Klinik und Poliklinik für Frauenheilkunde und Geburtshilfe
Direktor: Univ.-Prof. Dr. med. Sven Mahner

aus der Neonatologie am Perinatalzentrum München-Großhadern
Ehem. Leiter: Univ.-Prof. Dr. med. Andreas Schulze

Kinderklinik und Kinderpoliklinik im Dr. von Haunerschen Kinderspital
Direktor: Univ.-Prof. Dr. Dr. Christoph Klein

Ludwig Maximilians Universität München

Viewpoints and motives on religion and spirituality of professionals in perinatal medicine.

A survey among midwives, nurses, obstetricians and neonatologists.

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Vorgelegt von Esther Sabine Schouten aus Amersfoort

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Berichterstatter: Univ.-Prof. Dr. med. Andreas Schulze

Mitberichterstatter: Priv. Doz. Dr. Britta Herbig

Prof. Dr. Alexander Strauss

Prof. Dr. Stefan Lorenzl

Dekan: Prof. Dr. med. Dent. Reinhard Hickel

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Content

Summary

Introduction

Pregnancy and childbirth are unique experiences in a family's lifetime. They are time periods of highest emotional sensitivity. Also, they may constitute substantial health risks for both the mother and the infant. With the advent of modern neonatal intensive care, ethical dilemmas have arisen more often in perinatology. Decisions on intensive vs. compassionate care for critically ill infants may have long-term emotional and mental health effects on parents. A questionnaire among parents of deceased newborns after delivery room resuscitation showed that predictions of morbidity and mortality were not central to their decision-making. However, religion, hope, spirituality and compassion were mentioned as being most valuable guidance to decision-making regarding delivery room resuscitation.[1]

Little is known about German professionals' views regarding the role of religion and spirituality in perinatology. We therefore administered a cross sectional survey to medical professionals (midwives, nurses, obstetricians and neonatologists) who are working in perinatal medicine in Germany. Our study aims were to evaluate their perspectives on religion / spirituality and health as well as their personal religious and spiritual characteristics.

Methods

A modified version of a questionnaire on "religious characteristics of U.S. physicians" that was developed by Curlin et al. was used. The questionnaire was translated, adapted and validated. The questionnaire contained 47 items divided over three sections that evaluated personal perspective on religion/spirituality and health, personal religious and spiritual characteristics of the respondents and demographic characteristics.

Results and conclusion

Four study centers were enrolled in the study. There were 374 eligible participants, 296 medical professionals participated (78% response rate). Among these 296 professionals, 21 chose not to fill out the entire questionnaire. They used an abbreviated version of the questionnaire.

This resulted in 275 active survey participants: 45 midwives (16%), 121 neonatal intensive care nurses (44%) and 109 physicians (neonatologists, obstetricians) (40%). The median age of all participants was 36 years (minimum 23, maximum 64, between center - range 41). 30% said to have no religious affiliation, 47% reported to be Roman Catholic, 18% Protestant and 5% indicated other religious affiliations.

10% reported to be very religious and 16% to be very spiritual, 47% reported to be moderately religious and 46% moderately spiritual, 21% slightly religious and 26% slightly spiritual and 22% reported to be not religious at all and 12% not spiritual at all.

96% of the survey participants think that R/S has an influence on health. They valued R/S mainly as something positive, that gives patients hope and helps to cope with and endure

illness. Although the medical professionals valued R/S mainly as something positive only 50% of the medical professionals ever inquired about R/S issues. They were more likely to inquire about R/S issues when the clinical situation is more severe. Furthermore, medical professionals likelyhood to inquire about R/S issues seems related to their own spirituality and religious affiliation, those who are more spiritual are more likely to inquire about R/S issues. 40% of the participants noted that they experience barriers that discouraged them from discussing R/S issues with patients. Most frequently mentioned barriers were lack of time and training as well as general discomfort speaking about R/S issues and fear to offend patients.

The study results suggest that educational programs should be made available to overcome such barriers. This study should encourage medical professionals in perinatal care to bring up religious and spiritual issues in patient care.

Zusammenfassung

Einführung

Schwangerschaft und Geburt sind Phasen höchster emotionaler Sensibilität im Leben einer Familie. Sie sind mit einem erhöhten gesundheitlichen Risiko für Mutter und Kind behaftet. Situationen mit ethischen Konflikten sind in der Perinatologie häufig und mit der Entwicklung neuer medizinischer Verfahren oft auch besonders komplex geworden. Stellvertreter-Entscheidungen zwischen Intensivtherapie oder palliativer Begleitung für schwer kranke Neugeborene können langfristige Konsequenzen für die emotionale und mentale Gesundheit der Eltern implizieren. In der Perinatologie liegen Daten vor, nach denen Eltern in kritischen Konfliktsituationen konkrete Vorhersagen von Morbidität und Mortalität als nicht zentral, die Thematisierung religiöser und spiritueller Belange jedoch als wichtig für eine Entscheidungsfindung erachten. Mehrere Studien belegen, dass ein großer Anteil der Ärzte in den USA religiöse und spirituelle Überzeugungen ihrer Patienten als bedeutsam betrachten im Kontext der medizinischen Betreuung.

In Deutschland liegen zur Rolle von Religion und Spiritualität im Umfeld der medizinischen Versorgung nur wenig empirische Daten vor. Gegenstand dieser Disseration ist deshalb ein Survey unter dem medizinischen Personal in der Perinatologie zu religiösen / spirituellen Einstellungen, Überzeugungen und Verhaltensweisen im Zusammenhang mit der medizinischen Betreuung. Einbezogen wurden hierbei das Pflegepersonal, Hebammen, Geburtshelfer und Neonatologen aus dem Bereich der Risiko-Perinatologie in sog. Perinatalzentren Level 1 oder 2.

Methodik

Der Studie liegt eine modifizierte Version des validierten Questionnairs „Religious Characteristics of U.S. Physicians“ von Curlin et al. zu Grunde. Der Fragenbogen wurde übersetzt, adaptiert und gemäß geltenden Leitlinien zur Validierung u.a. rückübersetzt und verschiedenen „Pretest“ unterworfen. Er umfasst, auf 3 Sektionen verteilt, 47 Fragen. Sie erfassen persönliche Einstellungen bezüglich des Einflusses von Religiösität / Spiritualität auf Gesundheit, religiöse / spirituelle Charakteristika der Teilnehmern sowie demographische Angaben. Der Survey konnte von der Teilnehmer als elektronische oder gedruckt Variante bearbeitet werden. Beide Varianten waren vollständig anonymisiert. Die Studie wurde von der Ethikkommission der Universität München sowie von den Personalräten und Datenschutzbeauftragten der beteiligten Kliniken genehmigt.

Ergebnisse und Schlussfolgerungen

374 potentielle Teilnehmer wurden in vier Studienzentren identifiziert als kompatibel mit den Einschlusskriterien der Studie. Unter Ihnen haben 275 Personen die volle Version des Surveys bearbeitet. 21 weitere Teilnehmer haben die Kurzversion des Fragenbogens beantwortet, nicht aber den kompletten Survey absolviert. Somit liegt die response rate bei insgesamt 78%. Unter den 275 Teilnehmern an der Vollversion befanden sich 121 Pflegekräfte (44%), 45 Hebammen (16%) und 109 Ärzte (40%). Das mediane Alter der Teilnehmer betrug 36 Jahre (Minimum 23, Maximum 64, range 41). 30% der Teilnehmer war

konfessionslos, 47% war römisch katholisch, 18% evangelisch und 5% gaben eine andere Konfession an.

10% der Teilnehmer stuften sich als „sehr religiös“ ein, 16% als „sehr spirituell“. 47% bzw. 46% gaben an „mäßig religiös“ bzw. „mäßig spirituell“ zu sein. 96% der Teilnehmer waren der Auffassung, dass Religiosität / Spiritualität die Gesundheit ihrer Patienten beeinflusst. Dieser Einfluss wurde ganz überwiegend als ein positiver Einfluss gewertet. Nur 50% der Teilnehmer fragten ihre Patienten jemals nach deren Religiosität / Spiritualität oder diskutierten diese im Kontext der medizinischen Betreuung. Die Thematik wird bei kritischen und schwierigen Behandlungssituationen häufiger aufgebracht. 40% der Teilnehmer gaben an dass bestimmte Barrieren sie davon abhalten, religiöse / spirituelle Belange in Beratungssituationen aufzubringen: als solche wurden vor allem genannt: Zeitmangel, ungenügendes Wissen/ ungenügende Ausbildung zu dieser Thematik, ein allgemeines Unbehagen bei Einbeziehung dieser Thematik in Gespräche während einer medizinischen Behandlungssituation sowie die Sorge, ihrem Patienten mit dieser Thematik möglicherweise persönlich zu nahe zu treten.

Während die genannten statischen Verteilungen sich eher in erwarteten Bereichen bewegten, lagen einige andere weit außerhalb von uns erwarteter Häufigkeiten. So gaben beispielsweise 35% der 275 Teilnehmer an, eine religiöse oder spirituelle Erfahrung gemacht zu haben, die „ihr Leben verändert“ habe. Ein Drittel dieser Erfahrungen wurde im direkten Zusammenhang mit der beruflichen Tätigkeit erlebt.

80% der Teilnehmer gaben an, keine Vorbehalte gegenüber der Beendigung künstlicher lebenserhaltender medizinischer Maßnahmen zu haben. Etwa 50% der Vorbehalte werden zumindest teilweise religiös begründet.

47% der Teilnehmer gaben Vorbehalte gegenüber Schwangerschaftsabbruch bei angeborenen Fehlbildungen an. Ärzte und Hebammen hatten statistisch signifikant häufiger solche Vorbehalte als Pflegekräfte. Etwa zwei Drittel dieser Vorbehalte wurden als zumindest teilweise religiös begründet angegeben.

Die Studie legt nahe, dass Ausbildungsprogramme zu Fragen von Religiosität / Spiritualität im Kontext medizinischer Behandlungssituationen in der Perinatologie von Nutzen sein könnten und vom professionellen medizinischen Personal auch angenommen würden. Die Ergebnisse der Studie sind geeignet, das medizinische Personal zu motivieren, religiöse / spirituelle Aspekte nicht aus der Kommunikation mit Patienten auszugrenzen.

Introduction

History of spirituality, religion and health care

Religion is known to provide people with a system of orientation through which people may cope with stressful events in life. Since ancient times people have always been interested in and convinced of multiple factors influencing disease and illness. Religion and spirituality have been considered one of these factors. Plato and Hippocrates recognized among other philosophers the need to conceive human beings in a holistic concept. In whole human beings, their body, mind and spirit are interconnected. This view is called holism. Holism comes from the Greek word ὅλος (*holos)*, which means *all*, *whole*, *entire* or *total*. Holism refers to the theory that parts of a whole are in intimate interconnection, such that they cannot exist independently of the whole, or cannot be understood without reference to the whole. It is thus regarded as greater than the sum of its parts.[2] In medicine, the holistic approach refers to treating the patient as a whole person, taking in account his or her mental, spiritual and emotional factors, instead of just treating his or her pathophysiology.

Health care and religion have always been closely related. It was a general perception that healing comes through God's spirit. The use of healing gifts/herbs and other natural remedies were generally used and widely accepted as mediator`s of the healing process. Medical care was delivered from and within religious organizations. [3] Since the time of the Renaissance and the "age of Enlightenment", empiric scientific methodology and scientific rationale entered more and more the field of medicine and became cornerstones of modern developments. Religion as a keynote in healing disappeared to the background. One of the most famous philosophers of the "age of Enlightenment" was René Descartes who stated that the mind (spirit) was distinct from the matter (body). This is called Cartesian dualism and refers to medicine as something rational (body) and spirituality as something non-rational (mind). Cartesian dualism caused medicine and spirituality to be regarded as incompatible.[4]

The care of the body and the care of the human spirit or "soul" separated from each other. Scientific evidence assumed a leading role in understanding disease and developing healing treatments.[5] This medical model continues to play an important role in current health care. Nevertheless, in the last fifty years, spirituality and the holistic approach are regaining their acceptance.

Revival of spirituality as a component in modern healthcare concepts

In 1948 a preamble the World Health Organization (WHO) stated:

"Health is not just the absence of disease. It is a state of physical, psychological, social and spiritual well-being."

In 1998 the WHO extend this vision by the following statement:

"Until recently, health professions have largely followed a medical model, which seeks to treat patients by focusing on medicines and surgery, and gives less importance to beliefs and

to faith. This reductionism or mechanistic view of patients as being only a material body is no longer satisfactory. Patients and physicians have begun to realize the value of elements such as faith, hope and compassion in the healing process. The value of such 'spiritual' elements in health and quality of life have led to research in this field in an attempt to move towards a more holistic view of health that includes a non-material dimension, emphasizing the connectiveness of mind and body". [6]

In the palliative care protocol from the WHO the holistic approach becomes even more concrete:

"Palliative care improves the quality of life of patients and families who face life-threatening illness, by providing pain and symptom relief, spiritual and psychosocial support to from diagnosis to the end of life and bereavement" [7]

The WHO developed an instrument to measure quality of life aspects related to spirituality, religiousness and personal beliefs. This instrument is called the WHO Quality of Life-Spirituality, Religiousness and Personal Beliefs instrument (WHOQoL-SRPB). It is a 32-item multi-dimensional measure of quality of life aspects related to spirituality, religiousness and personal beliefs in people with various religious affinities or no particular religious orientation. The WHO QoL-SPRB assesses 8 dimensions: spiritual connection, meaning of life, awe, wholeness-integration, spiritual strength, inner peace, hope and faith.[6]

Besides the WHO, European organizations like the British National Health Service in cooperation with the Human rights act 1998 sets the obligation to health care systems to provide adequate spiritual care. [8]

Educational policymakers in the United States implemented coping and spirituality as one of the learning goals in medical schools.

In January 1998, the Association of American Medical Colleges (AAMC) issued Report I of the Medical School Objectives Project (MSOP). The purposes of the MSOP were to set learning objectives that medical schools can use as a guide in reviewing their medical student education programs. In 1999 a third report was issued which was devoted to communication in medicine. The value that the AAMC places on religion and spirituality as topic to be discussed by physicians with their patients is reflected by this report:

"Spirituality is recognized as a factor that contributes to health in many persons. The concept of spirituality is found in all cultures and societies. It is expressed in an individual's search for ultimate meaning through participation in religion and/or belief in God, family, naturalism, rationalism, humanism, and the arts. All of these factors can influence how patients and health care professionals perceive health and illness and how they interact with one another."

The documents states the following outcome goals:

"Students will be aware that spirituality, cultural beliefs and practices, are important

incorporate awareness of spirituality, and culture beliefs and practices, into the care of patients in a variety of clinical contexts. They will recognize that their own spirituality, and cultural beliefs and practices, might affect the ways they relate to, and provide care to, patients." [9]

Research on religion/spirituality and health

Parallel to this development, an increasing number of published studies have examined the hypothesis of connections between religion/spirituality and health. Religion/spirituality is believed to provide a framework and orienting system, through which people may cope with consequences of stressful events, address life questions and receive strength and hope. [10] Up to 2010, almost 3000 studies have examined the relationship between religion/spirituality and health.[11] Due to variation in methodological frameworks, clinical relevance, reliability and quality of these studies varies. A majority of those studies found greater happiness and satisfaction with life in those who said to be more spiritual or religious.[11] Furthermore, a large proportion of published studies on religion/spirituality and health show that religion/spirituality was related to better mental, physical and social health.[12] Future research on R/S and health appears to be warranted. Among other aspects, it might show that certain R/S beliefs or behaviors in patients could help medical professionals to identify high-risk persons for certain diseases and further develop disease prevention strategies. [11] If R/S truly relates to better health, R/S involvement could enhance and support conventional treatment.[11] Last but not least, unmet spiritual needs of critically ill patients and their families might result in diminished quality of life, reduced satisfaction with care and waste of health care resources.[13]

The view of the patient

Patients want to be treated as a whole person by their physicians, not as a disease. [14-16] A whole person is someone with physical, social, emotional and spiritual needs. [17]

In the Religion and Spirituality in the Medical Encounter Study (RESPECT), 66% of the patients believed that physicians should be conscious of their patients' spiritual and religious beliefs. 33% would welcome spiritual inquiry in an office visit. 40% would welcome such inquiry in a hospital setting, and 77% in an End-of Life setting. [14,18]

Severely ill patients consider spiritual care that entails recognition and support of the religious and spiritual dimensions of illness as a very important aspect of care. [14,16,17,19] Spiritual care should be nonintrusive care which tends to the spiritual dimension of health by addressing universal spiritual needs, honoring unique spiritual worldviews and helping individuals explore and mobilize factors that can help to gain and regain a sense of trust to promote optimum healing. [20] Spiritual needs or religious practices are various. They may include for example visiting ceremonies, anointment, bible reading, pilgrimage, meditation, laying on of hands and praying.

Seeking medical help and religious coping practices (such as, for example, prayer) are not mutually exclusive activities. Prayer is considered to be an active coping response in the face of health problems. [21] Religious practices and looking objectively at a medical problem are not mutually exclusive but complementary from patients` perspective. [22]

The view of medical professionals

Good medical practice requires medical professionals to know their patients´ values and expectations as well as their own values and beliefs. Personal reflection and self-knowledge are crucial characteristics for a mindful physician. Many healthcare professionals from different professional areas believe that communicating with patients about religion/spirituality is an important part of good patient care.[14,23,24] The importance of religion/spirituality in their own lives, the conviction that religion/spirituality influences health, and the desire to provide holistic care are reasons given for this belief. [25,26]

However in daily routine medical care, professionals are often reluctant to explore religious and spiritual perspectives with patients although substantial literature promoting inquiry after spiritual and religious perspectives of patients does exist.

The following aspects may be responsible for rarely addressing spiritual/ religious needs of patients in clinical practice: lack of time; perception that it is inappropriate to offer spiritual care in a medical encounter; fear of projecting personal beliefs onto patients; difficulty in identifying those patients who would welcome or even expect a communication on their religious/spiritual needs; lack of training in providing spiritual care. [23,27-32]

Religion/spirituality in pediatrics

As mentioned before, religion/spirituality may provide a framework for coping strategies to people in stressful times. When a child gets severely ill, parents report extreme stress, anxiety and fear. Parents are dependent on the physicians to explain their child's complex disease. Furthermore, they need a stabile, empathetic social network to facilitate their coping process with the disease of their child. Over the last years, medical decision-making has shifted from a paternalistic approach to "shared decision-making" as recently advocated by various medical organizations like the American Academy of Pediatrics, 'Deutsche Gesellschaft für Kinderheilkunde', ' Gesellschaft für Neonatologie und Pädiatrische Intensivmedizin".[33,34] To achieve true shared decision-making, physicians and parents need mutual understanding and respect.[35] Besides clear communication and trust, knowledge of parental values and biases is essential. Religion and spirituality are important aspect of values in life and are at the core of one's identity. If one accepts such statement, a holistic medical care approach in children will imply to explore parental religious and spiritual characteristics and needs in complex pediatric illnesses.

The focus of pediatric research on religion/spirituality used to explore effects of parental religious objections to certain medical procedures and interventions. Extensive studies have been published on this topic.[36,37] In the last two decades, the number of publications on the role of religion/spirituality in pediatric health care increased. [1,26,38-51] Research of the literature shows that since 2000 at least 15 studies concerning religion/spirituality in pediatrics have been published whereas in only a few studies originate from the eighties and nineties. [52,53]

As one of the authors of these studies noticed:

" In every clinical encounter, a child's and family's spirituality and religious life will interact

The view of the parents

Many parents would welcome inquiry about religion/spirituality by the physicians of their severely ill children.[54] In a questionnaire among parents of deceased children, the majority mentioned religious/spiritual issues as being most helpful at the end of life.[39,44] In a study among parents of children receiving palliative care, parents reported that decisions were less difficult when they felt they could rely on "God's will".[54] In a multicenter study with parents whose children had died as result of extreme prematurity or lethal congenital anomalies, parents reported that religion/spirituality and hope guided them in decision-making.

The view of the pediatrician

An institutional survey in an academic medical center in the U.S. shows that the majority of the pediatricians believed that religion/spirituality plays an important role in health and that they are willing to discuss these topics with parents.[46] In their opinion, personal religious/spiritual characteristics of parents play a role in pediatric health care and should be discussed. However only a minority of the pediatricians routinely discusses religious/spiritual issues with parents. The discrepancy between willingness to speak about religion/spirituality with parents and actually doing so was remarkable. Pediatricians who identified themselves as more religious/spiritual were more likely to discuss religious/spiritual issues with parents. It seems that willingness to pay attention to religious/spiritual issues in daily practice maybe intertwined with personal religious/spiritual perspectives.[46,55] In the clinical encounter with parents of severely ill children, physicians quickly enter the parents' inner circle of support, even more than friends or family members do.[44] This underlines the importance of mutual understanding in pediatric healthcare.[35]

Differences between the U.S. and Europe

Adherence to religion and religiosity varies substantially from country to country. The highest levels of devotion to religion are found in countries outside Europe, mainly the U.S. and Brazil. [56] In the U.S., religion plays a central role in peoples lives. According to large surveys, more than 80% of the population believes in god and indicates that religion is an important part of personal life. Almost 90% of the U.S. population reported to have a religious affiliation (27% Roman Catholic, 55% Protestant, 8% other). [57,58] In Germany 70% of the population reported to have a religious affiliation (30% Roman Catholic, 30% Protestant, 10% other). Considering the importance of religion, approximately 50% of the population in Western Germany values religion as important whereas only 20% of the population of the former East Germany values religion as important.[59] In spite of these geographic differences, the overall importance of religion in most of Europe is clearly lower compared to the U.S.. Therefore, research data on religion/spirituality from the U. S. is certainly not directly applicable to Germany or other European countries.

