User Experiences of Modern Spirituality Applications: Navigating Personal

Relationships

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Abstract

Modern spirituality (New Age) is becoming an important theme in research as a spiritual orientation can support people to cope with physical and psychological difficulties. However, knowledge of the role of the relatively new spirituality apps in people's lives is limited, as most research is based on defining spirituality and its beneficial implications for one's health. This qualitative thesis study analyses how people use modern spiritual apps regarding their social relationships by examining user experiences. This thesis presents the results of a Thematic Analysis by Braun and Clarke (2006) of 23 interview transcripts. Five broad themes were created that represent the different views of participants on their app use concerning their social connections. The most common theme was "Using social comparison to make connections". The apps are mainly used as self-help or learning tools and support users in making connections with other people, provide support to deal with difficult situations, and help them reach increased self-awareness and understand their emotions. However, the negative sides of these apps, such as users not questioning the app's content, confirmation bias or increased negative feelings, are examined. The thesis extended previous research by providing insight into implications and recommendations for future research, giving insights into users' needs to app designers and showing the potential to psychologists for integrating modern spiritual apps into interventions and therapies.

Keywords: Spirituality, New Age, Mobile Apps, Relationships, Qualitative, Thematic Analysis, Support, Risks

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Spirituality has become more popular and prominent in the modern world over the last few years. Although spirituality is often seen as an internet-driven phenomenon that is hard to grasp for a big part of society, the reality differs (Campell, 2005; Campell, 2012; Evolvi, 2022). Especially modern challenges to traditional religions, such as cultural pressures, have resulted in many individuals trying to find answers to different themes in modern spirituality, such as New Age (Campell, 2004; Campell, 2012). *New Age* is a modern spiritual practice that is different from traditional religions by using, for instance, astrology, occultism, and tarot card readings. Additionally, modern spirituality seems to be also explored through mobile applications that are easily accessible and try to support individuals in several daily activities and their mental well-being (Gorichanaz, 2022). These apps also appear to have a guiding function in the users' life, as they may help individuals navigate, for instance, their relationships by using modern spiritual practices (Gallardo-Peralta, 2017). As establishing and fostering relationships can be challenging, different modern spiritual apps can provide various information about other people, such as birth charts or suitable tarot cards, that can help to understand their social relations. Thus, modern spirituality in the form of mobile apps could play a role in people's lives that should be explored in depth.

Spirituality is a broad and multifaceted concept which cannot be limited to one meaning. Spirituality can be seen as a lifestyle, belief system, worldview, religion, philosophy, personality trait, character strength or a combination of them (Baysal, 2022; Dyson et al., 1997; D'andrea, 2007; Marcoen, 1994; Puchalski et al., 2014; Reimer & Dueck, 2012). Spirituality is the umbrella term for something personal, distinct, and individual (Delgado, 2005). However, the origin of spirituality and how it is perceived individually seem to differ.

Delagado (2005) claims that the term spirituality has its roots in the Latin word spiritus, meaning "breath", which connects to the breath of life. Marcoen (1994) describes spirituality as a "transcendent relationship with something greater than the self" that gives energy and wisdom. This has been underlined by many researchers in the field, concluding that spirituality is seeking the purpose of life and the connection between the self, others, the universe, and nature leading to well-being and inner peace (Cash, 2000; Delgado, 2005; Kolodinsky et al., 2004; Mitroff & Denton, 1999; O'Brien, 2003; Puchalski et al., 2014).

The differences between spirituality and religion have long been debated among scholars. According to Delgado (2005), both terms are often interchangeably used as they are perceived as similar or identical. Advocates of both concepts claim to be highly concerned with love, faith, hope, morality, trust, and self-expression related to interpersonal relationships (McSherry & Ross, 2012; Ross et al., 2014). Although the concepts overlap and relate, they differ (King, 2011; Newman, 2004). Spirituality seems to be broader and goes beyond religion as there are more individual differences in how it is experienced and manifested, changes over time and contains a value system of how to seek and give meaning to one's life (Laukhof & Werner, 1998; Van Niekerk, 2018). Nevertheless, many scholars underline that modern spirituality is formed and highly influenced by the fundaments of different traditional religious concepts, such as reincarnation from Buddhism (Newman, 2004; Ross et al., 2014; Van Niekerk, 2018).

Regarding specific spiritual practices, New Age spirituality (NAS), the focus of this thesis, is a relatively modern and alternative form of spirituality that has reached the attention of the media and research multiple times. NAS developed between the 1960s and 1970s in the UK and the USA and refers to a collection of specific spiritual ideas and practices that can be applied and adjusted to individual needs (Amaral, 2015; Aupers & Houtman, 2007). Since introducing this type of spirituality, New Age has been portrayed rather negatively in the media and research. Terms such as "do-it-yourself religion", "pick-and-mix religion", and

"spiritual supermarket" are commonly used by scholars and journalists to describe NAS (Davies & Freathy, 2014; Sutcliffe & Bowman, 2000). This implies that NAS is a problematic and contested term. For instance, Awad (2021) claims that the NAS is not a unique spiritual practice but borrows elements of many different religions and spiritual practices, combines them and presents it as something new, special and world-changing. Furthermore, Stark and Bainbridge (1985) argue that the NAS does not have a clear core belief but adjusts and changes according to the needs of the society in a certain period to appeal to more individuals. Lastly, some voices underline and criticise the increased economic reasons behind the NAS (Rauchfleish, 2005). Therefore, NAS is often viewed as too commercial and a consumer-oriented spirituality that makes scholars doubt the core of this spiritual practice.

