. A selection bias may occur for different reasons, and when it does it may threaten the sample's ability to represent the population. If for instance the choice of not participating is systematically related to a value of any key variable in the study it represents a severe threat to the validity of the study (Skog, 1998). A systematic difference between responders and non-responders is not, however, automatically linked to large proportions of non-response (see section below on generalizability). However, as only 22 per cent of the randomly drawn sample in this study chose to participate, it becomes increasingly relevant to ask why. It could be due to their health status or interests in subjects of religion and spirituality. Although we did not perform a non-responder study, key variables in the study were compared to the findings in other population-based studies. In Paper I we compared the sample of key religion variables to findings of the International Social Survey Programme (ISSP)

in 2008 (http://www.issp.org/). We found that our sample had a higher proportion of regular church attendance, same proportions of praying regularly, same proportions of religious people, and higher proportions of non-religious people. This indicates that we may have a smaller proportion of agnostics, or people being uncertain of their religious or non-religious belonging, as compared to findings in ISSP. Furthermore, our total sample showed that 29 per cent responded yes to whether they had long-standing health problems. Compared to another large population study in Norway (Nord-Trøndelag Health Study, HUNT), we found that 25 per cent of the population responded yes in 1995-97 (https://hunt-db.medisin.ntnu.no/hunt-db/#variab3011) and 33 per cent in 2006-08 (https://hunt-db.medisin.ntnu.no/hunt-db/#variab4019), the same year as the present study was conducted. Consequently, the present sample seems to be comparable to other studies. However, the present sample may have a greater proportion of non-religious responders. Consequently, this could have affected the results in Paper II and III producing weaker relationships between the different domains of religiousness and existential well-being. On the other hand, large amounts of single item non-response within the 653 study respondents led to excluding about 1/6 of the sample of mainly non-religious people in Paper II and III. This was mainly due to non-responses of non-religious respondents for items on religiousness. Thus, this may have leveled out the larger proportion of non-religious people.

Based on the above, the samples in the papers are fairly similar to the population in both demographics, including selected domains of religiousness and long-standing health problems. Consequently, this could support a generalization to the greatest proportion of the Norwegian population with exception of a smaller group of non-religious people in which some of the religiousness items did not apply.

Information bias occurs when a person participating in a study, deliberately or not and in a systematic fashion, provides information that is incorrect or distorted. One reason for this may be *social desirability*, in which bias occurs if someone tends to answer questions in a way that they think will be favored by others. Problems related to social desirability may be especially relevant when investigating specific phenomena that are regarded taboo, illegal, or sensitive in any way. Religiousness and health may both be such phenomena in which people either avoid answering or deflate or inflate their response to specific items. For instance, a study across both Europe and the U.S.

found that religious people tended to present themselves as better than average compared to non-religious people (Eriksson & Funcke, 2014). And the closer examination of people in the U.S. showed that the better-than-average effect was closely related to the context-bound stereotype of valuing the virtue of warmth among religious people. This effect is however context bound and also seems to vary across different domains of religion. For instance, in a study of social desirability effects on The Religious Orientation Scale, researchers found that intrinsic religiousness (e.g., religion as an end to itself) differed from extrinsic religiousness (e.g., religion as a means to friendship) in such a way that intrinsic religiousness correlated with social desirability whereas extrinsic religiousness did not (Trimble, 1997). We know little about social desirability among religious (and even non-religious) people in Norway and in this particular study. This may be a potential problem also viewed in light of the information-letter the participants received together with the questionnaire informing about the purpose of the study. That is, we stated that we wanted to examine if religion or view of life was important for staying healthy. From an ethical point of view withholding information about the study from the participants would not be an option. Consequently, we should acknowledge that this information could have influenced the participants' responses in one direction or the other. However, both the design of the current study using mailed questionnaires to ensure the anonymity of the study participants and the use of valid and reliable measures may aid problems with different causes to information bias. Both single item measures and psychometric measurement scales were used in the present thesis. Most single item measures had already been used in a Norwegian context and in samples of the general population (e.g., demographics, long-standing health problems, religious versus non-religious, religious affiliation) (see section 2.2 on measures). The validity and reliability of these measures have therefore been evaluated previously. Furthermore, although the sample in the present thesis may have had a greater proportion of non-religious people, it was a relatively good fit between scores on demographic variables, religiousness (single items), and long-standing health problems to that of other population studies (see this section on selection bias). This is also an indication of validity of the measures.

None of the psychometric measurement scales used in this thesis has previously been used in a Norwegian setting as far as we know. Consequently, the items included

were all translated as described in section 2.2 on measures. In general, all psychometric measurement scales in the present study showed good psychometric properties supporting the reliability of the measures. For instance, Cronbach's alpha of the subscales from the MOS-SSS (Sherbourne & Stewart, 1991) ranged from .88 to .95 with an inter-scale correlation ranging from .69 to .73. The MOS-SSS also reported good psychometric properties across nations and in both ill and healthy populations (Griep, Chor, Faerstein, Werneck, & Lopes, 2005; Robitaille et al., 2011; Sherbourne & Stewart, 1991; Soares et al., 2011; Yu, Lee, & Woo, 2004). The same also applies to EWB as measured by the SWB scale (C. W. Ellison, 1983; Paloutzian & Ellison, 1982). The scale is translated to a range of different languages and validated in many contexts showing good psychometric properties (Paloutzian, Bufford, & Wildman, 2012). In the present thesis, we found a Cronbach's alpha of .82 in both Papers II and III. Furthermore, in both Papers II and III the results from structural equation modeling analysis showed a good fit to the data supporting the reliability of the scale. Optimism and pessimism as measured by The Life Orientation Scale (Scheier & Carver, 1985) showed a Cronbach's alpha of .76 for optimism and .61 for pessimism in Paper II. Although the Cronbach's alpha values are a bit lower than what is found for social support and existential well-being, they are still acceptable given the few items in each dimension (3 items), and they are also similar to what others have found (Herzberg et al., 2006).

The measurement scales used to assess religiousness included scales of religious coping, church attendance, and religious experiences. In general, all dimensions of these scales showed acceptable Cronbach's alpha values according to their number of items ranging from .61 to .96 in addition to showing good fit to the data (Papers II and III). The religiousness scales do differ, however, from the scales discussed in the previous section as they seem to be tested in a smaller range of contexts.

Despite good reliability of the measurement scales used in the present thesis, validity of the study is also evaluated according to face value. Are these measures applicable to a general Norwegian population compared to Christian denominations in which they have been mainly used previously? And do these items apply to Norwegians at all? A general argument supporting the applicability of these scales is that Norway is mainly Christian; this is supported by the high proportion (76 per cent) of members in

the Church of Norway (Statistics Norway, 2013). Although such a formal membership may be more or less important to people's religious behaviors in terms of church attendance, which is only about 5 per cent (European Social Survey, 2010), it still gives a picture of what may apply to most people regardless of high versus low scores. The applicability of religious experiences and church attendance was tested in Paper III as we compared two models: one consisting of self-identified Christians and one using the complete sample. Both models showed good fits with the data, and the structural patterns were the same. Furthermore, neither of the measurement scales showed surprisingly low or high scores, and they correlated with other variables as expected. For instance, church attendance was generally low with a mean score of 1.6; this indicates that, in general, the frequency of attending church is rare (Paper III). Another example is the strong and positive correlation between positive religious experiences and church attendance, whereas for negative religious experiences the correlation is also positive but weaker.

In regards to the single item questions on service attendance, prayer, and religious coping used in Paper I, the comparison between religious and non-religious groups showed that these behaviors were not exclusively reported by religious people. This may be an indication of misclassification such that people identifying as non-religious but who do show religious behaviors should rather be classified as religious. However, this can also be viewed as supporting a dimensionality of people's religious and spiritual lives. That is, although you may not identify as being religious, you may occasionally take part in services in the church. This is an important aspect to acknowledge when discussing the results from the thesis. For instance, although some people frequently use religious coping when dealing with difficulties, they may not attend church regularly or even at all. However, a general picture of classification does however make sense. There is a significant difference in proportions of people within the religious and non-religious groups who engage in religious and spiritual behaviors. That is, a small proportion of non-religious people (4-8 per cent) versus a high proportion of religious people (14-57 per cent) do frequently pray, attend church, or cope by using religion.

Finally, in Paper I we distinguished between people who reported high versus low levels of enrichment from their view of life. This item has not been used in previous

studies. The item may not be as neutral as it could be, asking “do you find your view of life enriching?” rather than for example “my view of life is enriching”. Furthermore, the exact interpretation of the word enriching may also be a challenge to the validity of the item. However, arguments may be raised in support of using the item. First, like the distinction between religious versus non-religious people, people with high view of life enrichment are typically more engaged in attending services, prayer, and they use religious coping more so than those with low view of life enrichment. Therefore, although people may view the concept of enrichment differently, it seems to reflect some level of significance of people’s view of life or to express how important ones view of life is.

External validity or generalizability may be the greatest strength of questionnaire surveys. When performed properly, the findings could be generalized to the whole population under natural conditions (Weisberg, 2008). In the present thesis the response rate was 22 per cent. As 3000 people were invited to participate in the study, 653 persons returned the questionnaire. Assuming a random cause for non-response, a large sample like the present one is an advantage due to a smaller standard error associated with any of the parameter estimates. According to De Vaus (2014), a liberal reduction of the sample may however cause sampling error and leave us with little confidence in generalizations. As the present study show large proportions of non-response (78 per cent), three issues were addressed to ensure confidence in the results. First, a large sample was drawn in order to ensure a tolerable number of responses. According to De Vaus (2014, p. 78), with at 20/80 split in the population expecting to give a particular answer to key variables in a survey, and a 4 per cent sampling error rate with 95 per cent confidence intervals, you would need a sample size of 400. In the present thesis the number of responses was 653, and although subsamples were used in all three papers, they remained relatively large: 470 in Paper I and 539 in Papers II and III. Second, responders and non-responders were compared in terms of their gender and age. The responders were older than non-responders, and no statistically significant gender differences were found. However, the p-value approached significance. Although older people seem to have been more likely to respond to this questionnaire survey, each group of responders and non-responders seem to be well distributed in terms of age as well as gender. Third, both samples used in this thesis were compared to

the sampling frame, which in this case was the general population in Norway. The sample in all papers seems to be well represented compared to the distribution of people by gender, age, education, and membership in the Church of Norway in the population. Consequently, this increases confidence that the present findings may be generalized to the population despite a low response rate.

5 Conclusions and implications

The overall aim of the present thesis was to explore the relationship between religiousness and social support and religiousness and well-being in a secular Norwegian society. Findings showed that older non-religious people reported significantly higher levels of social support. For younger people, religious men reported significantly higher levels of tangible and emotional support compared to non-religious men. Younger non-religious women, on the other hand, reported significantly higher levels of tangible and emotional support compared to younger religious women. Furthermore, higher frequency of church attendance was significantly related to more existential well-being for men but not for women, and positive religious experiences were positively and significantly related to existential well-being for women but not for men. These results show that religion may associate differently to social support and well-being depending on gender. Furthermore, we also examined the role of optimism and pessimism to the relationship between religious coping and existential well-being. Religious coping was significantly related to well-being both directly and indirectly through pessimism. The same significant pattern of associations between religious coping and well-being was found for people with long-standing health problems, but the relationships were stronger for this group when compared to people without long-standing health problems.

The findings of the present thesis both deviate and coincide with other studies internationally. Unlike other studies, the findings of this thesis did not support a positive relationship between religiousness and social support except in the case of younger men. However, religiousness was generally found to be significantly related to existential well-being. Since this type of research is in its infancy in a Norwegian context, other studies should be performed to see if the results found here can be replicated. This is an important next step, and it would therefore seem radical to directly implement the findings to clinical practices. Nevertheless, the findings in the present thesis could help argue why knowledge of view of life in general, and religiousness and spirituality in particular, are important. For instance, questions on how religion may influence people's lives is absent in the curriculum for students in the clinical psychology education program in Norway (Reme, Berggraf, Anderssen, & Johnsen,

2009). Consequently, as professionals have limited knowledge of the psychology of religion, religiousness as a resource or burden to mental health may sometimes be neglected despite its potential high relevance for the patient. Furthermore, this thesis showed that religious coping was more strongly related to existential well-being for people struggling with long-standing health problems. This knowledge could help shape future studies involving medical patients, but it could also help form a common understanding of potential personal resources that may help a person dealing with severe health problems. In terms of theoretical implications, the thesis adds to existing knowledge by being the first study in a Norwegian context to examine the relationship between religiousness and social support and religiousness and existential well-being. Furthermore, Paper II, which examined the influence of optimism and pessimism in the religious coping process, is also the first to investigate these relationships in an international context as far as we know. In particular the finding that pleading coping was significantly and positively related to existential well-being for people with long-standing health problems could have theoretical implications. That is because pleading coping is generally categorized as a negative coping strategy, and consequently it is expected to cause less beneficial health outcomes. Contrary to this, our findings showed that pleading coping is related to beneficial health outcomes when dealing with long-standing health problems.