The role of religion/spirituality in perinatal medicine

Pregnancy and birth are unique experiences in a person's and in a family's lifetime. They are time periods of highest emotional sensitivity. Also, they may constitute substantial health

human lives at the same time. Advances in perinatal care have significantly improved survival rates of severely ill newborns and premature infants over the last decades. Nevertheless, a significant number of newborn infants still develop (pre- or postnatal) potential terminal illnesses. In each individual patient, it remains impossible to predict with certainty whether the infant will survive with a disability or even pass away soon after birth. With the advent of modern neonatal intensive care, ethical dilemmas have arisen more often in perinatology. Decisions on intensive vs. compassionate care for critically ill infants may have long-term emotional and mental health effects on parents. A questionnaire among parents of deceased newborns after delivery room resuscitation showed that predictions of morbidity and mortality were not central to their decision-making. Therefore religion, hope, spirituality and compassion were mentioned as being most valuable guidance to decision-making regarding delivery room resuscitation.[1] Neonatologists often consider statistical estimates of mortality and morbidity risks as most important in counseling parents when decisions on resuscitation/intensive care vs. compassionate care are pending. Only 25% of the neonatologists report discussing religious or spiritual aspects with parents on a regular basis during prenatal counseling sessions.[50,51,60,61] Health risk estimates are difficult to understand by parents who are exposed to emotional and physical distress. Moreover, parents stated that their personal values and beliefs play a central role when confronted with the need for a critical decision in perinatology. [1]

Study aims and objectives

Little is known about German professionals' views regarding the role of religion and spirituality in perinatology. We therefore administered, a national cross sectional survey to medical professionals (neonatalogists, obstetricians, neonatal intensive care nurses and midwives) who are working in perinatal medicine in Germany. Our study aims were to evaluate their perspectives on religion and spirituality as well as their personal religious and spiritual characteristics. We applied a modified version of a questionnaire on "religious characteristics of U.S. physicians" that was developed by Curlin et al. (Appendix 1) This questionnaire evaluates religious and spiritual characteristics of physicians in the United States.[58] It has been shown in a thorough validation procedure to achieve a high level of reliability. A comparable questionnaire in German was not available. Curlin's questionnaire was therefore modified for our study to suit the area of perinatology and was adapted for specifics in Germany.

The study population consisted of medical professionals working in regional perinatal care centers for high risk and moderate risk obstetric and neonatal care ("level I or II centers"). In Germany, perinatal care is assigned to four different types of institutions; perinatal care centers level I, perinatal care centers level II, clinics with perinatal care as point of interest and birth clinics. A perinatal care center level I is responsible for severely ill neonates (prenatally diagnosed congenital malformations or severe maternal risk factors) and premature babies with the highest risk (birth weight < 1250 g. or gestational age (GA) < 29 weeks or triplets with gestational age < 32 weeks). A perinatal care center level II is responsible for all premature babies of GA >29 weeks and GA <33 weeks or birth weight >1250 g and <1400 g and neonates who are small for gestational age (SGA) or of mothers

with insulin-dependant-diabetes-mellitus (IDDM).[62] In 2007, 138 perinatal care centers level I and 24 perinatal care centers level II were registered in Germany.[63] In our study, only level I or II perinatal care centers were included in order to recruit participants with extended experience in perinatal care and complex situations in perinatology.

The aims of this study were:

- to gain insight into the personal religious and spiritual characteristics of medical professionals in perinatology

- to assess personal perspectives of medical professionals in perinatology on religion/spirituality and health.

- to asses differences among different professions in perinatology (obstetricians, neonatologist, midwives and nurses) with respect to their personal religious and spiritual characteristics and their perspectives.

- to asses the influence of one's own religiosity or spirituality on a person's view on the role of religion and spirituality in health.

- to asses the influence of one's own religiosity or spirituality on discussing religious and spiritual issues with patients.

Methods

Development and application of the survey

The survey was developed using the 5-step (pre-) test model of data collection development technique of Akkerboom et al. [64] These five developmental steps are: (1) project definition and feasibility studies; (2) qualitative content test; (3) qualitative operational test; (4) quantitative pilot in the field; and (5) implementation. These steps were used as a guideline to develop and apply the survey.

In this research project step 1 and 2 describe project preparation and analysis of data collection. Step 3 and 4 describe qualitative and quantitative adaptations, step 5 describes the actual implementation of the survey. Overlap between these steps is common because issues and procedures are strongly related. Below these steps are combined to describe the development of the survey.

Project definition, feasibility study and a qualitative content test (step 1 and 2)

First, a review of the literature about surveys on religion and health was performed. To gather the questions for the survey a so-called bottom-up approach was performed. A bottom-up approach is a strategy to piece together already existing systems, in this case questions, to give rise to a grander system. That means that the questions of an already existing questionnaire, in this case the American questionnaire by Curlin et al. become, modified, a part of the new questionnaire. [58] Subsequently, an interdisciplinary evaluation of the entire project plan and the modified questionnaire was performed by an explorative focus group consisting of 6 persons: neonatologists, obstetricians and neonatal intensive care nurses.

A translation process according to the international guidelines from the WHO was used to develop the German questions for the questionnaire. "The aim of process is to achieve different language versions of the English instrument that are conceptually equivalent in the target country/culture. That is, the instrument should be equally natural and acceptable and should practically perform in the same way. The focus is on cross-cultural and conceptual equivalence, rather than on linguistic/literal equivalence."[65] [66] To achieve this goal forward-translations and back-translations were performed. A native English-speaking translator with German as her mother tongue, who was familiar with the area covered by the questionnaire, performed the forward-translation. Subsequently, an expert panel (n=5) consisting of physicians, psychologists and theologians revised the translated questionnaire. The ask-the-same-question approach was used. This approach means asking the same question in the original language and in the target language, the answers are then to be compared in order to optimize the translated version.[65,67]

After revision by the expert panel, a translator with English mother tongue performed a backward-translation using the same approach as in the forward-translation. Back-translation was limited to selected items of the questionnaire. All the cultural and translational adaptation procedures were documented.

To increase the quality of the survey a so-called total survey error approach was used. Total survey error is a conceptual framework used to systematically consider all types of survey error during the design process. "Rather than focusing on just one or a few of the elements of a survey, all the elements are considered as a whole. A survey is no better than the worst aspect of its design and execution. The total survey error approach means taking that broad perspective and ensuring that no feature of the survey is so poorly designed and executed that it undermines the ability of the survey to accomplish its goals."[68]

Qualitative content test and a quantitative pilot in the field (step 3 and 4)

Subsequently, a pre-test was performed. The pre-test was performed in order to evaluate the question and answer process and to evaluate intelligibility, duration, usability and validity of the questionnaire before starting the study.[69] This pre-test consisted of three different cognitive strategies.

First, to evaluate usability, duration and question comprehension a standard pretest was performed with respondents acquired from the pre-tester pool from Unipark, a part of Enterprise Feedback Management Software (EFS). [70]

Secondly, relevance and participant comprehension was evaluated by discussion of the survey in a focus group consisting of 7 persons (neonatologist, obstetricians, nursing staff and one moderator).

Thirdly, a representative, randomly taken, sample of respondents (n=4) was included for cognitive interviewing. These respondents were either nurses or doctors working on a pediatric intensive care unit. Cognitive interviewing is one of the methods to assess respondent comprehension of the questions. Cognitive interviewing can be performed by several techniques including meaning oriented probes and the 'thinking aloud'. Meaning-oriented probes are used to get to know how respondents interpret a particular item or how they understand a question. These probes are probing questions on the comprehension of specific words/phrases and on the comprehension of the entire question. The 'thinking aloud' technique asks respondents to describe their thoughts while answering questions. [71] The results of the cognitive interviewing were implemented in the final version of the questionnaire with 47 items. Following the discussions in the focus group (7 persons: neonatologist, obstetricians, nursing staff) and the feedback from the Pre-test adaptations in the German translation considering German culture and respondent characteristics were made.

Implementation (step 5)

The study population consisted of medical professionals working in perinatal care centers level I or II.

To increase recruitment rate the survey was presented personally at every participating perinatal center, presentations were performed separately for physicians, nurses and midwives. In every center a local study supervisor was nominated. This person was trained in correct anonymous data management and was readily available for technical and practical questions concerning participation. The questionnaire is an online-based survey

conventional paper questionnaires were available on demand.

Questionnaire content

The questionnaire evaluates religious and spiritual perspectives of medical professionals in perinatal medicine. Personal religious and spiritual characteristics as well as specific beliefs and opinions concerning medical practice are assessed. As mentioned before the questionnaire is a validated and adapted German version of an original questionnaire by Curlin et al. Translation and adaptation were performed with permission of the original author.[72]

Sections A, B, C

The original questionnaire is divided in three sections, section A, B and C. The original outline was preserved in the German questionnaire. Section A assesses personal perspective on religion/spirituality and health. Section B assesses personal religious and spiritual characteristics of the respondents. Section C consists demographic characteristics. (Table 1)

Table 1: Questionnaire content.

Questionnaire content	
Section A Perspectives on religion/spirituality and health	22 questions
	relation between religion/spirituality and health how to deal with religion/spirituality in daily clinical practice influence of religion/spirituality on patients behaviour inquire about the role of religion/spirituality reasons for not discussing religion/spirituality with patients controversial issues in medicine
Section B Personal religious and spiritual characteristics	13 questions
	religiosity spirituality practice of faith attendance of religious services faith role of God and religious coping meaning of life and the role of God life changing experiences the role of faith in daily clinical practice the role of faith and compassion in life
Section C Demographic features	12 questions
	profession religious affiliation of workplace nationality place of residence place of birth gender age highest educational degree

Section A was translated and implemented completely, section B and C were extended and adapted. Several questions were not included because of failing relevance, others were

Demographic standards, the International Survey Programme (ISSP 2008), 'Allgemeine Bevölkerungsumfrage der Sozialwissenschaften' (ALLBUS 2010). [73-76] These adaptations were meant to improve willingness to respond, hence increasing the recruitment rate. Besides that, the adaptation of the questions to these resources creates the possibility to compare the data of the survey to the German population.

The original questionnaire was quite extensive; therefore no specific perinatal questions were added in order to contain appropriate size. The questionnaire covers 15 pages. Section A contains 22 questions, section B contains 13 questions and section C contains 12 questions.(Table 1) In case of non- participation, respondents were requested to fill out a minimal survey containing six questions covering demographic details like gender, age, religious affiliation, nationality, profession and reason for non-participation. Most questions are arranged as classical Likert items or as free-text items. Likert items contribute to a psychometric scale (Likert scale), which is commonly used in questionnaires. [77]

Definition spirituality and religiosity

A generally agreed upon and accepted definition of the term "spirituality" and the term "religiosity" does not exist. Participants of our survey may hold different understandings of the two terms. Therefore, they were asked in two questions about their subjective evaluation of the degree (high, moderate, slightly, not at all) of their religiosity and their spirituality. Comparison of the answers to the two questions allowed assessing the degree of overlap in the understanding of the two terms by survey participants, i.e. the extent to which the two terms were considered synonymous. [76] In the literature, religion and spirituality are often stated as synonyms or as a construct, namely Religion/Spirituality (R/S). [15,36,78] Therefore, no differentiation between R and S was used throughout the questionnaire except for the above mentioned two specific questions. For the purpose of this survey, religiosity and spirituality was defined and explained on the first page of the questionnaire as follows: "eine der Dimensionen, die das Menschsein ausmachen, neben andere Dimensionen wie Körperlichkeit/Physis, Psyche und Sozialität.", "Spirituality/Religiosity is a dimension of a human being, besides other dimensions like body, spirit and sociality."

Evaluation of religiosity and spirituality

There are various ways to measure religiosity and spirituality. In this study three concepts were evaluated; self-reported religiosity, self-reported spirituality and intrinsic religiosity. The self-reported religiosity and self-reported spirituality are four point scales; very religious/spiritual, moderate religious/spiritual, slightly religious/spiritual, not religious/spiritual at all. Intrinsic religiosity is intended to measure the extent to which an individual embraces religion as the "master motive" that guides and gives meaning to life. Intrinsic religiosity is measured as agreement or disagreement with two statements from the Hoge's Intrinsic Religious Motivation Scale. [58,79]. The first statement is "I try hard to carry my religious beliefs over into all my other dealings in life" and the second one is: " My whole approach to life is based on my religion." Curlin et al. used these two statements to measure intrinsic religiosity and categorized intrinsic religiosity in low, moderate and high. The participant was categorized as "high" if agreement to both statements existed, "moderate" if the participant agreed with one of the statements but not to the other and "low" if he or

questionnaire. In order to be able to compare self-reported religiosity and self-reported spirituality with intrinsic religiosity these former items were reduced from four categories to three categories. This modification is described by Curlin et al and simplifies the comparison. . Self-reported religiosity and self-reported spirituality are categorized high if the participant answered “very religious”, moderate if the participant answered “moderately religious” and low if the participant answered “slightly” or “not at all religious”.[24]

Study population

The study population was defined as medical professionals in perinatal care. These professionals included neonatologists, obstetricians, neonatal intensive care nurses, midwives, medical psychologists and social workers. Participation was voluntary and anonymous. For survey recruitment two possible recruitment strategies are available, an opt-in strategy (investigators refrain from contacting unless potential participants actively signal willingness to participate) and an opt-out strategy (potential participant were repeatedly contacted unless they withdrew their contact details). [80,81] Although the literature shows that the opt-out strategy significantly increases recruitment rate, it could compromise voluntary participation. Involuntary participation could compromise the integrity and authenticity of the answers. Honest and authentic completion of the questionnaire was of utmost importance for the quality of the data, therefore the opt-in strategy was chosen and a possible lower recruitment rate was accepted.

Anonymity

The questionnaire is anonymous. Personal perspectives on religion and spiritual are perceived as very sensible data, therefore attaining and preserving anonymity was considered very important. Every participant became an unique code in a sealed blank envelope. Every code is unique; duplicates could not be generated. The unique code to access the questionnaire was not saved. After completing the questionnaire; the data were attached to a new random code. The data are stored for five years after recruitment closure.

Performing the survey

The survey was established as an online questionnaire using EFS software from Unipark.[70] Unipark is a part of Questback. Questback is a company for Enterprise Feedback Management Software and enables organizations to gain insights from customer and employee experiences, through feedback and social engagement solutions.[82] The software of Unipark separates questionnaire data from demographic data.

The questionnaire could be accessed via an URL by entering the unique code. This code contains 8 alphanumeric characters (a-z; 0-9). Participants could adjust their answers for the duration of the session and were able to pause the session and continue later on.

As soon as the questionnaire was completed the code became inactive, hence double participation with the same code was not possible. This code gave access to the online questionnaire. The participant had to sign an agreement of participation to be able to continue the questionnaire. If the participant did not wish to participate, on a voluntary

basis, a minimal set of six questions was to be completed. These questions provide few demographic details and reason for non-participation. Hereby a possible non-response bias, significant differences between participants and non-participants, can be identified. [83]

Although the questionnaire was developed as online-based survey conventional paper questionnaires were available on demand. To decrease error from data entry, all data were double keyed and cross-compared. Double keying refers to a process in which two separate persons enter information at separate times. Afterwards the entries are compared to make sure they match, hereby decreasing error from data entry.

Statistical analysis

First, descriptive statistics are presented as percentage or median and range where appropriate. Second, differences between professions, religious affiliation and study centers were examined by using the Pearson X^2 test or Fisher's exact test when observed count < 10 or expected count < 5 or the Fisher-Freeman-Halton exact test (Monte Carlo simulation) when contingency tables were larger than 2x2. P< .05 was considered to be significant. The variables were dichotomized at the point most closely approximating 50% and the Pearson X^2 was used to examine their univariate associations with self-reported religiosity, self-reported spirituality, intrinsic religiosity and religious affiliation.

Missing data and items marked as "does not apply" were excluded from the analysis. Questionnaires with less than 50 percent of all questions answered were excluded from analysis.

The survey data were analysed using SPSS version 20, statistical computer package for Mac (SPSS inc. Chicago, Illinois)

Results

Recruitment and demographic features (section C of the questionnaire)

Recruitment

Of the 374 eligible participants, 296 medical professionals participated in this study (79% response rate). (Figure 1) Among these 296 professionals, 21 chose not to fill out the entire questionnaire. They used the abbreviated version of the questionnaire with the minimal set of six questions, which included basic demographic details and a request to specify the reason for non-participation in the full survey.

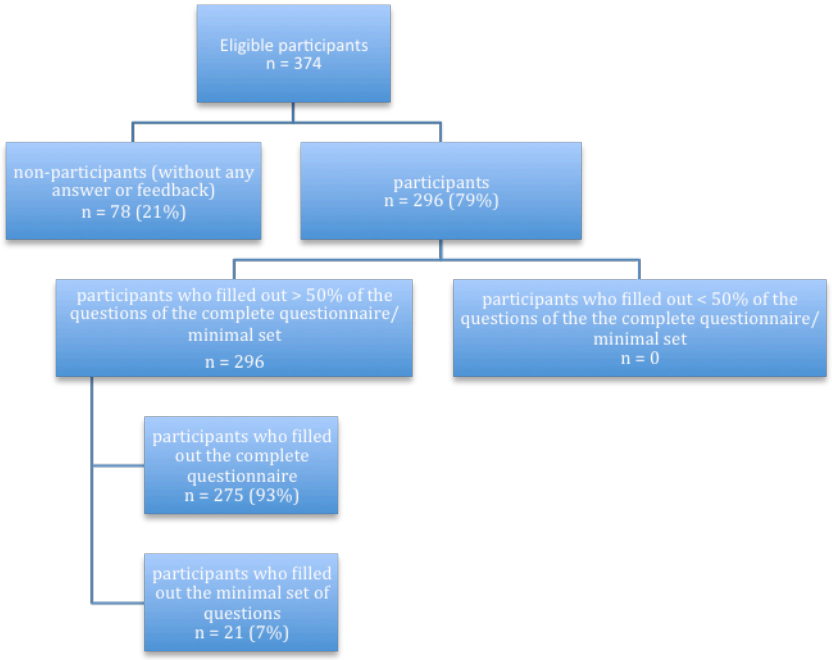

Figure 1: Recruitment profile of the entire study cohort.

All participants filled out more than 50% of the complete questionnaire or the minimal set of questions. (Figure 2) Therefore, none was excluded from analysis for missing a majority of data.

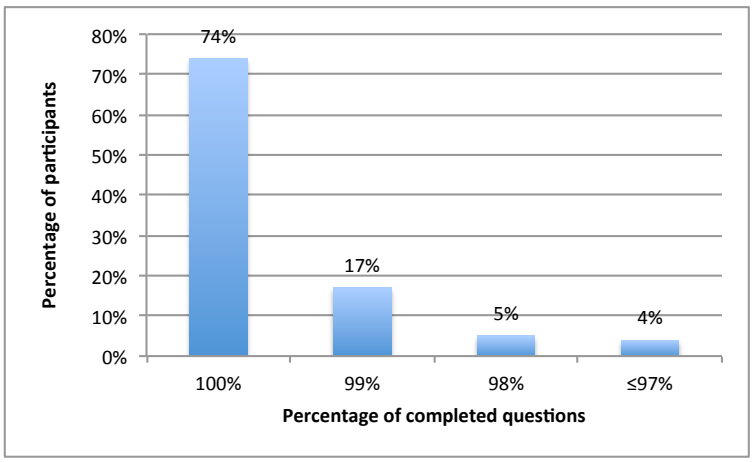

Figure 2: Percentage of active survey participants who completed 100%, 99%, 98% or ≤97% of the questions. (n=275)

Study centers

The study population consisted of medical professionals working in perinatal care centers level I or II. The survey strategy aimed at recruiting a spectrum of different perinatal care institutions with respect to the medical risk - level of the service, geographic location and academic and religious background. Logistic feasibility of the survey was an important aspect in the center recruitment process. Among the four recruited perinatal care centers, two are level I university centers, one level I center is in a catholic academic teaching hospital, and the remaining level II center is also affiliated with an academic teaching hospital. All recruited centers are in Bavaria except for one of the university centers, which is located in the former East Germany.

The study centers received an internal ID code, generated by a random coding system using capitals Q, L, B and C.

Center Q provided 122 questionnaires from 122 eligible participants (41% all returned questionnaires from the total cohort), center L collected 80 questionnaires from 149 eligible participants (27% all returned questionnaires from the total cohort), center B returned 70 questionnaires of 70 eligible participants (24% of all returned questionnaires from the total cohort) and center C provided 24 questionnaires of 33 eligible participants (8% of all returned questionnaires from the total cohort). (Figure 3)

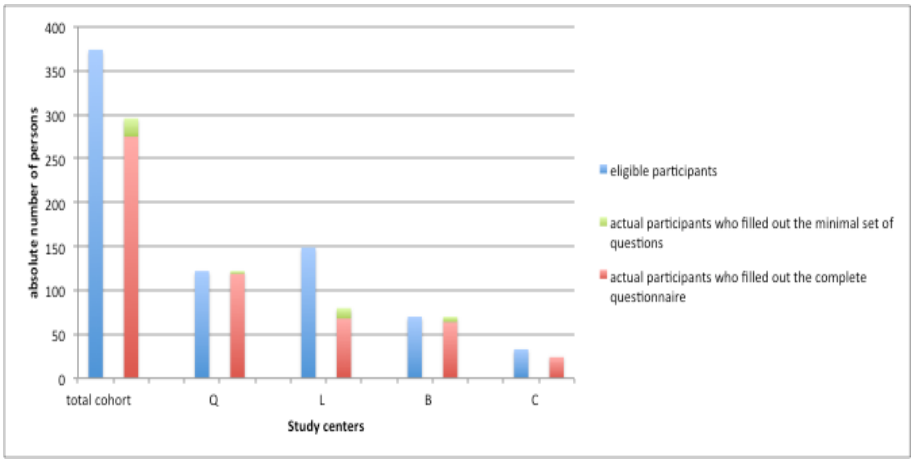

Figure 3: Number of eligible study participants (n=374) and number of returned questionnaires (n= 296).

Table 2 shows an overview of the characteristics of the study centers.

Table 2: Study center characteristics including level of perinatal service, academic background, religious affiliation, location in Germany (former East or West), recruitment rate.