There is little research about this spirituality, but NAS has probably emerged as a response to the decreasing popularity of traditional religions and supports individuals to cope with it as a "churchless religion" (Collins, 1998). As it is a spirituality that is perceived and experienced individually, there is not one way to describe the core of NAS. Individuals who describe themselves as new agers often reject one overarching god and believe that a part of a god can be in anyone and anything (Berg, 2007; O'Neil, 2001). However, it is also common to mix NAS into traditional religions by keeping the belief in one personal god (Amaral, 2015). According to Amaral (2015), among new agers, it is common to strongly believe in, for instance, astrology, the spiritual energy in objects, occultism, tarot card readings, healing, and reincarnation. The NAS transfers from the typical Western traditional and religious beliefs to a form of self-spirituality, including the importance of individual experiences (Aupers & Houtman, 2007; Berg, 2007; Rauchfleish, 2006). This relates to the theory of self-actualisation by Maslow (1970), which is the highest-order state of human motivation. Some new agers believe that this self-actualisation is hindered by modern society as it limits the capacities of the individual and does not support them to reach their full capacities (Lewis & Melton, 1992).

Furthermore, Amaral (2015) reports that the NAS is developed and strengthened through making and sharing essential "peak experiences" individually and with other new agers. These experiences often aim to find "ultimate consciousness" or enlightenment (Rauchfleish, 2005). Additionally, it is common among new agers to believe in the possibility and responsibility of every individual to change the world positively and achieve harmony through their own divinity (Amaral, 2015; Berg, 2007).

Spirituality is also becoming an "aesthetic" lifestyle for many individuals (D'andrea, 2007; Hodge et al., 2007). Several places, such as the island of Ibiza, have been promoting the spiritual way of living for many years, which attracts foreigners to move to this place to feel the different spirit by offering, for instance, retreats and spiritual parties (D'andrea, 2007). In line with this, Blasche et al. (2021) conclude that as the number of individuals visiting spiritual retreats, meditation courses and yoga classes increases, incorporating spirituality into one's life seems to receive permanent status in society. Moreover, in the rapidly changing world, spirituality is perceived by some individuals as an approach to life that supports them in surviving and developing in several situations in life, such as with their worries or social relationships (Laukhof & Werner, 1998). Consequently, modern spiritual apps seem to comprise the need of many individuals regarding a spiritual lifestyle by transferring it into a mobile application.

Moreover, especially in stressful life periods, spirituality plays an essential role in coping with several stressors (Falb & Pargament, 2014; Pargament, 1977). Several studies have shown that spirituality can positively affect physical and psychological health, such as depressive symptoms and life satisfaction (Berry & York, 2011; Brooks et al., 2018; Janssen-Niemeijer et al., 2017; Kelly & Miller, 2007; Koening et al., 2012; Marques et al., 2013; Steemers-van Winkoop, 2014). In these studies, spirituality has been considered a coping strategy that enhances faith, confidence, the belief in oneself and alters negative feelings into more optimistic ones, promoting health. Also, Janssen-Niemeijer et al. (2017) report that

social connectedness, being crucial for lifestyle changes and decreasing negative symptoms, is improved by spirituality.

Likewise, Hardy et al. (2014) reported that spirituality could positively influence forgiveness, gratitude, and empathy. Additionally, spirituality can support and strengthen the ability to encounter social relationships. However, some voices claim that using spiritual practices in interventions can negatively influence the individual (Falb & Paragament, 2014; Baysal, 2022). For instance, Falb and Paragament (2014) revealed that it could lead to increased negative feelings towards people who are not believing in their kind of spirituality or the development of uncertainty and struggles concerning spiritual practices.

Although spirituality is starting to be integrated as a testable variable in psychological tests, it is still underestimated in psychological practices and highly doubted amongst traditional psychologists who do not believe that spirituality should be examined in psychology (Kashdan & Nezlek, 2012). Nevertheless, the field of positive psychology (PP) has started to acknowledge the potential of spirituality and develop a more substantial connection between psychology and spirituality (Rye et al., 2013; Falb & Paragament, 2014). PP has been introduced by Seligman and Csikszentmihalyi (2000) to counterbalance the traditional clinical-pathological approach and aims to increase well-being by focusing on individuals' strengths rather than only decreasing pathology (Sin & Lyubomirsky, 2009). Several studies show that the positive effect of spirituality integrated into positive psychology interventions on well-being cannot be ignored any more (Elham et al., 2015; Falb & Paragament, 2014; Fallah et al., 2011; Lambert et al., 2010; Noferesti & Tavakol, 2022). In these PP studies, spirituality is viewed and measured as a character strength (Baysal, 2022). Also, a systematic review by Wong et al. (2006) reported that around 90 % of study results demonstrated a strong correlation between mental health and spirituality. In this case, spirituality was defined as the "intrinsic human capacity for self-transcendence", which leads to the search for a deeper meaning and purpose in life. In PP interventions, spirituality

improves hope, forgiveness, gratitude, resilience, and compassion by focusing on the mind and offering a positive lifestyle and coping methods (Berg et al., 2008; Bonanno, 2004; Gilbert, 2005; Wade & Worthington, 2005). As Marshall et al. (2020) report that PP mobile apps are gaining relevance nowadays, connecting PP and spirituality into one app could have the potential for different purposes.

Also, the increased societal interest in spirituality has led to a spiritual economy, meaning that several people have seen the financial potential of spirituality and have made use of this (D'Andrea, 2007). As mobile applications became a fixed part of many daily routines, spiritual applications were created and published on different mobile app stores (Buie & Blythe, 2013; Gorichanaz, 2022). Mobile apps can make spirituality even more approachable to everyone with a smartphone. A study by Buie & Blythe (2013) tried to give the first scientific view on spiritual apps and revealed that around 6000 spirituality-related apps could be found in the Apple app store. Gorichanaz (2022) used these first insights to explore the functions behind these applications. Consequently, it became visible that these apps mainly focus on four elements: journals, card decks, notifiers, and timers. Spiritual apps mostly use timers for their meditation exercises, notifiers in the form of quotes to spread a message, cards to let users shuffle or organise and the opportunity to write about experiences and share with others (Gorichanaz, 2022).

