

The Adaptation of the Death Anxiety and Religious Belief Measures into Estonia
A Pilot Study on the Supernatural Belief Scale and the Existential Death Anxiety Scale

Karl Käsnapuu
University of Tartu

Master's Thesis

Supervisors: Roland Karo, Ph.D. & Olga Schihalejev, Ph.D.

TARTU 2019

Abstract

This master's thesis demonstrates an adaptation process of a survey research method that evaluates the relationship between death anxiety and religiosity into the Estonian setting. Three main objectives were set: (a) introduction of the theoretical reasoning, (b) preparation and execution of the pilot study, (c) exploration of the entire process to determine requirements for the main study. Theoretical and methodological basis are drawn from Jong and Halberstadt (2016) who's central objective bases on the following questions: "are people afraid of death? Does death anxiety motivate religious belief? Does religious belief mitigate death anxiety?" (p. 47). In this paper two measures of survey questionnaire from the named authors were adapted (6 + 12 items) and an online pilot survey (n = 194) was executed. The intention of the pilot study was to test the reliability of the measures adapted. Satisfactory result was received—the adapted survey measures were found to be highly reliable. Cronbach's alpha for the Existential Death Anxiety Scale was .939, and for the Supernatural Belief Scale .927. This shows that the main study is feasible.

Keywords: death anxiety, fear of death, religious belief

Table of contents

| | |
|--------------------------|----|
| ABSTRACT | 2 |
| TABLE OF CONTENTS | 3 |
| INTRODUCTION | 5 |
| Background | 6 |
| Literature review | 8 |
| Digression with the ADBS | 10 |
| SBS-6 and EDAS | 10 |
| Terms | 12 |
| Religion | 13 |
| Fear of Death | 14 |
| Fear | 14 |
| Death | 14 |
| Estonian setting | 16 |
| Theoretical synopsis | 17 |
| Research objective | 17 |
| METHOD | 18 |
| Pilot study | 19 |
| Participants | 21 |
| Sampling | 22 |
| Materials and apparatus | 23 |
| Questionnaire design | 23 |

| | |
|-------------------------------|----|
| SBS-6 | 24 |
| EDAS | 25 |
| Tools | 26 |
| Survey interface | 26 |
| Statistical analyses software | 27 |
| Procedure | 27 |
| Adaptation | 27 |
| Translation | 29 |
| Back translation | 30 |
| Expert consultations | 31 |
| Cognitive interviews | 32 |
| Responses | 34 |
| Nonresponse bias | 34 |
| Study design statement | 35 |
| RESULTS | 36 |
| DISCUSSION | 38 |
| Reliability | 38 |
| Questionnaire design | 39 |
| Overall performance | 40 |
| CONCLUSION | 40 |
| REFERENCES | 42 |
| Eesti keelne kokkuvõte | 46 |
| APPENDIX 1 | 48 |
| APPENDIX 2 | 49 |

Introduction

When I first embarked on the project of measuring death anxiety I saw a possibility that could lead me to the answers I was looking for. I had a persistent idea in my head that our thoughts about what comes to us in death has an enormous influence on our lives. I noticed how people with different belief systems about the afterlife can live their lives based on quite different understandings. The stories we tell ourselves impact our lives in various ways. They impact our well-being, our decision-making, and attitudes towards events and so on. I wanted to find out more about the impact death has on life—on individuals, but in addition to that, on society as a whole. There is always some sort of story, a hunch, that influences us even if we do not think about it consciously. The story we have about death plays a role in the overall human endeavor. I have a friend who once picked a book from my collection and started to read it. This was the world-famous “Life after Life,” by Raymond Moody (1975). This was the book that presented the concept of near-death experiences to the wider auditorium. Soon she returned the book with a comment: “how on earth could I ever have a fear of dying again?” I did not even know if such an effect was good or bad, but what I realized was that for my friend the “story” had changed. Altogether we have a plethora of stories. There are different religions, different world-views, different cultural environments and so on. It has been repeatedly noted that all religions have their own story about death. It is inescapable. But in today’s secular environment, who or what creates our story about death? Some would say that science does, but there is nothing conclusive for science to say. The “story” of death is still open to adjustments. In a situation like this, I found it compelling to start studying how the influence of afterlife stories manifests itself in people. This is how singling out one component of the whole story—in this case the death anxiety—became useful as a possible lens of investigation for research.

Background

I started reviewing the literature about the fear of death and death anxiety. With lots of different approaches, it became difficult to get a firm footing. There seemed to be no universally accepted understanding, except perhaps the most prevalent one—the theory of death anxiety being the basis for the birth of religion. The renowned anthropologist Bronisław Malinowski wrote in his “Magic, Science, and Religion” (1948):

The savage is intensely afraid of death, probably as the result of some deep-seated instincts common to man and animals. He does not want to realize it as an end, he cannot face the idea of complete cessation, of annihilation. The idea of spirit and of spiritual existence is near at hand. ... Grasping at it, man reaches the comforting belief in spiritual continuity and in the life after death. (pp. 32–33)

One author who went into depth in his considerations of humanity’s position in this life was the well-known cultural anthropologist Ernest Becker, who in his Pulitzer Prize-winning book “The Denial of Death” (1973), formulates the image of a *cultural hero system*, that supposedly works in giving people meaning which again is one way that people mitigate death anxiety: “Society itself is a codified hero system, which means that society everywhere is a living myth of the significance of human life, a defiant creation of meaning. Every society thus is a ‘religion’ whether it thinks so or not” (p. 38). This describes the set of circumstances I referred to about how people always have some sort of “story” about things, even if not subscribing to any religion—a belief system, if you will. At the time, surviving without providing hard empirical proof, Becker unravels an attractive reasoning on the problem of death:

Best of all, of course, religion solves the problem of death, which no living individuals can solve, no matter how they would support us. Religion, then, gives the possibility of heroic victory in freedom and solves the problem of human dignity at its highest level. The two ontological motives of the human condition are both met: the need to surrender oneself in full to the rest of nature, to become a part of it by laying down one's whole existence to some higher meaning; and the need to expand oneself as an individual heroic personality. Finally, religion alone gives hope, because it holds open the dimension of the unknown and the unknowable, the fantastic mystery of creation that the human mind cannot even begin to approach, the possibility of a multidimensionality of spheres of existence, of heavens and possible embodiments that make a mockery of earthly logic—and in doing so, it relieves the absurdity of earthly life, all the impossible limitations and frustrations of living matter. (p. 282)

The eminent ideas of Becker were well received. Today, the book has almost eight thousand citations according to Google Scholar. Naturally, not everybody agrees with his ideas and his claims were not always supported with hard evidence. However, scientific support for his theories started to come some years later, in 1984, when the authors Sheldon Solomon, Jeff Greenberg, and Tom Pyszczynski attended the meeting of Society of Experimental Social Psychology where they “introduced what we dubbed *terror management theory* in order to build on Becker's claim that people strive for meaningful and significant lives largely to manage the fear of death” (p. 11). They also described how audience members left the room when they started their presentation. (p. 11). Today, Terror Management Theory (TMT) is a renowned theory with several articles about it cited more than one thousand times, as well

as Wikipedia pages about it available in ten different languages. Recently, a book was published by the same authors “The Worm at the Core” (2015) where they elaborate on how they have “spent the last quarter century investigating the influence of the fear of death on human affairs” (p. 12). The book is an interesting read on how the authors conducted tests in labs, did cognitive testing, survey research and everything they could to try to find proof for Becker’s theories.

This seemed like exactly the direction I was looking for—fear of death pinpointed as the cardinal factor in shaping the human condition. But is it really so? Or to what extent it is so? When I started my literature review, I wanted to find promising methods for investigating death anxiety. In consideration of my thesis I saw potential in two methods: a) qualitative research in the form of the in-depth interview method; and b) the quantitative self-report survey method. I decided to go with the self-report survey questionnaire method. First, I felt that it would be good to obtain a broader perspective before going into depth, and secondly, there was no satisfactory quantitative data about the Estonian situation. So, this took me to the idea of conducting a quantitative self-report survey study on death concerns in Estonia.