	Q	L	B	C
Level of perinatal service	I	I	I	II
Academic background	University hospital	University hospital	Academic teaching hospital	Academic teaching hospital
Religious affiliation	–	–	✓	–
Location West/East	West	East	West	West
Recruitment rate	100%	54%	100%	73%

The answers of the subgroup of participants who filled out the minimal set of questions are presented at page 47. The following paragraphs show the results of the "active survey participants". "Active survey participants" are those who filled out the complete, i.e. the full version of the questionnaire (n=275).

Participants

Table 3 shows the demographic features of those who filled out the complete questionnaire. Appendix 1 lists the respective original questions in the questionnaire.

Table 3: Demographic characteristics of the subset of participants who filled out the complete questionnaire (n = 275)

		n	%
Study center	Q	119	43%
	L	68	25%
	B	64	23%
	C	24	9%
Nationality	German	258	94%
	Other	17	6%
Age (years)		36*	(23-64)**
Gender	Male	46	17%
	Female	229	83%
Profession	Midwive	45	16%
	Nurse	121	44%
	Physician	109	40%
Religious affiliation	None	83	30%
	Roman Catholic	130	47%
	Protestant	50	18%
	Muslim	2	1%
	Other	10	4%

*median
**range

The entire cohort comprised 275 active survey participants. These professionals included 45 midwives (16%), 121 neonatal intensive care nurses (44%) and 109 physicians (neonatologists, obstetricians) (40%). (Figure 4)

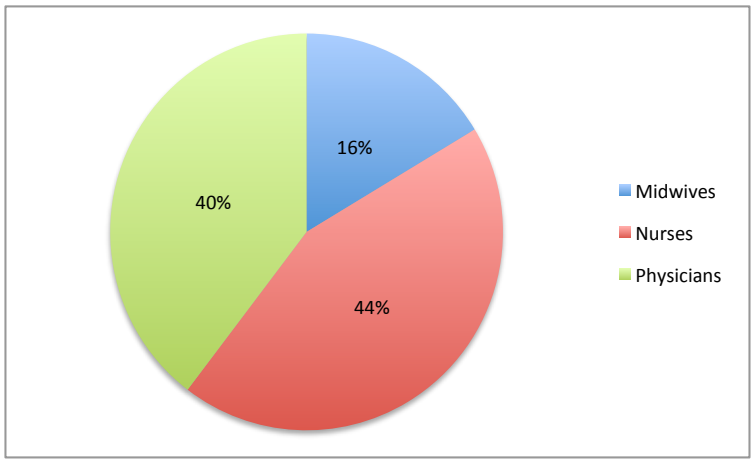

Figure 4: Professions of the 275 active survey participants.

Each center contributed similar percentages of participants from the three professions. (Figure 5)

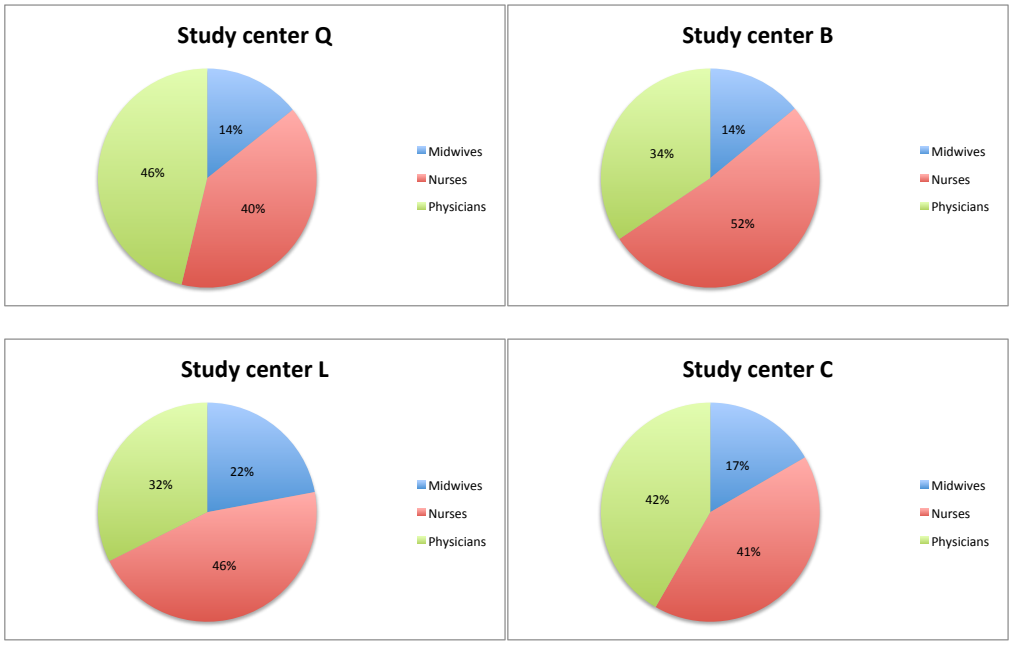

Figure 5: Representation of the different professions in the four study centers.

The majority of the participants were female (n= 229, 83%) mainly due to female predominance in nursing and obstetrics. (Figure 6) Conversely, 90% of the male participants (n= 46) were physicians. The median age of all participants was 36 years (minimum 23, maximum 64, between center - range 41). (Figure 7)

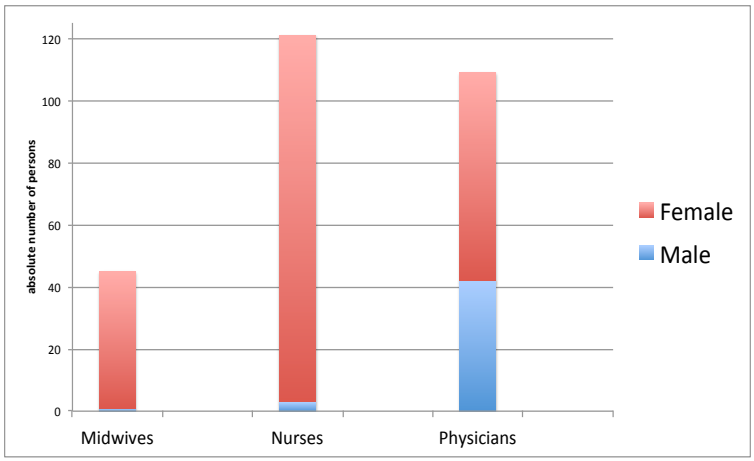

Figure 6: Gender differences between the professions of the active survey participants (n=275).

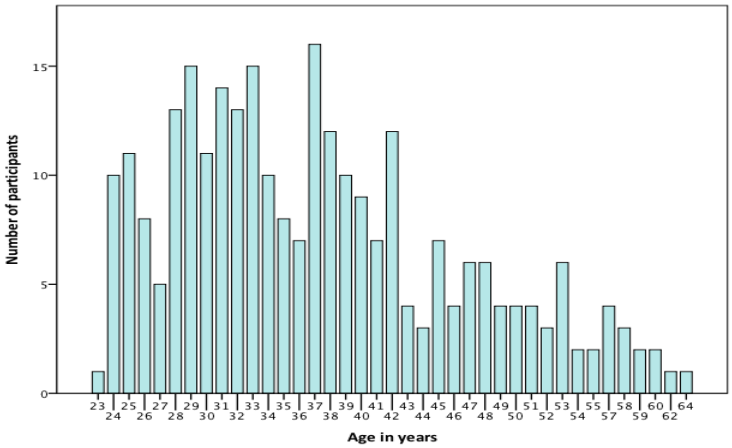

Figure 7: Age in years of active survey participants. (n=275)

Nationality

94% of the participants were German. Table 4 shows the number of participants from other nationalities. The percentage of foreign participants differed among study centers; however, these differences were not statistically significant (NS). These differences might be related to the geographic location of hospitals (proximity to foreign border) or historical developments (East vs. West Germany). The participants with a foreign nationality were mainly physicians (65%).

Table 4: The nationalities of the active survey participants who were not German (n=16).

	n	%
Bosnia	1	6
Hungary	1	6
Luxembourg	1	6
Austria	9	58
Rumania	2	12
Singapore	1	6
Switzerland	1	6
Total	16	

The majority of the participants lived in Bavaria (74%, Saxony: 24%, other German regions: 1%). (Table 5) Participants' places of birth were scattered across almost every region of Germany. Figure 8 shows that almost 50% of the participants who lives in Bavaria were born elsewhere, representing every other region of Germany. In Saxony, the far majority of the participants were born in Saxony, those who were born elsewhere came from eight other regions of Germany.

Table 5: Places of current residence and birth regions of the active survey participants (n=275)

	place of residence (n)	place of birth (n)
Baden-Württemberg	3	27
Bavaria	203	112
former Berlin-West	1	2
Hamburg		1
Hessen		3
Lower Saxony		8
North Rhine-Westphalia		17
Rhineland-Pfalz		7
Saarland		2
Schleswig-Holstein		1
former Berlin-Ost		2
Brandenburg		2
Mecklenburg -Vorpommern		1
Saxony	68	57
Saxony-Anhalt		6
Thuringia		7
abroad		20
Total	275	275

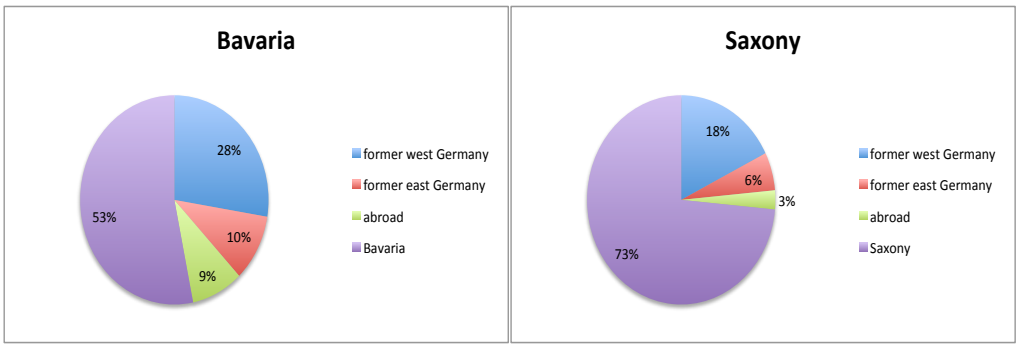

Figure 8: Left: participants' place of birth of those who live in Bavaria (n=203). Right: participants' place of birth of those who live in Saxony. (n=68). [1]

[1] Former west Germany regions: Baden-Würrtemberg, Bavaria, former Berlin west, Ham burg, Hessen, Nordrhein-Westfalen, Rheinland-Pfalz, Saarland, Schleswig-Holstein. Former east Germany regions: Mecklenburg-Vorpommern, Brandenburg, Saxony, Saxony –Anhalt, Thuringia and former Berlin east.

Religious affiliation

The following two questions were asked in terms of religious affiliation: "What is your religious affiliation?" and "Is your current religious affiliation the same as the one in which you grew up?". Among all the participants, 30% said to have no religious affiliation, 47% reported to be Roman Catholic, 18% Protestant, 1% Muslim and 4% indicated other religious affiliations. Compared to the concurrent religious affiliation, the affiliation one grew up in did not differ much: 23% no religious affiliation, 48% Roman Catholic, 25% Protestant, 1% Muslim and 3% other religious affiliations. (Table 6) The main change of religious affiliation was seen among Protestants. 17 participants (25%) who grew up as protestant changed their religious affiliation. Of these 17 individuals, 15 (88%) reported to have left their church. One participant became Roman Catholic and one participant joined another religious affiliation not otherwise specified. Among Roman Catholics only 7 participants (5%) changed their religious affiliation between adolescence and present time. One participant became a protestant and six others left the church without joining another affiliation.

Table 6 : Religious affiliation during childhood and presently of the active survey participants (n=275). The table shows absolute numbers and percentages between brackets.

What is your religious affiliation….	now?	as you grew up?	
None	83 (30%)	62 (23%)	
Roman Catholic	130 (47%)	133 (48%)	
Protestant	50 (18%)	67 (25%)	
Muslim	2 (1%)	2 (1%)	
Other	10 (4%)	11 (3%)	
Total	275	275	

Figure 9 shows the religious affiliations of the participants from the different study centers. There are major differences between participants from different study centers. For example, in study center B the participants who report to be Roman Catholic are overrepresented compared with the other study centers.

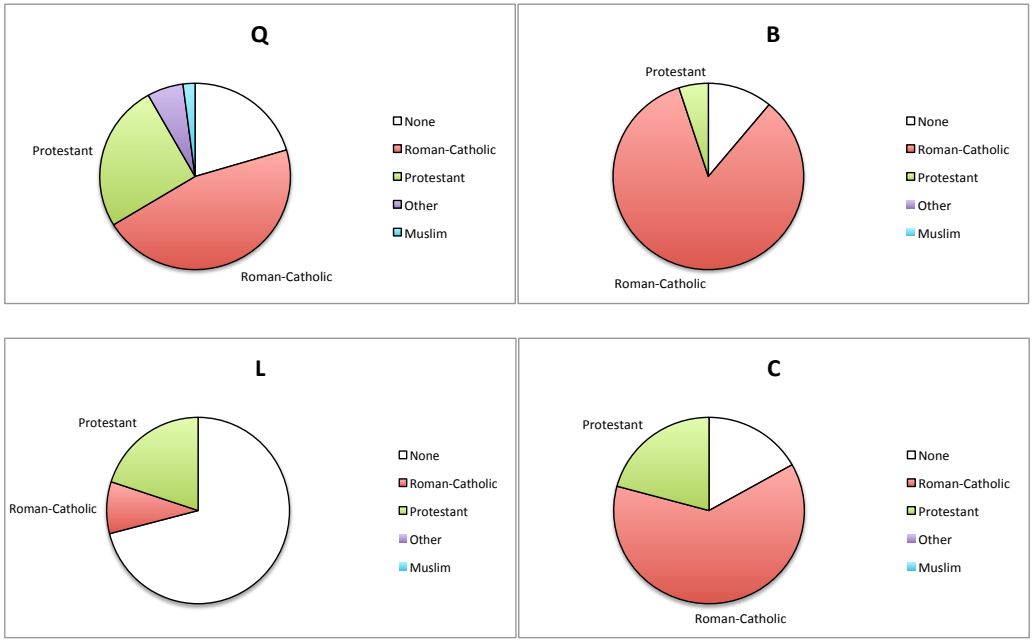

Figure 9: Religious affiliation of active survey participants in the 4 centers: Q, B, L, C.

Comparing religious affiliation among different professions, more physicians reported to be Protestant that expected, as opposed to midwives and nurses, who more often than expected, reported to have no religious affiliation (NS). (Table 7)

Table 7: Religious affiliation and characteristics of the active survey participants (n=275).

	None	Roman-Catholic	Protestant	Muslim	Other
Germany	30%	30%	29%	5%	6%
Active survey participants					
Current religious affiliation	30%	47%	18%	1%	4%
Religious affiliation in which one grew up	23%	48%	24%	1%	4%
Study centers					
Q	19% (23)	46% (55)	24% (29)	2% (2)	9% (10)
L	72% (49)	9% (6)	19% (13)	0	0
B	11% (7)	84% (54)	5% (3)	0	0
C	17% (4)	62% (15)	21% (5)	0	0
Profession					
Midwive	36% (16)	51% (23)	11% (5)	2% (1)	0
Nurse	38% (46)	48% (58)	10% (12)	4% (5)	0
Physician	19% (21)	45% (49)	30% (33)	4% (4)	2% (2)

Personal situation

Participants were asked to evaluate/rate their personal situation: *"If you were to consider*

More than 90% considered themselves as “very happy” or “fairly happy”. To evaluate personal health participants were asked ‘In general, would you say your own health is; excellent, good, fair, poor or bad?’ Personal health was considered “excellent” or “good” by 83% (23% and 47% respectively). Satisfaction with work was rated as “very satisfied” or “moderately satisfied” by 90% of the participants (36% and 47% respectively).

Personal religious and spiritual characteristics (section B of the questionnaire)

To gain insight in the personal religious and spiritual characteristics of participants a set of 13 items regarding personal values and beliefs were evaluated. For every item possible differences between professions, study centers and religious affiliation were calculated; only statistical significant differences are mentioned.

Religiosity and Spirituality

Religiosity and spirituality were measured in three different ways: self-reported religiosity, self-reported spirituality and intrinsic religiosity.

To evaluate self-reported religiosity and self-reported spirituality, the following two questions were asked: “*To what extent do you consider yourself a religious person?”* and *“To what extent do you consider yourself a spiritual person?”*

Intrinsic religiosity was measured as agreement or disagreement with two statements; “*I try hard to carry my religious beliefs over into all my other dealings of life.” and “My whole approach of life is based on my religion.”*

Self-reported religiosity and self-reported spirituality

Among the participants, 10% (n=26) reported to be very religious and 16% (n=43) to be very spiritual, 47% (n=128) reported to be moderately religious and 46% (n=127) moderately spiritual, 21% (n=58) slightly religious and 26% (n=71) slightly spiritual and 22% (n=61) reported to be not religious at all and 12% (n=33) not spiritual at all. (Figure 10)

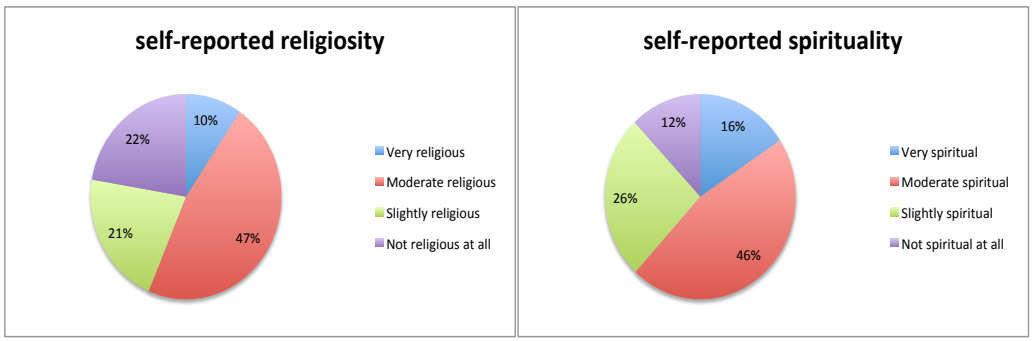

Figure 10: Self-reported religiosity and spirituality by active survey participants (n=273)

Physicians were more likely to report to be “very religious” or “moderately religious” compared to nurses. (p=0.04) Participants who report to have a religious affiliation are more likely to report to be “very religious” or “moderately religious” than participants without a religious affiliation. (p=0.001) (Table 8)

Table 8: Self-reported religiosity and self-reported spirituality and religious affiliation, study center and profession of the active survey participants (n=273).

	Very		Moderately		Slightly		Not at all	
	religious	spiritual	religious	spiritual	religious	spiritual	religious	spiritual
Whole study group	10% (26)	16% (43)	47% (128)	46% (126)	21% (58)	26% (71)	22% (61)	12% (33)
Religious affiliation: yes	13% (25)	18% (35)	62% (117)	54% (103)	21% (39)	22% (42)	5% (9)	5% (10)
Religious affiliation: no	1% (1)	10% (8)	13% (11)	28% (23)	23% (19)	35% (29)	63% (52)	28% (23)
Study centers								
Q	8% (9)	14% (17)	54% (64)	50% (60)	23% (27)	27% (32)	16% (19)	8% (10)
L	6% (4)	9% (6)	24% (16)	34% (23)	21% (14)	34% (23)	50% (34)	24% (16)
B	16% (10)	23% (14)	56% (35)	52% (32)	16% (10)	16% (10)	4% (7)	10% (6)
C	12% (3)	25% (6)	54% (13)	46% (11)	29% (7)	25% (6)	4% (1)	4% (1)
Profession								
Midwive	11% (5)	18% (8)	36% (16)	45% (20)	23% (10)	20% (9)	30% (13)	16% (7)
Nurse	8% (10)	8% (10)	43% (52)	47% (56)	20% (24)	30% (36)	28% (34)	15% (18)
Physician	10% (11)	23% (25)	55% (60)	46% (50)	22% (24)	24% (26)	13% (14)	7% (8)

There are differences between study centers concerning self-reported religiosity. Among the medical professionals working in study center B, 72% report to be either “very religious” (16%) or “moderately religious” (56%), whereas in study center L 30% reports to be “very religious” (6%) or “moderately religious” (24%). A similar pattern was seen with respect to self-reported spirituality. (Figure 11)

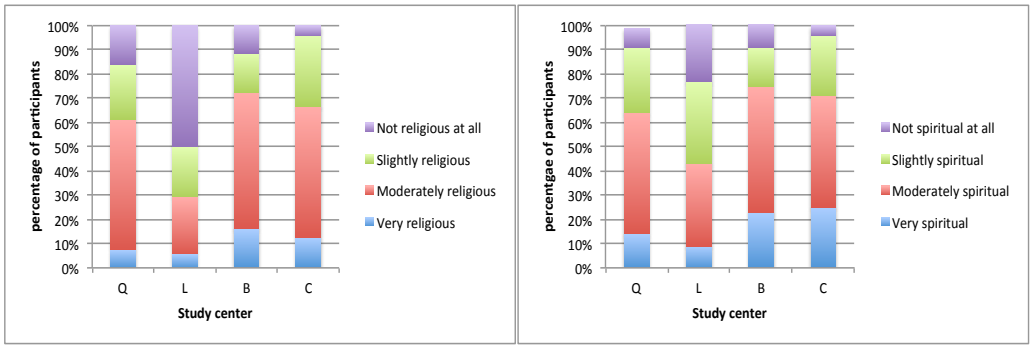

Figure 11: Self-reported religiosity and self-reported spirituality of active survey participants comparing the 4 study centers (n=273, 2 participants did not answer these questions).

Correlation religiosity and spirituality

In the following text, self-reported religiosity and self-reported spirituality are reduced from four categories to three categories. Self-reported religiosity and self-reported spirituality are categorized high if the participant answered “very religious”, moderate if the participant answered “moderately religious” and low if the participant answered “slightly” or “not at all religious”.[24] This modification is described by Curlin et al. and simplifies comparison with intrinsic religiosity.