The examined studies have shown that there is an existing interest in spirituality in research with a primary focus on the definition of spirituality and its advantages regarding health (Berry & York, 2011; Brooks et al., 2018; Delgado, 2005; Janssen-Niemeijer et al., 2017; Kelly & Miller, 2007; Koening et al., 2012; Marques et al., 2013; Reimer & Dueck, 2012; Puchalski et al., 2014; Steemers-van Winkoop, 2014). However, there are few papers about spirituality connected to mobile applications yet. Spirituality as a lifestyle has many benefits for physical and psychological well-being, so spiritual apps could be a suitable medium to offer individuals support that struggle with, for instance, social relationships or

other daily activities (Bozek et al., 2020; Lavretsky, 2010). As having good and stable social relationships is important for individuals' well-being, modern spiritual apps could promote this as spiritual practices seem to influence them positively (Falb & Paragament, 2014). Current papers regarding spirituality applications mainly focus on traditional or modern meditation or yoga practices and their features (Buie & Blythe, 2013; Gorichanaz, 2022). However, NAS is concerned with practices beyond physical practices and seems to play a massive role in many lives, so it should be investigated further in how it can support individuals.

Furthermore, regarding the type of research, only a few scientific papers conducted qualitative research on modern spirituality that does allow for receiving in-depth insight and give indications for the individual relevance of spiritual mobile apps on users' life (Estanek, 2006; Possamai, 2000; Rose, 1998). Therefore, more qualitative insights into specific facets and features of modern spirituality are needed. Especially as there seems to be a gap in research about the perceived influence of modern spirituality and spiritual mobile apps, the current research will focus on this. Moreover, the facets of spirituality regarding social relationships will be explored with a qualitative method. The current research aims to discover and explore how people discuss using the apps to deal with their social relationships. This leads to the research question: "How are spiritual apps used to navigate social relationships?".

Method

Study Design

The current study is a collaboration between five bachelor thesis students, discovering the user experiences of modern spiritual apps in people's lives. The interviews were collected as a joint effort by the students, totalling 23 interviews. The data formed a shared database allowing students to use all collected interviews. Therefore, the jointly developed materials were essential to ensure that all researchers could gather enough data for their thesis focus.

To answer the research question of this paper, finding out about the participants' personal experiences with their spiritual app use regarding their social relationships has been the main interest. Therefore, qualitative research has been chosen as the research approach as it has been shown to be able to gain deeper insight into unique and personal experiences than quantitative research (Shoshanna, 1999). The interviews were semi-structured to allow the researchers to react, adjust and allow participants to delve further into specific sub-topics of the questions. An interview guide has been developed as a group effort with all thesis students, the responsible supervisor Heidi Toivonen and researcher Tim Gorichanaz. The interview guide consists of 16 questions, and several probes have been created (Appendix A). The interviews were primarily conducted to receive data for the current thesis. However, secondary they serve as data for an upcoming scientific paper by the researchers Heidi Toivonen and Tim Gorichanaz. The interviews were conducted in a one-on-one setting, either online or offline. The data analysis has been done individually.

Participants

This research was approved by the BMS Ethics Committee of the University of Twente (221430, see Appendix B), and participants were recruited by either signing up via SONA systems, by snowballing the students' and supervisors' network and via social media platforms. The criterium for participation was the participants had used at least one of the available spiritual mobile applications, such as Moonly, Sadhguru or Saged. However, participants who have barely used the said apps or used apps that do not have a spiritual background were excluded from the study. Especially participants that used traditional religious apps focusing on, for instance, Christianity, Islam, or Buddhism were excluded. Consequently, the final interview database consists of 23 interviews conducted with spiritual app users.

In this thesis, I have used 19 of the final 23 interviews, as these included the most relevant information to answer my research question. The remaining four interviews were

excluded for further analysis as participants did not discuss modern spiritual apps regarding social relationships. The ages of the 19 participants involved were ranging from 18 years to 42 years. Looking at the variation, seven of the participants were male (37%), 11 were female (57%), and one identified as nonbinary (6%). Lastly, the origins of the selected participants included seven nationalities. Participants were most frequently of German (47%) or Dutch (26%) origin.

Materials

Before the interview, the researchers jointly created an interview guide with different questions based on the preceded literature review and the examination of the theoretical background (Appendix A). Consequently, questions about the participants' understanding of the concept spirituality, New Age spirituality, features of the spiritual apps they use, the reasons to use these apps and the impact on one's life were created, adjusted, and integrated into a guide. For instance, "Is 'spirituality' a word that describes your beliefs and values well?", "Do you recognize the term "New Age?"," What made you download this app" or "Would you say using this app has had an impact on you or your life?" were questions integrated into the guide.

Additionally, as the current paper focuses on spiritual app use regarding social relationships, question 13, "Has using this app helped you in your social relationships?" has been implemented to trigger reflections relevant to answering the research question. The interview guide questions functioned as an outline that could be slightly adjusted based on the answers given by the interviewee by asking follow-up questions to receive increased insight.

Procedure

After the study received ethical approval from the BMS ethics committee of the University of Twente (221430), the study details, such as the inclusion and exclusion criteria, were determined before the recruitment of participants started. The study has been published on SONA, a university platform that supports students in recruiting participants, and the

researchers were asked to look for possible participants via their personal networks and social media platforms, such as Instagram and Facebook. After signing up or agreeing to participate in the study, the participants were invited for an online or face-to-face interview in a suitable setting.