Overall, the findings of the present thesis support the notion that religiousness is relevant for people's well-being; therefore, we should strive to implement more knowledge on psychology of religion for people working in clinical practices. Further studies on the relationship between religiousness and social support, and between religiousness and well-being, should be carried out to see if it will generate results similar or different from the present thesis. Finally, findings in this thesis showed that the role of religion in association with social support and well-being was more pronounced for men compared to women. The generally higher level of social support for non-religious people also deviated from previous studies. Further studies should therefore aim to examine how and why religiousness is related to health differently for men and women. And finally, studies should also aim to examine the content and potential consequences of a secular view of life to people's health.

6 References

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Paper I

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Paper II

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Paper III

Church Attendance and Religious Experience: Differential Associations to Well-Being for Norwegian Women and Men?

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Abstract

Previous studies have shown that gender may moderate the relationship between religiousness and mental health. Although associations between religiousness and mental health seem to be more pronounced for women, international and Norwegian empirical findings appear to be divided on this issue. This study examined gender differences of religious experiences and church attendance in association with existential well-being among 295 women and 233 men 18-75 years of age from the general Norwegian population. Of the 3000 randomly selected persons, 653 (22%) chose to participate in this cross-sectional study conducted in 2009. The results from the multiple group structural equation analysis showed that the structural models for women and men did not differ significantly on the global level. However, the models for women and men showed different patterns as church attendance and negative religious experiences were related to existential well-being for men. For women, positive and negative religious experiences were related to existential well-being. Women and men differed significantly on the relationship between positive religious experiences and existential well-being. The present findings should be interpreted with caution, but the pattern of findings may suggest that men may benefit more from active religiousness and women from affective religiousness.

Keywords: religious experience, church attendance, existential well-being, Norway, secular context

Church Attendance and Religious Experience: Differential Associations to Well-Being for Norwegian Women and Men?

The relation between both religious experiences and church attendance and mental health and well-being is revealed in several contexts (Baetz, Bowen, Jones, & Koru-Sengul, 2006; Bailly & Roussiau, 2010; Braam et al., 2004; C. G. Ellison, Boardman, Williams, & Jackson, 2001). As it is generally found that women attend church more frequently and have religious experiences more often than men (See Francis, 1997 for a review), it may be expected that women and men may benefit differently from religion. The moderating impact of gender on the relationship between, specifically, church attendance, religious experiences and well-being is less known. However, some empirical studies seem to support a differential impact of religiousness on mental health for women and men (Ellison & Fan, 2008; Hintikka, 2001; Krause, Ellison, & Marcum, 2002; Lewis, Shevlin, Francis, & Quigley, 2011; Maselko & Kubzansky, 2006; McCullough & Laurenceau, 2005; McFarland, 2010). Although women in general are shown to benefit more from religion, studies from Norway and Denmark indicate a different pattern. The relationship between religiousness and mental health, including social support, seems to be stronger for men than for women (Hvidtjørn, Hjelmborg, Skytthe, Christensen, & Hvidt, 2013; Kvande, Reidunsdatter, Løhre, Nielsen, & Espnes, 2015; Sørensen, Dahl, et al., 2012; Sørensen, Danbolt, Holmen, & Koenig, 2012). Consequently, the impact of gender on the relationship between religiousness and well-being is worth further exploration, especially since most studies have been conducted in nations where the majority is highly religious (Koenig, King, & Carson, 2012). Extending research on gender differences to secular contexts may add valuable knowledge to religion and health research. Thus, the main purpose of this study is to examine gender differences of religious experiences and church attendance in association with existential well-being.

The subjective dimension of religious experience may differ in intensity ranging over four levels: “a confirming experience, a responsive experience, the ecstatic experience and the revelational experience” (Glock & Stark, 1965). The two latter are the least common and contain more powerful perceptions and sensations with an increasing intimate closeness to the divine in a perceived two-way interaction (Glock & Stark, 1965, pp. 39-67). On the other hand, a confirming experience and a responsive experience reflect a person’s everyday feelings and sensations in association with the transcendent. Such everyday experiences have also been described by King (1967) as “personal religious experiences” and how one’s personal life may be influenced by the transcendent (God). This includes a sense of God’s presence, being in close communion with God and being heard and cared for. Such religious experiences are associated with well-being and other positive mental-health outcomes. For instance, in a French study on participants aged 65 years and older, researchers found a positive correlation between religious experiences and self-rated health and life satisfaction (Bailly & Roussiau, 2010). Another U.S. study showed that spiritual/religious experiences were a strong predictor of happiness, life excitement, satisfaction with self and optimism (Ellison & Fan, 2008).

In its position as one of the most studied domains of religiousness, church attendance is repeatedly associated with mental health. For instance, a U.S. study found that church attendance was positively associated with well-being and negatively associated with distress (Ellison et al., 2001). Furthermore, a Dutch study found higher levels of church attendance to be negatively related to depressive symptoms (Braam et al., 2004). This study controlled for a range of confounding variables that may influence the outcome, such as age, gender, education, marital status, chronic disease, self-esteem and emotional support. Others have also found church attendance to be positively associated with optimism, self-esteem and well-

being and negatively related to death anxiety, mortality and depression (Baetz et al., 2006; Koenig & Vaillant, 2009; McFarland, 2010; Strawbridge, Shema, Cohen, & Kaplan, 2001).

Women are often found to experience greater benefits from religion compared to men. A study from Northern Ireland found the level of church attendance to associate with well-being for both genders, but the relationship was stronger for women (Lewis et al., 2011). As Lewis et al. (2011) also accounted for denominational differences, church attendance had a stronger association to well-being for Catholic women and men compared to Protestants. Furthermore, a study conducted on the Finnish general population found a significant relationship between religious attendance and less mental-health disorders among women, but not among men (Hintikka, 2001). Religious experiences may also be a greater benefit for women. Findings from the U.S. General Social Survey in 1998 (but not for 2004) revealed that having daily spiritual experiences was related to greater levels of happiness and self-satisfaction for women, but not for men (Ellison & Fan, 2008). Moreover, a prospective study found that women who were highly religious (equal to high levels of organizational and private religiousness combined) in early life reported a higher mean level of self-rated health throughout life compared to less religious women, a difference not evident for men (McCullough & Laurenceau, 2005). Finally, weekly religious attendance and spiritual experiences predicted well-being for women, but weekly religious attendance was more strongly related to well-being for men (Maselko & Kubzansky, 2006).

In general, it may be maintained that women experience more mental-health benefits from several domains of religiousness compared to men – however, the empirical findings are somewhat ambiguous. For instance, in a prospective study on U.S. adults aged 66-95 years, high levels of religious involvement decreased symptoms of depression and increased levels of optimism and self-esteem for men, but not for women (McFarland, 2010). Furthermore, a second prospective study found church-based social support to be positively associated with

self-rated health for men, but not for women (Krause et al., 2002). Such long-term benefits for men were evident despite higher levels of emotional support among women.

Although research is sparse on relationships between religiousness and health in Norway, a couple of studies support gender differences. A cross-sectional population study found younger religious men (18-39 years) to report significantly higher levels of tangible and emotional support compared to younger non-religious men (Kvande, Reidunsdatter, Løhre, Nielsen, & Espnes, 2015). Younger religious women, on the other hand, experienced less tangible support and the same level of emotional support compared to younger non-religious women. Furthermore, a large population study found church/prayer house attendance to moderate the positive relationship between death of a close relative and depression (Sørensen, Danbolt, et al., 2012). The influence of church attendance on depression differed for men and women. Among men, lower depression rates were associated with more frequent religious attendance, whereas among women, lower depression rates were associated with less frequent religious attendance.

The possible moderating influence of gender on the relation between religiousness and well-being does not make any assumptions about different levels of religious involvement between the genders. However, it appears that it is relevant to briefly review theories explaining gender differences in religiousness before addressing theories on the moderation effect in the subsequent paragraph.

According to Sullins (2006), the types of theories explaining gender differences are structural location theories, socialization theories, personality theories and differences in risk-seeking behaviour. Briefly described, structural location theories find that gender differences are due to men's wage labour and women having a nurturing role in the domestic sphere. Socialization theories focus on social experiences – women's values, norms and their role involve nurture and care whereas men's social experiences are based on aggressiveness and

accomplishments. Personality theories as opposed to structural and socialization theories posit that general psychological or physiological differences in the personalities of women and men cause women to be more attracted to religion compared to men. Finally, higher levels of general risk-taking associated with less religiousness are observed for men, with the opposite pattern for women. These differences are linked to physiological distinctions across gender which may lead to differences in their relationship to religion (Cornwall, 2009; Sullins, 2006; Francis, 1997; Miller & Hoffmann, 1995; Stark, 2002; De Vaus & McAllister, 1987).

Even though there are several approaches to explaining gender differences in religion, the differential mental-health *benefits* from religiousness for women and men are rarely addressed. Nevertheless, perceiving religion as a stress buffer for poor mental health is pronounced within theories on personality. Thus, as women more so than men struggle with internalizing such mental-health disorders as anxiety and depression (Rosenfield & Mouzon, 2013), women may use religion to protect themselves from threats to their mental health. Thus, as women tend to engage in more emotion focused coping and turn to their social networks more often than men do (Rosenfield & Mouzon, 2013), both church attendance and religious experiences might influence women's well-being more than men's. Nevertheless, one Danish study found that although women were generally more religious, religious men within the most religious subsample were more inclined to use religious coping (Hvidtjørn et al., 2013). Viewed together with the Norwegian research by Kvande et al. (2015) on social support and by Sørensen et al. (2012) on depression, the relationship between religiousness and mental health may show different mechanisms across gender. The role of religiousness in terms of coping, social support and depression seems to be particularly beneficial for the men in these studies.

Few empirical studies have investigated associations between both private and public domains of religiousness and well-being from a gender perspective. This study is particularly

relevant to discussions on religion as a potential facilitator for positive mental-health outcomes among the general population. As Norway is considered one of the most gender-equal countries in the world when it comes to women's participation in the public sphere outside the home (Bekhouch, Hausmann, Tyson, & Zahidi, 2013; Lopez-Claros & Zahidi, 2005), gender differences on religiousness and health associations are particularly interesting. Based on the literature reviewed above, with the exception of the Scandinavian studies, women seem to attend church more frequently and report religious experiences more often. Moreover, women's well-being seems to be more strongly related to church attendance and religious experience as compared to men. Thus, women seem to be more religiously involved *and* have a greater benefit from religion in terms of greater well-being. The Scandinavian studies reviewed here show that although at least one study found women to be more involved in religion compared to men (Sørensen, Lien, Holmen, & Danbolt, 2011), the relationship between religiousness and mental health seems to be stronger for men.

Although the patterns of associations may be different in Scandinavian compared to other contexts, no specific hypotheses of gender differences in the relationship between religiousness and well-being were formed to guide our study. This is due to the few empirical studies serving as background for our study. Consequently, the present study was conducted with the aim of examining gender differences relating to the association between church attendance and well-being – and between religious experience and well-being – while controlling for the influence of education, age and long-standing health problems.

Method

Procedure and sample

The data for this cross-sectional study were collected in 2009 from the general Norwegian population. An independent company, EDB Business Partner, randomly selected 3000 individuals from the national registration office in two steps: first, 2500 individuals between

the ages of 18 and 75 were drawn, and then an additional 500 individuals between 60 and 75 years of age were drawn to increase the proportion of elderly participants (Figure 1). A questionnaire designed to address issues relating to health, religion, spirituality, view of life and working life were sent to each respondent's home address. One reminder was sent four weeks after the first mailing and the total response rate was N = 653 (22%). When comparing responders to non-responders we found no significant gender differences, χ^2 (1, N = 2347) = 3.33, p = .068, but responders were significantly older than non-responders, mean age (SD) = 50 (16.2) versus 48 (17.1) years, t (1043) = -3.44, p = .001. The chi square test for significant gender differences approached significance, thus reflecting that a larger proportion of women participated in the study. For the present study we used data from n = 539 participants due to incomplete data provided by the remaining n = 114 participants.[1]

Ethical guidelines were followed and the study was approved by the Regional Committee for Medical Research Ethics (REK), and the Norwegian Data Inspectorate approved the collection of data.

[Insert Figure 1 near here].

Measures

Demographics included questions on gender, age, education and religious affiliation. The level of education was detected by providing three choices: *(1) primary school, (2) high school and (3) college/university.* Religious affiliation was assessed by asking people "are you a member of a religious community" with eight response options: *(1) Church of Norway, (2)*

[1] We excluded respondents if more than 66% (50 items) of their responses were "not applicable" (based on the 76 religiousness items in the questionnaire with the possible "not applicable" response option). Consequently, proportions of data present across all single items in our models ranged from 65% to 94%.