Literature Review

In the considerable body of literature about death anxiety, there are some names that stand out more than others. One of the earlier works, Multidimensional Fear of Death Scale (MFODS) published in “The Fear of Death and the Fear of Dying” (1969) by Collett-Lester, seems to have had an exceptional influence, considering the number of citations I have come across. Its focus is on death and dying of self, and death and dying of others. Another well-known work is the fifteen-item Death Anxiety Questionnaire (DAQ), published by Conte,

Weiner, and Plutchik in “Measuring death anxiety: Conceptual, psychometric, and factor-analytic aspects” (1982). Using factor analysis, they suggested that there are “four independent dimensions of death anxiety: Fear of the Unknown, Fear of Suffering, Fear of Loneliness, and Fear of Personal Extinction.” An interesting article regarding religiosity “Fear of personal death: Attribution, structure, and relation to religious belief” was published by Florian and Kravetz in 1983. Their Fear of Personal Death Scale (FOPDS) “reflected quantitative differences between persons characterized by varying degrees of religious commitment.” Among many others, perhaps the most well-known is Templer’s (1970) Death Anxiety Scale (DAS). It is probably the most translated and internationally adopted tool of measurement. Google Scholar reports more than 1,200 citations of it. Listed in the collection of “Measures of Religiosity” (1999), and most probably well fit for international use considering that it has already been translated into Arabic, German, Spanish, Hindi, Chinese, Korean, Afrikaans and, Japanese, it started to arouse my interest. At first sight it incorporated some fascinating applications, like: *“I am very much afraid to die”*, or *“The sight of a dead body is horrifying to me”*, or *“The subject of life after death troubles me greatly”*. But trying to compare these items to other works and trying to form a sensible framework for myself, I was left with a kind of ambiguity. The 15-item true/false scale was supposed to provide one single score, but what exactly could it signify? John D. Scanish and Mark R. McMinn, who reviewed DAS for the “Measures of Religion” collection (1999), noted that “Although the DAS appears to have multiple factors contributing to its overall score, what these factors are and how these factors load onto the overall score is not well understood. Consequently, it is still unclear how the overall score should be interpreted” (p. 437). So, having found the most intriguing one, I still did not grasp it or feel comfortable using it. For a while I was left with no direction with

this intriguing but ambiguous topic. I was sure I wanted to use an existing measurement, because from my standpoint creating one myself seemed unrealistic.

Digression with the ADBS

Then it occurred to me that I could adjoin two different types of scales. I had been looking at the afterlife belief measures as well. I found one in Burris and Bailey's "What lies beyond: Theory and measurement of afterdeath beliefs" (2009). They had generated the Afterdeath Belief Scale (ADBS) which measures "five variations in belief: Annihilation, Disembodied Spirit, Spiritual Embodiment, Reincarnation, and Bodily Resurrection". I saw these categories as something to use as a consistent framework in assessing the "belief system" factor. In addition, the authors declared that these "measures proved to be meaningful related to self-reported religious affiliation, religiosity, spirituality, death concerns, mystical experience, and attitudes toward embodied existence" (Burris and Bailey). The ADBS consisted of 24 items. I even started the adaptation process with this scale. I had it translated and I ran it through one round of cognitive interviews, after which I dropped it. This will be also addressed in this work, in the Methods section.

SBS-6 and EDAS

The ambiguity lasted until I ran into the outstanding work of Jonathan Jong and Jamin Halberstadt (2016). In their book, "Death Anxiety and Religious Belief: an existential psychology of religion" they present the Supernatural Belief Scale (SBS-6) and the Existential Death Anxiety Scale (EDAS) which I later decided to adapt for my study in Estonia. The first version of SBS-6, the SBS, was originally introduced by Jong, Bluemke and Halberstadt in 2013 (these scales will be addressed in the Methods section). These were measures to use in

conjunction with each other. Jong and Halberstadt went through a great deal of trouble to build a convincing method to assess the relationship between death anxiety and religious belief. In a word, what Jong and Halberstadt did is they assessed if death anxiety indeed triggers religious belief. They presented readers with complex descriptions on how conflicting is the evidence about religion reducing death concerns. Thanatocentric theories, as they refer to the common ground concepts that by their reasoning theorists seem to agree on, consist of the following: “(1) human beings have a basic fear of death; (2) this fear of death motivates people to believe in supernatural agents, and (3) these beliefs in supernatural agents mitigate death anxiety” (p. 43). The authors argue that “none of these three hypotheses are obviously true” (p. 43). They posit right away that the first claim has been greatly questioned, adding later that “population levels of death anxiety tend to be relatively *low*, at least when assessed via self-report measures. There is therefore scant direct evidence that people are actually afraid of death; this is so even when death is made salient to them” (p. 115). Secondly, they cite some anthropologists, e.g. Radcliffe-Brown (1939) and Lambert, Triandis, & Wolf (1959), to argue that religion can offer terrifying concepts related to death, and not just comforting and pleasurable ideas. We can all probably imagine fearful supernatural beings who pose a danger to us. This symbol is very common in different cultures—whether some demonic figures or anticipated visions of hell in movies and literature. But again, even terrifying concepts related to religion do not necessarily have to be disadvantageous. Cathy Cox and Robert Arrowood (2016) argue that: “the dark side of religiosity is advantageous as it serves an anxiety-buffering function for persons, especially when confronted by awareness of death. Given that the threat of mortality can happen at any time due to unforeseen circumstances, belief in a punishable God or deity is much more comforting than the randomness and uncertainty of life.” I believe this discussion will remain open for a long time. In the book, the

stance is quite nuanced. An attempt has been made to base the argument on strong evidence. Vincent van Bruggen (2017) makes a point that likely resonates with many: “people might have a broad range of reasons to become or stay religious, and these reasons might be as relevant as alleviating death anxiety”, but also add that “It is important to broaden the scope of future research to other experiences that motivate people in the direction of religious belief. The same methods [of Jong and Halberstadt] that have been used to study the relationship with death anxiety may again prove to be valuable.” This is the kind of judicious argumentation that I found compelling about the book. There are of course many ways to cast doubt on every statement the authors make, but overall it is very reasonable venture into the topic. I think the way the authors question the widely accepted Terror Management Theory, introduced earlier, only increases our understanding of the so-called thanatocentric worldview program.

Terms

In this section I introduce key terms to communicate the definition by which they will be utilized in the current project. The terms in consideration are “religiosity” and “fear of death”. Whilst both find quite common use within everyday speech and usually do not raise any questions, they are most probably not possible to define conclusively for the scientific realm. As this project is built on the empirical method of Jong and Halberstadt (2016), my objective here is to use these terms in accordance with the authors’ strategy. I introduce these definitions true to the authors’ impressions by summarizing their interpretation.

Religion

As anyone who is familiar with the field would recognize, “religion”, “like most natural phenomena—resists neat, uncompromising, and exceptionless conceptualization” (Jong and Halberstadt 2016, p. 2). Nevertheless, as the project at hand incorporates assessments of measures of religiosity, a proper elucidation on the term is needed. It has sometimes even been taken as far as Ole Preben Riis’s claim (2009) that a general consensus exists within social-scientific scope that “many interesting religious questions fall outside its competence” (p. 230). He adds a suitable notion that when dealing with the operationalization of religion we should “narrow its scope and focus on certain aspects”, while at the same time “proposing both a nominal definition, which provides a theoretical anchorage, as well as an operational definition, which provides an empirical grounding” (p. 230). These qualities I found convincingly provided by Jong and Halberstadt (2016) in operationalizing “religion” for the empirical research under scrutiny. I suggest taking a look at the measure (Table 2) in the Methods section. Items in this measure constitute to the religious identification with the stronger to lighter assent. To operationalize and measure “religion” for the current study, Jong and Halberstadt (2016) provide this definition:

we defined “religion” as the belief in supernatural agents and the phenomena associated with those beliefs, such as rituals, social structures, and emotional and perceptual experiences. Supernatural agents, in turn, are those whose attributes violate our intuitive or automatic (i.e., natural), category-based expectations. (p. 48)

Fear of Death

Fear. I am hereby obliged to put forward the conceptualization of Jong and Halberstadt (2016). They indicate that the theories of religion by Feuerbach, Malinowski, or Becker, that they otherwise rely on, are not precise enough: “they do not spell out the parameters of death anxiety, leaving us to do some conceptual work for them” (p. 72). Jong and Halberstadt make a clear impression that they need their measures to meet the means they theorize about. One criterion to pay attention to is that fear is distinguishable from anxiety (p. 65). They lean on Izard (1992) and Russell & Barrett (1999) in declaring that “the fear is more basic than anxiety, in that the latter involves higher-order cognitive processing” (p. 65). Making a distinction between fear and anxiety, Jong and Halberstadt (2016) proceed:

Despite the variety of approaches to fear and anxiety generally, *death anxiety*, by any reasonable account, must refer primarily to an anticipatory affective response, rather than an acute response to direct and concrete, and more in the future than immediate. (p. 65)

Death. Now adding that the TMT, which is under scrutiny, “is explicitly about human beings’ consideration of their deaths long before they occur” (p. 66). So, regarding to the current project, the focus is on “*anxiety*’ rather than fear per se” (p. 66)

Defining “death”, the authors discuss two commonly made distinctions: “the death of oneself and the death of others” (p. 66) and “the dying process and the death itself” (p. 66). They summarize a definition of death used in this study:

Death itself entails the cessation of life, either as we know it or *tout court*; either way, it is shrouded in mystery, which people might find disconcerting. It is the latter, the fear of death per se—and what it entails, including the cessation of conscious experience, and the loss of worldly possessions and achievements—that is directly relevant to our theoretical interests. (p.66)

Later, in “Death Anxiety and Religious Belief: Responses to Commentaries” (2017)

Jong and Halberstadt provide an enlightening explanation of the usage of terms related to their empirical research. As these terms are of great importance to my proceedings as well, I provide their explanation in its entirety:

Our first port of call was the seemingly obvious, but so frequently ignored matter of defining what “religion” and “death anxiety” mean – and do not mean. If there is one thing on which researchers agree, it is that both religion and death anxiety are complex, multifaceted phenomena. For example, an individual or group may hold religious beliefs, engage in religious practices, and experience religious emotions. Equally, there are many aspects of death about which one might be fearful, including prolonged suffering, loneliness, and nonexistence. As widely accepted as the multidimensionalities of these phenomena are, we argue that researchers have largely failed to take seriously an obvious implication of them: one cannot assume that any particular aspect of religion (or death anxiety) has the same etiology or consequences as another. Scientific progress, at least at this early stage, is more likely if we isolate and cleanly operationalize the aspect(s) we care about, and have a good understanding of why we do.