The religiosity and spirituality constructs are interrelated according to the answers of the survey participants (Table 9 and Figure 11)

Table 9: Self-reported religiosity and self-reported spirituality of the active survey participants. (n=273)

	High spirituality	Moderate spirituality	Low spirituality
High religiosity	5% (15)	3% (9)	1% (2)
Moderate religiosity	7% (20)	31% (84)	9% (24)
Low religiosity	3% (8)	12% (33)	28% (78)

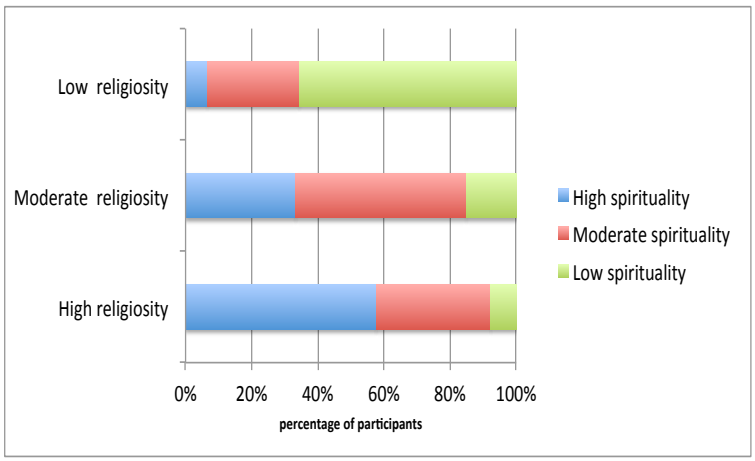

Figure 12: Overlap between self-reported religiosity and self-reported spirituality in percentages. (n=273)

To evaluate the relationship between self-reported religiosity (high, moderate, low) and self-reported spirituality a Spearman Rho correlation coefficient was performed. There was a strong positive correlation between the two variables, r .52, n=275, p < .01 with high self-reported religiosity associated with high self-reported spirituality.

Intrinsic religiosity

To measure intrinsic religiosity two statements were used: "I try hard to carry my religious beliefs over into all my everyday life." and "My whole approach of life is based on my religion." The majority (66%, n=183) of the participants disagreed with both statements, 67% (n=185) of the participants disagreed with the former statement, 88%(n=243) disagreed with the latter. Intrinsic religiosity did not differ significantly by study center or profession. Participants with a religious affiliation are more likely to have a high or moderate intrinsic religiosity than those without a religious affiliation (NS). (Table 10)

Table 10: Intrinsic religiosity and religious affiliation, study center and profession of the active survey participants (n=273).

	High intrinsic religiosity	Moderate intrinsic religiosity	Low intrinsic religiosity
Whole study group	10% (28)	23% (62)	67% (183)
Religious affiliation: yes	13% (25)	28% (53)	59% (114)
Religious affiliation: no	4% (3)	11% (9)	85% (69)
Study centers			
Q	8% (10)	24% (28)	68% (81)
L	6% (4)	19% (13)	75% (50)
B	16% (10)	28% (18)	56% (36)
C	17% (4)	13% (3)	70% (16)
Profession			
Midwive	16% (7)	24% (11)	60% (27)
Nurse	8% (10)	17% (20)	75% (89)
Physician	10% (11)	29% (31)	61% (67)

Correlation Intrinsic religiosity and self-reported spirituality

Intrinsic religiosity and spirituality might be related concepts as well. 7% of the participants

moderate intrinsic religiosity and were moderately spiritual and 33% had a low intrinsic religiosity and were low spiritual. (Table 11 and Figure 13)

Table 11: Intrinsic religiosity and self-reported spirituality of the active survey participants. (n=271)

	High spirituality	Moderate spirituality	Low spirituality
High intrinsic religiosity	7% (17)	2% (6)	1% (4)
Moderate intrinsic religiosity	6% (14)	14% (39)	3% (9)
Low intrinsic religiosity	4% (12)	30% (81)	33% (89)

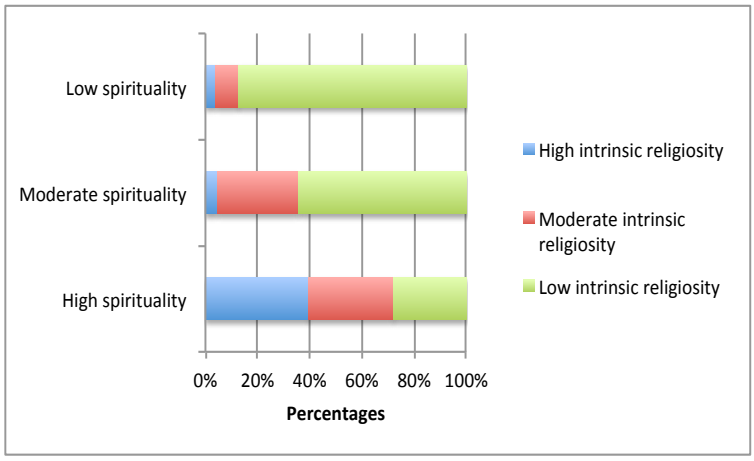

Figure 13: Overlap between intrinsic religiosity and self-reported spirituality in percentages. (n=271)

To evaluate the relationship between intrinsic religiosity (high, moderate, low) and self-reported spirituality a Spearman Rho correlation coefficient was performed as well. There was a medium positive correlation between the two variables, r .42, n=273, $p < .01$ with high intrinsic religiosity associated with high self-reported spirituality.

Practice of faith

Participants were asked to report their attendance of religious services: "*How often do you currently attend religious services?*" and "*How often did you attend religious services when you grew up*?". The results are shown in Table 12.

Table 12: Religious service attendance of active survey participants in the current and the past.

	current	past
Never	19% (51)	12% (32)
Less than once a month	11% (31)	7% (18)
About once a year	32% (87)	12% (33)
Several times a year	23% (64)	18% (50)
About once a month	7% (19)	8% (21)
Two or three times a month	4% (11)	9% (24)
Nearly every week	3% (7)	17% (47)
Every week	1% (2)	16% (44)
Several times a week	1% (2)	2% (4)
Total	274	273

Private religious practice was obtained by questions concerning praying and meditation: "*How often do you pray?*" and "*How often do you meditate?*" (Table 13). Participants report to pray more often than they meditate. Figure 14 shows the differences between participants of different study centers.

Table 13: Frequency of prayer (n=274) and meditation (n=265) by active survey participants.

	Praying	Meditation
Never	28% (76)	59% (163)
Less than once a year	5% (15)	10% (28)
About once or twice a year	11% (29)	7% (20)
Several times a year	20% (55)	8% (23)
About once a month	4% (11)	3% (7)
Two or three times a month	5% (15)	3% (7)
Nearly every week	4% (10)	3% (7)
Every week	3% (8)	2% (5)
Several times a week	10% (28)	1% (3)
Once a day	4% (12)	1% (2)
Several times a day	5% (15)	0
Total	274	265

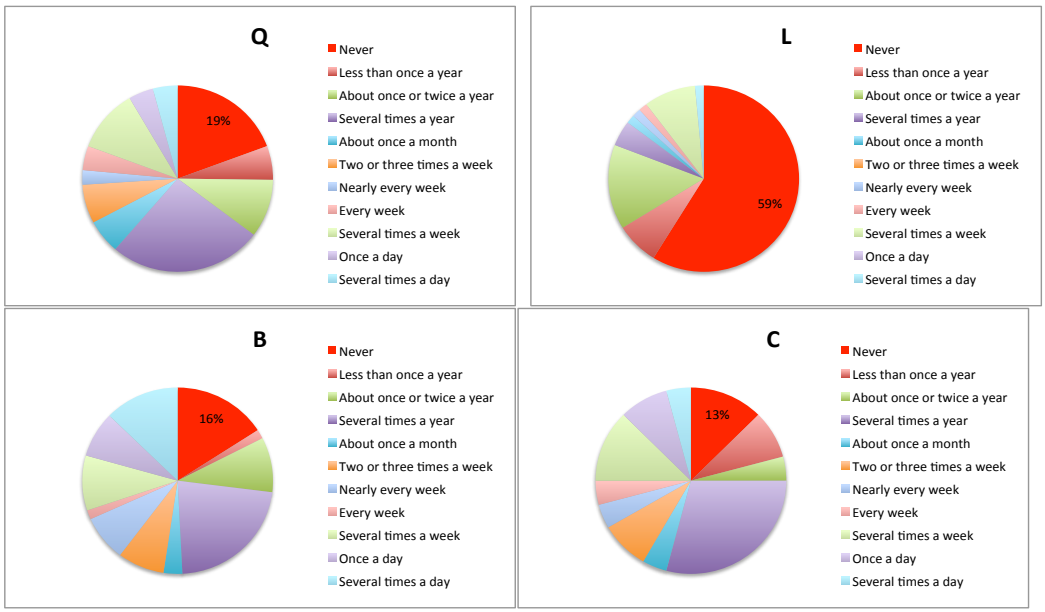

Figure 14 : Differences between frequency of prayer of active survey participants of the four study centers Q, L, B, C . (n=274)

Faith was evaluated by the questions: *"Do you believe in god?"* and *"Do you believe in a life after death? "*. More than half of the participants believe in God (58%, n=158), 17% (n=46) of the participants were undecided. (Figure 15)

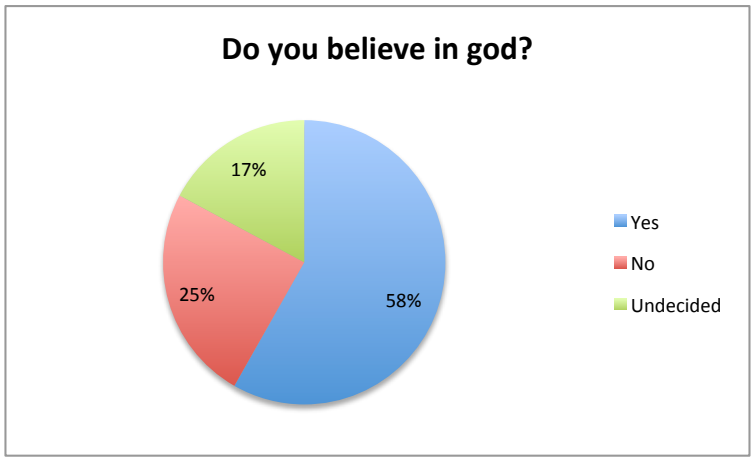

Figure 15: Percentage of active survey participants who stated that they "believe in God". (n=273)

Participants of study center Q were more likely to believe in god compared to the participants of study center L. ($p < 0.001$). (Figure 16)

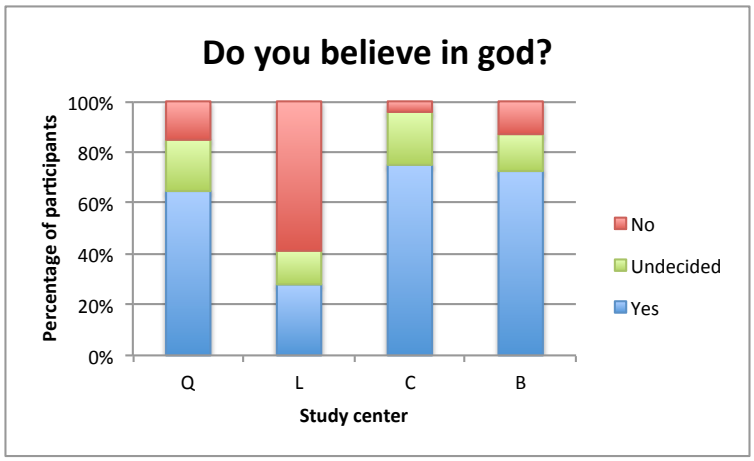

Figure 16: Percentage of active survey participants of the four different study centers Q (n=119), L (n=68), B (n=62), C (n=62). (total n =273)

Approximately 40% (n=117) of the participants confirm to believe in a life after death, 27% (n=74) of the participants were undecided. (Figure 17) Participants without a religious affiliation reported more often not to believe in a life after death than those with a religious affiliation. ($p<0.001$)

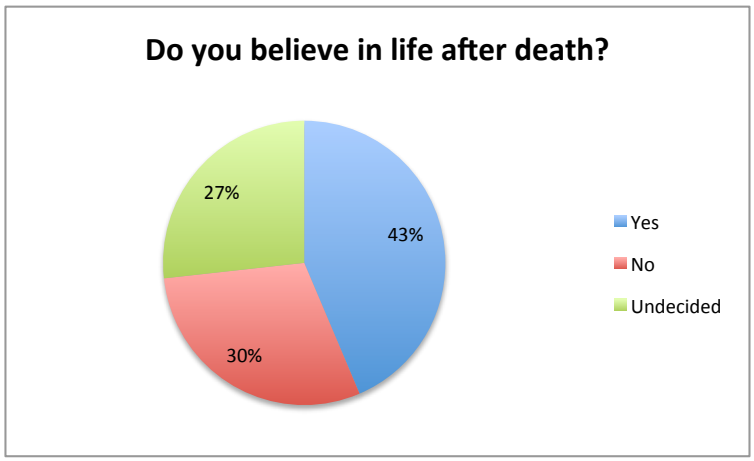

Figure 17: Percentages of participants who believe in life after death. (n= 273)

Religious coping, meaning-making and locus of control

Coping strategies are used to understand and deal with major problems in life. "God" may play a role in these coping strategies. To evaluate this role of God the following two statements were propound: "*I try to make sense of the situation and decide what to do without relying on God"* and *"I look to God for strength, support and guidance."* The results are shown in Table 4. 74% of the of the participants agreed with the statement "*I try to make sense of the situation and decide what to do without relying on God"* and 47% of the participants agreed with the statement *"I look to God for strength, support and guidance."*

Table 14: Percentage of active survey participants who agreed on the following statements: "I try to make sense of the situation and decide what to do without relying on God" (n=271) and "I look to God for strength, support and guidance." (n=273)

	Strongly agree	Agree	Disagree	Strongly disagree
I try to make sense of the situation and decide what to do without relying on god. (n=271)	26% (72)	48% (132)	19% (52)	6% (17)
I look to god for strength, support and guidance. (n= 273)	11% (30)	36% (99)	32% (88)	19% (52)

Participants with a religious affiliation agreed more frequently with the statement "I look to god for strength, support and guidance" compared to those without a religious affiliation. ($p<0.001$)

Meaning making is trying to understand a situation in a distinctive way and reassessing one's beliefs and ambitions, hereby regaining new consistency among them.[84,85] Three statements evaluated the meaning-making; results are shown in Table 15.

Table 15: Percentage of active survey participants who agreed on the following statements: "There is a god who concerns himself with every human being personally." (n=273) and "To me, life is meaningful only because god exists." (n=272) and " I have my own way of connecting with god without churches or religious services." (n=273).

	Strongly agree	Agree	Disagree	Strongly disagree
There is a God who concerns Himself with every human being personally. (n= 273)	15% (41)	28% (77)	18% (50)	18% (50)
To me, life is meaningful only because God exists. (n= 272)	5% (14)	8% (22)	39% (107)	42% (116)
I have my own way of connecting with God without churches or religious services. (n= 273)	12% (33)	42% (116)	24% (66)	15% (41)

The statements shown in Table 16 evaluate the locus of control**.** Persons who consider themselves as the primary causal representative that controls his or her life and the circumstances around it have an internal locus of control. When someone beliefs that the primary causal representative that controls his or her life is located outside oneself (powerful forces, fate or other persons) his or her locus of control is external. [86]

Table 16: Percentage of active survey participants who agreed on the following statements: "There is little people can do to change the course of their lives." (n=274) and "In my opinion life does not serve any purpose." (n=273) and "Life is only meaningful if you provide the meaning yourself." (n=275).

	Strongly agree	Agree	Disagree	Strongly disagree	Undecided
There is little people can do to change the course of their lives. (n= 273)	2% (5)	7% (19)	48% (132)	41% (113)	2% (5)
In my opinion life does not serve any purpose. (n= 272)	1% (3)	5% (14)	32% (88)	55% (151)	6% (17)
Life is only meaningful if you provide the meaning yourself. (n= 273)	27% (74)	46% (127)	17% (47)	6% (17)	4% (10)

Only 10% of the participants agreed with the following statement: *"There is little people can do to change the course of their lives."*

Less than 10% of the participants agreed with the statement: *"In my opinion life does not serve any purpose."* and 73% of the participants agreed with statement: *"Life is only meaningful if you provide the meaning yourself."*

Faith and daily clinical practice

Participants were asked whether they had ever had a religious or spiritual experience that changed their life. Over 35% (n=95) of the participants had ever had a religious or spiritual experience that changed their life, 30% (n=29) of these participants experienced this in the context of practicing medicine. Participants with a religious affiliation were more likely to report a religious or spiritual experience ($p=0.001$). In study center L participants were less

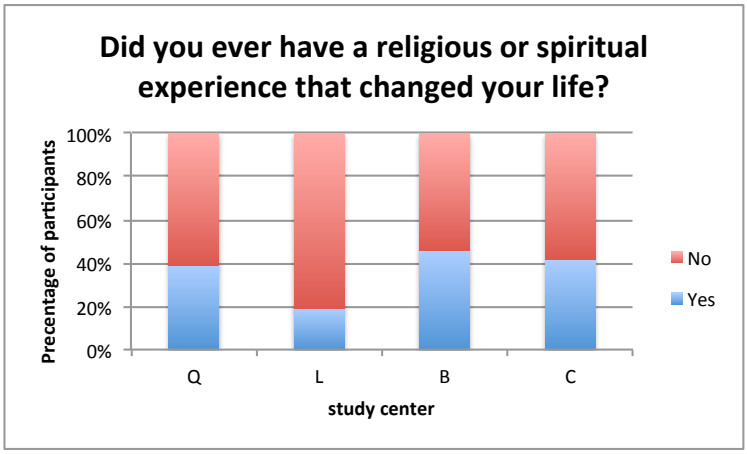

Figure 18: Percentage of active survey participants of the four study centers Q, L, B,C who reported to have =ever had e religious or spiritual experience that changed their lives. (n=272)

To evaluate the role of faith in daily clinical practice four statements were propound as shown in Table 17. Approximately 75% of the participants agreed with the statement: "*For me, the practice of medicine is a calling."* and 35% of the participants agreed with the statement: *"My religious beliefs influence my practice of medicine."* Around 20% of the participants agreed with the statement: *"My experiences as a medical professional have caused me to question my beliefs."* Only 22% of the participants agreed with the statement: "*I find it challenging to remain faithful to my religion in my work as a physician."*

Table 17: Percentage of active survey participants who agreed on the following statements: "For me, the practice of medicine is a calling." and "My religious beliefs influence my practice of medicine." and "I find it challenging to remain faithful to my religion in my work as a physician." and "My experiences as a medical professional have caused me to question my beliefs." (n=275).

	Strongly agree	Agree	Disagree	Strongly disagree
For me, the practice of medicine is a calling. (n=275)	28% (20)	48% (132)	22% (61)	1% (3)
My religious beliefs influence my practice of medicine. (n=275)	6% (17)	29% (80)	43% (118)	23% (63)
I find it challenging to remain faithful to my religion in my work as a physician. (n=275)	3% (8)	19% (52)	52% (143)	26% (72)
My experiences as a medical professional have caused me to question my beliefs. (n=275)	2% (5)	16% (44)	49% (133)	32% (87)

The role of faith and compassion in life

To evaluate the role of faith and compassion in life, the following two statements were propound; "*I feel a deep sense of responsibility for reducing pain and suffering in the world."* and "*The family in which I was raised emphasized the importance of serving those with fewer resources*. " 69% (n=190) of the participants agreed with the statement: "*I feel a deep sense of responsibility for reducing pain and suffering in the world."* 66% (n= 182) of the participants agreed with the statement: "*The family in which I was raised emphasized the importance of serving those with fewer resources."*

Physicians agreed more frequently with both statements compared to nurses (p=0.004) and midwives (p=0.04). Participants with a religious affiliation agreed more frequently with both statements than those without a religious affiliation. (p=0.02)

Perspectives on Religion/Spirituality and health (section A of the questionnaire)

Section A evaluates the personal perspective of medical professionals on religion/spirituality and health. The questions in this part of the questionnaire refer to patients or patients' parents or families. For the sake of readability the term patient is used as synonym for patients, patients' parents and patients' families in this section of the results. For example, a question concerning discussing R/S issues with patients; the patient can be the pregnant woman or the parents or family of the newborn depending on the context of the question.

Relation between R/S and health

Three questions evaluate the perspective of medical professionals on the relation between R/S and health: "*Overall, how much influence do you think R/S has on patients' or on patients' families health?* ", "*Is the influence of R/S on health generally positive or negative?*" and "*Do you think God or another supernatural being ever intervenes in patients' or patients' families health?".*

61% (n= 168) of the participants say that R/S has "much" or "very much" influence on patients' or on patients' families health, whereas only 2% (n=6) of the participants think that R/S has "little" to "no influence".