Evangelical Lutheran Free Church, (3) Roman Catholic Church, (4) Pentecostal movement, (5) Islamic community, (6) Norwegian Humanist Association, (7) No membership, (8) Other membership (open-ended question). The item on religious affiliation was developed for this study and the listing of options was based on the largest communities in Norway in 2008 (Statistics Norway 2013, http://www.ssb.no/english/).

Long-standing health problems were assessed by the following question "Do you suffer from any long-standing (at least one year) limiting somatic or psychiatric illness, disease or disability?" with a dichotomous response option (*Yes, No*). The item has been used in international studies (Ayis et al. 2003) and in population-based studies in Norway (Krokstad et al. 2002; Løhre et al. 2012).

Church attendance was assessed by three items from King and Hunt's (1972) Dimensions of Religion Scale. Each participant was asked how frequently they engaged in three aspects of church attendance. The items were ranged on a five-point scale ranging from *low (1)* to *high (5)* levels, in addition to a sixth response option of *(6) not applicable*. The categories of possible response options differed between the three items. The first item, "How often have you taken Holy Communion during the past year?" was ranged as follows *(1) never, (2) seldom, (3) occasionally, (4) fairly regularly and (5) regularly*. The second item, "During the last year, how many Sundays per month on average have you gone to a worship service?" was ranged *(1) none, (2) one, (3) two, (4) three, (5) four*. The final item, "If not prevented by unavoidable circumstances, I attend church" was ranged *(1) never, (2) seldom, (3) monthly, (4) weekly, (5) several times a week.* The three items together comprised the dimension of church attendance. The previously reported Cronbach's alpha for church attendance is .82 (King & Hunt, 1972), and for the present study we found a Cronbach's alpha of .89. As the measures of church attendance are appropriate for Christian denominations, we know less about its applicability to others. Consequently we ran all structural equation models

performed in this study using only Christian participants. The patterns of associations were equal to analysis performed on the total sample. This indicates that in a Norwegian setting, the measures apply equally well to the general population as to Christian denominations in particular.

Religious experience was assessed using the revised version of the Religious Experience Questionnaire (REQ) (Edwards, 1976). The REQ consists of twelve items (compared to eight items in the original version) that were designed to reflect a personal affective relationship with God (Hill & Hood, 1999). The scale was developed according to King (1967) and the dimension of "personal religious experience", which was composed of items reflecting a person's perceived influence of God in one's life, including feelings of being forgiven for sins and referring to God when making decisions. Examples of items in the REQ are "I experience an awareness of God's love" and "I pray privately in places other than church". The items were rated on a seven-point Likert scale with the response options *(1) never, (2) almost never, (3) rarely, (4) sometimes, (5) often, (6)almost all the time, (7) always*. Although a one-factor structure of the REQ has previously been used by other researchers (Brokaw & Edwards, 1994; Tisdale, Key, Edwards, Brokaw, & et al., 1997), an examination of the factor structure for the present study's Norwegian sample found better support for a two-factor structure (See Appendix A). Consequently, a two-factor structure with positive and negative REQ was used in this study, and Cronbach's alpha for Positive REQ was .96, and for Negative REQ .61.

Well-Being was assessed using one dimension of the Spiritual Well-Being Scale (SWB)[2] – Existential Well-Being (EWB). Twenty items compose the SWB Scale and distribute equally between religious and existential well-being (Paloutzian & Ellison, 1982;

[2] English SWBS © 1982, C.W. Ellison and R.F. Paloutzian. Norwegian translation SWBS © 2011, R.F. Paloutzian. All rights reserved.

Ellison, 1983). Existential well-being uses questions on contentment with meaning, purpose and satisfaction in life. As opposed to religious well-being (RWB), EWB has no specific relation to God and religion. Examples of items are, "I feel that life is a positive experience" and "Life doesn't have much meaning". The items were rated on a six-point Likert scale with response options *(1) strongly agree, (2) agree, (3) somewhat agree, (4) somewhat disagree, (5) disagree, (6) strongly disagree.* The internal consistency of RWB and EWB are reported by others with a Cronbach's alpha of .79 and .87 (unknown order) for an African-American sample (Utsey, Lee, Bolden, & Lanier, 2007), and .78, .84, .87 and .91 for EWB in groups having members of four different religious communities (Genia, 2001). The present study found a Cronbach's alpha of .82 for EWB.

All measures were translated from English into Norwegian by two bilingual native-Norwegian academics. Following this, the translation of all items was evaluated by a Norwegian academic working in sociology of religion to ensure correct item meaning.

Statistical analysis

Frequencies were used to describe the sample on level of education, religious affiliation and long-standing health problems. Mean and standard deviation was calculated for age, church attendance, positive and negative religious experience and existential well-being. Cronbach's alpha was used to examine the internal consistency of church attendance, positive and negative religious experience and existential well-being. All the above calculations (frequencies, mean, standard deviation, Cronbach's alpha) were performed using IBM SPSS version 20.0 for Windows (IBM, 2011). Multiple groups structural equation modelling employing Mplus software (Muthén & Muthén, 1998-2012) was used to calculate correlations between the latent constructs: frequency of church attendance, positive religious experience, negative religious experience and existential well-being. Furthermore, we tested for

significant mean differences on the four latent constructs across women and men. A p-value of < 0.05 was regarded as statistically significant for all analyses in the present study.

Structural Equation Modelling (SEM) with maximum-likelihood estimation employing Mplus software was used to evaluate the research questions. SEM is shown to have a number of advantages compared to other statistical techniques, such as multiple regressions. SEM enables you to calculate complex models using both latent and single-item variables, to include cases with missing values and to control for measurement errors when using latent variables (Geiser, 2013; Muthén & Muthén, 1998-2012). Prior to testing for significant gender differences in our SEM model, we tested for measurement invariance across gender to ensure the measurement model was equal for women and men. Then we specified our model with direct effects from church attendance, positive religious experience and negative religious experience on existential well-being. The model also controlled for the influence of education, age and long-standing health problems on existential well-being. We used multiple group modelling to test for significant gender differences. Hence, separate models for women and men are specified within the same overall model. The models were tested in three steps. First, we examined the overall model fit (model 1) according to the residual mean squared error of approximation (RMSEA) with values less than .07 for adequate fit, and .03 for excellent fit (Steiger, 2007). Values of above .90 for the comparative fit index (CFI) and the Tucker-Lewis index (TLI) were regarded as good-enough fits (Hu & Bentler, 1999). These fit thresholds were used to evaluate all further models. Second, we performed a global test by comparing a constrained to an unconstrained model. In the first model, the three regression coefficients from the effect of church attendance, positive religious experience and negative religious experience on existential well-being were constrained so they were equal between genders. In the second model, the regression coefficients were free to vary, and the two models were evaluated by comparing Chi square

statistics, absolute goodness-of-fit indices and the Bayesian information criterion (BIC). When comparing models on BIC, unit changes of >10 across models were regarded as very strong indices showing that the model with the lowest BIC fits the data better (Kass & Raftery, 1995). In our third step, each of the three regression coefficients from the effect of church attendance, positive religious experience and negative religious experience on existential well-being were tested for significant differences across gender using the Wald test for parameter constraints. Three separate models were run, each constraining one of the three regression coefficients so it was equal across gender.

In all analyses using Mplus software, missing data were processed using full information maximum likelihood estimation (FIML) and included both system missing data and responses of "not applicable" on single items on church attendance and religious experience. FIML is regarded as one of the most robust methods for dealing with missing data (Schlomer, Bauman, & Card, 2010).

Because some items were intended to measure religiousness among Christian participants, additional analyses were conducted excluding participants whose religious affiliation was not Christian. The results revealed the same pattern, so we report the overall results here.

Results

Descriptive statistics and correlations between study variables by gender

The sample (n = 528) was distributed relatively evenly across gender with 56% women (Table 1). Women and men were both highly educated with college/university degrees (42% and 44%), most were members of the Church of Norway (79% and 81%) and about one-third had long-standing health problems (31% and 27%). No significant differences were found between women and men on age, level of education, religious affiliation or long-standing health problems, all *p*s >.05.

[Insert Table 1 near here].

The level of positive religious experience significantly differed across gender with a lower mean for men than for women (difference: -0.372 scale points, see Table 2). No significant differences were found between women and men on level of church attendance, negative religious experience or existential well-being. Bivariate correlations between study variables (Table 3) show that negative religious experience was significantly and inversely associated with existential well-being for both women and men. Church attendance and positive religious experience were significantly associated with existential well-being for women, but not for men. Significant correlations between church attendance and positive religious experience were similar across gender. The same pattern was found for correlations between church attendance and negative religious experience. Finally, the correlation between positive and negative religious experience was significant for both genders, but stronger correlations were found for men as compared to women.

[Insert Table 2 near here].

[Insert Table 3 near here].

Measurement invariance and model fit

A prerequisite for testing structural differences in a multiple group SEM model is to establish measurement invariance across groups in the model. Hence, we compared two CFA models, a

constrained model with equal factor loadings across groups, and an unconstrained model in which the factor loadings where freely estimated for each group. The results showed that the constrained model (N=473; χ^2(772)=1598.61, p<.05, χ^2/df=2.07, RMSEA=.067, CFI=.882, TLI=.878, BIC=30884) had a lower BIC value compared to the less restrictive model (N=473; χ^2(751)=1555.17, p<.05, χ^2/df=2.07, RMSEA=.067, CFI=.886, TLI=.878, BIC=30970). This indicates that allowing the factor loadings to be freely estimated for women and men did not lead to a better fit in the model as the BIC value increased from 30884 to 30970. However, even if measurement invariance could be established, our constrained model did not show adequate fit to the data. Thus, we examined the modification indices to obtain a better understanding of possible sources of misfits in our model. Consequently, two larger modification indices were examined further.[3] We allowed some item residuals to correlate: REQ item 10 (pray to God) with item 11 (fellowship with God), and EWB item 2 (uncertainty of origin and purpose) with item 6 (unsettled future). The rerun of the model with the two correlations added resulted in an adequate fit to the data, N=473; χ^2(768)=1456.04, p<.05, χ^2/df=1.90, RMSEA=.062, CFI=.902, TLI=.898 (Figure 2).

[Insert Figure 2 near here].

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[3] According to the modification index, a correlation between the residuals of REQ items 10 and 11, and between EWB items 2 and 6 would consequently cause the largest reduction in χ^2. REQ items 10 and 11 were placed on a separate page in the questionnaire; items 1 to 9 were placed at the end of page 7, while items 10, 11 and 12 were placed on page 8. REQ item 10s and 11 especially concerned an experience of close bonds between the person and God. Both the location of the items in the questionnaire and the common theme of the items could be the cause of the items being more correlated to each other rather than to the latent variable, as predicted by the model. EWB items 2 and 6 concerned uncertainty about the future which could be the reason for the correlation between items 2 and 6.

Structural differences of SEM model across gender

To test structural differences between the models for the two genders systematically, a model with the additional constraint of equal structural regression weights was tested against a model which only assumed measurement invariance but allowed all structural regression weights to be estimated freely. Both models showed adequate fit to the data (Table 4). The fit indices were similar, apart from marginal changes in CFI. However, as BIC improved by >10 units from the less constrained to the more constrained model this indicates that gender does not moderate the structural paths from church attendance, positive religious experience and negative religious experience to existential well-being altogether. In other words, a model that assumes equal structural regression paths receives a better overall fit expressed in a lower BIC as compared to a more complex model with individually estimated regressions weights for men and women.

[Insert Table 4 near here].

Nevertheless, for descriptive purposes the regression paths were examined individually across gender (Figure 2). For women, positive religious experience had a significant positive association to existential well-being, while negative religious experience had a significant negative association to existential well-being. No significant relationship was found between level of church attendance and existential well-being. For men (Figure 2), the level of church attendance had a significant positive relationship with existential well-being, and negative religious experience had a significant negative association with existential well-being. No significant association was found between positive religious experience and existential well-being for men.

Even if the overall model with equality constraints fit the data better, we also specifically examined whether each of the three regression paths significantly differed for women and men, so three separate models were run by means of a Wald test, each placing an equality constraint for each of the three regression paths. The results showed a significantly stronger relationship between positive religious experience and existential well-being for women than for men, WALD (df=1)=4.55, $p< .05$. No significant differences between women and men were found for the regression path from church attendance, WALD (df=1)=2.10, $p=.15$, or negative religious experience, WALD (df=1)=0.14, $p=.71$, to existential well-being.