Prior to the actual interview questions, the participants received an information sheet (Appendix C) about the study description that gave the participant some details about what to expect during the interview. After reading the information sheet, participants were asked to read and sign the informed consent (Appendix D), stating that all information will be treated confidentially, participation is entirely voluntary, and participants can withdraw from the study at any time without providing any reason. After receiving informed consent, the researcher introduced the interview and explained the study's aim again. Then, the participant was asked for permission to record the interview before proceeding to carry out the interview according to the interview scheme.

After each participant's consent (Appendix D), all interviews were voice recorded by the researcher to allow the researchers to focus entirely on the participant and facilitate transcription afterwards. The voice recordings were transcribed via Otter.ai. Additionally, each researcher manually checked the transcripts for correctness and readability before sharing them with the remaining researchers and consequent analysis. Pseudonyms replaced the real names of the participants.

Data Analysis

In the next phase, the anonymised transcripts were further analysed with the Thematic analysis (TA) by Braun and Clarke (2006). This method helped to identify interesting patterns by initially coding the interview transcripts of the participants. TA has been applied as an inductive method as it allows one to explore a new topic and find concepts and patterns in an iterative process based on the data rather than looking for confirmation to preconceived codes, possibly limiting the gathering of meaningful content.

In the initial coding phase, there was a focus on the whole transcript of participants, and the aim was to locate descriptions of their app use regarding their social relationships. The interviews were analysed in an open and iterative coding process, meaning codes were modified throughout the analysis (Maguire, 2017). There was a focus on question 13, which specifically asked participants about their app use and how it is connected to their social relationships. Therefore, expressions were coded that provided meaningful data to answer the research question. The smallest codable unit of data was a clause:

Having an open heart and open mind.

This clause has been coded with "open towards others". However, sometimes whole sentence needed to be coded to ensure clarity. Thus, the codable unit of data was longer, such as the example below that has been coded with "improving interactions":

I think it has had a huge impact on, on the way that I interact with people in general.

After all transcripts have been coded, the codes were grouped together into themes. Therefore, patterns between the transcripts were searched that could show a broader meaning regarding modern spiritual apps on social relationships. Usually, extracts representing a theme consisted of multiple codes as the example below:

It's giving you actually information about your bonds, so you can actually link your friends into it, and you can see if you have similar kind of patterns or different kind of patterns.

This extract has been coded with "comparing oneself with others" and "making connections". The themes were modified multiple times and checked whether they overlap or if they represent multiple patterns that need to be separated into different themes rather than one. Afterwards, the themes were checked by the supervisor before continuing with reporting the results. The analysis was finalized with 127 coded units of data that led to the creation of five main themes regarding spiritual apps and social relationships.

Results

Based on the TA of 19 interviews, five themes were created. The participants were interviewed about either one or multiple apps. Hence, the participants of these 19 interviews used one or more of the following apps: Astrology, Calm[1], Co-star[2], Daylio[3], Falcı Bacı[4], Headspace[5], Moonly[6], The Pattern[7], Plum Village[8], Sadhguru[9], Saged[10], Sanvello[11], Waking Up[12] and YouTube[13]. The general intention of the mentioned mobile applications seems to focus on meditation, astrology, and mindfulness mainly. All the apps included in these interviews incorporate mindfulness and/or spirituality information. Furthermore, most apps offer the option to connect with friends or other unknown users.

Looking more into the focus of the apps, Calm, Headspace, Plum Village, Sanvello and Waking Up offer guided mediation sessions and related content for different needs of the users, such as anxiety symptoms or experiencing high levels of stress (Calm.com; Headspace.com; Sanvello.com). Additionally, Sadhguru offers yoga activities to complement meditation sessions. The apps Astrology and Co-star have a strong focus on astrology-related

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[1] *Co−Star: Hyper-Personalized, Real-Time Horoscopes*. (n.d.). https://www.costarastrology.com/

[2] *Co−Star: Hyper-Personalized, Real-Time Horoscopes*. (n.d.). https://www.costarastrology.com/

[3] Daylio. (n.d.-b). *Daylio - Journal, Diary and Mood Tracker*. https://daylio.net/

[4] *Kaave Falı - Her zaman yanınızdaki kahve falcınız*. (n.d.). Kaave Falı. https://kaavefali.com/

[5] *Meditation and Sleep Made Simple - Headspace*. (n.d.). https://headspace.com/

[6] *Moonly — Moonly — Moon Calendar*. (n.d.). Moonly — Tarot. https://www.moonly.app/

[7] *THE PATTERN | The Pattern*. (n.d.). The Pattern. https://www.thepattern.com/

[8] *Mindfulness Apps | Plum Village*. (n.d.). Plum Village. https://plumvillage.org/de/mindful-apps/

[9] *Sadhguru: Yoga und Meditation – Apps bei Google Play*. (n.d.). https://play.google.com/store/apps/details?id=com.ishafoundation.app&hl=de&gl=US&pli=1

[10] *Saged Shop*. (2022, June 9). Saged. https://www.sagedshop.com/

[11] *Sanvello | On-demand help for stress, anxiety, and depression*. (n.d.). https://sanvello.com/

[12] *Waking Up - A New Operating System for Your Mind*. (n.d.). wakingup.com. https://www.wakingup.com/