Estonian Setting

Significant to Estonian religiosity is the fact that according to the most recent census, a very large fragment of the population does not attest to following any particular religion. This is not a new phenomenon. Estonia is quite well known for its relatively high representation of non-religious people. The 2011 Population and Housing Census (PHC 2011) affirmed that 54% of people aged 15 years and older did not consider themselves to be followers of any particular religion. Another study, requested by the Estonian Council of Churches and conducted by the major social and market research company Saar Poll, added more specifically that only 20% of the Estonian population considered themselves religious on top of the 26% who were “leaning towards religiosity” (Elust, usust ja usuelust 2015). In my opinion, these are circumstances that make Estonia a particularly interesting environment in which to test the hypotheses incorporated in this study. This is for two main reasons. First, this is something that Jong and Halberstadt (2016) have called for—involving a non-religious sample in research. Secondly, it is interesting to see how this sample responds to the enquiry about supernatural beliefs. A Senior Research Fellow in Church History, Priit Rohtmets also notes about this matter in his recently published work “Eesti usuelu 100 aastat” (2019) (*Estonian Religious Life for 100 Years*) that such statistics do not actually mean that Estonian people are totally indifferent to religious topics (p. 189). In addition, many authors who are familiar with the work of Jong and Halberstadt have praised the approach of purposefully preparing the measures for cross-cultural usage and been supportive of conducting the research in different cultures, e.g. Vincent van Bruggen (2017), Christopher Kavanagh (2017), and Marc Stewart Wilson (2017), to name just a few.

Theoretical Synopsis

Common sense would suggest that death is a fundamental part of our human existence. What comes in death remains unknown. For a common man, it is normal to want to avoid death. This is an inherent feature of all living organisms. Solomon et al. (2015), the creators of Terror Management Theory, add that: "On one hand, we share the intense desire for continued existence common to all living things; on the other, we are smart enough to recognize the ultimate futility of this fundamental quest. We pay a heavy price for being self-conscious. ... Terror is the natural and generally adaptive response to the imminent threat of death" (p. 19). Solomon et al. propose that awareness of our own mortality is unique to human beings and this results in psychological conflicts known only to humans. Consequently, we try to manage these psychological conflicts by bringing faith into our cultural worldview and by seeking individual significance (pp. 21–22.) This all can be seen as a search for meaning. And the best answer to this longing is to rely on some worldview that offers literal immortality, such as religion or belief in the afterlife, or symbolic immortality, such as national identity, or finding some other immortal group to belong to. This proposition has developed and has incorporated insights from many fields. Recently Jong and Halberstadt (2016) have advanced this research by proposing a salient empirical method to question it cross-culturally. The thesis at hand, by running that empirical method in Estonia, is a contribution to this enquiry.

Research Objective

The straightforward overall objective of the current thesis is to adapt and run a pilot study in the form of a survey questionnaire in the Estonian setting on the theoretical and

methodological grounds introduced in 2016 by Jonathan Jong and Jamin Halberstadt in “Death Anxiety and Religious Belief: An existential psychology of religion”. My central objective is adapting their methodology to Estonia. My central question is determining whether my adaption of the Supernatural Belief Scale and the Existential Death Anxiety Scale were successful.

The theoretical and methodological grounds of the pilot study are based on the following questions: “are people afraid of death? Does death anxiety motivate religious belief? Does religious belief mitigate death anxiety?” (p. 47). To assess the problem in a broader sense, an attempt has been made to test the theory cross-culturally. By 2016, the same study had been conducted in six different countries. The current project is my contribution in adapting and introducing this research method to the Estonian environment. After the possible success of the adaptation process, I plan on running a full study as my PhD project. In the case of favorable progress, I plan to contact the original authors before running my main study.

Method

When I started with this project, my intentions were to conduct a full-scale quantitative study in Estonia. I wanted it to accurately reflect the relevant characteristics of the whole population of Estonia according to census data. An adapted theoretical background seemed to be applicable and the only thing to figure out was a straightforward and convincing methodological approach. It was then that I realized that, considering the scope of the master’s thesis, it would not be possible to fit all the work needed into one thesis. The authors of the book “Death Anxiety and Religious Belief”, Jonathan Jong and Jamin Halberstadt

(2016), name twenty persons in the book's "Acknowledgments" paragraph, who only "were involved in the original empirical research—particularly the data collection and data analysis" (p. xiii). Before the data collection could start, just the adaption process of the survey questionnaire alone started to become more voluminous than I had anticipated. In addition to the translation process, and the expert consultations, a series of cognitive interviews had to be planned. Gordon Willis points in his widely respected guidebook: "Cognitive Interviewing: A Tool for Improving Questionnaire Design" (2005) in the section "Twelve Logistical Issues and Considerations" that it is possible to conduct these interviews alone, but it is better to hire help even in the case of nine or fewer planned interviews (p. 12). I did not have that possibility. I still wanted the adaption process to be reliable and I also wanted to execute the survey within the current master's project. With these considerations in mind, the workload started to look unreasonable. At first, there was no easy solution in sight. Then, after helpful consultations with my supervisors, I decided to incorporate into my thesis a) the preliminary adaptation of the survey questionnaire, and b) the execution of the pilot study. These procedures seemed to cover an appropriate amount of work in the overall progress towards the parent study.

Pilot Study

A pilot study is a useful and rewarding step to take in the development of a full study. Carrying many important functions, it helps to develop a suitable study design. Bearing in mind the aforementioned situation with the overall workload, I decided that instead of getting hastily into the full-scale testing of the hypotheses, the first objective was preparing all the study instruments for this new cultural environment. The hypotheses at hand have been already well tested in many different cultural settings (Jong and Halberstadt 2016; Jong

2018) and the leading author has communicated how crucial it is to adapt all the parts of the survey questionnaire with care (Jong 2018). All things considered, I decided that the running of the pilot survey should be the main objective of the current study with an emphasis on testing the reliability of the questionnaire by using Cronbach's alpha statistics. As secondary objectives, I chose the development of the overall study design, including the adaptation and sampling processes. Although in some cases it has been argued that the data from a pilot study could also be used, as van Teijlingen and Hundley (2002) point out, "when an established and validated tool is being used and the pilot study is determining other methodological aspects such as recruitment rates, it could be argued that such data may be of value". However, this is not the case here—the proceedings of this study lay predominantly in testing reliability and building a useable study design. Testing reliability prior to conducting a parent study is important, as the cross-cultural adaptation of complex terms and definitions from various aspects of religiosity and anxiety, play a significant role. It is the target population's capability to understand the meanings of the survey contents that makes the results count. Also, in addition to serving the project at hand, Teijlingen (2001), a proponent of piloting, states that "everybody needs pilot studies, not just their own, but also those of other researchers in the field". In addition to the previously mentioned benefits of running a pilot study, I make a non-exhaustive list of all the benefits I consider important to this study (Table 1).

| |
|---|
| Table 1 |
| <i>Benefits expected from the pilot study</i> |
| <ul style="list-style-type: none"> • Testing reliability of the adapted scales • Assessing the feasibility of a full-scale survey • Establishing and testing the sampling and recruitment strategies • Collecting preliminary data • Determining what resources (staff; expertise; finances) are needed for a planned study • Assessing the proposed data analysis techniques to uncover potential problems • Training a researcher in as many elements of the research as possible • Developing research plan • Convincing other stakeholders (service providers, ethics committees, managers, politicians, university committees etc.) that the proposed main study is worth supporting. |
| <i>Note.</i> This |
| <i>Source: inspired by Teijlingen and Hundley (2002); Teijlingen (2001); Connelly (2008)</i> |

Participants

My aim with the future parent study is to recruit a representative sample of the Estonian-speaking population of Estonia. With the help of the online “Sample size calculator” from the *Qualtrics Experience Management*¹ I am estimating that the future parent study should include approximately 1,100 respondents (with a confidence level of 95% and a margin of error of 3%). To estimate a sufficient sample size for the pilot study, I turned to the corresponding literature, the majority of which appeared to be provided by the field of health and nursing. Several authors and experts recommend that a pilot sample be around 10% of the sample projected for the parent study: 9% (Cocks and Torgerson 2012); 10% (Connelly 2008; Hertzog 2008). The authors also advocate that this is not always as simplistic of a calculation as that. Hertzog (2008) notes that the figures might vary according to the type of

¹ <https://www.qualtrics.com/blog/calculating-sample-size/>

study and different factors, but “the final decision to be guided by cost and time constraints as well as by size and variability of the population”. To sum up, after reviewing the constraints and possibilities, I set a realistic target conveniently at 10%.