Discussion

The purpose of this study was to examine if frequency of church attendance and religious experiences were related to existential well-being differently for women and men. The results were ambiguous, and consequently the findings should be interpreted with caution. Although the global test comparing the female model to the male model found that they were not significantly different from each other, the pattern of association within the male model compared to the female model is much in line with previous findings. Church attendance and negative religious experiences were significantly inversely related to existential well-being for men, while both positive and negative religious experiences were significantly related to existential well-being for women. Nevertheless, the only association to show significant differences between women and men was the relationship between positive religious experiences and existential well-being. The structural pattern of associations for women and men will be further discussed while bearing in mind that the findings are tentative. This will be further addressed in the section on limitations of the study.

Active men and affective women – differential relationships to well-being?

Although women are generally found to be more religious than men, they seem to express their religion differently. Whereas women engage in the more subjective dimensions of prayer

or comfort from religion, men are more engaged in church attendance, church membership or volunteerism (Sullins, 2006). By comparing the gender difference between active to affective dimensions of religion in both the General Social Survey (1998-2002) and the International Social Survey Programme (1998), a larger discrepancy between women and men was found for affective dimensions compared to the active dimensions (Sullins, 2006). The present study fit this distinction in part. Women and men attended church and had negative religious experiences equally often, but women reported to have positive religious experiences more often than men. Furthermore, church attendance and negative religious experiences were related to existential well-being for men, while positive religious experiences were related to existential well-being for women. These findings are consistent with a prospective study showing organizational religious involvement to be more beneficial to men's health in terms of less depression, more optimism and better self-esteem (McFarland, 2010). Likewise, although the study by Maselko and Kubzansky (2006) found that religious attendance and spiritual experiences were related to the well-being of women, men's well-being was more strongly related to weekly religious attendance. Other studies, however, have found that women benefit the most from church attendance (Hintikka, 2001; Lewis et al., 2011) and religion in general (McCullough & Laurenceau, 2005). One reason for the divergent findings could be linked to the measures used in the different studies. For instance, both studies by McFarland (2010) and Maselko and Kubzansky (2006) measure public religious participation according to several items tapping into both frequency of service attendance and also participation in other activities like prayer groups, meetings and bible study groups. The studies by Hintikka (2001) and Lewis et al. (2011), on the other hand, are limited to attendance at religious services as measured by one item. Although Lewis et al. (2011) asked respondents "How often do you attend a place of worship", which could include a visit to a place of worship without attending a service, the question did not explicitly touch on

participation in prayer groups, meetings and bible study groups. Although the present study also did not include questions on prayer groups and so on, three related items were used: questions on frequency of Holy Communion, Sunday service and general church attendance, thus reflecting that church attendance may be more than merely attending a Sunday service. All in all, the studies supporting a stronger relationship between church attendance and well-being or mental health for men have in common that they extend the measure of church attendance beyond that of attending service. Therefore, could a combination of the different activities in the church be particularly beneficial for men? According to Krause et al. (2002), this may indeed be the case. In a prospective study on church-based emotional support with about 400 U.S. Presbyterian church members, findings revealed that over time, men reported better self-rated health. The authors argued that due to differences in gender socialization it may be easier for men to experience emotional support with coreligionists compared to others outside the church. Furthermore, the often subordinate position of women in the church may be a reason why their emotional support from others in the congregation was related to poorer self-rated health over time (Krause et al., 2002), which was also confirmed by a study that found a positive association between women's public religious activities and distress (Maselko & Kubzansky, 2006).

Based on the above findings, activities in the church extending beyond merely service attendance may be more facilitating to men as compared to women. However, in reviewing some of the measures used to detect church attendance it is difficult to argue whether room is left for additional behaviour than service attendance. This may be the case in the study by Lewis et al. (2011), where they asked participants about attendance at a place of worship. The participants may report service attendance, other activities or both. Furthermore, a Norwegian study measured church attendance by asking participants "How often in the last six months have you been to church or a house of prayer". Among men who attended a church/prayer

house more than three times a month after losing a loved one, experiences of depressive symptoms were fewer compared to less frequent attenders (Sørensen, Danbolt, et al., 2012). The item in this study could mean "Sunday service attendance" as well as being inclusive of other activities. Nevertheless, as the frequency of attending a church/prayer house was more pronounced among men who attended more than three times a month, it may reflect a higher level of attachment to religious activities for these men (Sørensen, Danbolt, et al., 2012). Thus, findings from a Norwegian context may also strengthen our arguments that the relationship between church attendance and mental health becomes substantial for men when church attendance is not merely service attendance.

In the present study we found women's close communion with God or the transcendent to be related to existential well-being. This finding could be related to women's general psychological health in that they more often experience anxiety and depression, and more often used emotion focused coping strategies compared to men (Rosenfield & Mouzon, 2013). Thus, experiencing a meaningful and close relationship with the transcendent may be one way of coping emotionally with adversities. In support of this being the case in a secular Norwegian context, a cross-sectional study on the general population found that both spiritually based coping and support from coreligionists were related to existential well-being for women and men studied together (Kvande, Klöckner, Moksnes, & Espnes, 2015).

By comparing our results to particularly that of other Norwegian and Danish findings, a commonality is that they all seem to support that religion is important for men in different ways. Among men there were higher levels of religious coping (Hvidtjørn et al., 2013), church attendance was associated with less depression (Sørensen, Danbolt, et al., 2012) and religiousness was related to more tangible and emotional support (Kvande et al., 2014). Moreover, among a Norwegian population sample of cancer patients, men more often sought God's help compared to women. However, seeking God's help was not associated with life

satisfaction or disease specific quality of life (Sørensen et al., 2012). The present study also supported a relationship between both positive and negative religious experiences and well-being for women, a finding not comparable to other studies. In general, comparability posits a great challenge in the present study, as very few studies internationally, and probably none nationally have examined the exact constructs of church attendance, religious experiences and existential well-being. More studies are clearly needed to examine the role of religion and the potentially beneficial effects in the lives of Norwegian women and men.

Strengths and limitations

The use of general population-based data is an important strength of our study as it may provide information on the prevalence and magnitude of religiousness and health in the Norwegian population. Nevertheless, in order to generalize from population data, the non-response rate needs to be as low as possible – thus decreasing the chances of non-response error. A response-rate of 22% in the present study may automatically present a threat to its generalizability for the rest of the population. However, as the representation of the population in the data material still seems to be reasonably accurate in terms of age, gender and level of education (see Kvande, Klöckner, et al., 2015), the data may still represent the population. An additional strength of the study is the use of scales compared to single-item measures which are likely to cover more aspects of the phenomenon. One limitation in the present study is the cross-sectional design, and consequently no causal inferences can be made from the associations. It is thus impossible to say whether women who experience high levels of existential well-being tend to have more positive religious experiences, or vice versa. A final limitation is related to the lack of significant differences in the global test when comparing the female to the male model. Furthermore, although the relationship between church attendance, religious experiences and existential well-being showed different patterns for women and men, the only significant difference between women and men was the

association between positive religious experiences and existential well-being. Consequently, our results should be interpreted with caution, and the value of this study is more of a descriptive nature that may guide further studies on gender differences. As we know that relationships between religiousness and health are more pronounced among highly religious populations (Diener, Tay, & Myers, 2011), it may be that a population study in a highly secular context will not reflect clear gender differences that would otherwise be found in specific congregations. Further studies and preferably prospective studies should be carried out in order to test for gender differences in religiousness and well-being across gender.

Conclusion

Researchers point to gender differences in the relationship between religiousness and mental health. Although the empirical findings are highly variable, men benefit more than women from church attendance when it reflects service attendance in addition to other activities. For women, the affective dimensions seem to have the most benefit, and the difference between women and men seems to be most influential in this domain. With reservations due to ambiguous results, the present findings are generally in line with such a pattern of difference across gender. Future prospective studies should examine these relationships among specific congregations and furthermore examine potential influential factors explaining gender differences, including both social and individual domains.

[Insert APPENDIX A, Table 1 near here].

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Table 1
Distribution characteristics [mean, SD, n (%)] among women and men in the present sample

	Women n = 295 (56%)	Men n = 233 (44%)	*P* value*
Mean age (SD)	49.8 (16.3)	52.4 (15.9)	.071
	n (%)	n (%)	
Educational level			.238
Primary/Secondary school	49 (17)	27 (12)	
High School	118 (41)	103 (45)	
College/University	123 (42)	100 (44)	
Religious Affiliation			.658
Church of Norway	233 (79)	180 (81)	
Evangelical Lutheran Free Church	2 (1)	2 (1)	
The Roman Catholic Church	4 (1)	5 (2)	
Pentecostal Church	5 (2)	5 (2)	
Islamic denomination	4 (1)	1 (-)	
Humanist Association	9 (3)	4 (2)	
Other	6 (2)	9 (4)	
Not member	28 (10)	17 (8)	
Long-standing health problems			.317
Yes	85 (31)	59 (27)	
No	191 (69)	162 (73)	

Note. Missing n = 0 – 19. *Comparisons were made using a 2- sided Independent samples t-test for the continuous variable (age), and Pearson's chi- squared test were used for categorical variables (education, church membership, long-standing health problems).

Table 2

Descriptives of the study variables [Mean (SD) and internal consistencies] among women and men

			Means (SD)[a]		Cronbach's alpha[a]		Latent mean difference[b]	*P* value*[b]
Measure	Scale	Item example	Women	Men	Women	Men		
Church Attendance	1-5	"If not prevented by unavoidable circumstances I attend church: …"	1.61 (.92)	1.61 (.98)	.87	.91	0.017	.864
Positive Religious Experience	1-7	"My relationship with God is characterized by close fellowship"	3.34 (1.69)	2.94 (1.74)	.95	.96	-0.372	.013
Negative Religious Experience	1-7	" I experience feelings of anger or recentment toward God"	1.99 (1.03)	1.91 (1.00)	.61	.61	-0.113	.238
Existential Well-Being	1-6	"I feel that life is a positive experience"	4.72 (.80)	4.73 (.73)	.86	.80	0.052	.324

Note. N (for means (SD)[a]) varies between 264-283 for women and 207-217 for men. [a] Calculated in SPSS based on aggregated observed variables.
[b]Calculated in MPLUS based on latent means in which women represent the baseline group, N=515.

Table 3
Correlation coefficients for the study variables for women and men

	Measure	1	2	3	4
1.	Church Attendance	-	.70***	.34***	.15
2.	Positive Religious Experience	.68***	-	.59***	-.07
3.	Negative Religious Experience	.22**	.39***	-	-.35***
4.	Existential Well-Being	.18*	.23***	-.26**	-

Note. Correlations below the diagonal is for women (n =266), above is for men (n = 207). *p<.05, **p<.01, ***p<.001.

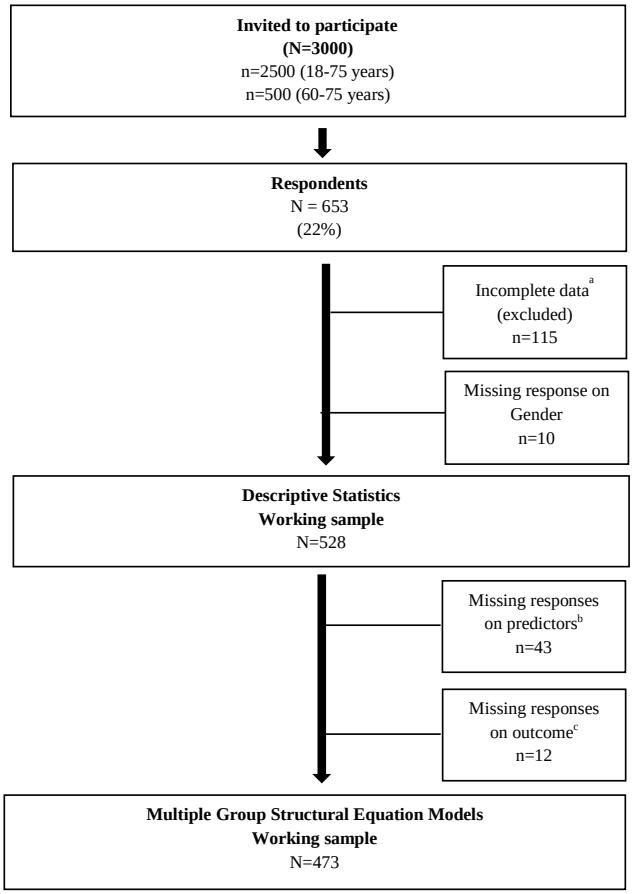
Table 4

Comparing the fit indicies and Bayesian Information Criterion (BIC) for the unconstrained and constrained multiple group SEM models

Model	χ^2	df	χ^2/df	RMSEA	CFI	TLI	BIC	ΔBIC
Unconstrained	1456.04	768	1.90	.062	.902	.898	30766.778	
Constrained[a]	1468.60	775	1.90	.062	.901	.898	30736.229	30.549

Note. N=473 χ^2=Chi Square, df=degrees of freedom, RMSEA=Root Mean Square Error of Approximation, CFI=Comparative Fit Index, TLI=Tucker-Lewis Index, BIC=Bayesian Information Criterion. [a]All regression weights (from church attendance, positive experience, and negative experience, to existential well-being) constrained to be equal for women and men.