[13] *YouTube*. (n.d.). https://youtube.com/

content. Users can develop their own birth chart and investigate those of friends as well as zodiac sign information and the connection between all of them. Moreover, users are provided with a daily horoscope and can also read the horoscope of friends as they can connect with them on the app (Costarastrology.com). Daylio and Saged are both apps that allow users to write an online journal about their daily thoughts or experiences. This way, they can evaluate their mood and focus on writing down positive events that happened that day (Daylio.net; Sagedshop.com). Moreover, Saged offers daily affirmations and supports users in increasing gratitude by offering articles, community chats and inspirational quotes. Falcı Bacı is a Turkish app that provides online "coffee mug readings", which is a Turkish tradition. Users scan their coffee mugs, and then the app makes predictions about the future (Kaavefali.com). Moonly describes the current and changing moon phases concerning the users' zodiac signs and mood with the help of tarot, rituals, runes and daily affirmations to help users find harmony (Moonly. app). The Pattern offers detailed information about one's personality and horoscope and offers analyses about the connection of both to discover themselves (Thepattern.com). Lastly, YouTube is a worldwide platform with many videos about different topics. In this case, YouTube is perceived as a spiritual app, as users can look for specific videos regarding modern practices or follow accounts sharing videos about modern spirituality. One participant describes YouTube as a spiritual app because he regularly opened it to look for meditation and hypnosis activities when he felt the need.

Based on the interviews, five main themes were created (Table 1). The themes are "Using social comparison to make connections with others", "Learning ways to improve social relationships", "Self-awareness regarding oneself and position in social relations", "Understanding one's emotions", and "Becoming (more) insecure after using a spiritual app", listed from highest to lowest frequency and will be presented in the same order below. Moreover, all names of participants are anonymized, and pseudonyms will be used to refer to the participants. Lastly, the extracts have been slightly stylized to ensure readability.

Table 1

Themes reflecting the experiences of modern spiritual apps regarding social relationships.

Theme	Definition	Codes included	N
Using social comparison to make connections with others	The users express that they can compare themselves (regarding astrology, birth charts, etc.) through the app with people in their surrounding and in this way, develop connections with others.	- Comparing oneself with other people - Understanding behaviour of other people - Collective app use - Ending relations - Meeting new people - Making connections with others - Community interactions	48
Learning ways to improve social relationships	The users experience the apps' various features as helping them to understand and deal with social relationships in new ways.	- Becoming more open towards other people - Gaining confidence - Becoming more relaxed - Getting to know other people (better) - Predictions about relations - Improving daily interactions - Offering explanations	31
Increasing self-awareness regarding oneself and position in social relations	The users experience that the features of the apps allow them to have more awareness for themselves, their actions, the people around them and their position in their social relations.	- Awareness of situations - Awareness of people - Reflections	23
Understanding one's emotions	The users express that the apps offer skills that support them in understanding and expressing emotions that can lead to a change in their behaviour.	- Focusing on emotions - Improving empathy - Increasing gratitude - Internal support - Behavioural change	17

Table 1 (continued)

Theme	Definition	Codes included	*N*
Becoming (more) insecure after using a spiritual app	The users experience that the features of the app and the information provided make them more insecure and worried than before using the app.	- Becoming worried - Developing negative feelings - Increasing insecurity	8

Using social comparison to make connections with others

Within this theme, the participants discussed their need for connections. They mainly talked about their own zodiac signs, horoscopes, birth charts, personality types and that the information about these aspects makes them curious to find out the same things of other people. Especially, the astrological and personality information of friends was in the centre of attention of many participants and important for their relations.

In "Tim's" example below, the value of comparing and testing connections between people based on spiritual apps is expressed.

The app can basically make relations to your friends, so you can see how good your personality type matches with the personality type of your friends. And, well how good a friendship would be in that sense. So, it's also like a measure to see how you and your friends might be getting along.

Tim talks about the importance of personality traits of himself and a friend. He clarifies this by saying that the app can assess how "*good*" a friendship can be solely based on assigned traits. Tim seems to highly value and believes in the information about his friends that is provided in the app, and it has a perceived influence on how he views a social connection to someone in real life. Especially the last sentence surrounding "*getting along*" indicates that not getting along could be explained by non-fitting personalities, according to the app. It seems that he constructs all the relevant feelings regarding friendships as

something the app can monitor. He expresses that the app could ultimately "decide otherwise" against Tim's' initial feeling regarding a certain person. Furthermore, Tim is talking about "*measuring*", so the app seems to promote the idea that he can objectively quantify the quality of his friendship. This is also underlined by other participants who say that their friends see the information in the app as crucial for the continued existence of their relationship.

"Sarah": *It means so much to my friend that he might have used that as an orientation because it kind of confirmed that we were so compatible as friends. And, he was so happy about it. So yeah. Maybe indirectly changed. It had an influence because I am pretty sure it influenced my friend.*

The extract from Sarah shows a secondhand description of her friends' app use, as it seems important for the relationship between them. Sarah downloaded the app to give her friend the needed information about her zodiac sign and birth chart, as the friend needed a "spiritual" confirmation that the friendship they were already having was genuine and should be continued. The app makes meaning of zodiac signs regarding social relationships that give users insight into themselves and their connection to other people. Moreover, users seem to give "decision power" about relationships to the app. The friend seemed relieved that their zodiac information matched, as Sarah indicates that it influenced her friend, and he was "*so happy*" about it. The apps seem to provide information perceived as trustworthy by users and support them in assessing their relationships with others. Sarah expressed that she could observe a difference in her friend. This difference shows that the apps are perceived to be able to affect the thoughts and feelings of the users solely by showing a (dis)connection between two or more individuals. Furthermore, Sarah's example displays that the apps are explored and used individually and together. As in the abstract above, users integrate the apps into their meetups and use them when being in the same location.