Sampling

With the current pilot study, I used the opportunity and tested the idea of distributing a questionnaire with the help of social media. *Establishing and testing the sampling and recruitment* was also one of the benefits of running a pilot listed in Table 1. At first, I also prepared survey questionnaire on paper to reach people who may not be using computers or smartphones, e.g. the elderly population, but had to abandon this ambition due to time and resource limitations. Participants were recruited using the snowball sampling method. The chain-referral system worked better than I had anticipated. When first distributing the questionnaire, I mainly tried to reach different age groups in different geographical locations. The five main characteristics I pay attention to, are: age, sex, education, geography, and religion. I consider these characteristics relevant to the study and they are also easy to match with census data. During the process of distribution, some first-round respondents asked themselves if they could share the survey to others. To some, I suggested doing that. The spread of the questionnaire was rapid but uneven. I achieved 194 full responses (counting for 17.6% of the projected parent study) in 72 hours. Considering all the characteristics, the responses did not exactly match the census data ratios, though the extent of the spread was satisfactory. In my opinion, this experience demonstrated that if there was more time at hand, it would be possible to direct the distribution in such a way that desired representation of the characteristics would be achieved. Also, with such an abundant response rate, a strong basis for correcting biases with the method of post-stratification is indicated. Although this

sampling method looked promising, I hold that further investigation of additional methods is needed before starting the sampling for the future parent study.

Materials and Apparatus

This study is based on a self-report survey questionnaire. The questionnaire incorporates two measures developed by Jonathan Jong and Jamin Halberstadt (2016): 1) the Supernatural Belief Scale (SBS-6), and 2) the Existential Death Anxiety Scale (EDAS). These scales were published in the current form in "Death Anxiety and Religious Belief: An Existential Psychology of Religion. *Scientific studies of religion inquiry and explanation*" (2016). The authors establish a theoretical background and propose a survey questionnaire method for investigation. "Thanatocentric theories", they say, "make two causal claims: first, that death anxiety motivates religious belief, and second, that religious belief mitigates death anxiety" (p. 116). The line of questioning they follow is "are people afraid of death? Does death anxiety motivate religious belief? Does religious belief mitigate death anxiety?" (p. 47). In their words, the main difficulty to tackle was "to determine how 'religiosity' and 'death anxiety' are to be operationalized and measured" (p. 47). The first scale (SBS-6) measures "religiosity" and the second (EDAS) "death anxiety". To my knowledge, the project at hand is the first time these scales have been adapted into the Estonian setting.

Questionnaire Design

The questionnaire consists of two sections: 1) SBS-6 and EDAS combined, and 2) a sociodemographic questionnaire. In the first section, all the items from both scales were randomly mixed and they appeared to a respondent on one continuous web-page. For each statement respondents needed to indicate their level of agreement on a Likert scale from 1

(complete disagreement) to 7 (total agreement). The sociodemographic questionnaire asked about the age, sex, location, education, and religiosity of the respondent.

SBS-6. Jong, Bluemke, and Halberstadt introduced the Supernatural Belief Scale (SBS) in 2013. It was designed to measure “respondents’ tendency towards religious belief” (Jong et al. 2013). The second aim of the development, as the authors described it, was to “shed light on the role of death-related cognitions or emotions in the development and maintenance of religious belief” (Jong et al. 2013). When developing the scale, a cross-cultural attainability was kept in mind. Three years later Bluemke, Jong, and Halberstadt, together with Grevenstein and Mikloušić reported to have succeeded in creating for the first time “a valid measure of religious supernatural belief across two groups of different language and culture” (Bluemke et al. 2016). The cross-cultural oriented logic is its main innovation. The authors expressed a wish from the beginning that “items in such a scale should reflect cross-culturally recurring supernatural concepts, with minimal inclusion of sectarian doctrines (e.g. Christian doctrine of the Trinity)” (Jong et al. 2013). Originally tested in moderately secular New Zealand, “the SBS was found via exploratory and confirmatory factor analysis to be an essentially unidimensional scale” (Jong and Halberstadt 2016, p. 57). The original SBS consisted of 10 items, but in 2016 a new concise version of it, the SBS-6, was introduced in their freshly published hardback. What makes this scale convenient in different cultural environments is that the authors kept in mind from the beginning that “the specific terms ‘God,’ ‘angels,’ ‘demons,’ ‘spirit,’ ‘soul,’ and ‘miracles’ may be replaced with more culturally appropriate terms, while the descriptions of the supernatural concepts remain constant” (p. 57). They claimed the measure also works well in secular and non-Abrahamic contexts (p. 62).

Altogether, by 2016 studies had been conducted in Brazil, United States, Russia, South Korea, the Philippines and Japan (pp. 57–58).

Table 2

Supernatural Belief Scale-Revised (SBS-6)

- There exists an all-powerful, all-knowing spiritual being, whom we might call God.
- There exist spiritual beings, who might be good or evil, such as angels or demons.
- Every human being has a spirit or soul that is separate from the physical body.
- There is some kind of life after death.
- There is spiritual realm besides the physical one.
- Supernatural events that have no scientific explanation (e.g., miracles) can and do happen.

Source: Jong, & Halberstadt (2016)

EDAS. The Existential Death Anxiety Scale consists of two-factors: Factor 1, the cessation of life, and Factor 2, the extinction of life. Both factors consist of six propositions which makes in total twelve items. Jong and Halberstadt (2016) express their objective with this 12-item scale as follows: “the aim was to arrive at a concise unidimensional measure with which we could test the thanatocentric theories of religion in multiple cultural contexts” (p. 73). I see great value in the concise format of the scale. They started with a 45-item version, which they then reduced to a 12-item measure. This makes it much easier to distribute as a self-report survey questionnaire. People are more willing to make an effort, if it does not take too much of their time. By the time of publishing the EDAS in their hardback (2016), it had been executed in such varying cultural environments as Brazil, Philippines, Russia, South Korea, and Japan. Adapting EDAS to Estonia was more problematic than SBS-6 due to the language constructs and wording issues.

| |
|--|
| Table 3 |
| <i>Existential Death Anxiety Scale (EDAS)</i> |
| Factor 1: The cessation of life |
| <ul style="list-style-type: none"> • The thought of my own death frightens me. • I am troubled by the fact that someday I will no longer be alive. • The finality of death is frightening to me. • My mortality troubles me. • Thinking about being dead fills me with dread. • It upsets me to think that someday I will no longer be in this world. |
| Factor 2: The extinction of the self |
| <ul style="list-style-type: none"> • The idea of never experiencing the world again after I die frightens me. • I am scared that death will be the end of “me”. • The loss of my consciousness in death scares me. • I am scared that death will be the end of my “self”. • I am scared that death will extinguish me as a person. • Never feeling anything again after I die upsets me. |
| <i>Source: Jong, & Halberstadt (2016)</i> |

Tools

Survey interface. The online survey tool LimeSurvey was used to generate the online survey questionnaire. University of Tartu provides full access for its staff and students to use the tool. Although the SurveyMonkey platform was considered, I ended up building all three developmental versions of the questionnaire on LimeSurvey. Using it in the Estonian language was somewhat confusing. Some of the guides are translated into Estonian, but the majority are not. Using some specific features became difficult up to the point when I changed the working language fully into English. Also, there is a very active LimeSurvey wiki community online to help answer all sorts of questions.² For example, I needed the survey to be

² This community can be found at <https://www.limesurvey.org/forum/can-i-do-this-with-limesurvey>

completely anonymous. In addition to that I wanted the respondents, if they so desired, to have the option to provide their e-mail addresses for upcoming studies. The difficulty was in keeping the responses anonymous while simultaneously retrieving personal contacts. At first there was not any system I was aware of that provided the service for such an arrangement. Then I found help from the community on how to solve this problem by creating a second survey that skipped over the start page and had an auto direction from the end-page of the first survey. E-mails could be asked in this separate survey which was not connectable to the first one and it still looked like one seamless environment with a consistent design.

Statistical analyses software. SPSS version 25 was used.