Figure 1. *Flowchart of study sample*



Note. [a]Respondents with more than 66% responses of "not applicable" across 76 items on religiousness. [b]Includes respondents with missing response on all predictors of latent variable indicators (indicators of church attendance, positive religious experience, negative religious experience *and* respondents with missing responses on a observed predictor which is the control variables (education, age, long-standing illness).[c]

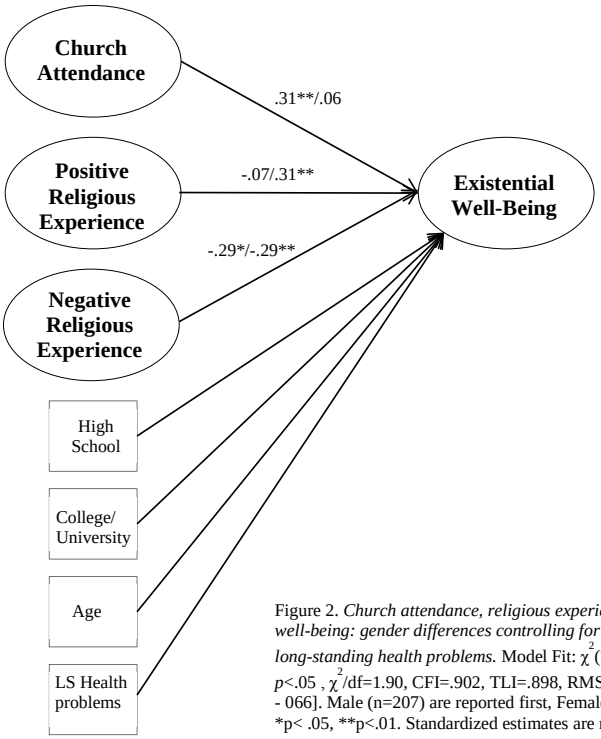


Figure 2. *Church attendance, religious experience and existential well-being: gender differences controlling for education, age and long-standing health problems.* Model Fit: $\chi^2(768)=1456.04$, $p<.05$, $\chi^2/df=1.90$, CFI=.902, TLI=.898, RMSEA=.062 [CI .057 - 066]. Male (n=207) are reported first, Female (n=266) second. *p< .05, **p<.01. Standardized estimates are reported..

APPENDIX A

Table 1
Confirmatory factor analysis of a one-factor and a two-factor solution of the Religious Experience Questionnaire

One-factor model (n=503)					Two-factor model (n=503)				
Item← Latent Variable	*b*	*SE*	β	*p*	Item← Latent Variable	*b*	*SE*	β	*p*
REQ1 ← REQ	1.000	-	.885	-	REQ1 ← REQ[a]	1.000	-	.890	-
REQ2 ← REQ	1.037	.041	.839	<.001	REQ2 ← REQ[a]	1.032	.041	.839	<.001
REQ3 ← REQ	.218	.037	.281	<.001	REQ3 ← REQ[b]	1.000	-	.634	-
REQ4 ← REQ	.972	.040	.830	<.001	REQ4 ← REQ[a]	.967	.039	.830	<.001
REQ5 ← REQ	.261	.032	.373	<.001	REQ5 ← REQ[b]	.895	.146	.630	<.001
REQ6 ← REQ	.878	.035	.837	<.001	REQ6 ← REQ[a]	.872	.035	.836	<.001
REQ7 ← REQ	.118	.043	.133	.007	REQ7 ← REQ[b]	.839	.122	.467	<.001
REQ8 ← REQ	1.094	.038	.899	<.001	REQ8 ← REQ[a]	1.094	.037	.904	<.001
REQ9 ← REQ	1.187	.036	.938	<.001	REQ9 ← REQ[a]	1.189	.035	.944	<.001
REQ10 ← REQ	1.133	.043	.880	<.001	REQ10 ← REQ[a]	1.093	.043	.857	<.001
REQ11 ← REQ	1.143	.042	.892	<.001	REQ11 ← REQ[a]	1.101	.042	.867	<.001
REQ12 ← REQ	.731	.053	.587	<.001	REQ12 ← REQ[a]	.729	.053	.588	<.001

Model fit	One-factor Model	Two- factor Model
χ^2	439.668	230.806
df	54	52
χ^2/df	8.14	4.44
RMSEA[CI]	.119[.109-.130]	083[.072-.094]
CFI	.911	.959
TLI	.892	.948
BIC	17518.679	17322.258
ΔBIC		196.421

Note. [a]Positive religious experience.[b]Negative religious experience.

Appendices

Questionnaire

Sample Reminder Letter

HELSE, ARBEIDSLIV OG LIVSSYN

SPØRREUNDERSØKELSE

Formålet med undersøkelsen

Formålet med denne spørreundersøkelsen er å studere sammenhengen mellom livssyn, sykdom og helse. Har livssyn eller religiøs tro noen betydning for om man holder seg frisk, og om man blir raskt bra hvis man er syk? Har religiøsitet og livssyn noen betydning for hvor raskt man kommer tilbake til arbeidslivet når man har vært syk? Dette er noen av spørsmålene vi vil prøve å finne svar på. 3000 personer er trukket tilfeldig til å delta i undersøkelsen, som gjennomføres ved Institutt for sosialt arbeid og helsevitenskap, Norges teknisk-naturvitenskapelige universitet NTNU.

Frivillighet og konfidensialitet

Det er frivillig å delta. Fram til data blir anonymisert kan du når som helst og uten å oppgi noen grunn trekke deg fra undersøkelsen og få svarene dine slettet. Data blir anonymisert senest ved prosjektslutt i 2014 ved at all informasjon som kan identifisere enkeltpersoner slettes fra datamaterialet. Er det noen spørsmål du synes er ubehagelige, eller som du ikke kan eller vil svare på, kan du hoppe over dem. Alle opplysninger vil bli behandlet konfidensielt, og forskerne som får tilgang til data har taushetsplikt. Resultatene vil bli presentert slik at ingen enkeltpersoner kan gjenkjennes. Prosjektet er tilrådd av personvernombudet for forskning, Norsk samfunnsvitenskapelig datatjeneste (NSD) AS og av Regional komité for medisinsk og helsefaglig forskningsetikk (REK Midt-Norge).

Svarfrist

Vennligst returner skjemaet så snart som mulig, og senest 14 dager etter at du mottok det.

Premietrekning!

Når du har svart på spørsmålene, returnerer du skjemaet i vedlagte svarkonvolutt. Alle som sender inn spørreskjemaet i utfylt stand er med i trekningen av et gavekort på kr 5000.

Kontaktinformasjon

Har du spørsmål kontakter du Marianne Nilsen Kvande, e-post marianne.n.kvande@svt.ntnu.no eller tlf. 73 59 02 34.

Takk for at du er villig til å delta!

Marianne Nilsen Kvande
stipendat
Inst. for sosialt arbeid
og helsevitenskap

Torbjørn Rundmo
professor
Psykologisk institutt

Geir Arild Espnes
professor
Inst. for sosialt arbeid
og helsevitenskap

NTNU
Det skapende universitet

LES DETTE FØR DU STARTER!	Skjemaet skal leses maskinelt. Følg derfor disse reglene: • *Bruk svart/blå kulepenn. Skriv tydelig, og ikke utenfor feltene.* ***Kryss av slik:*** ☒. • *Feilkryssinger kan annulleres ved å fylle hele feltet med farge. Kryss så i rett felt.* • *Sett bare ett kryss på hvert spørsmål om ikke annet er oppgitt.*

A. DIN HELSE

1. Hvordan er helsa di nå? ⇨

Dårlig 1	*Ikke helt god* 2	*God* 3	*Svært god* 4
☐	☐	☐	☐

2. Har du noen langvarig (minst ett år) sykdom, skade eller lidelse av fysisk eller psykisk art som nedsetter dine funksjoner i ditt daglige liv? ⇨

Ja 1	*Nei* 2
☐	☐

3. Hvis ja: Hvor mye vil du si at dine funksjoner er nedsatt? ⇨

	Ikke nedsatt 1	*Litt nedsatt* 2	*Middels nedsatt* 3	*Svært nedsatt* 4
1. Er du bevegelseshemmet?	☐	☐	☐	☐
2. Har du nedsatt syn?	☐	☐	☐	☐
3. Har du nedsatt hørsel?	☐	☐	☐	☐
4. Er du hemmet p.g.a. fysisk sykdom/skade?	☐	☐	☐	☐
5. Er du hemmet p.g.a. psykisk sykdom/skade?	☐	☐	☐	☐

4. Har du vært innlagt i sykehus i løpet av de siste 12 månedene? ⇨

Ja 1	*Nei* 2
☐	☐

5. Har du, eller har du noen gang hatt, noen av disse sykdommene/plagene? Hvis ja, vennligst oppgi hvor gammel du var <u>første gang</u> du hadde sykdommen/plagen.

	Har du hatt dette? *Nei* 1	*Ja* 2	Alder første gang: ⇩
1. Hjerteinfarkt ⇨	☐	☐	
2. Angina pectoris (hjertekrampe)	☐	☐	
3. Hjertesvikt ⇨	☐	☐	
4. Annen hjertesykdom ⇨	☐	☐	
5. Hjerneslag/hjerneblødning	☐	☐	
6. Nyresykdom ⇨	☐	☐	
7. Astma ⇨	☐	☐	
8. Kronisk bronkitt/emfysem/KOLS	☐	☐	
9. Diabetes (sukkersyke) ⇨	☐	☐	
10. Psoriasis ⇨	☐	☐	
11. Eksem på hendene ⇨	☐	☐	
12. Kreftsykdom ⇨	☐	☐	
13. Epilepsi ⇨	☐	☐	
14. Leddgikt ⇨	☐	☐	
15. Bechterews sykdom ⇨	☐	☐	
16. Sarkoidose ⇨	☐	☐	
17. Beinskjørhet (osteoporose) ⇨	☐	☐	
18. Fibromyalgi ⇨	☐	☐	
19. Slitasjegikt (artrose) ⇨	☐	☐	
20. Psykiske plager som du har søkt hjelp for ⇨	☐	☐	

Før du fortsetter: Kontroller at du ikke har glemt noe på denne sida.

Husk: Bare ett kryss på hvert spørsmål!

6. Har du hatt andre alvorlige sykdommer/plager enn de som ble nevnt på forrige side? Hvis ja, vennligst oppgi sykdommens/plagens art og din alder <u>første gang</u> du hadde sykdommen/plagen.

Sykdommens/plagens art: STORE BOKSTAVER, *ett tegn pr. felt*. Alder første gang: ⇩

1. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐ ☐☐
2. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐ ☐☐

7. Livet og helsa generelt: Tenk på livet ditt <u>de to siste ukene</u>.

	Svært dårlig 1	*Dårlig* 2	*Verken /eller* 3	*God* 4	*Svært god* 5
1. Hvordan vil du vurdere kvaliteten på livet ditt?	☐	☐	☐	☐	☐

	Svært u-tilfreds 1	*Util-freds* 2	*Verken /eller* 3	*Til-freds* 4	*Svært tilfreds* 5
2. Hvor tilfreds er du med helsen din?	☐	☐	☐	☐	☐

Tenk på <u>de to siste ukene</u>, og hvordan du i det store og hele opplever din livskvalitet, helse og andre sider ved livet ditt.