The extracts illustrate how participants within this theme use the spiritual apps to determine whether the connection between them and other people is "*stable*" enough, based

on, for instance, astrology, by supporting users to decide about the future of particular social relationships. However, unlike the examples of Tim and Sarah, some participants presented the app as merely confirming what they already think, not as changing their initial feelings or thoughts about certain social relations. Nevertheless, all interviews within this theme provided that users compare themselves with others and find possible connections to determine the quality of relationships by highly trusting the information provided in the app.

Learning ways to improve social relationships

The spiritual apps have a role in the daily lives of the participants. Within this theme, many participants described multiple times that different features of the apps supported them directly and indirectly in understanding and handling difficult situations in their lives. Participants either use the apps to receive immediate support, or working with the app can help users to learn ways and achieve skills that are beneficial for future situations with other people. Moreover, it was common among participants to display a high level of trust in the descriptions and explanations of the apps, as they were never challenged or criticized.

In "Emma's" example below, the importance of apps as immediate support can be displayed.

Yesterday I was checking my daughter, because she was behaving in a way that I could not understand why she was behaving that way and I wanted to see if if if [emphasizing the "if", putting her head from one side to another] this could explain it (showing the chart at the camera). And yeah, I guess it kind of did, so.

This example of Emma shows that she was experiencing struggles in her relationship with her daughter. She did not know how to handle the situation and opened the app to receive immediate support. Her non-verbal behaviour expressed that she was insecure when the situation with her daughter occurred, and she couldn't figure out her daughters' behaviour by underlining the ("*if, if, if*") and moving her head. Emma explained that she opened the app to receive an answer to questions that she could not answer at that moment. Thus, it seems

that for her, the app is, in difficult situations, a kind of "self-help tool" that offers answers. Furthermore, she seems to be looking for confirmation on the app regarding her thoughts and feelings. Within this theme, many participants often trusted the "answers" provided through the app or seemed satisfied with the increased understanding. After receiving support and possibly finding an explanation for her daughter's behaviour, the participant seemed relieved and felt that she could better handle the situation. However, this example also shows that users seem to use the apps when facing a challenging situation but have difficulties and feel inclined to admit to other people that the app offered them an answer they trusted and followed during that specific situation ("*And yeah, I guess it kind of did, so*"). Thus, within this theme, the participants discussed the apps as offering solutions supporting the users in finding a suitable solution to their problem by trusting the app at the moment but possibly doubting it afterwards.

Furthermore, many participants talked about the indirect influence of the apps on their lives. They did not use the app as an immediate reaction to a difficult situation but expressed that the regular usage of the spiritual apps supports and prepares them to encounter difficult situations in the future. The extract of "Emily" below shows an example of this.

In a social situation where a lot of people are, I feel less comfortable and confident in for instance, speaking up. And then I feel this, like pressure in my chest and I feel like, I feel super insecure, although I don't want to be insecure. So, I feel not confident enough to speak up. And then I can like, although I'm not speaking up afterwards, I can just like cope with this feeling in my chest. So, I can like release the tension by being more relaxed and calmer and thinking about the methods and techniques I've used on the app.

This example shows that spiritual mobile apps seem to give users a "confidence boost" by using different spiritual practices, such as meditation lessons. It changes how users feel about certain topics or situations by using the app. Moreover, the users seem to learn from the app on rather longer terms than only using it as a direct coping strategy. Hence, the app is also

used by participants as a learning tool that supports the users to improve skills and decrease weaknesses. For instance, Emily remembers what she learned in the app, such as methods to encounter many people by staying more relaxed and becoming more confident. As this example represents, participants discussed the apps as preparing the user for future situations and can, therefore, help with improving their own skills and experiences with others.

Lastly, the apps support the participants in predicting the future of social relationships with certain people. Within this theme, participants expressed that the app's predictions can influence their behaviour and possibly change their behaviour.

"Luisa": *There might have been, because quite a few times I drew a tarot card asking about relationships because that's quite challenging to me. But I can also be more specific. And then I guess I did act on quite a few cards.*

Luisa admits "*there might have been*" times when the app influenced her, as she often draws cards asking about relationships. During the interviews, participants expressed that they try to find answers about the future as they would like to be prepared for it. This example shows that participants take tarot cards very seriously regarding the future and certain people. However, she is hesitant when admitting that she acted based on the tarot ("*I guess I did act*"). This extract illustrates how participants discussed repeatedly using tarot apps to navigate difficult relationships but how there is hesitance to admit the apps influence one.

Nevertheless, most participants expressed that the app's indirect and direct support and predictions are valuable for them. In most interviews, the participants explained that the spiritual apps alter their daily life as they open them whenever they feel that they need support in tackling a situation.

Receiving self-awareness regarding oneself and position in social relations

During the interviews, many participants discussed that spiritual apps made them more aware of themselves and their surroundings. This is also related to increased reflection on

certain situations between two or more people. The participants use the apps to increase awareness of past situations, process them, and prepare for future situations.

"Hannah": *When you're like in social situations it's all very busy and you're not really noticing what's happening, and then when you had this moment in the meditation, I think it was easier to sort the thoughts and also apply this calmness or like maybe this focus that you have in a meditation so that I feel like this kind of exercise of this process helped me to maybe apply that in real life when I'm really like bothered by something.*

Hannah's example shows that meditation exercises that are offered in different apps guide the user in a way that they become more aware of experiences in an individual and calmer setting. The apps seem to give the users an increased self-understanding. Among participants, the atmosphere that is created by the app during, for instance, meditation sessions seems to improve the skill to sort thoughts and reflect upon them. This self-awareness seems highly important to the participants as it seems to change relationships with themselves and indirectly to others, as they know themselves better. Although Hannah seems to explain her personal benefits of the apps, parts of the extracts ("*I think it was easier…*") and ("*so that I feel like this kind…*") indicate that Hannah is not entirely sure if the improved focus and calmness is a result of the spiritual app or if there is another reason behind this.