Procedure

Adaption. Different approaches can be found on how to prepare study instruments for administration in different cultures. Variations may depend on the scope, schedule, and budget of the study. In this case I am adapting a self-report questionnaire to a new cultural environment. This means that the emphasis must be laid on getting through to the respondent. The questions must be understandable. They should be clear and readable but should also meet the needs of the study. Getting the right answer from the respondent makes a great difference. In technical terms, the priority is to minimize response error. A leading author in the field, Gordon B. Willis, emphasizes this in his pioneering publication "Cognitive Interviewing: A Tool for Improving Questionnaire Design" (2005): "Response error is a major impediment to survey data quality, and the design of questionnaires that are sufficiently free

of such error is a complex process that requires the use of systematic principles of both question design and empirical evaluation” (p. 5).

| | | |
|----------------------|-------------------------------|---|
| Summer 2018 | Review of the literature | |
| Sept 2018 | Phrasing first principles | |
| Oct 2018 | Translations | 2 independent translators |
| Oct 2018 | Questionnaire ver 1 | 18 + 24 items; 12 demographic questions |
| | Consultations on ver 1 | n = 2 (supervisors) |
| Oct 2018 | Analyze of ver 1 | Lots of fixed wordings. Reviewed demographic questions. |
| Dec 2018 | Questionnaire ver 2 | |
| | Consultations on ver 2 | n = 5 |
| Dec 2018 – Jan 2019 | Cognitive interviews on ver 2 | n = 8 |
| | Analyze of ver 2 | Dropping the ADBS (24 items). Fixed wordings. |
| March 2019 | Questionnaire ver 3 | 18 items; 12 demographic questions |
| | Consultations on ver 3 | n = 3 |
| Apr 2019 | Cognitive interviews on ver 3 | n = 12 |
| | Analyze ver 3 | Dropping irrelevant demographic questions |
| | Questionnaire ver 4 | 18 items; 7 demographic questions (of which 3 related to religion) |
| Apr 30, 2019 | Preliminary piloting ver 4 | (n = 30) |
| Apr 30 – May 3, 2019 | Piloting ver 4 | (n = 194) <i>full responses</i> |
| May 2019 | Analyzing ver 4 | Reliability analyzed (2 independent statisticians). Analyzed overall questionnaire performance. |

Translation. At first I had two versions of translations carried out by two experts: one a professional translator and an expert on the English and the Estonian languages and the other an associate professor of religious education. Next, both translations were analyzed using insights from the work of Jong and Halberstadt (2016). Several questions arose. For example, how should *God* in this cultural setting be referred to? In Estonia, the problem might be somewhat different than expected—namely, Estonians are usually reluctant to use the term “God”. A senior research fellow in sociology of religion in the School of Theology and Religious Studies at the University of Tartu informed me directly that, according to unpublished research material she holds, it is well evident that, although Estonians might talk and think with reference to the same thing that *God* represents, they prefer to talk about *some greater power that guides and watches over us* or something to that extent. The original wording for the sentence under inspection was actually promising in the first place:

There exists an all-powerful, all-knowing spiritual being, whom we might call God.

Here with this sentence there is only a hint included, that this *all-powerful, all-knowing being* might be considered “God” by someone who sees it that way, but this is not an absolute. Anyhow, it was about to be tested with the planned cognitive interviews. To my satisfaction, all the interviewees found it understandable, even if they described themselves as non-religious. The only question that arose was whether “God” should be capitalized or not. Considering indications received from the interviewees, the term remained capitalized. These kinds of problems are probably not unique to Estonia, as Jong (2018) has commented on the exact issues that arose here:

Religious belief can also be difficult to measure, at least as a single factor, as the aspects of belief can be so diverse, particularly across cultures. Many people don't believe in God but do believe in an immortal soul. Some people believe in angels but not demons. It is hard to say whether some of these people are "more religious" than the others. (Jong 2018)

The whole process of translation became many times more time-consuming than I had anticipated. The hardship with this process was known and experienced by the authors themselves:

Translating these questions into other languages has proved difficult, but there are now over a dozen versions of this "Supernatural Belief Scale" that allow me to conduct research not only in the English-speaking world but also in China, Indonesia, Russia, Japan, Thailand, and elsewhere. (Jong 2018)

Back translation. To get a different angle on the effectiveness of the translation, I also undertook the well-known method of back translating the questionnaires into English. The original translations were done by two separate experts. The back-translation process showed only minor discrepancies. It also became clear that it is not difficult to eliminate all the discrepancies. All the sentences were translated well, but the problem was not the question of translating *per se*, but the issue of specific terms, their usage and understanding by populations in different cultural setting. However, during these proceedings I developed a better understanding of the most up-to-date methods on adapting a survey questionnaire into a different cultural environment. My opinion developed thanks to some expert

consultations and subsequent review of the literature. The literature was at first somewhat contradictory. When it comes to the question of the studies about fear of death and religiosity, some (Ellis et al. 2013) of the cross-cultural studies, relied solely on the back-translation method in the adaptation process. At the same time, contemporary literature about the adaptation process points out the need for better transparency and emphasizes that it is important that “the sample population will comprehend the adapted items appropriately” (Sousa et al. 2017). With these most complex terms (religiosity, fear, soul, belief, etc.) at hand, I was convinced that to ensure reliability and validity, in addition to clarity, more rigorous methods were needed. This drew me to the cognitive interview method, which has been used in many different fields, including social sciences, political sciences, market research, health research, among others (Miller et al. 2014; Willis 2005). Thus, as I found little or no real value in back-translation, I turned my focus straight past the expert consultations to the cognitive interviews.

Expert consultations. After the translation process, I analyzed the outcome and to get a full comprehension on how the questionnaire would look like in reality, I constructed the first version of it on the LimeSurvey platform. Now I was ready to get a second opinion so I turned to five different persons for expert advice. Two of them, my thesis supervisors, went through the whole online survey and gave me very helpful and thorough feedback. In addition, I consulted a professor from the field of sociology of religion in the quest to find sound principles to plan the survey design around. I also turned to two other graduate students with expertise in empirical research techniques. Everyone in this “expert” group was introduced to the translated survey questions and discussions were held on the comprehensibility of the current wording. The consultations with graduate students took

about three hours each. My discussions with the professors were shorter but nevertheless, I received straightforward advice. After analyzing all this information and developing an advanced survey questionnaire, I turned to the next stage—conducting cognitive interviews.

Cognitive interviews. Throughout the course of adapting the questionnaire, I considered the question evaluation method of cognitive interviewing to be centrally important. After all, even with the best translations and the best expert advice, it is the understanding of common respondent that the outcome depends on. The method I am using is predominantly drawn from the standards set by a prominent author in the field, Gordon B. Willis (2005).

In total, I administered two rounds ($n = 8$ and $n = 12$) of cognitive interviews. The first round was conducted after the preliminary expert consultations. At this stage the questionnaire contained thirty more items than the final version. This was due to the additional scale I intended to use in combination with the main apparatus. It made a difference in respect to the time management—interviews at this stage took at least twice as long as the ones in the second round. The timing of the whole adaptation process to conduct the cognitive interviews is very important. If conducted too early, there is a risk of encountering too many unfamiliar circumstances; if too late, there is a risk of running out of time to carry out all the changes needed (Willis 2005). When I made the decision to drop the ADBS scale entirely after the first round, I must admit that conducting the first eight interviews with twenty four more items was perhaps unnecessary work. That extra part was dropped for reasons not connected to the interviews: these items were well comprehended by the sample. The sample was compiled step by step. Although not always recommended, I started my interviews with

people I knew. I think this was a good decision, because it allowed me to hone my skills. Also, the first interviewees were persons connected to universities, so they were aware about my goings-on and gave me thorough feedback, which was helpful for me. Then I moved on to interviewees I did not know beforehand, some of whom had been suggested to me by the first interviewees and others whom I had contacted through social networks. I always scheduled meetings at a convenient location for the interviewee. Interviews took place in Tallinn and in Tartu. The duration of interviews shortened as I became more skillful and efficient. For example, at first I put a printout of the whole questionnaire in front of the interviewee and when we went through the items one by one, the participant started to look at the coming items and started to consider the contents of upcoming items and getting confused. As a solution, I started to use a piece of paper to block all the upcoming items so that it would be easier to concentrate on the current one. This technique helped me to shorten the interview time. Willis posits that, although cognitive interviews can take anywhere between 15 minutes and 2 hours, it is reasonable to stay within a one-hour limit (2005). My first interviews took almost two hours, but later I never passed the one-hour limit. I marked down all the relevant observations during the interview. If needed, I asked additional questions on site. To get an overview of all my observations I constructed an excel sheet with all the questionnaire items listed in rows, every column representing one interviewee. I filled the sheet with information and color-coded the cells according to relevance. The problematic items became easily distinguishable. After that I started to re-analyze the translations, wordings, meanings of the words, etc. At the same time, I started my second round of expert consultations. Eventually a new and a better version was ready and I started the second round of cognitive interviews. In this version, a part of the survey was dropped for theoretical reasons of not being compatible to the concept developed, so the questionnaire was shorter

and more convenient to deal with. Also, the phrasing was considerably improved. Consequently, the second round of cognitive interviews was easier to conduct and it became possible to conduct them in 15 to 30 minutes. Again, a few items came up several times that were not easily comprehensible, but the overall process was quite smooth. Many participants did not have any problems in understanding everything. After making the final corrections, I finalized the survey and uploaded the results onto the LimeSurvey platform. The survey was now online and ready for execution.

Responses

In 72 hours (From April 30 to May 3, 2019), I received 194 full responses. This included the time-consuming period of the first 24 hours, which I used for preliminary pilot testing to detect any possible design flaws. I learned about such preliminary proceedings from the questionnaire development used in health science: “Before conducting a pilot test of the questionnaire on the independent respondents, it is advisable to test the questionnaire items on a small sample (about 30–50) of respondents” (Tsang et al. 2017). I judged the advice to be reasonable in my proceedings because it was the first time I had used the survey platform LimeSurvey for a larger-scale study and I wanted to make sure that all the systems worked as intended. And, as it turned out, I had to impose some minor changes during the preliminary testing period. This did not include the order or anything else about the main survey contents; only some minor changes were needed to fix the welcoming note on the cover letter.