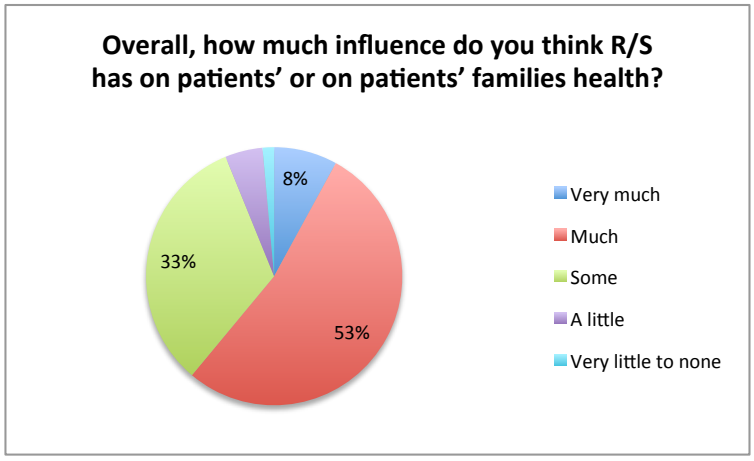

Figure 19: Percentage of active survey participants who completed the question: "Overall, how much influence do you think R/S has on patients' or on patients' families health?". (n=275)

Whether this influence is regarded as generally positive or negative varies among participants: 40% (n=110) consider this influence as generally positive, whereas 56% (n=154) of the participants are ambivalent (could be positive or negative). The opinion on whether God or another supernatural being ever intervenes in patients' health was different among the participants, 34% said yes, 36% said no and 29% was undecided. (Figure 20)

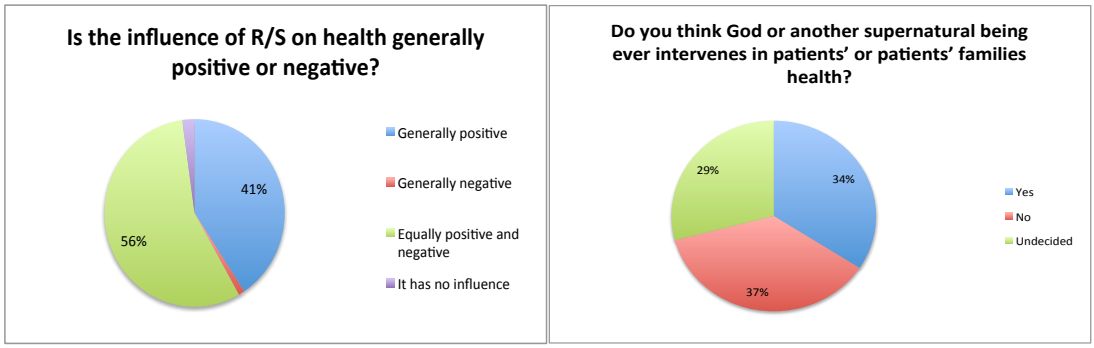

Figure 20: Percentage of active survey participants who completed the questions: "Is the influence of R/S on health generally positive or negative?" and "Do you think God or another supernatural being ever intervenes in patients' or patients' families health?". (n=275)

Compared to participants from the other study centers, participants of study center L more frequently did not think that God or another supernatural being ever intervenes in patients' health. (p=0.002) (Figure 21)

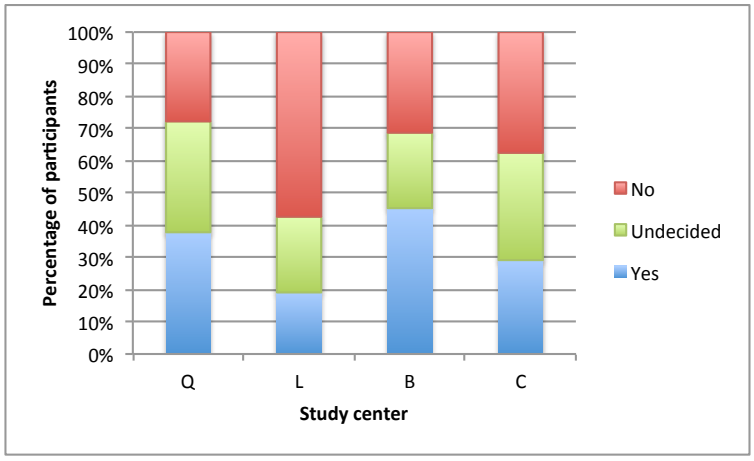

Figure 21: Percentage of active survey participants of the four study centers, Q, L, B, C who answered the question: "Do you think God or another supernatural being ever intervenes in patients' or patients' families health?" (n=275)

How to deal with R/S in daily clinical practice

Two questions evaluated the appropriateness of discussing R/S issues with patients: "*In general, is it appropriate or inappropriate for a physician to discuss R/S issues when a patient or patients' parents brings them up?*" and "*In general, is it appropriate or inappropriate for a physician to inquire about a patients' or patients' parents R/S?* ". Almost all medical professional (98%, n= 270) reported to find it "always" or "usually appropriate" to discuss R/S issues with a patients when the patient brings these issues up. Still the majority (69%, n=190) of the participants think it is appropriate to discuss R/S issues even when the medical professional actively inquires about it. (Figure 22)

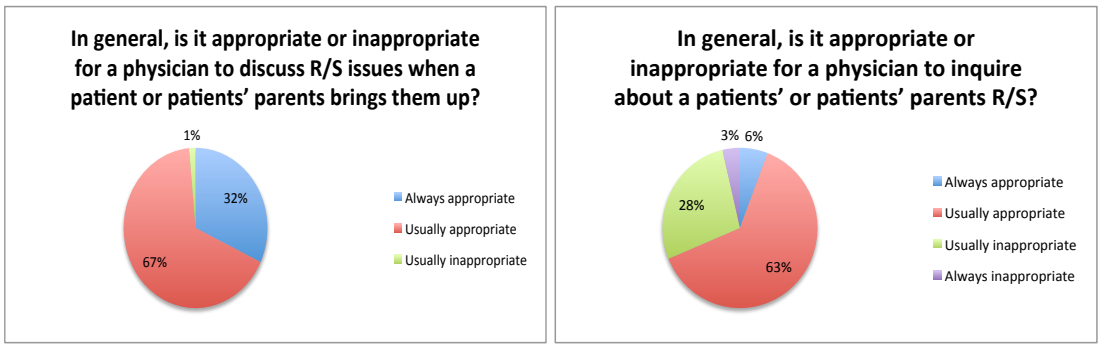

Figure 22: Percentage of active survey participants who answered the questions on appropriatness of discussing R/S with patients. (n=275)

The majority of the participants of center C thought it to be inappropriate for a physician to inquire about a patients' R/S whereas in the other study centers the majority of the participants thought it to be appropriate to inquire. (p=0.03) (Figure 23)

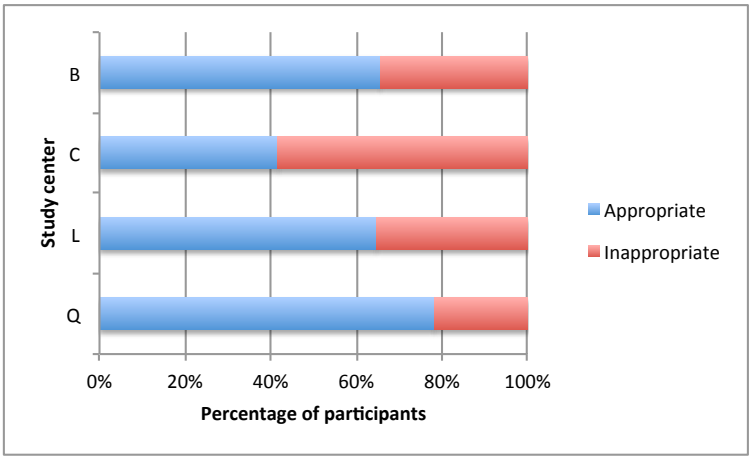

Figure 23: Percentage of active survey participants of the four different study center Q, L, B.C who completed the following question: "In general, is it appropriate or inappropriate for a physician to inquire about a patients' or patients' parents R/S?". (n=275)

Inquire about R/S

To evaluate the behaviour and perspectives on inquiry about R/S issues participants were asked: "*Do you ever inquire about patients' or patients' parents R/S issues?" and "If yes, how often do you inquire?*". Subsequently the following statements were propound: "*I would feel comfortable discussing a patients' or patients' parents R/S concerns if the patients or patients' parents brought them up."* and *"I enjoy discussing R/S issues with patients or patients' parents."*

Approximately 50% (n= 141) of the participants ever inquire about R/S issues. If one inquires, 24% (n=73) does so rarely, 42% (n=62) sometimes, 7% (n=11) often and 1% (n=3) always. When a medical professional discusses R/S issues with patients, they report that patients never or rarely (94%) seem uncomfortable about it. Almost every participant (91%, n= 261) agreed with the statement *"I would feel comfortable discussing a patients' R/S concerns if the patients brought them up."* on the other hand 50% (n=141) agreed with the statement: *"I enjoy discussing R/S issues with patients."*

Participants with a religious affiliation were more likely to agree with the statement *"I enjoy discussing R/S issues with patients."* ($p<0.05$)

When medical professionals are asked how often they inquire about R/S issues in specific clinical situations they are more likely to discuss R/S issues when the nature of the clinical situation is severe, for example concerning frightening diagnosis, an ethical quandary or end of life situations. (Table 18)

Table 18: Percentage and absolute number of active survey participants who answered the questions on inquiry about R/S issues in specific clinical situations.

In the following clinical situations, how often do you inquire about R/S issues?	Never	Rarely	Sometimes	Often	Always
When a patient or a patients' parent comes for a history and physical. (n=273)	79% (216)	15% (41)	3% (8)	2% (5)	1% (3)
When a patient or a patients' parent presents with a minor illness or injury. (n=274)	92% (252)	7% (19)	0,4% (1)	-	-
When a patient or a patients' parent faces a frightening diagnosis or crisis. (n=274)	21% (58)	29% (79)	30% (82)	19% (52)	3% (8)
When a patient or a patients' parent faces end of life. (n=274)	9% (25)	12% (33)	18% (49)	36% (99)	25% (69)
When a patient or a patients' parent suffers from anxiety or depression.(n=272)	28% (76)	29% (79)	27% (73)	13% (35)	2% (5)
When a patient or a patients' parent faces an ethical quandary. (n=274)	18% (49)	20% (55)	32% (88)	23% (63)	8% (22)

Nurses were less likely to inquire about patients R/S issues than midwives or physicians. ($p=0.04$)

Participants were asked how they react in discussions with patients concerning R/S issues, as shown in Table 19.

Table 19: Percentage and absolute number of active survey participants who answered the questions on how they react in discussions with patients concerning R/S issues.

When R/S issues come up in discussions with patients or patients' parents, how often do you respond in the following ways?	Never	Rarely	Sometimes	Often	Always
I listen carefully and empathetically. (n=273)	2% (5)	1% (3)	7% (19)	44% (120)	46% (126)
I try to change the subject in a tactful way. (n=273)	40% (109)	37% (101)	18% (49)	4% (10)	1% (3)
I encourage patients in their own R/S beliefs and practices. (n=274)	7% (19)	12% (33)	30% (82)	37% (101)	14% (38)
I respectfully share my own religious ideas and experiences. (n=274)	29% (79)	40% (110)	23% (63)	6% (16)	2% (5)
I pray with the patient or patients' parents. (n=274)	48% (132)	38% (104)	10% (27)	2% (5)	2% (5)

When R/S issues come up in discussions with patients 90% (n=246) of the medical professionals say to listen carefully and empathetically, they are unlikely to change the subject (77%, n=211)). On the other hand, they are reserved when it comes to share their own religious ideas and experiences.

Praying and talking about personal religious beliefs

Participants were asked whether they find it appropriate to pray with patients and to talk about their own religious beliefs or experiences with patients. This was evaluated through the following two questions: "*When, if ever, is it appropriate for a medical professional to talk about his or her own religious beliefs or experiences with a patient?* (3 point scale; never, only when the patient or patients' parents asks, whenever the medical professional senses it would be appropriate)" and "*When, if ever, is it appropriate for a medical professional to pray with a patient or patients' parents; only when the patient or patients'*

general it is thought to be appropriate for medical professionals to talk about their own religious beliefs and pray with patients, yet the majority (69%, n=190) of the participants thinks this should be only when the patient actively inquires about this and 8% (n=22) of the participants said it is never appropriate. 74% of the participants find it appropriate to pray with patients when they ask, 10% of the participants said it is never appropriate to pray with patients.

Influence of R/S on patient treatment and behaviour?

The questions listed in Table 20 relate to the personal experience of medical professionals concerning the influence of R/S on patients' behaviour.

Table 20: Percentage and absolute number of active survey participants who answered the questions on how R/S influences patients' behaviour. (n=

In your experience, how often have your patients or patients' parents....	Never	Rarely	Sometimes	Often	Always
mentioned R/S issues like God, prayer, meditation, the Bible, etc.? (n=275)	6% (17)	63% (173)	28% (76)	3% (8)	0,4% (1)
received emotional or practical support from their religious community? (n=275)	5% (14)	25% (69)	50% (137)	19% (52)	1% (3)
used R/S as a reason to avoid taking responsibility for their own health or the health of their child? (n=275)	23% (63)	52% (141)	22% (60)	2% (5)	0,4% (1)

Table 21 shows statements concerning R/S and its influence on patients. The majority of the participants think that R/S helps patients to cope with and endure illness (61% often, 35% sometimes). R/S may give patients negative and positive emotions, the questions shown in Table 21 evaluate this influence. 56% of the participants think that R/S rarely causes negative emotions and 61% thinks that R/S often give patients a positive, hopeful state of mind. R/S rarely (according to 54% of the participants) leads patients to refuse, delay or stop medically indicated therapy. Considering R/S as a possible mechanism to prevent severe medical problems like respiratory problems, infections or death, the participants hold different views: 34% of the participants think it never prevents severe medical problems, whereas 41% think it rarely does so and 21% believe that R/S sometimes prevents severe medical problems. Almost half of the participants believe that the experience of illness increases patients' awareness of and focus on R/S.

Table 21: Percentage and absolute number of participants who answered the following questions on the influence of R/S on illness.

Considering your experience, how often do you think R/S....	Never	Rarely	Sometimes	Often	Always
helps patients or patients' parents to cope with and endure illness and suffering? (n=274)	0,4% (1)	3% (8)	35% (96)	61% (167)	2% (5)
causes guilt, anxiety, or other negative emotions that lead to increased suffering? (n=274)	12% (33)	56% (154)	30% (82)	2% (5)	0,4% (1)
gives patients or patients' parents a positive, hopeful state of mind? (n=274)	0	3% (8)	36% (99)	61% (167)	0,4% (1)
leads patients or patients' parents to refuse, delay, or stop medically indicated therapy? (n=272)	5% (14)	54% (141)	36% (98)	5% (14)	-
helps to prevent severe medical problems like respiratory problems, infections or death? (n=271)	34% (92)	41% (114)	21% (57)	3% (8)	-
How often would you say that the experience of illness increases patients' or patients' parent's awareness of and focus on R/S? (n=274)	1% (3)	10% (27)	46% (134)	42% (115)	1% (3)

Reasons for not discussing R/S issues with patients

Almost 50% (n= 118) of the medical professionals report to experience barriers that discourage them from discussing R/S issues with patients. Insufficient time, knowledge and training as well as the concern to offend patients are to most commonly mentioned reasons. (Figure 34). Social burden does not seem to keep medical professionals from speaking

about R/S issues, only 3 participants reported not to discuss R/S issues with patients because they are concerned their colleagues will disapprove.

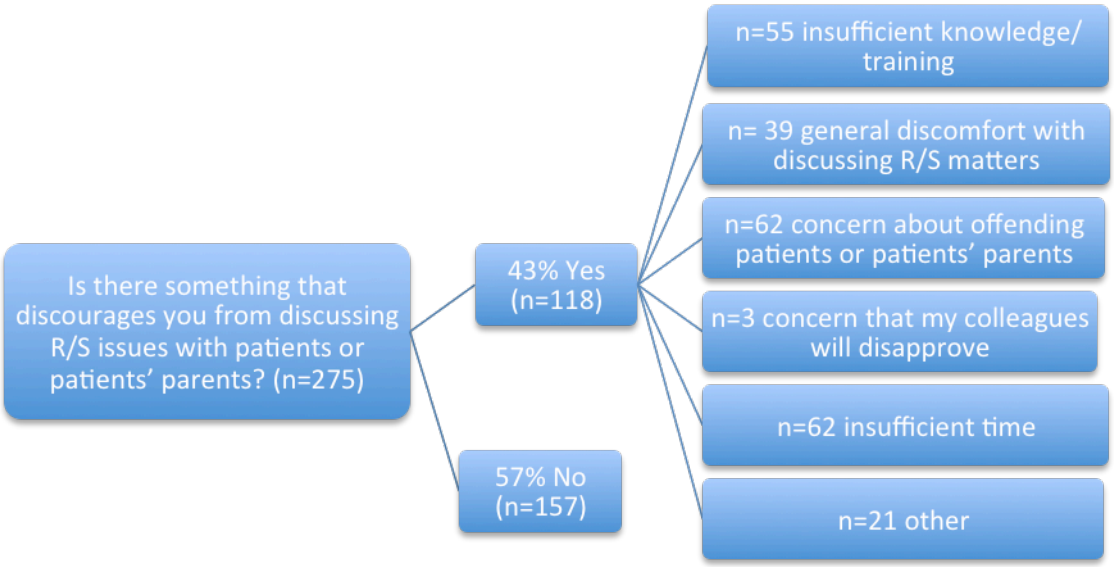

Figure 24: Percentage and absolute number of active survey participants who answered the questions on barriers that discourage them from discussing R/S issues with patients.

Approximately 80% (n=226) of the participants never had any formal training regarding R/S in medicine. (Figure 25)

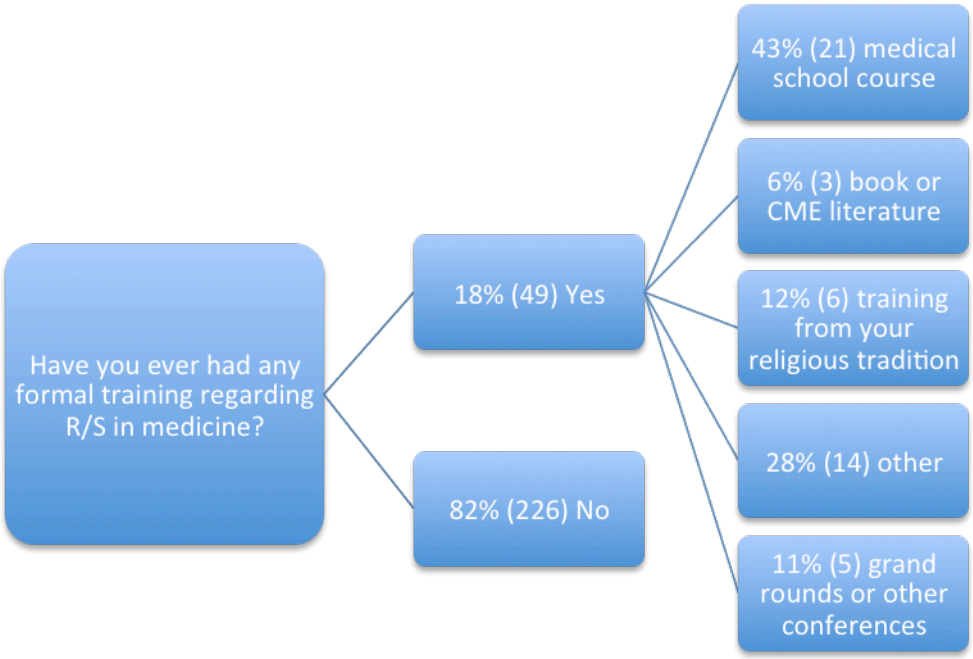

Figure 25: Percentage and absolute numbers of active survey participants who reported to have had any formal training regarding R/S in medicine and the characteristics of these trainings. (n=275)

Controversial issues in medicine

Regarding controversial issues in medicine, the questionnaire contained the following medical practices: physician assisted suicide, sedation to unconsciousness in dying patients, withdrawal of artificial life support, abortion for congenital abnormalities and abortion for failed contraception. It was asked that if the participant objected to one of the following medical practices to state whether this objection was for a religious reason, for reasons unrelated to religion or both.

Table 22: Percentage and absolute number of active survey participants who answered the questions regarding controversial issues in medicine.

	No objection	religious objections	Non-religious objections	Both religious and non-religious
Physician assisted suicide. (n=272)	25% (68)	6% (16)	27% (73)	41% (112)
Sedation to unconsciousness in dying patients. (n=273)	61% (167)	2% (5)	23% (63)	13% (35)
Withdrawal of artificial life support. (n=273)	80% (218)	2% (5)	9% (25)	8% (22)
Abortion for congenital abnormalities (n=273)	43% (117)	10% (27)	21% (57)	25% (68)
Abortion for failed contraception (n=273)	18% (49)	10% (27)	33% (90)	38% (104)

The majority of the medical professionals (80%, n=218) had no objection to withdraw artificial life support. Similarly, over 60% had no objection to sedation to unconsciousness in dying patients. Whereas abortion for failed contraception as well as physician assisted suicide only 30% of the participants had no objections. (Table 22)

Concerning abortion for congenital abnormalities there were clear differences between subgroups. Physicians and midwives had more frequently objections than nurses. (p=0.02) (Figure 26)

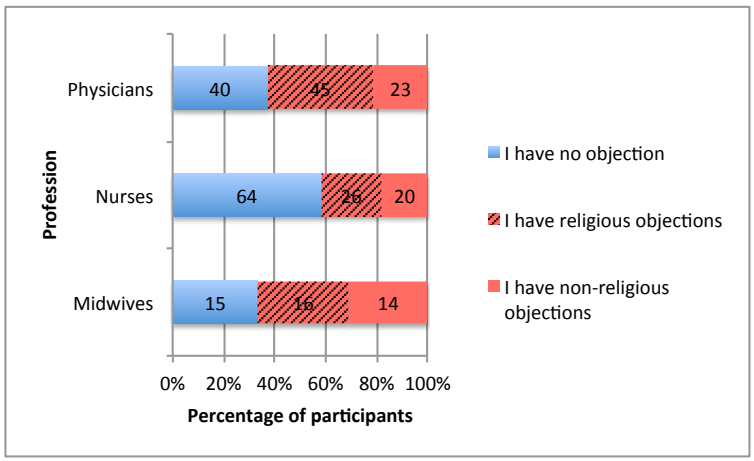

Figure 26: Percentage and absolute number of active survey participants who answered the questions on objections to abortion for congenital abnormalities. (n=273)

Participants were asked to give their opinion on possible objections to legal medical procedures as shown in Table 23.

Table 23: Percentage and absolute number of active survey participants who answered the questions on legal medical procedures.