"Lola": *I think that if you start working on yourself and you can reflect on yourself until you give yourself that pep talk. I know that I really improved it for myself. So, I improved it to other people.*

Lola expresses that she needed to be in harmony and happy about herself before she could have strong connections with other people. Participants explained that the spiritual apps made the users reflect upon themselves, which helped them personally but also the people around them. Similar to the example of Lola, participants expressed that the spiritual apps support them in reflecting upon their personal qualities and problems with the help of different spiritual methods. Moreover, the apps also include information on how other people

could experience and react to certain actions of the users. This can help them to understand their actions better. As the participants expressed, this influences their mental state and their connection to other people, which can strengthen a bond. As described by the participants, reflecting and becoming aware of their own actions through the apps leads to perceived personal development and growth.

The example of "Olivia" expresses and underlines the importance of self-awareness for the participants and how they perceived that it positively affected their relationships.

Later on, that turned into a habit because my boyfriend and I we give every day, we give it a grade. And finally, we started seeing a pattern on which days we are the happiest or on which days, you need like a little bit more love or affection or a little bit more time for yourself.

Olivia and her boyfriend started to see "a pattern" with the support of spiritual apps as they graded daily based on their mood and needs. This example shows that spiritual apps seem to help users to self-evaluate themselves regarding their values, needs and wishes. Moreover, participants expressed that these apps support them in becoming aware of these values, needs and wishes that can be communicated to other people they are having a certain relationship with. However, the example of Olivia also shows that participants seem to take these apps at face value as if they provide scientific data.

Understanding one's emotions

The fourth theme focuses on understanding emotions regarding their social relationships. Within this theme, participants talked a lot about the connection between spiritual apps and their experienced emotions. This theme involves depictions of participants who open the apps when certain positive or negative emotions arise when navigating with others. Participants explained that the apps' features help them understand these emotions and possibly put them into perspective.

"Jason": *Because, yeah, because it grounds me right? So I feel I just feel more in sync with my emotions. And that's important with social relationships.*

Jason's example shows that the apps can support the users with understanding and becoming aware of their emotions. Participants explained that they sometimes experience extreme emotions that affect themselves and their relationships with other people. If the app is used, participants expressed that these too-extreme emotions could be transferred into less extreme emotions that benefit the users and the people around them. It is also interesting that Jason explicitly states that he becomes "in sync" with his emotions after using his spiritual app. Hence, he expresses that the app helps him balance his positive and negative emotions. Participants seem to outsource their responsibility regarding emotion management to the spiritual apps.

Furthermore, participants display that, regarding self-control, the emotions of others can be better respected and encountered with the support of spiritual apps. This shows a different perspective of the relationship between people as the participants use the app not only to understand or control their own emotions but also try to understand and show empathy to the ones of their friends, family members or partners.

"Lara": *I look at the descriptions of my friends and I'm like, OK, I mean, I can. This description suits them so. Yeah, I know they can be very sensible or sensitive and this is why they overreacted or reacted that way because they might be thinking that way. So I can use a few to adjust my behaviour because I understand why they did, why they did something.*

Lara expresses that she uses her spiritual apps to increase sensitivity and understanding for her friends. Within this theme, participants explained that they try to put themselves in the position of a friend by taking another perspective. After seeing another perspective of, for instance, a dispute, the communication between both parties could be improved by showing more empathy and compassion for each other. Participants expressed that understanding each other's emotions can benefit the relational bond and how to approach

such situations. Thus, spiritual apps seem to function as internal support for social relations. However, the example of Lara also shows that she fully trusts the information provided in the app. She believes in what the app tells her and acts according to this information without questioning it. Hence, users seem to not have a need to fact-check the information provided in the app with, for instance, their friends to see if the apps' assumptions about their reactions are correct.

Becoming (more) insecure after using a spiritual app

Although the previous four themes showed indications of how spiritual apps could support individuals in handling several situations, the last theme, shows another side of the app usage. Some participants talked about how their app use did make them more worried or insecure than they were before opening the app.

"Lilly": *In the last coffee mug experience, there was something like: one of my friends will not betray me, but that they will do something, um, will hurt- or something that will hurt me. Like my, of one of my closest friends. And then I was just like, okay, thinking about my friends, why should they do something to hurt me? But then I was honestly, when I had then conversations with my friends, I had this always in the back of my mind. I was just like, okay, who often my friends would be like, yeah, would do something. So, I was really, really cautious.*

The example of Lilly shows that the apps offer more than just support in improving personal skills or understanding of relationship-related situations; they also offer participants predictions about their current relationships. However, as the example shows, these predictions can make the user doubt leading to overthinking what could happen and who is meant with it. Lilly could not stop thinking about the coffee mug reading when encountering her friends, which threatened the existing relationship. Thus, although the apps support many participants, some share that the app's features negatively affect their thinking patterns. Furthermore, participants seemed to attribute huge trust and power to the apps regarding

making decisions in their lives. In Lilly's example, she takes the prediction of the app for granted by taking a distance from certain social relations and becoming more insecure. Hence, the apps might have the power to affect the thinking pattern of the user by only providing assumptions.

Discussion

This thesis has discussed the experiences of 19 individuals being users of one or multiple modern spiritual apps and revealed how these people use them to navigate their social relationships. The five broad themes (a) Using social comparison to make connections, (b) Learning ways to improve social relationships, (c) Self-awareness regarding oneself and position in social relations, (d) Understanding (own) emotions, and (e) Becoming (more) insecure after using a spiritual app, were developed based on the interviews, highlight how participants described specific features of spiritual mobile and how these features are perceived to affect their social connections. Consequently, the themes answer the thesis' research question, "How are spiritual apps used to navigate social relationships?".