	Ikke i det hele tatt 1	*Litt* 2	*Til en viss grad* 3	*I høy grad* 4	*I svært høy grad* 5
3. I hvilken grad føler du at smerte hindrer deg i å gjøre det du må?	☐	☐	☐	☐	☐
4. I hvilken grad trenger du medisinsk behandling for å kunne fungere til daglig?	☐	☐	☐	☐	☐
5. Hvor mye gleder du deg over livet?	☐	☐	☐	☐	☐
6. I hvilken grad føler du at livet ditt er meningsfullt?	☐	☐	☐	☐	☐
7. Hvor godt klarer du å konsentrere deg?	☐	☐	☐	☐	☐
8. Hvor trygg føler du deg til daglig?	☐	☐	☐	☐	☐
9. Hvor sunne er dine fysiske omgivelser?	☐	☐	☐	☐	☐

	Ikke i det hele tatt 1	*Litt* 2	*Til en viss grad* 3	*I høy grad* 4	*Full-stendig* 5
10. Har du nok energi til dine daglige gjøremål?	☐	☐	☐	☐	☐
11. Kan du akseptere utseendet ditt?	☐	☐	☐	☐	☐
12. Har du nok penger til å dekke dine behov?	☐	☐	☐	☐	☐
13. Hvor tilgjengelig er den informasjonen som du trenger i dagliglivet?	☐	☐	☐	☐	☐
14. I hvilken grad har du mulighet til å delta i fritidsaktiviteter?	☐	☐	☐	☐	☐

	Svært dårlig 1	*Dårlig* 2	*Verken /eller* 3	*Godt* 4	*Svært godt* 5
15. Hvor godt er du i stand til å komme deg dit du vil?	☐	☐	☐	☐	☐

	Svært u-tilfreds 1	*Util-freds* 2	*Verken /eller* 3	*Til-freds* 4	*Svært tilfreds* 5
16. Hvor tilfreds er du med hvordan du sover?	☐	☐	☐	☐	☐
17. Hvor tilfreds er du med din evne til å utføre dine daglige gjøremål?	☐	☐	☐	☐	☐
18. Hvor tilfreds er du med din arbeidskapasitet?	☐	☐	☐	☐	☐
19. Hvor tilfreds er du med deg selv?	☐	☐	☐	☐	☐
20. Hvor tilfreds er du med ditt forhold til andre mennesker?	☐	☐	☐	☐	☐

Før du fortsetter: Kontroller at du ikke har glemt noe på denne sida.

Husk: Bare ett kryss på hvert spørsmål!

	Svært u-tilfreds 1	*Util-freds* 2	*Verken /eller* 3	*Til-freds* 4	*Svært tilfreds* 5
21. Hvor tilfreds er du med ditt seksualliv?	☐	☐	☐	☐	☐
22. Hvor tilfreds er du med den støtten du får fra dine venner?	☐	☐	☐	☐	☐
23. Hvor tilfreds er du med forholdene der du bor?	☐	☐	☐	☐	☐
24. Hvor tilfreds er du med din tilgang til helsetjenester?	☐	☐	☐	☐	☐
25. Hvor tilfreds er du med transportmulighetene dine?	☐	☐	☐	☐	☐

	Aldri 1	*Sjeldent* 2	*Ofte* 3	*Svært ofte* 4	*Alltid* 5
26. Hvor ofte opplever du negative følelser, som f.eks. at du er trist, fortvilet, engstelig eller deprimert?	☐	☐	☐	☐	☐

B. DIN LIVSSTIL

1. Røyker du? ⇨ Ja ☐1 ⇨ / Har sluttet ☐2 / Nei ☐3

2. Hvis ja, hvor mange sigaretter røyker du vanligvis i løpet av én dag? ⇨ ☐

3. Hvis du røykte tidligere, men har sluttet: Når sluttet du sist? ⇨
   For mindre enn 2 år siden ☐1 / For mellom 2 og 5 år siden ☐2 / For mellom 6 og 10 år siden ☐3 / For mer enn 10 år siden ☐4

4. Hvor ofte spiser du vanligvis disse matvarene? ⇨

	0 - 3 ganger pr. mnd. 1	*1 - 3 ganger pr. uke* 2	*4 - 6 ganger pr. uke* 3	*En gang pr. dag* 4	*Flere ganger daglig* 5
1. Frukt eller bær	☐	☐	☐	☐	☐
2. Grønnsaker	☐	☐	☐	☐	☐
3. Sjokolade, smågodt	☐	☐	☐	☐	☐
4. Kokte poteter	☐	☐	☐	☐	☐
5. Pasta eller ris	☐	☐	☐	☐	☐
6. Pølse eller hamburger	☐	☐	☐	☐	☐
7. Fet fisk (laks, ørret, sild, makrell, uer som pålegg eller middag)	☐	☐	☐	☐	☐

5. Er du avholdsmann/kvinne? ⇨ Nei ☐1 Ja ☐2

6. I løpet av de siste 12 månedene, hvor ofte har du drukket alkohol (unntatt lettøl)?
   4 – 7 ganger pr. uke ☐1 / 2 - 3 ganger pr. uke ☐2 / Ca. en gang pr. uke ☐3 / 2 – 3 ganger pr. mnd. ☐4 / Ca en gang pr. mnd. ☐5 / Noen få ganger pr. år ☐6 / Ingen ganger siste år ☐7 / Har aldri drukket alkohol ☐8

7. Hvor ofte mosjonerer du (f.eks. går på tur, går/sykler til jobb, går på ski, svømmer eller driver annen idrett)?
   Aldri ☐1 / Sjeldnere enn en gang i uka ☐2 / En gang i uka ☐3 / 2 – 3 ganger i uka ☐4 / Omtrent hver dag ☐5

8. Her kommer noen spørsmål om hvordan du føler deg. For hvert spørsmål krysser du av for det svaret som best beskriver hvordan du har følt deg den siste uka. Tenk ikke for lenge på hvert spørsmål - den første innskytelsen er oftest det beste svaret.

   1. Jeg føler meg nervøs og urolig
      Mesteparten av tiden ☐1 / Mye av tiden ☐2 / Fra tid til annen ☐3 / Ikke i det hele tatt ☐4

KS-2009-14-7

Før du fortsetter: Kontroller at du ikke har glemt noe på denne sida.

Husk: Bare ett kryss på hvert spørsmål!

2.	Jeg gleder meg fortsatt over tingene slik jeg pleide før	Avgjort like mye ☐ 1 Ikke fullt så mye ☐ 2		Bare lite grann ☐ 3 Ikke i det hele tatt ☐ 4
3.	Jeg har en uroføelse som om noe forferdelig vil skje	Ja, og noe svært ille ☐ 1 Ja, ikke så veldig ille ☐ 2		Litt, bekymrer meg lite ☐ 3 Ikke i det hele tatt ☐ 4
4.	Jeg kan le og se det morsomme i situasjoner	Like mye nå som før ☐ 1 Ikke like mye nå som før ☐ 2		Avgjort ikke som før ☐ 3 Ikke i det hele tatt ☐ 4
5.	Jeg har hodet fullt av bekymringer	Veldig ofte ☐ 1 Ganske ofte ☐ 2		Av og til ☐ 3 En gang i blant ☐ 4
6.	Jeg er i godt humør	Aldri ☐ 1 Noen ganger ☐ 2		Ganske ofte ☐ 3 For det meste ☐ 4
7.	Jeg kan sitte i fred og ro og kjenne meg avslappet	Ja, helt klart ☐ 1 Vanligvis ☐ 2		Ikke så ofte ☐ 3 Ikke i det hele tatt ☐ 4
8.	Jeg føler meg som om alt går langsommere	Nesten hele tiden ☐ 1 Svært ofte ☐ 2		Fra tid til annen ☐ 3 Ikke i det hele tatt ☐ 4
9.	Jeg føler meg urolig som om jeg har sommerfugler i magen	Ikke i det hele tatt ☐ 1 Fra tid til annen ☐ 2		Ganske ofte ☐ 3 Svært ofte ☐ 4
10.	Jeg bryr meg ikke lenger om hvordan jeg ser ut	Ja, jeg har sluttet å bry meg ☐ 1 Ikke som jeg burde ☐ 2		Kan hende ikke nok ☐ 3 Bryr meg som før ☐ 4
11.	Jeg er rastløs som om jeg stadig må være aktiv	Uten tvil svært mye ☐ 1 Ganske mye ☐ 2		Ikke så veldig mye ☐ 3 Ikke i det hele tatt ☐ 4
12.	Jeg ser med glede frem til hendelser og ting	Like mye som før ☐ 1 Heller mindre enn før ☐ 2		Avgjort mindre enn før ☐ 3 Nesten ikke i det hele tatt ☐ 4
13.	Jeg kan plutselig få en følelse av panikk	Uten tvil svært ofte ☐ 1 Ganske ofte ☐ 2		Ikke så veldig ofte ☐ 3 Ikke i det hele tatt ☐ 4
14.	Jeg kan glede meg over gode bøker, radio og TV	Ofte ☐ 1 Fra tid til annen ☐ 2		Ikke så ofte ☐ 3 Svært sjelden ☐ 4

	Meget sterk og opplagt 1	*Sterk og opplagt* 2	*Ganske sterk og opplagt* 3	*Både /og* 4	*Ganske trøtt og sliten* 5	*Trøtt og sliten* 6	*Meget trøtt og sliten* 7
9. Hvordan føler du deg nå? ⇨	☐	☐	☐	☐	☐	☐	☐

10. Stress

I løpet av den siste måneden, hvor ofte …

	Aldri 1	*Sjelden* 2	*Av og til* 3	*Ofte* 4	*Veldig ofte* 5
1. … har du vært oppskaket på grunn av uventede hendelser?	☐	☐	☐	☐	☐
2. … har du følt manglende kontroll over viktige ting i livet ditt?	☐	☐	☐	☐	☐
3. … har du følt deg nervøs eller stresset?	☐	☐	☐	☐	☐
4. … har du følt deg sikker på at du kan håndtere dine personlige problemer?	☐	☐	☐	☐	☐
5. … har du følt at ting har ordnet seg slik du ønsker?	☐	☐	☐	☐	☐
6. … har du opplevd at du ikke håndterer alt du skulle ha gjort?	☐	☐	☐	☐	☐

Før du fortsetter: Kontroller at du ikke har glemt noe på denne sida.

Husk: Bare ett kryss på hvert spørsmål!

I løpet av den siste måneden, hvor ofte …

	Aldri 1	*Sjelden* 2	*Av og til* 3	*Ofte* 4	*Veldig ofte* 5
7. … har du vært i stand til å takle irritasjoner?	☐	☐	☐	☐	☐
8. … har du følt at du hadde kontroll med alle dine gjøremål?	☐	☐	☐	☐	☐
9. … har du blitt sint for ting som var utenfor din kontroll?	☐	☐	☐	☐	☐
10. … har du følt at dine problemer har vært så store at du ikke hadde mulighet til å løse dem?	☐	☐	☐	☐	☐

11. Støtte fra venner og familie: Hvor mange nære venner og nære familiemedlemmer har du (mennesker du føler deg komfortable med, og kan snakke fritt om det som opptar deg)? *Oppgi antall i feltet til høyre.* ⇨ ☐

12. Av og til ønsker man samhold, hjelp og støtte fra mennesker rundt seg. Hvor ofte er slik støtte tilgjengelig for deg om du har behov for det?

	Aldri 1	*Sjelden* 2	*Av og til* 3	*Ofte* 4	*Veldig ofte* 5
1. Noen til å hjelpe deg hvis du måtte være til sengs?	☐	☐	☐	☐	☐
2. Noen du vet vil lytte til deg om du hadde behov for å snakke?	☐	☐	☐	☐	☐
3. Noen som kan gi deg gode råd hvis du hadde en krise?	☐	☐	☐	☐	☐
4. Noen som kunne ta deg med til legen hvis du hadde behov for det?	☐	☐	☐	☐	☐
5. Noen som gir deg oppmerksomhet og kjærlighet?	☐	☐	☐	☐	☐
6. Noen å ha det trivelig sammen med?	☐	☐	☐	☐	☐
7. Noen som kan gi deg informasjon slik at du kan forstå ting på en bedre måte?	☐	☐	☐	☐	☐
8. Noen å betro seg til, hvor du kan snakke om deg selv eller dine problemer?	☐	☐	☐	☐	☐
9. Noen som gir deg en klem?	☐	☐	☐	☐	☐
10. Noen å slappe av sammen med?	☐	☐	☐	☐	☐
11. Noen som kan lage mat for deg hvis du ikke var i stand til å gjøre dette selv?	☐	☐	☐	☐	☐
12. Noen som gir deg råd som har stor betydning for deg?	☐	☐	☐	☐	☐
13. Noen du kan gjøre ting sammen med slik at du glemmer andre ting?	☐	☐	☐	☐	☐
14. Noen som hjelper deg med daglige gjøremål om du er syk?	☐	☐	☐	☐	☐
15. Noen å dele dine private bekymringer og engstelser med?	☐	☐	☐	☐	☐
16. Noen som kan råde deg når du har et personlig problem?	☐	☐	☐	☐	☐
17. Noen å gjøre hyggelige ting sammen med?	☐	☐	☐	☐	☐
18. Noen som forstår dine problemer?	☐	☐	☐	☐	☐
19. Noen du er glad i, og som får deg til å føle deg verdsatt?	☐	☐	☐	☐	☐

13. Syn på livet:

	Helt uenig 1	*Uenig* 2	*Verken /eller* 3	*Enig* 4	*Helt enig* 5
1. Når ting er usikkert, forventer jeg som regel et positivt utfall	☐	☐	☐	☐	☐
2. Det er naturlig for meg å slappe av	☐	☐	☐	☐	☐
3. Hvis noe kan gå galt, gjør det som regel det	☐	☐	☐	☐	☐
4. Jeg er alltid optimistisk til framtiden	☐	☐	☐	☐	☐
5. Jeg trives godt med mine venner	☐	☐	☐	☐	☐
6. Det er viktig for meg å ha noe å gjøre	☐	☐	☐	☐	☐
7. Jeg forventer nesten aldri et positivt utfall	☐	☐	☐	☐	☐
8. Det skal mye til for at jeg blir oppskaket	☐	☐	☐	☐	☐
9. Jeg regner sjelden med at positive ting skjer med meg	☐	☐	☐	☐	☐
10. Alt i alt forventer jeg flere positive enn negative hendelser i livet mitt	☐	☐	☐	☐	☐

Før du fortsetter: Kontroller at du ikke har glemt noe på denne sida.