Imagine the following situation: A patient or patients' parents requests a legal medical procedure, but the physician objects to the procedure due to religious or moral reasons.	Yes	No
Does the physician have an obligation to present all possible options to the patient or the patients' parents including information about obtaining the requested procedure? (n=267)	98% (261)	2% (6)
Does the physician have an obligation to refer the patients or patients' parents to someone who does not object to the requested procedure? (n=221)	76% (169)	24% (52)
Would it be ethical for the physician to plainly describe to the patient why he or she objects to the requested procedure? (n=229)	80% (184)	20% (45)

When a patient requests a legal medical procedure, but the physician objects to the procedure due to religious or moral reasons, 95% of the participants hold the opinion that the physician has an obligation to present all possible options to the patient including information about obtaining the requested procedure. Around 60% of the participants think that the physician has an obligation to refer the patients to someone who does not object to the requested procedure and almost 70% of the participants hold the opinion that it would it be ethical for the physician to plainly describe to the patient why he or she objects to the requested procedure.

Grief

Participants were presented the following case: *"A mother presents to you with continued deep grieving two months after the death of her newborn child. If you were to refer this mother, to which of the following would you prefer to refer first? A health-care chaplain, a clergy member/other religious counsellor, psychiatrist/psychologist or other "* Almost 50% (n=129) of the participants reported to refer to a health care chaplain.

Around 90% (n=246) of the participants report to be “very satisfied” or “satisfied” with their experience with chaplains and other pastoral care professionals.

Participants who filled out the minimal set of questions

Participants who were not willing to fill out the complete questionnaire were asked to fill out a minimal set of nine questions concerning gender, year of birth, religious affiliation; current and past, nationality, profession and reason for non participation. In total 21 medical professionals elected to only fill out the minimal set of questions. The demographic characteristics are shown in Table 24. Reasons for non-participation were evaluated as shown in Table 25. The most common reason for non-participation was no interest in the study.

Table 24: Demographic characteristics of the participants who filled out the minimal set of questions. (n=21)

		n	%
Participants		21	
Nationality	German	20	95%
	Other	1	5%
Age (years)		37*	(24-56)**
Gender	Male	2	10%
	Female	19	90%
Profession	Midwive	3	14%
	Nurse	15	71%
	Physician	1	5%
	Unkown	2	10%

*median
**range

Table 25: Reasons for non-participation reported by the participants who filled out the minimal set of questions. (n=21)

Reasons for non-participation:	n
I'm not interested in this study	6
I have no time to fill out the questionnaire	3
I'm uncomfortable with the topic R/S	4
Unknown	8

The influence of personal religiosity and spirituality of the participants

One's own religiosity or spirituality may influence a person's answer on the questions of this questionnaire. In this perspective the next part of the results will review three questions and five statements of the questionnaire more thoroughly.

Inquire about R/S issues

Participants who are "very" or "moderately" spiritual are significantly more likely to inquire about R/S issues than those who are slightly spiritual (p=0.002). (Table 26) Participants with high and moderate intrinsic religiosity are significantly more likely to inquire about R/S issues than the participants with low intrinsic religiosity (p< .05) (Table 27) A significant association between the self-reported religiosity of the participants and their willingness to inquire about R/S issues could not be proven in this study. (

Table 28)

Table 26: Self-reported spirituality of the active survey participants and their willingnes to inquire about R/S issues in percentages and absolute numbers . (n=272)

Do you ever inquire about patients' R/S issues?	Very spiritual	Moderate spiritual	Slightly spiritual	Not spiritual at all
Yes	63% (27)	56% (70)	32% (23)	58% (19)
No	37% (16)	44% (55)	68% (48)	42% (14)

Table 27: Intrinsic religiosity of the active survey participants and their willingnes to inquire about R/S issues in percentages and absolute numbers . (n=272)

Do you ever inquire about patients' R/S issues?	Intrinsic religiosity high	Intrinsic religiosity moderate	Intrinsic religiosity low
Yes	68% (19)	66% (40)	44% (81)
No	32% (9)	34% (21)	56% (102)

Table 28: Self-reported religiosity of the active survey participants and their willingnes to inquire about R/S issues in percentages and absolute numbers . (n=272)

Do you ever inquire about patients' R/S issues?	Very religious	Moderate religious	Slightly religious	Not religious at all
Yes	62% (16)	54% (69)	46% (26)	46% (28)
No	38% (10)	46% (59)	54% (31)	54% (33)

The influence of R/S on health

A statistically significant association between self-reported spirituality, self-reported religiosity and intrinsic religiosity of the participants and their opinion on the influence of R/S on health could not be proven. Tables are listed in Appendix 2

Behaviour concerning R/S issues

A statistically significant association between personal spirituality of participants and their behaviour concerning R/S issues could not be proven. Tables are listed in Appendix 3.

Discussion

The purpose of this study was to evaluate religious and spiritual characteristics and perspectives of medical professionals working in perinatal care.

Descriptive analysis

Four perinatal care centers enrolled in this study. 275 participants answered the complete questionnaire containing 47 questions. The recruitment rate was high (78%), a response rate > 75% minimizes the bias due to non-response. [87] This high recruitment rate allows us to draw conclusions that are representative for the study centers.

The four study centers were chosen in order to represent a broad demographic variance, while logistic feasibility had to be warranted. The study cohort does not constitute a representable sample for the entire nation. Therefore, conclusions cannot be extrapolated to all perinatal care centers in Germany.

The 275 participants included 45 midwives (16%), 121 neonatal intensive care nurses (44%) and 109 physicians (neonatologists, obstetricians) (40%). Midwives were underrepresented (16%) compared to nurses (44%) and physicians (40%). Midwives are often professionals working independently. They frequently fulfil tasks as family midwives or pregnancy consultants outside the hospital as well. This constellation might have caused midwives to be less likely to participate in this clinical study. The majority of participants were female, this can be explained by the female predominance in nursing, obstetrics and neonatology.

Among all the participants, 30% said to have no religious affiliation, 47% reported to be Roman Catholic, 18% Protestant and 5% indicated other religious affiliations. The religious affiliation of a person can change during life. Nevertheless the religious affiliation one grew up in might still influence a person's current behaviour and attitude towards religion or spirituality. Therefore, both current religious affiliation and the religious affiliation one grew up in were obtained. In the population of this study, the current religious affiliation did not differ much from the religious affiliation one grew up in. The religious affiliations in our study compared with the religious affiliation of the entire German population differed; Roman Catholics were overrepresented whereas Protestants and Muslims were underrepresented. Differences may be explained by a number of reasons. Probably most important is the specifics of the population investigated in the study sample (medical professionals only and the geographical location of the study centers).

Religiosity and spirituality

In our study population adherence to religious affiliation was quite stable, only 21 of 275 participants left their church. In the last decades, religious diversity in Germany underwent discrete but definite changes. The importance of individualism and pluralism is rising in the current secularized society. The consequences of these changes are difficult to predict. To gain better insight in change in religion and its significance within the social context, a religion monitor survey was conducted in 2013 (first release 2007) by the Bertelsmann Stiftung. The Bertelsmann Stiftung is a private operating foundation that is dedicated to serving the common good.[88] The religion monitor survey exhibits a marked religious

Germany still retains its adherence to religious affiliations (Roman-Catholic, Protestant), the states of former East Germany are characterized by a more secular culture. This finding is stable over the last five years. In both West and East Germany, a decline in the importance of religion in daily life is reported. [59]

The majority of the participants of our study described themselves as moderately religious and spiritual. Physicians were more likely to describe themselves as spiritual compared to nurses. Compared to the general German population, the participants of this study are more religious and spiritual. According the religion survey monitor of 2007, in West Germany every fifth person describes him- or herself very religious, around 35% reports to be slightly or not religious at all. In East Germany the shift towards slightly or not religious at all is even greater, up to 72%. Among people in West Germany 59% considers him- or herself slightly or not spiritual at all, in East Germany this goes up to 77%. [59]

This difference between the study population and the general german population might be related in part to the profession. People who are more spiritual or religious might more frequently choose a profession that embodies "doing good" and helping fellow human being.

Participants who have a religious affiliation were more likely to report to be "very religious" or "moderately religious" than participants without a religious affiliation. There are differences between participants of the different study centers concerning religiosity and spirituality. This might be mediated through the influence of geographical distribution of religious affiliation on the level of religiousness and spirituality.

Among participants 16% attend religious services once a month or more frequently. This is comparable to the German population (12% East Germany and 22% West Germany) but clearly less frequent compared to U.S. physicians (46%) as measured by Curlin et al.[58] [59] The differences between the U.S. and Germany are congruent with other reports and fit the secularized European context. Besides secularization, some say that the decline of church attendance can be seen as a path of individualism instead of a loss of significance of R/S. Religion might still be thriving in the minds of people and taken on various forms. Hereby becoming more 'individual' and thereby 'invisible'.[89] These more individual forms of religion are reflected by 50% of the participants who reported to have their own way of connecting with god without churches or religious services. This more individual form of religious/spiritual practice also reflected by the fact that over 35% of the participants reported to have ever had a religious or spiritual experience that changed their life, a third of these participants even experienced this in the context of practicing medicine.

35% of the participants reported that their religious beliefs influence their practice of medicine. Several factors may influence moral decision-making, including one's own religion or spirituality.[90] Therefore it is important for medical professionals to be aware of their own religiosity or spirituality. Besides being aware of one's own religious/spiritual, knowing a patient's (including their religious and spiritual) background may be a key feature for a good professional relationship. To sustain a good professional relationship can be challenging, especially when one's own religious/spiritual perspectives is at odds with the

understand patients' point of view by coming to terms with their own ideologies and perspectives. Participation in our study may therefore be worthwhile in itself.

Influence of R/S on health

Religiosity and spirituality may influence health in several ways. R/S may form a paradigm to understand, cope with and endure illness. It may provide emotional an practical support via a religious community [91] Furthermore, there may be association between R/S and health in a biomechanical way, resulting in a positive influence of R/S on health outcomes. [92-94]

The 96% of the medical professionals in this study think that R/S has an influence on health, this percentage was much higher than expected by the investigators. They were asked to value the influence of R/S on health. This influence can be both positive and negative. 40% of the participants consider this influence as generally positive, whereas 56% of the participants are ambivalent (could be positive and negative). This could mean that religious or spiritual issues could interfere with treatment. Specific conditions or treatment options might not be accepted by patients due to religious or spiritual obligations or beliefs. To understand and cope with these situations, awareness of religious/spiritual needs of patients is crucial. Nevertheless participants think R/S is rarely used as a reason to avoid taking responsibility for one's own health or the health of one's child. Very religious participants were more likely to value the influence of R/S generally positive than those who report to be not religious at all.

The need for spiritual care

As mentioned before, R/S may provide support and guidance for people under extreme circumstances. Spirituality provides a sense of hope and self-transcendence. Hope is thought to be indispensable to a life worth living, without hope life is thought to be worthless.[95] Self-transcendence is a trait that is associated with considering oneself as an integral part of something 'bigger' hereby providing the ability to move on after a life event and aspire a meaningful life. Therefore medical professionals should be aware and elicit religious or spiritual needs of patients. Coming to terms with these needs can facilitate better health care.

Severe illness or hospitalisation may be seen as extreme conditions in which people need support and guidance. In a study among 56 parents whose children had died in the paediatric intensive care unit 73% of the parents reported spiritual/religious resources to be helpful. [39,42,44] The medical professionals in this study valued R/S mainly as something positive, that gives patients hope and helps to cope with and endures illness. They were more likely to inquire about R/S issues when the clinical situation is more severe. In contrast, when a patient comes for a history, physical or minor illness or injury, they never or rarely inquire about R/S issues. This is in agreement with a study by Monroe et al. that showed that physicians were more likely to get involved in spiritual behaviour in more acute clinical settings.[96] Perhaps as the clinical situation becomes more severe, medical professionals might believe that R/S issues become more important for patients and they might benefit from religious or spiritual support.

Inquire about R/S

As shown in the literature patients want to be treated as a whole person by their physicians, not as a disease. A whole person can be described as someone with physical, social, emotional and spiritual needs.[17] As described in the Religion and Spirituality in the Medical Encounter Study (RESPECT) 66% of the patients believed that physicians should be conscious of their patients' spiritual and religious beliefs, while 40% would welcome spiritual inquiry in a hospital setting and 77% in an End-of Life setting [14] In the same study over 80% of the physicians noted that they should be aware of the patients spiritual and religious beliefs. This was confirmed in a study among residents in 2005, over 90% of the physicians reported that a physician should be aware of the spiritual and religious beliefs of patients.[97]

In our study almost all medical professional (98%) reported to find it appropriate to discuss R/S issues with a patients when the patient brings these issues up. Still the majority (69%) of the participants think it is appropriate to discuss R/S issues even when the medical professional actively inquires about it. Whether medical professionals inquire about R/S issues seems related to their own spirituality and religiosity, those who are more spiritual or religious are more likely to inquire about R/S issues, this finding is consistent with the literature. [96]

When R/S issues come up in discussions with patients 90% of the medical professionals say to listen carefully and empathetically, they are unlikely to change the subject. On the other hand, they are reserved when it comes to share their own religious ideas and experiences. This might be explained by the fact that listening to the patient is commonly valued obligatory for a good medical professional whereas sharing one's own ideas is not.

Predictors and barriers for talking about R/S

Although medical professionals in this study value R/S mainly as something positive and hold the opinion that R/S has much influence on health, only 50% of the medical professionals ever inquired about R/S issues. This disparity between R/S relevance and clinical attention for R/S is seen in many studies.[27,30,36,46,90,96] In a study among paediatricians over 70% agreed that R/S issues of their patients are important for their delivery of care, nevertheless only 10% gave always or frequently attention to R/S issues and around 50% never or rarely talked with patients about R/S.[26] Another study found that although R/S issues were valued as important by physicians, only around 7% of the medical professionals performed routinely a spiritual history.[36]

Predictors for discussing R/S issues with patients can be identified. Medical professionals who identify themselves as more religious or spiritual are more likely to talk about R/S issues with patients.[24,26,32,96,97] Moreover, medical professionals who frequently participate in private and public religious practices are more likely to address R/S issues.[98] Previous training in spiritual care was shown to be a strong predictor among physicians and for addressing R/S issues.[78] A similar pattern was seen among the participants in this study, self-reported spirituality and intrinsic religiosity influenced whether participants talked about R/S issues with patients; participants who are more spiritual or have a high intrinsic religiosity were more likely to inquire about R/S issues.

In our study medical professionals with a religious affiliation were significantly more likely to discuss R/S issues. This might be because they are more used to discussing R/S issues because they do so more frequently in daily life. Social pressure is does not seem to keep medical professionals from speaking about R/S issues, only 3 participants reported not to discuss R/S issues with patients because they are concerned their colleages will dissaprove. Those professionals who enjoy discussing R/S issues with patients were less likely to experience any barriers that discourage them from discussing R/S issues.

This study identified barriers to discuss R/S issues. 40% of the participants noted that they experience barriers that discouraged them from discussing R/S issues with patients. Most frequently mentioned were lack of time and training as well as general discomfort speaking about R/S issues and fear to offend patients. These findings are consistent with the literature: frequently mentioned barriers are lack of time and lack of training in how to take a spiritual history. Furthermore, medical professionals report uncertainty about whether patients desire to speak about R/S issues, the concern to offend patients by bringing up the subject, concern of causing discomfort, concerns about invasion privacy, different belief systems and lack of spiritual awareness.[24,27,32]

Limitations of the study

The relatively small sample size might limit the ability to reveal possible associations or relationships between the items addressed in this study. All results need to be confirmed in an extended study with a bigger sample size.

This survey describes hypothetical clinical situations. What people think they will do in specific clinical situations might differ from that what they actually will do when the situation occurs. Furthermore social response bias might caused medical professionals to overreport their behaviour concerning addressing R/S issues. [99,100]

The recruitment rate was high (78%). Nevertheless 22% of the potential participants did not complete the questionnaire nor did they fill out the minimal set of questions. Although there is no substantial reason to suggest bias, a possible response bias caused by the unknown potential participants cannot be ruled out completely.

This was a cross sectional survey, the results cannot be linked to conclusions regarding causality.

Conclusion

A high percentage of the medical professionals in perinatal care hold the opinion that religion/spirituality influence health. Among them many experience barriers in translating this believe into the practice of perinatal care. Our study suggests that educational programs should be made available to overcome such barriers. The results of this study should encourage medical professionals in perinatal care to bring up religious and spiritual issues in patient care.

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"We are a human kind of 7 billion, so many different races and religions.

But it all comes down to one"

India Ari "One"

Appendices

Appendix 1: questionnaire.

LMU | KLINIKUM DER UNIVERSITÄT MÜNCHEN | PERINATALZENTRUM GROSSHADERN UND PROFESSUR FÜR SPIRITUAL CARE

RELIGIOSITÄT UND SPIRITUALITÄT IN DER PERINATALEN MEDIZIN

EINE ANALYSE DER EINSTELLUNGEN UND ÜBERZEUGUNGEN BEI HEBAMMEN, PFLEGEFACHKRÄFTEN UND ÄRZTEN SOWIE PSYCHOLOGEN UND MITARBEITERN DER SOZIALMEDIZINISCHEN VERSORGUNG

Religiosität/Spiritualität umfasst die Suche eines Menschen nach Sinn und Wert im Erleben und Handeln. Sie ist eine Dimension des Menschseins, neben anderen wie Körperlichkeit, Psyche und Sozialität.

Ihre Tätigkeit im Kreißsaal oder auf der Neugeborenenstation ist neben den medizinischen Aspekten oft mit komplexen Fragen ethischer, religiöser oder spiritueller Art verbunden. Diese Studie beschäftigt sich mit Ihrer eigenen Sichtweise auf mögliche Einflüsse von Religiosität und Spiritualität auf die Behandlungssituation in der Perinatalmedizin.

Wir möchten Sie herzlich bitten, an dieser schriftlichen Befragung teilzunehmen!

Durchführende Einrichtungen:
Neonatologie des Dr. von Haunerschen Kinderspitals am Perinatalzentrum Großhadern
& Professur für Spiritual Care am Interdisziplinären Zentrum für Palliativmedizin, Klinikum der Universität München

Studienleitung:
Prof. Dr. med. Andreas Schulze (Neonatologie am Perinatalzentrum Großhadern)
Prof. Dr. med. Eckhard Frick & Prof. Dr. theol. Traugott Roser (Professur für Spiritual Care)

Studienkoordination:
Dr. med. Inga Wermuth

✉ Neonatologie am Perinatalzentrum Großhadern, Klinikum der LMU München, Marchioninistr. 15, 81377 München
☎ 0 89 / 70 95 – 28 01 survey-spiritualitaet@med.uni-muenchen.de

[8-stelliger Code]

INFORMATIONEN ZUM FORSCHUNGSPROJEKT

Der Ihnen vorliegende Fragebogen* beschäftigt sich mit Ihrer eigenen Sichtweise auf mögliche Einflüsse von Religiosität und Spiritualität auf die Behandlungssituation in der Perinatalmedizin. Im Rahmen der Studie werden religiöse/spirituelle Einstellungen, Überzeugungen und Verhaltensweisen von Personen erfasst, die in der Perinatologie professionell tätig sind. Die Analyse dieser Daten erfolgt mittels einer quantitativen empirischen Forschungsmethodik und statistischen Hypothesenprüfung.

Die Bearbeitung der Fragen wird **ca. 20 Minuten** in Anspruch nehmen. Abgesehen vom Zeitaufwand entstehen für Sie keinerlei Nachteile durch eine Teilnahme an der Umfrage. Es ist uns Autoren des Fragebogens bewusst, dass wir einen persönlichen Bereich ansprechen. Es ist jedoch aufgrund der Rückmeldungen der Pretest-Teilnehmer anzunehmen, dass die Auseinandersetzung mit dem Thema sowie die Reflexion eigener Einstellungen und Überzeugungen positiv empfunden werden. Wenn Sie an einer Rückmeldung der Ergebnisse der Studie interessiert sind, können Sie uns dies auf Seite 18 mitteilen.

Die Teilnahme an dieser Untersuchung ist **freiwillig**. Eine Ablehnung der Studienteilnahme ist mit keinerlei Nachteilen für Sie verbunden. In diesem Fall möchten wir Sie jedoch um die Beantwortung von sechs allgemein-demographischen Fragen auf Seite 19 bitten!

Bei dieser Studie werden die Vorschriften über den **Datenschutz** eingehalten. Sowohl die durch den Onlinefragebogen als auch die auf ausgedruckten Formularen gewonnenen personenbeziehbaren Daten werden streng vertraulich behandelt und **nur in anonymisierter Form bearbeitet**. Dies bedeutet, dass alle Informationen, die in diesem Fragebogen erhoben werden, späterhin nicht mit Ihrer Person in Verbindung gebracht werden können.

Wenn Sie über die Ergebnisse der Studie informiert werden möchten, und daher Ihren Namen und Ihre Adresse im unteren Abschnitt auf Seite 18 dieses Fragebogens angeben, sichern wir Ihnen zu, dass diese Daten ausschließlich dem angegebenen Zweck dienen, getrennt von den Studiendaten gespeichert und nach Zusendung der Ergebnisse unwiderruflich gelöscht werden.

Die Unterlagen werden in der Abteilung Neonatologie des Perinatalzentrums Großhadern für fünf Jahre aufbewahrt und sind Dritten nicht zugänglich. Im Falle von Veröffentlichungen der Studienergebnisse bleibt die Anonymität der erhobenen Daten gewährleistet.

- Für etwaige Rückfragen finden Sie die Kontaktdaten auf dem Titelblatt des Fragebogens.

- Durch das Ausfüllen des Fragebogens und die Abgabe im dafür vorgesehenen Sammelbehältnis geben Sie Ihr Einverständnis zur Teilnahme an der Untersuchung und willigen in die datenschutzrechtlichen Bedingungen ein.

- Wenn Sie nicht an der Befragung teilnehmen möchten, lesen Sie jetzt bitte auf Seite 19 weiter.