Nonresponse bias

The total number of responses was 239 of which 45 were unfinished. Thanks to the adaption of the method of the preliminary testing during the first 24 hours, I found out that

a new incomplete response was added every time I opened the survey's cover letter myself. I did it several times to check if the system was up and running after I received some feedback that the survey did not run on somebody's smartphone or computer. By the time this issue was discovered, it was impossible for me to know how many of those incomplete responses were implemented by me and how many were implemented by respondents. The anonymity for survey responses meant that the system did not leave any time stamps on the response statistics and thus no leads could be drawn to any one respondent. In addition, I could only guess if these technically unsuccessful attempts by respondents could have added to the count of incomplete responses. Willis (2005) holds that "it is vital to address response error" (p. 5) but he also admits that "levels of other sources of error, and in particular nonresponse bias" (p. 5) have remained unknown quite often. The number of unfinished responses would give insight into how well the survey was accepted by people and if it drove off any respondents. However, because of the described situation, I was not able to adequately analyze the unfinished responses. This was a valuable lesson for me before running the parent study.

Study design statement

The final study design relied on two major considerations—the well-founded and defensible adaptation of the research apparatus, and the restraints of time and resources. Considering all these things, a pilot study was designed. To conduct a study with the help of the self-report survey the reliability of the survey questionnaire was a central concern. This study built predominantly on the adaptation and testing of the survey questionnaire. The process involved the adaptation of the measurements followed by the expert analyses. Moreover, cognitive interviews were conducted and a survey questionnaire in Estonian was

constructed on the online survey platform LimeSurvey. A pilot run ($n = 194$) to test the reliability was conducted and the desired results were received.

Results

Results were statistically analyzed by two independent statisticians. Cronbach's α was calculated for both scales and found to be highly reliable. Cronbach's α for the SBS-6 was .927. Cronbach's α for EDAS, two factors combined was .939. Factor 1 separately .923 and factor 2 .881. I present the Cronbach's α in the table (Table 3) for comparison to the data received from other countries, made available by Jong, & Halberstadt (2016).

| Country | Combined Cronbach's α | Factor 1 Cronbach's α | Factor 2 Cronbach's α |
|---------------------------|------------------------------|------------------------------|------------------------------|
| Brazil ($n = 200$) | .971 | .953 | .945 |
| Philippines ($n = 200$) | .973 | .953 | .955 |
| Russia ($n = 200$) | .966 | .940 | .953 |
| S. Korea ($n = 200$) | .970 | .939 | .959 |
| Japan ($n = 225$) | .975 | .949 | .969 |
| Estonia ($n = 194$) | .939 | .923 | .881 |

Note. Estonian results meet the high standard of reliability. Still, as comparison in the table provides—higher results are within reach.

Source:
Brazil, Philippines, Russia, S. Korea, Japan: Jong, & Halberstadt (2016)
Estonia: Käsnapu (2019)

The survey received 194 full responses in total. This makes the quantitative relation to planned main study better than expected. I set the goal to 10 %, but 17,6 % was achieved. Sampling strategy proved efficient. All 194 full responses were achieved in 72 hours. This shows that the proceedings enforced were considerate regarding resources. The exact

representation to the census data was expectedly not achieved. This issue will be addressed specifically when preparing the main study. Design of the questionnaire proved efficient. The performance of the questionnaire was up to standard. I received no complaints about the design. There were a few complaints about the tone of the contents, but this is an issue of the theory-wise standpoint when dealing with death concerns. Two extra options added to the questionnaire worked out satisfactorily: (a) a field to enter a personal contact, if interested in continuing studies on this topic, (b) a field to enter questions and comments. Results: (a) 41 e-mail addresses were subscribed, (b) 16 comments were written. Some comments will be considered in the “discussion” section. Taking into account the high inner reliability rate and very high response rate – I consider the overall performance very good. In conclusion, my decision is that the main study is feasible. The consistency of the research study was sufficient. However, better results should be possible. Some of the differing scores stood out a little more. I discuss the following three items under the discussion sector.

EDAS

(a) I am scared that death will extinguish me as a person.

SBS-6

(b) There is some kind of life after death.

(c) There exists an all-powerful, all-knowing spiritual being, whom we might call God.

The overall design of the questionnaire proved compatible. The two independent statisticians approved the results as well. No major flaws were detected.

Discussion

Reliability

As previously indicated, the main objective of the current thesis was attained: the pilot study was executed successfully. The adaptations of the Supernatural Belief Scale and the Existential Death Anxiety Scale were successful. With the combined Cronbach's α for EDAS on .939, it can be said that the measure worked well in the Estonian setting. The SBS-6 scored high as well: Cronbach's α was .927. As announced in the "Results" section there were three items that scored lower than the others. The statisticians insisted that the figures are still acceptable, but the differences show. All three items are familiar to me, some from the cognitive interviews, some from the consultations. The first one from the EDAS, "*I am scared that death will extinguish me as a person*" was a little problematic to some participants of the cognitive interviews. It made participants ask, what exactly is meant by the term "person", and it is not so easy to answer considering the Estonian language. "Person" seems to translate first into something that we consider a little emphasized version of just a person. But it depends on the connotations. For now, it is marked as an item to be reviewed again. The second item that scored lower is from the SBS-6: "*There is some kind of life after death*". I would suggest that here the problem is not in translation but in the original item. This proposal was not understandable to some, because the possible variations that could come into one's mind are probably infinite. One participant left a commentary, that even if there is no belief in any kind of supernatural sphere nor to life after death, then considering the

modern technological advancements, there remains a possibility that the mind will be uploaded into some computer, hence—some kind of life after death. And another controversy could be in reasoning what we think that “life” is? Many participants to the interviews took a minute to contemplate on this matter. And I see the problem myself—it can be pondered that some part of me, be it the consciousness, survives somehow, should I then consider it “life” or not? And the third item, also from the SBS-6, that was addressed, was the already renown “God” sentence: *“There exists an all-powerful, all-knowing spiritual being, whom we might call God”*. In my opinion the sentence is understandable and possible to answer in English and in Estonian. But as stated earlier in the Methods section, there is clear evidence that Estonians are not comfortable with the term “God”. I knew the problem and I considered changing it, but in the same time there are people who believe in God and then maybe they would have more difficulties to make a choice, so I left it in.

Questionnaire design

The overall questionnaire design performed well. I did not find any indications to major problems. I received negative feedback from three participants. The first problem was about the “negativity” itself. Someone found the questionnaire to be “not very nice” with all those questions about fear and anxiety. I understand the standpoint. And the person probably wanted to help me in development of more emotionally balanced questionnaire, they did not have an idea about the theoretical and methodological background of the questionnaire design and consistency in the first place. But this notion took me to the question of the design practice after all: whether to include an explanatory description of the research design and objectives for all the participants to see, or not? Another participant was not satisfied that such a deep topic as that of the death anxiety and religious belief will be statistically analyzed.

And the third complaint was about the “sex” question in the demographical questions section. I only had dual choice for choosing sex: “Female” or “Male”. The note requested a possibility for a third choice. I considered the third choice “other” in the beginning, but abandoned the idea. Now I would like to add that option the next time. In addition to the complaints there were also some approving comments. And some said that they would be interested in the results, and one person specifically praised the possibility to leave comments.

Overall performance

I consider the overall performance of the pilot survey acceptable. The long adaptation process paid off. Some issues to consider were detected and these are all addressed in the Results, Method, or Discussion sections. The most important Issues to consider in preparation of the main study is re-examination of the appointed survey items. My suggestion is to analyze the results from the current pilot study with some additional experts. Then if possible to have the survey items reconsidered and tested with a new round of cognitive interviews. After which a second pilot study should be run, during which the minor design features should be addressed and also, the technicalities of the LimeSurvey platform could be taken under scrutiny, so that the non-response figures would be admissible.

Conclusion

The long stood interest of mine—to research the effects death thoughts have on human condition has been set in motion. Throughout centuries or even millennia considerable amount of theories has been written about death matters. Plentitude of suppositions what death might bring to us. The end or the continuation. Freedom from rules and regulations or submission to higher ordinance. Whatever the stance it is hard to prove it

by worldly means. But—the ‘stance’ still has an effect on worldly means. And this influence itself is something that is possible to take under scrutiny. I found support to my thoughts and the way to investigate these matters mainly thanks to three attitudes published during the last fifty years. First, “The Denial of Death” (1973), a Pulitzer Prize-winning book by Ernst Becker, where he posits that people make every effort to attain meaningfulness in life to manage mortal concerns. Secondly, the renown Terror Management Theory (1984) was built on these exact ideas of Becker by Sheldon Solomon, Jeff Greenberg, & Tom Pyszczynski. And thirdly, just recently (2016) Jonathan Jong, & Jamin Halberstadt built a compelling method of investigation to question the concepts set out by Ernst Becker. This is where the current study comes into play. My aim with this study was to adapt the quantitative research method of Jong & Halberstadt and run it in Estonia. This method concerns self-report survey questionnaire that evaluates the relationship between death anxiety and religious belief. Considering the workload needed to achieve the final goal I decided to progress gradually. I settled a plan to adapt and test the reliability of the questionnaires for my master’s thesis. And in case of favorable advancement, run the main study for my PhD dissertation. By this work the first step has been completed. The survey questionnaire was adapted. Pilot study run. Reliability tested. In my opinion preconditions for the next step has achieved.