Husk: Bare ett kryss på hvert spørsmål!

C. DITT LIVSSYN: HVA TRORDU PÅ?

1. Hvilket livssyn vil du si ligger nærmest opp til ditt eget? ⇨

Kristent livssyn ..... ☐ 1 Ateistisk livssyn ..... ☐ 3
Human-etisk livssyn .... ☐ 2 Annet livssyn (forklar⇩) ... ☐ 4

Annet livssyn: STORE BOKSTAVER, *ett tegn pr. felt*.

2. Uavhengig av eventuelt medlemsskap i trossamfunn og religiøse aktiviteter, vil du si at du er … ⇨

… en religiøs person? ..... ☐ 1 … overbevist ateist? ☐ 3
… en ikke-religiøs person?.. ☐ 2 Vet ikke ..... ☐ 4

3. Er ditt livssyn berikende for ditt liv? ⇨

Ikke i det hele tatt ..... ☐ 1 Mye ..... ☐ 3
Noe ..... ☐ 2 Svært mye..... ☐ 4

4. Hvor enig eller uenig er du i disse utsagnene?

	Svært enig 1	*Enig* 2	*Verken /eller* 3	*Uenig* 4	*Svært uenig* 5	*Ikke aktuelt* 6
1. Det spiller ingen rolle om man er kristen eller ikke, så lenge man bryr seg om andre	☐	☐	☐	☐	☐	☐
2. Jeg tror at Bibelen er Guds ord	☐	☐	☐	☐	☐	☐
3. Gud skapte mennesket atskilt fra dyrene og forskjellig fra dem	☐	☐	☐	☐	☐	☐
4. Ideen om Gud er unødvendig i vår opplyste tid	☐	☐	☐	☐	☐	☐
5. Det finnes ikke noe liv etter døden	☐	☐	☐	☐	☐	☐
6. Jeg tror at Jesus ble født av en jomfru	☐	☐	☐	☐	☐	☐
7. Gud eksisterer som Faderen, Sønnen og Den hellige ånd	☐	☐	☐	☐	☐	☐
8. Bibelen er full av feil, misforståelser og motsigelser	☐	☐	☐	☐	☐	☐
9. Den eneste måten mennesket kan bli frelst på er å ta imot budskapet om Jesus Kristus	☐	☐	☐	☐	☐	☐
10. Jeg tror det har vært flere mennesker i vår historie som har hatt like stor betydning som Jesus	☐	☐	☐	☐	☐	☐
11. Jeg tror det finnes en himmel og et helvete	☐	☐	☐	☐	☐	☐
12. Evig liv er en gave fra Gud til kun de som tror at Jesus Kristus er frelseren.	☐	☐	☐	☐	☐	☐
13. Jeg tror en person kan være lykkelig og tilfreds i livet uten å tro på Gud	☐	☐	☐	☐	☐	☐
14. Bibelen har på mange måter hindret menneskelig fremgang	☐	☐	☐	☐	☐	☐
15. Jeg tror at Jesus på en synlig og personlig måte vil returnere til jorden	☐	☐	☐	☐	☐	☐

5. Om ditt forhold til <u>din</u> egendefinerte Gud eller guddom:
Erstatt gjerne «Gud» med hva som passer for deg.

	Aldri 1	*Nesten aldri* 2	*Sjelden* 3	*Av og til* 4	*Ofte* 5	*Nesten alltid* 6	*Alltid* 7	*Ikke aktuelt* 8
1. Jeg opplever nærværet av Guds kjærlighet	☐	☐	☐	☐	☐	☐	☐	☐
2. Jeg ber også på andre steder enn i kirken	☐	☐	☐	☐	☐	☐	☐	☐
3. Jeg føler meg noen ganger krenket av eller sint på Gud	☐	☐	☐	☐	☐	☐	☐	☐
4. Jeg ber Gud om tilgivelse for mine synder	☐	☐	☐	☐	☐	☐	☐	☐
5. Jeg er redd for at Gud vil straffe meg på en eller annen måte	☐	☐	☐	☐	☐	☐	☐	☐
6. Når jeg skal ta avgjørelser forsøker jeg å tenke på hva Gud vil jeg skal gjøre	☐	☐	☐	☐	☐	☐	☐	☐
7. Jeg har en følelse av at Gud er så stor og allmektig at han ikke har tid til mine personlige problemer	☐	☐	☐	☐	☐	☐	☐	☐
8. Jeg føler meg nær Gud når jeg ber, er i kirken, og i viktige hendelser i livet mitt	☐	☐	☐	☐	☐	☐	☐	☐
9. Jeg opplever at Gud er til stede i mitt daglige liv	☐	☐	☐	☐	☐	☐	☐	☐

Før du fortsetter: Kontroller at du ikke har glemt noe på denne sida.

Husk: Bare ett kryss på hvert spørsmål!

	Aldri 1	*Nesten aldri* 2	*Sjelden* 3	*Av og til* 4	*Ofte* 5	*Nesten alltid* 6	*Alltid* 7	*Ikke aktuelt* 8
10. Når jeg ber til Gud, føles det som om jeg har en samtale med en nær venn	☐	☐	☐	☐	☐	☐	☐	☐
11. Mitt forhold til Gud er karakterisert av nære bånd	☐	☐	☐	☐	☐	☐	☐	☐
12. Jeg tviler på at Gud virkelig eksisterer	☐	☐	☐	☐	☐	☐	☐	☐
13. Når det skjer vonde ting i livet mitt, tenker jeg: «Det er en mening med det!»	☐	☐	☐	☐	☐	☐	☐	☐
14. Jeg søker hjelp hos Gud når jeg trenger styrke og trøst	☐	☐	☐	☐	☐	☐	☐	☐

6. Tro og forandring

1. Har det hendt i en bestemt fase eller overgang i livet ditt at din tro har blitt betydelig sterkere? Nei ☐1 Ja ☐2
2. Hvor gammel var du da dette skjedde? *Skriv antall år.* ⇨ ☐☐
3. Hvis ja: Hvilken fase i livet tenker du på? STORE BOKSTAVER, *ett tegn pr. felt*.

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

4. Hvis ja: Hva mener du er den viktigste årsaken til at troen ble styrket? STORE BOKSTAVER, *ett tegn pr. felt*.

Er det for lite plass her, kan du skrive mer i kommentarfeltet på siste side.

5. Har det hendt i en bestemt fase eller overgang i livet ditt at din tro har blitt betydelig svekket? Nei ☐1 Ja ☐2
6. Hvor gammel var du da dette skjedde? *Skriv antall år.* ⇨ ☐☐
7. Hvis ja: Hvilken fase i livet tenker du på? STORE BOKSTAVER, *ett tegn pr. felt*.

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

8. Hvis ja: Hva mener du er den viktigste årsaken til at troen ble svekket? *Vanlig håndskrift. Skriv tydelig!*

Er det for lite plass her, kan du skrive mer i kommentarfeltet på siste side.

9. Har det hendt i en bestemt fase eller overgang i livet ditt at du endret troen/livssynet ditt på en fundamental måte, som f.eks. at du gikk over fra ett livssyn til et annet? Nei ☐1 Ja ☐2
10. Hvor gammel var du da dette skjedde? *Skriv antall år.* ⇨ ☐☐
11. Hvis ja: Hvilken fase i livet tenker du på? STORE BOKSTAVER, *ett tegn pr. felt*.

☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

12. Hvis ja: Hva mener du er den viktigste årsaken til at du endret livssynet? *Vanlig håndskrift. Skriv tydelig!*

Er det for lite plass her, kan du skrive mer i kommentarfeltet på siste side.

Før du fortsetter: Kontroller at du ikke har glemt noe på denne sida.

Husk: Bare ett kryss på hvert spørsmål!

7. Tenk på en vanskelig hendelse eller situasjon i livet ditt. I hvilken grad stemmer disse utsagnene med din opplevelse?

	Ikke i det hele tatt 1	*Noe* 2	*Mye* 3	*Veldig mye* 4	*Ikke aktuelt* 5
1. Jeg opplevde en sterk tro på at Gud ikke ville la noe forferdelig skje med meg	☐	☐	☐	☐	☐
2. Jeg opplevde Guds kjærlighet og omsorg	☐	☐	☐	☐	☐
3. Gud forsøkte å styrke meg	☐	☐	☐	☐	☐
4. Da jeg hadde problemer ble jeg veiledet av Gud	☐	☐	☐	☐	☐
5. Jeg ble klar over at jeg ikke behøvde å lide, siden Jesus led for meg	☐	☐	☐	☐	☐
6. Jeg brukte Jesus som et eksempel på hvordan jeg skal leve	☐	☐	☐	☐	☐
7. Tok kontroll over hva jeg kunne, og lot resten være opp til Gud	☐	☐	☐	☐	☐
8. Min tro viste meg ulike måter å mestre vanskelige hendelser på	☐	☐	☐	☐	☐
9. Jeg aksepterte at situasjonen var i Guds hender, og ikke mine	☐	☐	☐	☐	☐
10. Jeg fant ut at hendelsen var en lekse Gud ville lære meg	☐	☐	☐	☐	☐
11. Gud viste meg hvordan jeg skulle hanskes med situasjonen	☐	☐	☐	☐	☐
12. Jeg brukte troen min for å få hjelp til å forstå hvordan jeg skulle mestre situasjonen	☐	☐	☐	☐	☐
13. Jeg prøvde å være minst mulig syndig	☐	☐	☐	☐	☐
14. Jeg skriftet mine synder	☐	☐	☐	☐	☐
15. Jeg levde et liv med kjærlighet	☐	☐	☐	☐	☐
16. Jeg deltok på religiøse samlinger eller i religiøse ritualer	☐	☐	☐	☐	☐
17. Jeg deltok i kirkegrupper (støttegrupper, bønnegrupper, bibelstudier)	☐	☐	☐	☐	☐
18. Jeg ga hjelp til andre kirkemedlemmer	☐	☐	☐	☐	☐
19. Jeg følte sinne og avstand til Gud	☐	☐	☐	☐	☐
20. Jeg følte sinne og avstand til medlemmer i kirken	☐	☐	☐	☐	☐
21. Jeg stilte spørsmålstegn ved min religiøse tro	☐	☐	☐	☐	☐
22. Jeg mottok støtte fra presten	☐	☐	☐	☐	☐
23. Jeg mottok støtte fra andre kirkemedlemmer	☐	☐	☐	☐	☐
24. Jeg ba Gud om mirakler	☐	☐	☐	☐	☐
25. Jeg ba Gud om å endre min situasjon	☐	☐	☐	☐	☐
26. Jeg spurte Gud hvorfor dette skjedde	☐	☐	☐	☐	☐
27. Jeg fokuserte på livet etter dette istedenfor denne verdens problemer	☐	☐	☐	☐	☐
28. Jeg lot Gud ta hånd om min situasjon	☐	☐	☐	☐	☐
29. Jeg leste Bibelen og ba for å holde fokus borte fra mine problemer	☐	☐	☐	☐	☐

8. Religiøse aktiviteter (*unntatt dåp, bryllup og gravferd*):

	Er fast deltager 1	*Deltar som regel* 2	*Deltar av og til* 3	*Deltar sjeldent* 4	*Deltar aldri* 5	*Ikke aktuelt* 6
1. Hvor ofte har du tatt del i nattverd i løpet av det siste året?	☐	☐	☐	☐	☐	☐
2. Hvordan vil du rangere din deltagelse i kirkelige aktiviteter?	☐	☐	☐	☐	☐	☐
3. Hvor ofte tilbringer du kveldene med kirkelig arbeid og/eller møter?	☐	☐	☐	☐	☐	☐

	Ingen 1	*En* 2	*To* 3	*Tre* 4	*Fire* 5	*Ikke aktuelt* 6
4. I løpet av det siste året, hvor mange søndager pr. måned har du vært til gudstjeneste i gjennomsnitt?	☐	☐	☐	☐	☐	☐

	Flere ganger i uka 1	*Ukentlig* 2	*Måned-lig* 3	*Sjeldnere* 4	*Aldri* 5	*Ikke aktuelt* 6
5. Hvis jeg ikke blir forhindret, går jeg i kirka …	☐	☐	☐	☐	☐	☐

Før du fortsetter: Kontroller at du ikke har glemt noe på denne sida.