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* Die Originalversion des Fragebogens wurde von F. A. Curlin und Kollegen an der University of Chicago entwickelt und freundlicherweise für eine validierte Übersetzung und Verwendung zur Verfügung gestellt. Der Abschnitt B des Originalfragebogens wurde dem europäischen kulturellen Kontext angepasst, indem Originalfragen der Europäischen Wertestudie und des International Survey Programme integriert wurden. Zudem durften wir bei einigen der aus dem „Brief Multidimensional Measurement of Religiosity and Spirituality" stammenden Fragen auf die validierte deutsche Version von Thomas et al. zurückgreifen.

Hinweise zum Ausfüllen des Fragebogens

- Obwohl wir wissen, dass eine Person spirituell sein kann, ohne dabei religiös zu sein (und vice versa), werden die beiden Bezeichnungen zum Zweck dieser Studie in der Regel gemeinsam benützt.

- Da wir mit diesem Fragebogen unterschiedliche Professionen ansprechen, aber die Aufführung jeder einzelnen professionellen Gruppe im Fragetext die Lesbarkeit sehr einschränken würde, sprechen wir im Fragebogen zusammengefasst von dem „Professionellen". Ebenfalls aus Gründen der Lesbarkeit verzichten wir auf eine inkludierende Schreibweise.

- Im Fragebogen beziehen wir uns, wenn nicht ausdrücklich anders formuliert, auf die sog. „Unit of Care", im Bereich der Geburtshilfe und Neonatologie also auf die Einheit des noch ungeborenen Kindes bzw. des Neugeborenen oder Frühgeborenen, seiner Eltern und deren Familie.

- Bitte füllen Sie den Fragebogen für sich alleine aus, da es um Ihre individuellen Erfahrungen und Einstellungen geht.

- Wenn Sie sich bei einzelnen Fragen nicht sicher sind, wie Sie diese beantworten sollen, entscheiden Sie sich bitte trotzdem für eine der vorgegebenen Antwortmöglichkeiten. Wenn Sie keine Auswahl treffen oder Ihre Markierung zwischen zwei Kategorien eintragen, ist diese Frage nicht auswertbar. Bitte nehmen Sie die Möglichkeit wahr, zusätzliche Kommentare im letzten Abschnitt des Fragebogens einzutragen.

- Wenn Sie an den Ergebnissen dieser Studie interessiert sind, füllen Sie bitte den unteren Abschnitt auf Seite 18 aus und trennen diesen vom Fragebogen ab. Deponieren Sie den Abschnitt getrennt vom Fragebogen in dem in Ihrer Abteilung bereit stehenden Behältnis mit der Beschriftung „Adressabschnitt".

- Bitte legen Sie den ausgefüllten Fragebogen in den Rückumschlag und verschließen Sie diesen sorgfältig.

SEKTION A:
IHRE SICHTWEISE AUF RELIGIOSITÄT/SPIRITUALITÄT UND GESUNDHEIT

1. Was denken Sie insgesamt darüber, wie sehr Religiosität/Spiritualität die Gesundheit von Patienten bzw. Patientenfamilien beeinflusst?
   - ☐ Sehr stark [1]
   - ☐ Sehr [2]
   - ☐ Etwas [3]
   - ☐ Gering [4]
   - ☐ Gering bis gar nicht [5]

2. Ist der Einfluss von Religiosität/Spiritualität auf die Gesundheit allgemein positiv oder negativ?
   - ☐ Allgemein positiv [1]
   - ☐ Allgemein negativ [2]
   - ☐ Sowohl positiv als auch negativ [3]
   - ☐ Religiosität/Spiritualität hat überhaupt keinen Einfluss auf die Gesundheit [4]

3. Denken Sie, dass Gott oder eine andere übernatürliche Instanz jemals in die Gesundheit von Patienten bzw. Patientenfamilien eingreift?
   - ☐ Ja [1]
   - ☐ Nein [2]
   - ☐ Weiß nicht [3]

4. Finden Sie es im Allgemeinen angemessen oder unangemessen, über religiöse/spirituelle Themen zu sprechen, wenn ein Patient bzw. Patienteneltern diese zur Sprache bringen?
   - ☐ Immer angemessen [1]
   - ☐ Für gewöhnlich angemessen [2]
   - ☐ Für gewöhnlich unangemessen [3]
   - ☐ Immer unangemessen [4]

5. Finden Sie es im Allgemeinen angemessen oder unangemessen, den Patienten bzw. Patienteneltern zu seiner Religiosität/Spiritualität befragen?
   - ☐ Immer angemessen [1]
   - ☐ Für gewöhnlich angemessen [2]
   - ☐ Für gewöhnlich *un*angemessen [3]
   - ☐ Immer *un*angemessen [4]

6. Wann ist es, wenn überhaupt, angemessen, über die eigenen religiösen Überzeugungen oder Erfahrungen mit einem Patienten zu sprechen?
   - ☐ Nie [1]
   - ☐ Nur, wenn der Patient darum bittet [2]
   - ☐ Immer, wenn der Professionelle dies als angemessen empfindet [3]

7. Wann ist es, wenn überhaupt, angemessen für einen Professionellen, mit seinem Patienten bzw. Patienteneltern zu beten?
   - ☐ Nie [1]
   - ☐ Nur, wenn der Patient darum bittet [2]
   - ☐ Immer, wenn der Professionelle dies als angemessen empfindet [3]

In welchem Ausmaß stimmen Sie den folgenden beiden Aussagen (nicht) zu?

8. „Es wäre für mich in Ordnung, mit einem Patienten bzw. Patienteneltern über seine bzw. deren religiösen/spirituellen Angelegenheiten zu sprechen, wenn der Patient bzw. Patienteneltern diese zur Sprache bringen."
   - ☐ Ich stimme voll zu [1]
   - ☐ Ich stimme zu [2]
   - ☐ Ich stimme nicht zu [3]
   - ☐ Ich stimme überhaupt nicht zu [4]

9. „Ich spreche gerne mit einem Patienten bzw. Patienteneltern über religiöse/spirituelle Angelegenheiten oder Belange."
   - ☐ Ich stimme voll zu [1]
   - ☐ Ich stimme zu [2]
   - ☐ Ich stimme nicht zu [3]
   - ☐ Ich stimme überhaupt nicht zu [4]
   - ☐ Trifft nicht zu, da ich nicht mit Patienten bzw. Patienteneltern über religiöse/spirituelle Angelegenheiten spreche [5]

10. Wie häufig haben Patienten bzw. Patienteneltern Ihrer Erfahrung entsprechend …

	Niemals	Selten	Manchmal	Oft	Immer
a) religiöse/spirituelle Themen wie Gott, Gebet, Meditation, die Bibel etc. angesprochen?	☐ [0]	☐ [1]	☐ [2]	☐ [3]	☐ [4]
b) emotionale oder praktische Unterstützung durch die religiöse Gemeinschaft erhalten?	☐ [0]	☐ [1]	☐ [2]	☐ [3]	☐ [4]
c) Religiosität/Spiritualität als Argument benutzt, um einer Verantwortungs-übernahme für die eigene Gesundheit bzw. diejenige des Kindes zu auszuweichen?	☐ [0]	☐ [1]	☐ [2]	☐ [3]	☐ [4]

11. Was meinen Sie, wie häufig Religiosität/Spiritualität Ihrer Erfahrung entsprechend …

	Niemals	Selten	Manchmal	Oft	Immer
a) Patienten bzw. Patienteneltern hilft, Krankheit und Leiden zu bewältigen und auszuhalten?	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]
b) Schuld, Angst und andere negative Gefühle verursacht und damit Leiden vermehrt?	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]
c) den Patienten bzw. Patienteneltern eine positive und hoffnungsvolle Einstellung gibt?	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]
d) Patienten bzw. Patienteneltern veranlasst, medizinisch indizierte Therapien abzulehnen, hinauszuzögern oder zu beenden?	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]
e) zur Vorbeugung schwerwiegender medizinischer Probleme beiträgt (z.B. respiratorische Krisen, Infektionen oder tödlicher Verlauf)?	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]

12. Wie oft verstärkt Ihrer Einschätzung nach eine Erkrankung die Aufmerksamkeit der Patienten bzw. Patienteneltern für Religiosität/Spiritualität und die Bedeutung, die sie diesem Bereich beimessen?

☐ Nie [1]
☐ Selten [2]
☐ Manchmal [3]
☐ Oft [4]
☐ Immer [5]

13. Fragen Sie jemals nach religiösen / spirituellen Angelegenheiten eines Patienten bzw. Patienteneltern?

☐ Ja [1]
☐ Nein [2]

Wenn ja … → Wie oft fragen Sie?
☐ Selten [1]
☐ Manchmal [2]
☐ Oft [3]
☐ Immer [4]

Wenn ja … → Wie oft schienen Patienten bzw. Patienteneltern sich bei dieser Frage unwohl zu fühlen?
☐ Nie [1]
☐ Selten [2]
☐ Manchmal [3]
☐ Oft [4]
☐ Immer [5]

14. Wie oft fragen Sie in den folgenden klinischen Situationen von sich aus nach Religiosität/Spiritualität?

Wenn ein Patient bzw. Patienteneltern … ▼	*… fragen Sie nach religiösen/ spirituellen Belangen* ▼				
	Niemals	Selten	Manchmal	Oft	Immer
a) sich mit einer banalen Erkrankung oder Verletzung vorstellt, …	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]
b) mit einer angstbesetzten Diagnose konfrontiert wird oder vor einer Krise steht, ...	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]
c) mit dem Lebensende konfrontiert ist, …	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]
d) unter Angst oder Depression leidet, …	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]
e) zur Anamnese und körperlichen Untersuchung kommt, …	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]
f) mit einem ethischen Dilemma konfrontiert ist, …	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]

15. Wie oft reagieren Sie mit den folgenden Verhaltensweisen, wenn religiöse/spirituelle Belange in Gesprächen mit Patienten bzw. Patienteneltern auftauchen?

	Niemals	Selten	Manchmal	Oft	Immer
a) Ich höre aufmerksam und empathisch zu.	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]
b) Ich versuche, auf taktvolle Weise das Thema zu wechseln.	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]
c) Ich bestärke den Patienten in seinen eigenen religiösen/spirituellen Überzeugungen und Gebräuchen.	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]
d) In respektvoller Weise teile ich etwas über meine eigenen religiösen Vorstellungen und Erfahrungen mit.	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]
e) Ich bete mit dem Patienten bzw. mit den Patienteneltern.	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]

16. Eine Mutter wendet sich an Sie mit fortdauernder Trauer zwei Monate nach dem Tod ihres neugeborenen Kindes. Wenn Sie die Mutter weiter verweisen müssten, an welche der nachfolgend genannten Personen würden Sie sie bevorzugt zuerst verweisen?

☐ Krankenhausseelsorger [1]
☐ Geistlicher bzw. Berater der betreffenden Religionsgemeinschaft [2]
☐ Psychiater oder Psychotherapeut [3]
☐ Andere [4]: ✎ .....

17. Ihre Erfahrungen mit Krankenhausseelsorgern und anderen seelsorglich Tätigen waren:

- ☐ Sehr zufriedenstellend [1]
- ☐ zufriedenstellend [2]
- ☐ Nicht zufriedenstellend [3]
- ☐ Überhaupt nicht zufriedenstellend [4]
- ☐ Ich habe keine Erfahrungen mit o.g. Professionen [5]

18. Hält Sie etwas davon ab, mit Patienten bzw. Patienteneltern über Religiosität/Spiritualität zu sprechen?

- ☐ Ja [1]
- ☐ Nein [2]

Wenn ja … → Welche(r) der nachfolgenden Gründe hält Sie davon ab?
(Mehrfachantwort möglich)

- ☐ Allgemeines Unbehagen beim Sprechen über religiöse Dinge [1]
- ☐ Ungenügendes Wissen/Ausbildung [2]
- ☐ Zu wenig Zeit [3]
- ☐ Sorge, Patienten zu nahe zu treten [4]
- ☐ Sorge, mich der Kritik meiner Kollegen auszusetzen [5]
- ☐ Andere: [6]

✎ .....

19. Halten Sie Ihren Zeitaufwand für die Thematisierung religiöser/spiritueller Belange insgesamt für:

- ☐ zu groß [1]
- ☐ zu klein [2]
- ☐ genau richtig [3]

20. Haben Sie eine Fortbildung bezüglich Religiosität/Spiritualität in der Medizin erhalten?

- ☐ Ja [1]
- ☐ Nein [2]

Wenn ja … → Welche Art(en) der Fortbildung haben Sie erhalten?
(Mehrfachantwort möglich)

- ☐ Lehrveranstaltung während der Ausbildung oder des Studiums [1]
- ☐ Fachbuch oder CME-Literatur [2]
- ☐ Klinikkonferenz oder andere [3]
- ☐ Fortbildung ausgehend von Ihrer Konfession [4]
- ☐ Andere [5]

✎ .....

21. Nachfolgend geht es um kontrovers diskutierte Fragen im medizinischen Bereich.
Bitte geben Sie an, ob Sie Vorbehalte gegen eine der nachfolgend genannten medizinischen Vorgehensweisen haben. Wenn dies der Fall ist, unterscheiden Sie bitte, ob Ihre Vorbehalte aus religiösen Gründen, Gründen unabhängig von Religiosität oder beidem begründet sind.

Ich habe …	… keine Vorbehalte	… religiös bedingte Vorbehalte	… nicht-religiös bedingte Vorbehalte	… sowohl religiös als auch nicht-religiös bedingte Vorbehalte
a) Ärztlich assistierter Suizid (Beihilfe zur Selbsttötung)	☐ [1]	☐ [2]	☐ [3]	☐ [4]
b) Sedierung bis zur Bewusstlosigkeit bei sterbenden Patienten	☐ [1]	☐ [2]	☐ [3]	☐ [4]
c) Beendigung künstlicher lebenserhaltender medizinischer Maßnahmen	☐ [1]	☐ [2]	☐ [3]	☐ [4]
d) Schwangerschaftsabbruch bei angeborenen Fehlbildungen	☐ [1]	☐ [2]	☐ [3]	☐ [4]
e) Schwangerschaftsabbruch nach Versagen kontrazeptiver Maßnahmen	☐ [1]	☐ [2]	☐ [3]	☐ [4]

22. Bitte stellen Sie sich die folgende Situation vor:
Ein Patient bzw. Patienteneltern wünschen eine legale medizinische Behandlungsoption, aber der behandelnde Arzt hat aus religiösen oder moralischen Gründen Vorbehalte gegen diese.

	Ja	Nein	Weiß nicht
a) Hat der Arzt eine Verpflichtung, den Patienten bzw. Patienteneltern über alle möglichen Behandlungsoptionen aufzuklären, inklusive Informationen über die vom Patienten gewünschte Behandlungsoption?	☐ [1]	☐ [2]	☐ [3]
b) Hat der Arzt eine Verpflichtung, den Patienten bzw. Patienteneltern an jemanden zu vermitteln, der keine Vorbehalte gegen die verlangte Behandlungsoption hat?	☐ [1]	☐ [2]	☐ [3]
c) Wäre es ethisch vertretbar, wenn der Arzt dem Patienten bzw. den Patienteneltern ohne Umschweife beschriebe, warum er oder sie Vorbehalte gegen die gewünschte Behandlungsoption hat?	☐ [1]	☐ [2]	☐ [3]

SEKTION B: IHRE RELIGIÖSEN/SPIRITUELLEN CHARAKTERISTIKA

Vorbemerkung: Egal ob Sie sich selbst als religiös oder spirituell oder keines von beiden betrachten, **Ihre Perspektive ist wichtig!**

23. Unabhängig davon, ob Sie einer Religionsgemeinschaft angehören oder den Gottesdienst besuchen: Wie würden Sie sich selbst bezeichnen?
    - ☐ Sehr religiös [1]
    - ☐ Mäßig religiös [2]
    - ☐ Wenig religiös [3]
    - ☐ Überhaupt nicht religiös [4]

24. Wenn Sie sich an die Definition von Spiritualität aus der Einleitung dieses Fragebogens erinnern (*„Religiosität/Spiritualität umfasst die Suche eines Menschen nach Sinn und Wert im Erleben und Handeln. Sie ist eine Dimension des Menschseins, neben anderen wie Körperlichkeit, Psyche und Sozialität."*):
    Wie würden Sie sich selbst bezeichnen?
    - ☐ Sehr spirituell [1]
    - ☐ Mäßig spirituell [2]
    - ☐ Wenig spirituell [3]
    - ☐ Überhaupt nicht spirituell [4]

25. Glauben Sie an Gott?
    - ☐ Ja [1]
    - ☐ Nein [2]
    - ☐ Weiß nicht [3]

26. Glauben Sie an ein Leben nach dem Tod?
    - ☐ Ja [1]
    - ☐ Nein [2]
    - ☐ Weiß nicht [3]

27. Inwieweit stimmen Sie den folgenden Aussagen zu oder nicht zu?

	Stimme voll und ganz zu	Stimme zu	Stimme nicht zu	Stimme überhaupt nicht zu	Weiß nicht
a) Es gibt einen Gott, der sich persönlich mit jedem Menschen befasst.	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]
b) Die Menschen können selbst wenig tun, um den Lauf ihres Lebens zu verändern.	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]
c) Für mich hat das Leben nur einen Sinn, weil es Gott gibt.	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]
d) Meiner Meinung nach dient das Leben keinem Zweck.	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]
e) Das Leben hat nur dann einen Sinn, wenn man ihm selbst einen Sinn gibt.	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]
f) Ich trete mit Gott auf meine eigene Weise in Verbindung – ohne Kirchen oder Gottesdienste.	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]

28. Denken Sie darüber nach, wie Sie versuchen größere Probleme in Ihrem Leben zu verstehen bzw. mit ihnen umzugehen: In welchem Ausmaß sind die folgenden Aussagen an Ihrer Art der Bewältigung beteiligt?

	Stimme voll und ganz zu	Stimme zu	Stimme nicht zu	Stimme überhaupt nicht zu
a) Ich versuche, der Situation einen Sinn zu geben und entscheide mich für einen Weg ohne mich dabei auf Gott zu verlassen.	☐ [1]	☐ [2]	☐ [3]	☐ [4]
b) Ich suche bei Gott nach Kraft, Unterstützung und Orientierung.	☐ [1]	☐ [2]	☐ [3]	☐ [4]

29. Haben Sie jemals eine religiöse oder spirituelle Erfahrung gemacht, die ihr Leben verändert hat?

☐ Ja [1]
☐ Nein [2]

Wenn ja …

Wenn ja, haben Sie diese Erfahrung im Kontext Ihrer medizinischen Tätigkeit gemacht?

☐ Ja [1]
☐ Nein [2]

30. Wie oft …

	a) … nehmen Sie **aktuell** an religiösen Zeremonien oder Ritualen wie z.B. einem Gottesdienst teil?	b) … haben Sie an religiösen Zeremonien/Ritualen wie z.B. einem Gottesdienst teilgenommen, **als Sie aufwuchsen?**
Nie	☐ [1]	☐ [1]
Weniger als einmal im Jahr	☐ [2]	☐ [2]
Etwa ein- bis zweimal im Jahr	☐ [3]	☐ [3]
Mehrmals im Jahr	☐ [4]	☐ [4]
Ungefähr einmal im Monat	☐ [5]	☐ [5]
Zwei- bis dreimal im Monat	☐ [6]	☐ [6]
Fast jede Woche	☐ [7]	☐ [7]
Jede Woche	☐ [8]	☐ [8]
Mehrmals in der Woche	☐ [9]	☐ [9]

31. Welcher Religionsgemeinschaft bzw. Konfession oder Glaubensrichtung …

	a) … gehören Sie **aktuell** an?	b) … gehörten sie an, **als Sie aufwuchsen?**
Keiner	☐ [1]	☐ [1]
Römisch-katholischer Kirche	☐ [2]	☐ [2]
Römisch-orthodoxer Kirche	☐ [3]	☐ [3]
Evangelischer Kirche (o. Freikirchen)	☐ [4]	☐ [4]
Anderer christlicher Religionsgemeinschaft:	☐ [5] ✎	☐ [5] ✎
Islamischer Religionsgemeinschaft	☐ [6]	☐ [6]
Jüdischer Religionsgemeinschaft	☐ [7]	☐ [7]
Hinduistischer Religionsgemeinschaft	☐ [8]	☐ [8]
Buddhistischer Religionsgemeinschaft	☐ [9]	☐ [9]
Anderer **nicht-christlicher** Religionsgemeinschaft:	☐ [9] ✎	☐ [9] ✎

32. Wie häufig tun Sie die folgenden Dinge?

	a) Beten	b) Meditieren
Nie	☐ [1]	☐ [1]
Weniger als einmal im Jahr	☐ [2]	☐ [2]
Etwa ein- bis zweimal im Jahr	☐ [3]	☐ [3]
Mehrmals im Jahr	☐ [4]	☐ [4]
Ungefähr einmal im Monat	☐ [5]	☐ [5]
Zwei- bis dreimal im Monat	☐ [6]	☐ [6]
Fast jede Woche	☐ [7]	☐ [7]
Jede Woche	☐ [8]	☐ [8]
Mehrmals in der Woche	☐ [9]	☐ [9]
Einmal am Tag	☐ [10]	☐ [10]
Mehrmals am Tag	☐ [11]	☐ [11]

33. Inwieweit stimmen Sie den folgenden Aussagen zu oder nicht zu?

	Stimme voll und ganz zu	Stimme zu	Stimme nicht zu	Stimme überhaupt nicht zu
a) Ich empfinde eine große Verantwortung, Schmerz und Leid in der Welt zu verringern.	☐ [1]	☐ [2]	☐ [3]	☐ [4]
b) In der Familie, in der ich aufwuchs, wurde betont, wie wichtig es ist, sich für bedürftige Mitmenschen einzusetzen.	☐ [1]	☐ [2]	☐ [3]	☐ [4]
c) Für mich ist die Ausübung einer medizinischen Tätigkeit eine Berufung.	☐ [1]	☐ [2]	☐ [3]	☐ [4]
d) Meine religiösen Überzeugungen beeinflussen meine praktische medizinische Tätigkeit.	☐ [1]	☐ [2]	☐ [3]	☐ [4]
e) Ich empfinde es als herausfordernd, meinen religiösen Überzeugungen bei meiner klinischen Arbeit treu zu bleiben.	☐ [1]	☐ [2]	☐ [3]	☐ [4]
f) Die Erfahrungen meines Berufs haben dazu geführt, dass ich meine religiösen Überzeugungen in Frage stelle.	☐ [1]	☐ [2]	☐ [3]	☐ [4]
g) Ich bemühe mich sehr, meine religiösen Überzeugungen in mein alltägliches Leben zu integrieren.	☐ [1]	☐ [2]	☐ [3]	☐ [4]
h) Mein ganzer Lebensentwurf basiert auf meiner Religiosität.	☐ [1]	☐ [2]	☐ [3]	☐ [4]