References

- Becker, E. (1973). *The denial of death*. New York, NY: Free Press.
- Bluemke, M., Jong, J., Grevenstein, D., Mikloušić, I., & Halberstadt, J. (2016). Measuring cross-cultural supernatural beliefs with self-and peer-reports. *PloS One*, *11*(10), e0164291. <https://doi.org/10.1371/journal.pone.0164291>
- Burris, C. T., & Bailey, K. (2009). What lies beyond: Theory and measurement of afterdeath beliefs. *The International Journal for the Psychology of Religion*, *19*(3), 173–186. <https://doi.org/10.1080/10508610902879982>
- Clarke, P. (2009). *The Oxford handbook of the sociology of religion*. Oxford; New York: Oxford University Press.
- Cocks, K., & Torgerson, D. J. (2013). Sample size calculations for pilot randomized trials: a confidence interval approach. *Journal of Clinical Epidemiology*, *66*(2), 197–201. <https://doi.org/10.1016/j.jclinepi.2012.09.002>
- Collett, L.-J., & Lester, D. (1969). The fear of death and the fear of dying. *The Journal of Psychology*, *72*(2), 179–181. <https://doi.org/10.1080/00223980.1969.10543496>
- Connelly, L. M. (2008). Pilot studies. *Medsurg Nursing*, *17*(6), 411–412.
- Conte, H. R., Weiner, M. B., & Plutchik, R. (1982). Measuring death anxiety: conceptual, psychometric, and factor-analytic aspects. *Journal of Personality and Social Psychology*, *43*(4), 775. <https://doi.org/10.1037/0022-3514.43.4.775>
- Cox, C. R., & Arrowood, R. B. (2019). Religion as a defense against the awareness of death: comment on Jong and Halberstadt (2016). *Religion, Brain & Behavior*, *9*(2), 179–185. <https://doi.org/10.1080/2153599X.2017.1414706>
- Donovan, J. M. (1994). *Defining religion: Death and anxiety in an Afro-Brazilian cult* (PhD Thesis). Tulane University, New Orleans, USA.
- Ellis, L., Wahab, E. A., & Ratnasingan, M. (2013). Religiosity and fear of death: a three-nation comparison. *Mental Health, Religion & Culture*, *16*(2), 179–199.

<https://doi.org/10.1080/13674676.2011.652606>

Elust, usust ja usuelust. (2015). Retrieved from

http://www.saarpoll.ee/UserFiles/File/Elus,%20usust%20ja%20usuelust_2015_ESIT_LUS_FINAL.pdf

Florian, V., & Kravetz, S. (1983). Fear of personal death: Attribution, structure, and relation to religious belief. *Journal of Personality and Social Psychology*, *44*(3), 600.

<https://doi.org/10.1037/0022-3514.44.3.600>

Heflick, N. A., & Goldenberg, J. L. (2012). No atheists in foxholes: Arguments for (but not against) afterlife belief buffers mortality salience effects for atheists. *British Journal of Social Psychology*, *51*(2), 385–392. <https://doi.org/10.1111/j.2044-8309.2011.02058.x>

Hertzog, M. A. (2008). Considerations in determining sample size for pilot studies. *Research in Nursing & Health*, *31*(2), 180–191. <https://doi.org/10.1002/nur.20247>

Hill, P. C., & Hood, R. W. (1999). *Measures of religiosity*. Religious Education Press
Birmingham, AL.

Izard, C. E. (1992). *Basic emotions, relations among emotions, and emotion-cognition relations*. <https://doi.org/10.1037/0033-295X.99.3.561>

Jackson, J. C., Jong, J., Bluemke, M., Poulter, P., Morgenroth, L., & Halberstadt, J. (2018). Testing the causal relationship between religious belief and death anxiety. *Religion, Brain & Behavior*, *8*(1), 57–68. <https://doi.org/10.1080/2153599X.2016.1238842>

Jong, J. (2018). Faith and the Fear of Death. *The New Atlantis*, *55*, 85–95.

Jong, J., Bluemke, M., & Halberstadt, J. (2013). Fear of death and supernatural beliefs: developing a new Supernatural Belief Scale to test the relationship. *European Journal of Personality*, *27*(5), 495–506. <https://doi.org/10.1002/per.1898>

Jong, J., & Halberstadt, J. (2016). *Death anxiety and religious belief: An existential*

psychology of religion. London: Bloomsbury Publishing.

Jong, J., & Halberstadt, J. (2017). What is the causal relationship between death anxiety and religious belief? *Religion, Brain & Behavior*, 7(4), 296–298.

<https://doi.org/10.1080/2153599X.2016.1249916>

Jong, J., & Halberstadt, J. (2017). Death Anxiety and Religious Belief: responses to commentaries. *Religion, Brain & Behavior*, 9(2), 207–218.

<https://doi.org/10.1080/2153599X.2017.1414712>

Lambert, W. W., Triandis, L. M., & Wolf, M. (1959). Some correlates of beliefs in the malevolence and benevolence of supernatural beings: A cross-societal study. *The Journal of Abnormal and Social Psychology*, 58(2), 162-169.

<https://doi.org/10.1037/h0041462>

Miller, K., Chepp, V., Willson, S., & Padilla, J. L. (Eds.). (2014). *Cognitive interviewing methodology*. Hoboken, NJ: John Wiley & Sons.

Moody, R. A. (1975). *Life after life*. St. Simons Island, Ga.: Mockingbird Books.

Radcliffe-Brown, A. R. (2014). *Taboo*. Cambridge University Press.

Riis, O. P. (2009). Methodology in the Sociology of Religion. In *The Oxford Handbook of the Sociology of Religion* (pp. 229–244). Oxford, UK: Oxford University Press.

Russell, J. A., & Barrett, L. F. (1999). Core affect, prototypical emotional episodes, and other things called emotion: dissecting the elephant. *Journal of Personality and Social Psychology*, 76(5), 805. <https://doi.org/10.1037/0022-3514.76.5.805>

Scanish, J., & McMinn, M. (1999). Death anxiety scale (Templer, 1970). In *Measures of religiosity* (pp. 437–439). Religious Education Press Birmingham, AL.

Silver, C. F., Coleman III, T. J., Hood Jr, R. W., & Holcombe, J. M. (2014). The six types of nonbelief: a qualitative and quantitative study of type and narrative. *Mental Health, Religion & Culture*, 17(10), 990–1001.

<https://doi.org/10.1080/13674676.2014.987743>

Solomon, S., Greenberg, J., & Pyszczynski, T. A. (2015). *The worm at the core: On the role of death in life*. Random House Incorporated.

Sousa, V. E., Matson, J., & Dunn Lopez, K. (2017). Questionnaire adapting: little changes mean a lot. *Western Journal of Nursing Research*, 39(9), 1289–1300.

<https://doi.org/10.1177/0193945916678212>

Statistikaamet. (2013). *kindlat usku tunnistab üle neljandiku elanikkonnast* (No. REL2011).

Retrieved from https://www.stat.ee/65351?parent_id=32784

Templer, D. I. (1970). The construction and validation of a death anxiety scale. *The Journal of General Psychology*, 82(2), 165–177.

<https://doi.org/10.1080/00221309.1970.9920634>

Tsang, S., Royse, C. F., & Terkawi, A. S. (2017). Guidelines for developing, translating, and validating a questionnaire in perioperative and pain medicine. *Saudi Journal of Anaesthesia*, 11(Suppl 1), S80. https://doi.org/10.4103/sja.SJA_203_17

van Bruggen, V. (2019). Why are people religious? Death anxiety and alternative explanations. *Religion, Brain & Behavior*, 9(2), 190–194.

<https://doi.org/10.1080/2153599X.2017.1414709>

Van Teijlingen, E., & Hundley, V. (2002). The importance of pilot studies. *Nursing Standard*, 16(40), 33–36. <https://doi.org/10.7748/ns2002.06.16.40.33.c3214>

Van Teijlingen, E. R., Rennie, A.-M., Hundley, V., & Graham, W. (2001). The importance of conducting and reporting pilot studies: the example of the Scottish Births Survey. *Journal of Advanced Nursing*, 34(3), 289–295.