Husk: Bare ett kryss på hvert spørsmål!

	Veldig enig 1	Enig 2	Uenig 3	Veldig uenig 4	Ikke aktuelt 5
6. Jeg trives med mitt kirkelige arbeid	☐	☐	☐	☐	☐
7. Kirkelige aktiviteter danner et stort grunnlag for tilfredsstillelse i livet mitt	☐	☐	☐	☐	☐
8. Jeg er oppdatert på hva som skjer i menigheten min, og jeg er aktivt med når man skal ta avgjørelser i ulike saker	☐	☐	☐	☐	☐

9. Nevn de kirkelige aktivitetene der du har vært aktivt med i løpet av de siste 12 månedene (*unntatt dåp, bryllup og gravferd*): STORE BOKSTAVER*, ett tegn pr. felt*.

1. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
2. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
3. ☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐

9. Hvor enig eller uenig er du i disse påstandene?
Erstatt gjerne «Gud» med hva som passer for deg.

	Svært enig 1	Enig 2	Litt enig 3	Litt uenig 4	Uenig 5	Svært uenig 6	Ikke aktuelt 7
1. Det er lite tilfredsstillende å be til Gud	☐	☐	☐	☐	☐	☐	☐
2. Jeg er usikker på hvem jeg er, hvordan jeg ble til, og hva som vil skje med meg	☐	☐	☐	☐	☐	☐	
3. Jeg tror at Gud bryr seg om meg	☐	☐	☐	☐	☐	☐	☐
4. Livet er en positiv opplevelse for meg	☐	☐	☐	☐	☐	☐	
5. Jeg tror at Gud er upersonlig, og mindre interessert i mine daglige beskjeftigelser	☐	☐	☐	☐	☐	☐	☐
6. Min framtid er usikker	☐	☐	☐	☐	☐	☐	
7. Jeg har et personlig og meningsfullt forhold til Gud	☐	☐	☐	☐	☐	☐	☐
8. Mitt liv er meget tilfredsstillende	☐	☐	☐	☐	☐	☐	
9. Jeg finner lite støtte og styrke hos Gud	☐	☐	☐	☐	☐	☐	☐
10. Livet mitt utvikles i en positiv retning	☐	☐	☐	☐	☐	☐	
11. Jeg tror at Gud har omsorg for meg og de problemer jeg har	☐	☐	☐	☐	☐	☐	☐
12. Det er få ting i livet som jeg virkelig nyter	☐	☐	☐	☐	☐	☐	
13. Mitt forhold til Gud er verken tilfredsstillende eller personlig	☐	☐	☐	☐	☐	☐	☐
14. Jeg har positive tanker om fremtiden	☐	☐	☐	☐	☐	☐	
15. Mitt forhold til Gud er en stor hjelp mot ensomhet	☐	☐	☐	☐	☐	☐	☐
16. Jeg føler at livet byr på mange konflikter og negativitet	☐	☐	☐	☐	☐	☐	
17. Jeg føler stor tilfredsstillelse i mitt fellesskap med Gud	☐	☐	☐	☐	☐	☐	☐
18. Livet har ingen mening	☐	☐	☐	☐	☐	☐	
19. Mitt forhold til Gud gir meg en følelse av velvære	☐	☐	☐	☐	☐	☐	☐
20. Jeg tror det finnes en mening med livet	☐	☐	☐	☐	☐	☐	

D. DITT ARBEID

1. Er du i arbeid? ⇨ Ja ...... ☐ 1 Nei ..... ☐ 2

2. Hvis ja, hvor stor stillingsandel har du til sammen? *Oppgi stillingsandel i prosent. Avrund til nærmeste antall hele prosent. Full stilling = 100%.* ⇨ ☐☐☐

3. Er du pensjonist? ⇨ Ja ...... ☐ 1 Nei ...... ☐ 2

4. Hvis ja: Siden når? *Skriv årstallet i feltet til høyre.* ⇨ ☐☐☐☐

Før du fortsetter: Kontroller at du ikke har glemt noe på denne sida.

Husk: Bare ett kryss på hvert spørsmål!

5. Er du uføretrygdet? ⇨ Ja ..... ☐ 1 Nei ..... ☐ 2

6. Hvis ja: Siden når? *Skriv årstallet i feltet til høyre.* ⇨ ☐☐☐☐

7. Er du langtidssykmeldt? ⇨ Ja ..... ☐ 1 Nei ..... ☐ 2

8. Hvis ja: Siden når? *Skriv årstallet i feltet til høyre.* ⇨ ☐☐☐☐

9. Mottar du attførings-stønad? ⇨ Ja ..... ☐ 1 Nei ..... ☐ 2

10. Hvis ja: Siden når? *Skriv årstallet i feltet til høyre.* ⇨ ☐☐☐☐

11. Mottar du rehabiliterings-penger? ⇨ Ja ..... ☐ 1 Nei ..... ☐ 2

12. Hvis ja: Siden når? *Skriv årstallet i feltet til høyre.* ⇨ ☐☐☐☐

13. Hvilken beskrivelse passer best på arbeidet du har nå, eller arbeidet du hadde sist om du ikke er i arbeid nå? *Bare ett kryss.*

For det meste stillesittende arbeid (f.eks. skrivebordsarbeid, montering) ..... ☐ 1
Arbeid som krever at du går mye (f.eks. ekspeditørarbeid, lett industriarbeid, undervisning) ..... ☐ 2
Arbeid hvor du går og løfter mye (f.eks. postbud, pleier, bygningsarbeid) ..... ☐ 3
Tungt kroppsarbeid (f.eks. skogsarbeid, tungt jordbruksarbeid, tungt bygningsarbeid) ..... ☐ 4

14. Hvordan trives du alt i alt med arbeidet ditt, eller med arbeidet du hadde sist, om du ikke er i arbeid nå? ⇨ Veldig godt ..... ☐ 1 Godt ..... ☐ 2 Ikke særlig godt .. ☐ 3 Dårlig ..... ☐ 4

15. Hvis du ikke er i arbeid, hvor lenge har du vært uten arbeid? *Oppgi antall år og måneder, evt. bare måneder. Avrund til nærmeste antall hele år/måneder.* ⇨ ☐☐ *År* ☐☐ *Måneder*

16. Engasjement i arbeidet ditt: Hvilke følelser har du i forhold til jobben din? Hvis du ikke er i jobb på nåværende tidspunkt, ta stilling til hvordan situasjonen var i din siste jobbsituasjon.

	Aldri 1	*Noen få ganger i året eller sjeldnere* 2	*En gang pr. mnd. eller sjeldnere* 3	*Noen ganger pr. mnd.* 4	*En gang i uka* 5	*Noen ganger i uka* 6	*Hver dag* 7
1. Jeg er full av energi i arbeidet mitt	☐	☐	☐	☐	☐	☐	☐
2. Jeg synes arbeidet mitt har både mål og mening	☐	☐	☐	☐	☐	☐	☐
3. Tiden bare flyr når jeg arbeider	☐	☐	☐	☐	☐	☐	☐
4. Jeg føler meg sterk og energisk på jobben	☐	☐	☐	☐	☐	☐	☐
5. Jeg er entusiastisk i jobben min	☐	☐	☐	☐	☐	☐	☐
6. Når jeg arbeider glemmer jeg alt annet rundt meg	☐	☐	☐	☐	☐	☐	☐
7. Jeg blir inspirert av jobben min	☐	☐	☐	☐	☐	☐	☐
8. Når jeg står opp om morgenen ser jeg frem til å gå på jobben	☐	☐	☐	☐	☐	☐	☐
9. Jeg føler meg glad når jeg er fordypet i arbeidet mitt	☐	☐	☐	☐	☐	☐	☐
10. Jeg er stolt av det arbeidet jeg gjør	☐	☐	☐	☐	☐	☐	☐
11. Jeg er oppslukt av arbeidet mitt	☐	☐	☐	☐	☐	☐	☐
12. På jobben kan jeg holde på med å arbeide i lange perioder av gangen	☐	☐	☐	☐	☐	☐	☐
13. For meg er jobben en utfordring	☐	☐	☐	☐	☐	☐	☐
14. Jeg blir fullstendig revet med av arbeidet mitt	☐	☐	☐	☐	☐	☐	☐

Før du fortsetter: Kontroller at du ikke har glemt noe på denne sida.

Husk: Bare ett kryss på hvert spørsmål!

	Aldri 1	*Noen få ganger i året eller sjeldnere* 2	*En gang pr. mnd. eller sjeldnere* 3	*Noen ganger pr. mnd.* 4	*En gang i uka* 5	*Noen ganger i uka* 6	*Hver dag* 7
15. Jeg føler meg psykisk sterk på jobben	☐	☐	☐	☐	☐	☐	☐
16. Det er vanskelig for meg å løsrive meg fra jobben	☐	☐	☐	☐	☐	☐	☐
17. Jeg er alltid utholdende på jobb, selv når ting ikke går bra	☐	☐	☐	☐	☐	☐	☐

E. OM DEG

1. Kjønn: Kvinne... ☐ 1 Mann..... ☐ 2

2. Fødselsår: 19 ☐☐

3. Hva er din høyeste fullførte utdanning? ⇨
   - Grunnskole..... ☐ 1
   - VG skole, yrkesrettet..... ☐ 2
   - VG skole, allmennfaglig..... ☐ 3
   - Høgskole eller universitet ..... ☐ 4

4. Er du medlem av et trossamfunn? ⇨
   - Den norske kirke (statskirken)..... ☐ 1
   - Den evangelisk-lutherske frikirke .... ☐ 2
   - Den romersk katolske kirke..... ☐ 3
   - En av pinsemenighetene ..... ☐ 4
   - Islamsk trossamfunn..... ☐ 5
   - Human-etisk forbund ..... ☐ 6
   - Ikke medlem av noe trossamfunn... ☐ 7
   - Annet trossamfunn (hvilket?)..... ☐ 8

   Annet trossamfunn: STORE BOKSTAVER, *ett tegn pr. felt*.

5. Din sivilstatus ⇨
   - Enslig..... ☐ 1
   - Samboer, gift, reg. partner... ☐ 2
   - Separert/skilt ..... ☐ 3
   - Enke/enkemann ..... ☐ 4

6. Hvem bor du sammen med til daglig? ⇨
   NB: Ett eller flere kryss.
   - 1. Bor alene ..... ☐
   - 2. Samboer eller ektefelle.... ☐
   - 3. Egne barn under 18 år..... ☐
   - 4. Stebarn under 18 år..... ☐
   - 5. Fosterbarn under 18 år. ☐
   - 6. Andre..... ☐

7. Kan du tenke deg å delta i en oppfølgingsundersøkelse senere ? ⇨ Ja.... ☐ 1 Nei..... ☐ 2

Har du en kommentar til undersøkelsen eller noen av temaene som tas opp, kan du skrive her. ⇩

Ble plassen for liten her, er du velkommen til å legge ved kommentarer på separat ark.

Takk for at du ville svare på spørsmålene!

NTNU
Fakultet for samfunnsvitenskap og teknologiledelse
Institutt for sosialt arbeid og helsevitenskap

Vår dato 15.06.2009 | Vår referanse
Deres dato | Deres referanse

Påminnelse om å delta i en spørreundersøkelse om helse, arbeidsliv og livssyn

For ca. to uker siden mottok du et spørreskjema om helse, arbeidsliv og livssyn. Hvis du har sendt inn din besvarelse i løpet av de siste dagene, kan du se bort ifra denne henvendelsen.

Dette er en påminnelse til deg som ikke har returnert skjema i første omgang, og håper at du kan ha tid til å svare denne gangen. Hvis du ønsker å delta, er det fint om du kan returnere tidligere tilsendt spørreskjema i returkonvolutten. Det er ikke en svarfrist for å delta i undersøkelsen, men vi ønsker å få inn så mange svar som mulig, så raskt som mulig. Om du ikke lenger har tilgang på skjemaet vi sendte deg, kan du ta kontakt med undertegnede, så sender vi deg et nytt skjema.

Det er viktig for kvaliteten av studien at alle besvarer spørreskjemaet, men om du ønsker å avstå har du selvfølgelig din fulle rett til det.

Om det er noe du lurer på i forbindelse med undersøkelsen, kan du ta kontakt med stipendiat Marianne Nilsen Kvande, e-post marianne.n.kvande@svt.ntnu.no eller telefon 73 59 02 34. Ledere for prosjektet er professor Geir Arild Espnes ved Institutt for sosialt arbeid og helsevitenskap og professor Torbjørn Rundmo ved Psykologisk institutt.

Takk for at du er villig til å delta!

Med hilsen
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