34. Wenn Sie Ihre allgemeine Lebenssituation heute betrachten: Wie glücklich oder unglücklich sind Sie alles in allem?

- ☐ Sehr glücklich [1]
- ☐ Ziemlich glücklich [2]
- ☐ Nicht sehr glücklich [3]
- ☐ Überhaupt nicht glücklich [4]

35. Wie würden Sie Ihren allgemeinen Gesundheitszustand beschreiben?

- ☐ Sehr gut [1]
- ☐ Gut [2]
- ☐ Zufriedenstellend [3]
- ☐ Weniger gut [4]
- ☐ Schlecht [5]

SEKTION C: DEMOGRAPHISCHE UND BERUFLICHE ANGABEN

36. Welcher Profession gehören Sie an und in welchem Aus- bzw. Weiterbildungsstand befinden Sie sich?
(Mehrfachantwort möglich, ggf. Antwort spezifizieren ✎)

Profession	Aus-/Weiterbildungsstand
☐ Hebamme [1]	☐ Staatlich geprüfte Hebamme [11] ☐ Zusatzbezeichnung [12] ✎ ☐ Zusatzstudium [13] ✎ ☐ Sonstiges [14] ✎
☐ Pflegefachkraft [2]	☐ Examinierter Gesundheits- und Krankenpfleger [21] ☐ Fachgesundheits- und Krankenpfleger [22] ✎ ☐ Stations-/Bereichs-/Pflegedienstleitung [23] ✎ ☐ Praxisanleiter [24] ✎ ☐ Zusatzstudium [25] ✎ ☐ Sonstiges [26] ✎
☐ Ärztin/Arzt [3]	☐ Approbierter Arzt [31] ☐ Arzt in Weiterbildung [32] ✎ ☐ Arzt mit abgeschlossener Weiterbildung [33] ✎ ☐ Zusatzbezeichnung [34] ✎ ☐ Zusatzstudium [35] ✎ ☐ Sonstiges [36] ✎
☐ Psychologe/in [4]	☐ Diplom-Psychologe [41] ☐ Approbierter Psychologischer Psychotherapeut [42] ☐ Zusatzbezeichnung [43] ✎ ☐ Zusatzstudium [44] ✎ ☐ Sonstiges [45] ✎
☐ Sozialarbeiter [5]	☐ Diplom-Sozialpädagoge [51] ☐ Diplom-Sozialarbeiter [52] ☐ Diplom-Heilpädagoge [53] ☐ Zusatzbezeichnung [54] ✎ ☐ Zusatzstudium [55] ✎ ☐ Sonstiges [56] ✎
☐ Andere [6]: ✎	☐ Zusatzbezeichnung [61] ✎ ☐ Zusatzstudium [62] ✎ ☐ Sonstiges [63] ✎

37. Wie zufrieden sind Sie insgesamt mit Ihrer beruflichen Tätigkeit?

- ☐ Sehr zufrieden [1]
- ☐ Mäßig zufrieden [2]
- ☐ Ein wenig unzufrieden [3]
- ☐ Sehr unzufrieden [4]

38. Bitte schätzen Sie ab, wie viele Patienten/Patientenfamilien Sie in den letzten zwölf Monaten betreut haben, bei denen einer der nachfolgend genannten Zustände oder Situationen vorlag:

	Keinen	1-3	4-10	11-20	> 20
a) Kritische, lebensbedrohliche Erkrankung	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]
b) Neudiagnose einer lebensbedrohlichen Erkrankung	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]
c) Schwere Behinderung oder chronischer Schmerz	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]
d) Schwerwiegende pränatale Diagnose	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]
e) Ethisches Dilemma	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]
f) Tod des Patienten	☐ [1]	☐ [2]	☐ [3]	☐ [4]	☐ [5]

39. Hat ihre Arbeitsstätte eine akademische Orientierung?

- ☐ Keine akademische Orientierung [1]
- ☐ Akademisches Lehrkrankenhaus [2]
- ☐ Universitätsklinik [3]

40. Hat ihre Arbeitsstätte eine religiöse Orientierung?

- ☐ Ja [1] _____
- ☐ Nein [2]

41. Welche Staatsangehörigkeit haben Sie? *(Mehrfachantwort möglich)*

- ☐ Deutsch [1]
- ☐ Andere [2] _____

42. Wo bzw. in welchem Bundesland …

	a) … wurden Sie geboren?	b) … leben Sie aktuell?
Baden-Württemberg	☐ [1]	☐ [1]
Bayern	☐ [2]	☐ [2]
Ehemaliges Berlin-West	☐ [3]	☐ [3]
Bremen	☐ [4]	☐ [4]
Hamburg	☐ [5]	☐ [5]
Hessen	☐ [6]	☐ [6]
Niedersachsen	☐ [7]	☐ [7]
Nordrhein-Westfalen	☐ [8]	☐ [8]
Rheinland-Pfalz	☐ [9]	☐ [9]
Saarland	☐ [10]	☐ [10]
Schleswig-Holstein	☐ [11]	☐ [11]
Ehemaliges Berlin-Ost	☐ [12]	☐ [12]
Brandenburg	☐ [13]	☐ [13]
Mecklenburg -Vorpommern	☐ [14]	☐ [14]
Sachsen	☐ [15]	☐ [15]
Sachsen-Anhalt	☐ [16]	☐ [16]
Thüringen	☐ [17]	☐ [17]
Ausland (*bitte spezifizieren*)	☐ [18]	

43. Welches Geschlecht haben Sie?

☐ Männlich [1]
☐ Weiblich [2]

44. In welchem Jahr wurden Sie geboren?

|1|9|_|_|

45. Welchen höchsten allgemeinbildenden Schulabschluss haben Sie? *(Nur eine Antwort möglich)*

☐ Volks-/Hauptschulabschluss bzw. Polytechnische Oberschule mit Abschluss 8. oder 9. Klasse [1]
☐ Mittlere Reife/Realschulabschluss bzw. Polytechnische Oberschule mit Abschluss 10. Klasse [2]
☐ Fachhochschulreife/fachgebundene Hochschulreife/Abschluss einer Fachoberschule [3]
☐ Abitur/Allgemeine Hochschulreife bzw. Erweiterte Oberschule mit Abschluss 12. Klasse [4]
☐ Anderen Schulabschluss [5] .....

46. Welche akademischen Grade haben Sie bisher erworben haben? (*Mehrfachantwort möglich*)

- ☐ Keinen [1]
- ☐ Dr. med. [2]
- ☐ PD [3]
- ☐ Prof. [4]
- ☐ Anderen [5] _____

47. Gibt es noch einen Gedanken zum Thema „Religiosität und Spiritualität im gesundheitlichen und medizinischen Bereich", den Sie uns noch mitteilen möchten? Wenn ja, schreiben Sie ihn gerne in das nachfolgende Feld.

VIELEN DANK FÜR IHRE TEILNAHME!

Ich möchte über die Ergebnisse dieser Studie informiert werden: ☐ Ja ☐ Nein

Vorname und Name: _____

Adresse (Straße, PLZ, Ort): _____

oder E-Mail-Adresse: _____

☞ Bitte deponieren Sie diesen Abschnitt separat vom Fragebogen in dem in Ihrer Abteilung bereit stehenden Behältnis.

MINIMALERHEBUNG FÜR NICHT-TEILNEHMER

Wir respektieren Ihren Wunsch, derzeit nicht an unserer Studie teilzunehmen. Wir können Ihnen versichern, dass Ihre Entscheidung nicht weitergegeben und selbstverständlich auch keinerlei Auswirkung haben wird. Wir möchten Sie jedoch abschließend darum bitten, die sechs folgenden allgemein-demographischen Fragen zu beantworten. Sie tragen hiermit zu einer Steigerung der Qualität der Studienergebnisse bzw. deren Aussagekraft bei. Natürlich werden auch diese Angaben in anonymisierter Form ausgewertet.

1. Welches Geschlecht haben Sie?
   ☐ Männlich [1] ☐ Weiblich [2]

2. In welchem Jahr wurden Sie geboren?
   |1|9|_|_|

3. Welcher Religionsgemeinschaft bzw. Konfession oder Glaubensrichtung …

	c) … gehören Sie **aktuell** an?	d) … gehörten sie an, **als Sie aufwuchsen?**
Keiner	☐ [1]	☐ [1]
Römisch-katholischer Kirche	☐ [2]	☐ [2]
Römisch-orthodoxer Kirche	☐ [3]	☐ [3]
Evangelischer Kirche (o. Freikirchen)	☐ [4]	☐ [4]
Anderer christlicher Religionsgemeinschaft:	☐ [5] ✎	☐ [5] ✎
Islamischer Religionsgemeinschaft	☐ [6]	☐ [6]
Jüdischer Religionsgemeinschaft	☐ [7]	☐ [7]
Hinduistischer Religionsgemeinschaft	☐ [8]	☐ [8]
Buddhistischer Religionsgemeinschaft	☐ [9]	☐ [9]
Anderer **nicht-christlicher** Religionsgemeinschaft:	☐ [9] ✎	☐ [9] ✎

4. Welche Staatsangehörigkeit haben Sie? *(Mehrfachantwort möglich)*
   ☐ Deutsch [1]
   ☐ Andere [2] ✎ .....

5. Welcher Profession gehören Sie an?
   ☐ Hebamme [1] ☐ Pflegefachkraft [2] ☐ Arzt [3]
   ☐ Psychologe [4] ☐ Sozialarbeiter [5] ☐ Andere [6] ✎ .....

6. Wir sind bemüht, unsere Forschungsprojekte stetig zu verbessern und für alle Beteiligten so angenehm wie möglich zu gestalten. Sie können zu diesen Verbesserungen beitragen, indem Sie uns die Gründe für Ihre Nichtteilnahme kurz nennen *(Mehrfachantwort möglich)*.

   ☐ Die Studie interessiert mich nicht.

   ☐ Ich habe keine Zeit, einen Fragebogen auszufüllen.

   ☐ Ich empfinde es als unangenehm, über religiöse oder spirituelle Themen in Zusammenhang mit meinem Beruf nachzudenken.

   ☐ Ich habe Sorge, dass sich die Teilnahme an der Studie negativ auf meine berufliche Situation auswirken könnte.

   ☐ Ich habe andere Gründe, nämlich: ✎ .....

VIELEN DANK!

Appendix 2: Tables on self-reported religiosity and the influence of R/S on health

Table 29: Self-reported religiosity of the active survey participants and their opinion on the influence of R/S on health in percentages and absolute numbers. (n=273)

Overall, how much influence do you think R/S has on a patients' health?	Very religious	Moderate religious	Slightly religious	Not religious at all
(very) much	80% (21)	61% (78)	55% (32)	56% (35)
Some	12% (3)	37% (47)	38% (22)	30% (18)
A little or very little to none	8% (2)	2% (3)	7% (4)	14% (8)

Is the influence of R/S on health generally positive or negative?	Very religious	Moderate religious	Slightly religious	Not religious at all
Generally positiv	50% (13)	45% (58)	38% (22)	28% (17)
Generally negativ	4% (1)	1% (1)	0	2% (1)
Both positive and negativ	46% (12)	54% (69)	60% (35)	62% (38)
It has no influence	0	0	2% (1)	8% (5)

Table 30 : Self-reported spirituality of the active survey participants and their opinion on the influence of R/S on health in percentages and absolute numbers. (n=273)

Overall, how much influence do you think R/S has on patients' health?	Very spiritual	Moderate spiritual	Slightly spiritual	Not spiritual at all
(very) much	77% (33)	65% (82)	50% (36)	45% (15)
Some	16% (7)	32% (40)	38% (27)	49% (16)
A little or very little to none	7% (3)	3% (4)	12% (8)	6% (2)

Is the influence of R/S on health generally positive or negative?	Very spiritual	Moderate spiritual	Slightly spiritual	Not spiritual at all
Generally positive	40% (17)	46% (58)	34% (24)	33% (11)
Generally negative	0	1% (1)	1% (1)	3% (1)
Both positive and negative	60% (26)	52% (66)	62% (44)	55% (18)
It has no influence	0	1% (1)	3% (2)	9% (3)

Table 31 : Intrinsic religiosity of the active survey participants and their opinion on the influence of R/S on health in percentages and absolute numbers. (n=273)

Overall, how much influence do you think R/S has on patients' health?	Intrinsic religiosity high	Intrinsic religiosity moderate	Intrinsic religiosity low
(very) much	75% (21)	70% (43)	56% (102)
Some	21% (6)	28% (18)	36% (66)
A little or very little to none	4% (1)	2% (1)	8% (15)

Is the influence of R/S on health generally positive or negative?	Intrinsic religiosity high	Intrinsic religiosity moderate	Intrinsic religiosity low
Generally positive	64% (18)	40% (25)	37% (68)
Generally negative	0	0	2% (3)
Both positive and negative	36% (10)	60% (37)	58% (106)
It has no influence	0	0	3% (6)

Appendix 3: Tables on self-reported religiosity and behaviour concerning R/S.

Table 32: Self-reported religiosity of the active survey participants and their behaviour concerning R/S. (n=272)

When R/S issue come up in discussion with patients, how often do you respond in the following ways?

I listen carefully and empathetically	Very religious	Moderate religious	Slightly religious	Not religious at all
Never	4% (1)	1% (1)	0	5% (3)
Rarely or sometimes	4% (1)	5% (5)	12% (7)	14% (8)
Often or always	92% (24)	95% (101)	88% (50)	82% (49)

I try to change the subject in a tactful way.	Very religious	Moderate religious	Slightly religious	Not religious at all
Never	58% (15)	43% (55)	27% (15)	40% (25)
Rarely or sometimes	39% (10)	56% (71)	70% (39)	50% (30)
Often or always	3% (1)	1% (2)	3% (2)	10% (6)

I encourage patients in their own R/S beliefs and p	Very religious	Moderate religious	Slightly religious	Not religious at all
Never	0	4% (5)	2% (1)	21% (13)
Rarely or sometimes	34% (9)	41% (53)	51% (29)	41% (25)
Often or always	66% (17)	55% (70)	47% (27)	38% (22)

I respectfully share my own religious ideas and experiences.	Very religious	Moderate religious	Slightly religious	Not religious at all
Never	0	17% (22)	40% (23)	56% (34)
Rarely or sometimes	76% (20)	74% (95)	54% (31)	41% (25)
Often or always	24% (6)	9% (!1)	6% (3)	3% (2)

I pray with patients.	Very religious	Moderate religious	Slightly religious	Not religious at all
Never	30% (8)	39% (50)	53% (30)	70% (43)
Rarely or sometimes	54% (14)	56% (71)	45% (26)	30% (18)
Often or always	16% (4)	5% (7)	2% (1)	0

Table 33 : Self-reported spirituality of the active survey participants and their behaviour concerning R/S. (n=272)

When R/S issue come up in discussion with patients, how often do you respond in the following ways?

I listen carefully and empathetically	Very spiritual	Moderate spiritual	Slightly spiritual	Not spiritual at all
Never	0	0	1% (1)	13% (4)
Rarely or sometimes	2% (1)	6% (7)	14% (10)	13% (4)
Often or always	98% (42)	94% (118)	85% (60)	74% (26)

I try to change the subject in a tactful way.	Very spiritual	Moderate spiritual	Slightly spiritual	Not spiritual at all
Never	53% (23)	37% (46)	38% (27)	43% (14)
Rarely or sometimes	45% (19)	61% (32)	58% (41)	41% (13)
Often or always	2% (1)	2% (2)	4% (3)	16% (5)

I encourage patients in their own R/S beliefs and practices	Very spiritual	Moderate spiritual	Slightly spiritual	Not spiritual at all
Never	5% (2)	1% (1)	8% (6)	30% (10)
Rarely or sometimes	28% (12)	43% (54)	50% (36)	43% (14)
Often or always	67% (29)	56% (70)	42% (29)	27% (9)

I respectfully share my own religious ideas and experiences.	Very spiritual	Moderate spiritual	Slightly spiritual	Not spiritual at all
Never	5% (2)	18% (23)	46% (33)	64% (21)
Rarely or sometimes	76% (33)	74% (93)	49% (35)	30% (10)
Often or always	19% (8)	8% (9)	5% (3)	6% (2)

I pray with patients	Very spiritual	Moderate spiritual	Slightly spiritual	Not spiritual at all
Never	40% (17)	39% (49)	61% (43)	67% (22)
Rarely or sometimes	55% (24)	55% (68)	36% (36)	33% (11)
Often or always	5% (2)	6% (8)	3% (2)	0

Table 34 : Intrinsic religiosity of the active survey participants and their behaviour concerning R/S. (n=272)

When R/S issue come up in discussion with patients, how often do you respond in the following ways?

I listen carefully and empathetically	Intrinsic religiosity high	Intrinsic religiosity moderate	Intrinsic religiosity low
Never	4% (1)	0	2% (4)
Rarely or sometimes	4% (1)	5% (3)	10% (18)
Often or always	92% (26)	95% (58)	88% (161)

I try to change the subject in a tactful way.	Intrinsic religiosity high	Intrinsic religiosity moderate	Intrinsic religiosity low
Never	53% (15)	46% (28)	37% (68)
Rarely or sometimes	40% (11)	54% (33)	58% (105)
Often or always	7% (2)	0	5% (9)

I encourage patients in their own R/S beliefs and practices	Intrinsic religiosity high	Intrinsic religiosity moderate	Intrinsic religiosity low
Never	0	5% (3)	8% (15)
Rarely or sometimes	39% (11)	36% (22)	46% (84)
Often or always	61% (17)	59% (36)	46% (84)

I respectfully share my own religious ideas and experiences.	Intrinsic religiosity high	Intrinsic religiosity moderate	Intrinsic religiosity low
Never	0	10% (6)	39% (72)
Rarely or sometimes	71% (20)	85% (52)	55% (101)
Often or always	29% (8)	5% (3)	6% (10)

I pray with patients	Intrinsic religiosity high	Intrinsic religiosity moderate	Intrinsic religiosity low
Never	18% (5)	50% (31)	51% (94)
Rarely or sometimes	72% (20)	46% (28)	45% (82)
Often or always	10% (3)	4% (2)	4% (7)

Appendix 4: Ethical Votum

LMU LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN

ETHIKKOMMISSION BEI DER LMU MÜNCHEN

Vorsitzender:
Prof. Dr. W. Eisenmenger
Telefon+49 (0)89 5160 - 5191
Telefax+49 (0)89 5160 - 5192
Ethikkommission@
med.uni-muenchen.de

www.ethikkommission.med.uni-muenchen.de

Postanschrift:
Pettenkoferstr. 8a
D-80336 München

Hausanschrift:
Pettenkoferstr. 8
D 80336 München

München, 25.09.2012 HB /sc

Herrn
Prof. Dr. A. Schulze
Neonatologie GH
Klinikum Großhadern
81377 München

Titel:	**Religiosität und Spiritualität in der perinatalen Medizin: Eine Analyse der Einstellungen und Überzeugungen bei Hebammen, Pflegefachkräften und Ärzten.**
Antragsteller:	**Dr. I. Wermuth, Prof. Dr. A. Schulze, Prof. Dr. E. Frick, Prof. Dr. T. Roser**
Projekt- Nr.	**383-12**

Sehr geehrter Herr Kollege Schulze,

besten Dank für Ihr Schreiben vom 13.09.2012 mit der Beantwortung unserer Fragen bzw. Erfüllung der Auflagen und den noch ausstehenden bzw. überarbeiteten Unterlagen (EK- Antrag, Studienprotokoll).

Die Ethikkommission (EK) kann Ihrer Studie nun die ethisch-rechtliche Unbedenklichkeit zuerkennen.

Vorsorglich möchte ich darauf hinweisen, dass auch bei einer positiven Beurteilung des Vorhabens durch die EK die ärztliche und juristische Verantwortung für die Durchführung des Projektes uneingeschränkt bei Ihnen und Ihren Mitarbeitern verbleibt.

Änderungen des Studienprotokolls sind der EK mitzuteilen. Für Ihre Studie wünsche ich Ihnen viel Erfolg.

Mit freundlichen Grüßen

Prof. Dr. W. Eisenmenger
Vorsitzender der Ethikkommission

N/ Mitglieder der Ethikkommission

P.S.: Bitte beachten Sie die aktuellen Richtlinien für Anträge an die Ethikkommission.
Internetadresse: www.ethikkommission.med.uni-muenchen.de

Eidesstatliche Versicherung

Eidesstattliche Versicherung

Schouten, Esther Sabine

Name, Vorname

Ich erkläre hiermit an Eides statt,

dass ich die vorliegende Dissertation mit dem Thema

Viewpoints and motives on religion and spirituality of professionals in perinatal medicine.
A survey among midwives, nurses, obstetricians and neonatologists.

selbständig verfasst, mich außer der angegebenen keiner weiteren Hilfsmittel bedient und alle Erkenntnisse, die aus dem Schrifttum ganz oder annähernd übernommen sind, als solche kenntlich gemacht und nach ihrer Herkunft unter Bezeichnung der Fundstelle einzeln nachgewiesen habe.

Ich erkläre des Weiteren, dass die hier vorgelegte Dissertation nicht in gleicher oder in ähnlicher Form bei einer anderen Stelle zur Erlangung eines akademischen Grades eingereicht wurde.

Ort, Datum

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