Willis, G. B. (2005). *Cognitive interviewing: A tool for improving questionnaire design*. Sage Publications. <https://doi.org/10.4135/9781412983655>

Eesti keelne kokkuvõte

Surma hirmu ja religioossuse mõõtetööriista adapteerimine Eestisse

Käesolev magistritöö põhineb empiirilise uurimismeetodi esmakordse Eestisse rakendamise ettevalmistamisel. Magistritöö raames tutvustasin uurimismeetodi teoreetilist tausta, adapteerisin uurimisvahendid eesti keelsesesse keskkonda ning viisin läbi prooviuuringu testimaks andmekogumise tõesust ja täpsust. Teoreetiline taust seisneb surma hirmu ja usu vahelise seose hindamises. 1973. aastal avaldas Ernst Becker oma Pulitzeri auhinna võitnud teoses *“The Denial of Death”* (Surma eitamine) käsitluse, milles selgitas, kuidas inimene, teadvustades oma lõplikkust, on üleüldiselt mõjutatud hirmust surma ees. Püüdes leida leevendust selle üleüldise surma hirmu eest, otsib inimene (kasvõi alateadlikult) teed “otsese” või “sümboolse” surematuse poole. Tema sõnul väljendub see ennast mingisuguse, kasvõi üleloomuliku, tähendusväljaga siduda püüdmises. Näiteks religioon ja uskumine surmajärgsesse ellu (otsene surematuse kontseptsioon), või rahvuslikku või mõnda muusse, tähendust loovasse gruppi kuulumine (sümboolne surematuse kontseptsioon). Need vaated võtsid kokku autorid Sheldon Solomon, Jeff Greenberg ja Tom Pyszczynski (1984) nime all *Terror Management Theory* (TMT), mille sisuks lühidalt on see, et inimeses baasväärtusena lasuv surmahirm on põhjus, miks inimesed otsivad leevendust üleloomulikest jõududest. Vastavasisuline loogika nähtub ka laialdaselt käsitletud teooriast, et religiooni algpõhjuseks ongi surmahirm. Käesoleva magistritöö aluseks on aga vastavasisuliste teoreetiliste aluste küsimuse alla seadmine empiiriliste uurimismeetoditega, mille andsid raamatuna 2016. aastal välja Jonathan Jong ja Jamin Halberstadt. Nende peamine fookus seisneb surma hirmu ja religioossuse vahelise suhte hindamisel. Nende tugevus seisneb selles, et välja töötatud

empiriiliste meetodite puhul on sihtotstarbeliselt mõeldud nende rakendamisele erinevate kultuuride keskkonnas. Sealjuures arvesse võttes “mitte-religioosset” valimi osa, mida nende arvates ei ole pädevalt teinud väga paljud varasemad uurijad. Käesolev töö on eeltöö peauuringu ettevalmistamiseks. Prooviuuringu teostas in kvantitatiivse uurimismeetodina enesearuande-küsimustiku näol. 2013. – 2016. aastal ingliskeelsena välja töötatud religioossust (SBS-6; 6 küsimust) ja surma hirmu (EDAS; 12 küsimust) hindavate küsimustike adapteerimise viisin läbi kolmes osas: 1) tõlkimine kahe eksperdi poolt: a) keeletekspert, b) religiooniasjatundja; 2) ekspertkonsultatsioonid religioonieriala tundjatega ning kvantitatiivse uurimismeetodi tundjatega; 3) kognitiivsed intervjuud kahes osas a) n = 8, b) n = 12. Valminud küsimustiku (18 + 7 küsimust, + 2 kommentaaride ning kontaktide jaoks) laadisin üles LimeSurvey keskkonda ning avasin kasutamiseks 72 tunniks (30. aprill – 3. mai, 2019). Selle ajaga sain 194 täielikult vastatud vastust. Lootsin saada tulemuseks 10% planeeritava pea-uuringu valimist (n = 1100), aga tulemus oli 17,6%, seega parem kui oodatud. Valimi esindatus ei olnud demograafiliste näitajate poolest täpses vastavuses peauuringuks planeeritavaga, kuid see polnudki eesmärk ning adapteeritud küsimuste mõistmise hindamise ülesande täitis sobivalt. Tulemuste analüüsis tuvastasin, et adapteeritud küsimustiku reliaablus ehk usaldusväärsus Cronbachi α näol oli väga hea: (faktor 1: 0.923; faktor 2: 0.881; faktor 1 ja 2 koos: 0.939). Võttes arvesse küsimustiku adaptatsiooni, valimi koostamist, pilootuuringu kulgu ning tulemuste usaldusväärsust, võin käesoleva magistritöö tulemustega rahule jääda. Suur eeltöö peauuringu suunal on tehtud ning selgitatud on mõnesid kitsaskohti, millele tuleb veel tähelepanu pöörata.

Appendix 1

| | |
|---|--|
| Appendix 1 Page 1 of online survey questionnaire. | |
| <i>Eestlaste suhtumine surma 2019. Lk 1.</i> | |
| | Lehekülg 1 (<i>skaala1</i>) |
| 1 | See, et elu on lõplik, on minu jaoks hirmutav |
| 2 | Mind häirib, et peale surma ma enam kunagi ei tunne midagi |
| 3 | Ma kardan seda, et surm on "minu" lõpp |
| 4 | Ma kardan seda, et surm on minu "ise" (<i>ingl self</i>) lõpp |
| 5 | Igal inimesel on vaim või hing, mis eristub tema füüsilisest kehast |
| 6 | See, et ma olen surelik, teeb mulle muret |
| 7 | On olemas mingisugunegi elu pärast surma |
| 8 | Ma kardan, et surmaga hävineb minu isiksus |
| 9 | Mind hirmutab mõte, et pärast surma ei koge ma seda maailma enam kunagi |
| 10 | Füüsilise maailma kõrval on olemas vaimne maailm |
| 11 | Eksisteerib vaimseid olendeid, kes võivad olla head või kurjad, nagu näiteks inglid või deemonid |
| 12 | Mind vaevab tõsiasi, et ühel päeval ei ole ma enam elus |
| 13 | Mind hirmutab, et surres kaob minu teadvus |
| 14 | Eksisteerib keegi või miski kõikvõimas ja kõiketeadev vaimne olend, keda võidakse nimetada ka "Jumalaks" |
| 15 | On häiriv, kui ma mõtlen sellele, et ühel päeval mind siin maailmas enam ei ole |
| 16 | Mõte minu enda surmast hirmutab mind |
| 17 | Kui ma praegu surmast mõtlen, tekib mul hirm |
| 18 | Üleloomulikud sündmused, millele pole teaduslikku seletust (nt imed), võivad juhtuda ja ka juhtuvad |
| <i>Note.</i> Representation of the online survey items in their original order. The contents and the order of the items of the two measures, the SBS-6, and the EDAS were randomly mixed. | |

Appendix 2

| | | |
|---|---|--|
| Appendix 2 | | |
| Page 2 of the online survey questionnaire. | | |
| <i>Eestlaste suhtumine surma 2019. Lk 2.</i> | | |
| | Lehekülg 2 (ankeet1) | |
| 1 | Palun märkige oma vanus | |
| 2 | Palun märkige oma sugu | |
| 3 | Millises maakonnas te elate? | |
| 4 | Milline on teie hetkel kõrgeim omandatud haridustase? | |
| 5 | Kas te peate end mõne usu, usulahu, õpetuse või filosoofia järgijaks? | |
| 6 | Millise usu või usulahu liikmeks te ennast peate? | |
| 7 | Sõltumata sellest, kas Te olete mõne kiriku, koguduse, usulahu, või liikumise liige – kui oluliseks Te peate iseenda jaoks oma usku/religiooni/õpetust/filosoofiat? | |
| <i>Note.</i> Representation of the online survey demographic questions in their original order. | | |

Lihtlitsents lõputöö reprodutseerimiseks ja üldsusele kättesaadavaks tegemiseks

Mina, Karl Käsnapuu

(autori nimi)

1. annan Tartu Ülikoolile tasuta loa (lihtlitsentsi) minu loodud teose
The Adaptation of the Death Anxiety and Religious Belief Measures into Estonia—A Pilot Study
on the Supernatural Belief Scale and the Existential Death Anxiety Scale
(lõputöö pealkiri)

mille juhendajad on Roland Karo Ja Olga Schihalejev

(juhendaja nimi)

reprodutseerimiseks eesmärgiga seda säilitada, sealhulgas lisada digitaalarhiivi DSpace kuni autoriõiguse kehtivuse lõppemiseni.

2. Annan Tartu Ülikoolile loa teha punktis 1 nimetatud teos üldsusele kättesaadavaks Tartu Ülikooli veebikeskkonna, sealhulgas digitaalarhiivi DSpace kaudu Creative Commons'i litsentsiga CC BY NC ND 3.0, mis lubab autorile viidates teost reprodutseerida, levitada ja üldsusele suunata ning keelab luua tuletatud teost ja kasutada teost ärieesmärgil, kuni autoriõiguse kehtivuse lõppemiseni.
3. Olen teadlik, et punktides 1 ja 2 nimetatud õigused jäävad alles ka autorile.
4. Kinnitan, et lihtlitsentsi andmisega ei riku ma teiste isikute intellektuaalomandi ega isikuandmete kaitse õigusaktidest tulenevaid õigusi.

autori nimi

13.05.2019