As Buie and Blythe (2013) and Gorichanaz (2022) already showed, this thesis underlines that modern spiritual mobile applications are rising in relevance and provide helpful features that can support the users' lives, such as with their social relationships. Especially as modern spirituality is accessible via smartphones, these practices seem to become more available than before. Furthermore, whereas previous studies have mainly focused on the definition and beneficial implications of spirituality regarding health (Brooks et al., 2018; Delgado, 2005; Marques et al., 2013), this paper and the related themes show how modern spirituality can support individuals in navigating their social relationships by offering a relatively new way in the form of mobile apps with various features, including spiritual practices.

The first theme showed that participants use spiritual apps to make social comparisons and connections. The second theme showed how the apps provide different features that

directly or indirectly support users in difficult situations. The third theme discussed increased self-awareness through spiritual apps. The fourth theme explained that the apps helped participants understand their emotions regarding themselves and others and learn how to balance them. The last theme concerned how participants experienced that the apps could negatively influence their thoughts and feelings. In all themes, participants expressed that especially astrology-related features were important for their experiences, as they were used to assess, reflect and compare themselves and others and make deeper connections this way.

All themes revealed interesting insights into the user experiences of modern spiritual apps regarding their social relationships. In general, in line with Umberson & Montez (2010), social relationships seem to have a perceived strong influence on the individual. Participants expressed the perceived high value of their social relationships in multiple interviews and that they strive to improve these relationships by using the apps. The users use the apps in different ways concerning their social relationships. This aligns with how Delgado (2005) defines spirituality, as this thesis showed that spirituality seems to be perceived differently and individually by every participant. Spirituality can be viewed as a personal practice that is applied differently, influenced by the needs and purposes of the users. Nevertheless, the analysis of the interviews revealed that participants mostly used the apps as a self-help tool or a learning tool. The apps as self-help or learning tool are used for different situations or issues that the users try to solve or understand. For instance, they assess the quality or seek confirmation of connections to certain people.

Furthermore, the apps offer support if the users experience struggles in their social relationships. The second theme, "support for social relationships", explains that users use their apps when they need additional support or try to find answers to unanswered questions. The app seems to function as a guiding tool for social relationships, as it can give them ways how to tackle certain situations or to understand other people. Laukhof & Werner (1998) reported that spirituality supports individuals in surviving in certain situations. This seems to

be applicable to modern spiritual mobile applications as well. Participants expressed that the apps are opened when they do not know how to proceed and, thus, trust that the app will offer explanations. Moreover, spirituality seems to give participants the extra power that they need to take critical decisions. For instance, if individuals feel that certain people are not good for them, users can open the app to find information regarding the future of these social relations. Likewise, as Falb & Pargament (2014) reported, participants more often felt a need for their spiritual apps when having a higher amount of perceived stress than usual.

Moreover, the third and fourth themes showed that users of the apps started to become more aware of their feelings and behaviour. This is in line with the findings of Amaral (2015), as the modern spiritual apps seem to provide "peak experiences" to the users in which they can improve themselves by using spiritual practices leading to more consciousness of themselves and others. These peak experiences are achieved and promoted by different features of the apps, such as meditation sessions or gratitude assignments. Consequently, the experiences result in increased reflection of users' behaviour and possibly adjusting it. Also, the feelings of other people and their value for oneself are more closely examined, leading to increased gratitude for their relationship in some participants. This shows the strong connection to positive psychology, as well as the study by Hardy et al. (2014), who stated that spirituality could positively influence forgiveness, gratitude, and empathy. Users seem to adjust their behaviour to show, for instance, gained gratitude or empathy for the one they are having a relationship with. Additionally, similar to Amaral (2015), it was common among participants to express the need for harmony in their social connections that is achieved by individual behavioural change.

Consequently, the spiritual practices that are incorporated into the apps seem to ultimately strengthen the existing social relationships of users, which is in line with Janssen-Niemeijer et al. (2017). Users expressed that they became more confident, calm and grounded by using spiritual apps and how this helped them with their connections. Moreover,

participants explained that they had learned more about themselves, which helped them build stronger connections by clearly communicating their values, wishes and needs. Consequently, in most interviews, participants reported that the app made them feel better in different ways. Thus, the results are in line with other studies, suggesting that spiritual practices can improve individuals' well-being and indicate that some benefits of spiritual practices can be translated into the use of spiritual apps (Berry & York, 2011; Brooks et al., 2018; Marques et al., 2013; Janssen-Niemeijer et al., 2017).

However, this study could also give insight into the rather negative side of modern spiritual apps on individuals. As Baysal (2022) and Falb and Pargament (2014) proposed, spirituality can lead to negative feelings in individuals and negatively influence their connections to other people. During the interviews, it became apparent that many features of the apps could trigger more insecurity and worry than before opening the app. For instance, as some people seem to value matching birth charts highly, users feel the pressure that their relations could end if their astrology signs do not match. This causes stress in users as they highly trust the information provided in the apps and believe that matching factors can predict the quality of a connection. However, this should be seen critically, as it can lead to individuals navigating relationships solely based on the apps without assessing the real-life connection. Thus, making the wrong decisions and losing meaningful social relationships can result from this.

Moreover, the risk of taking the information provided in the apps at face value must be underlined. In nearly all interviews and themes, it became apparent that a critical reflection or criticism of the apps is largely missing in all interviews. The participants expressed high trust in the assumptions and predictions that were shared in the apps. This needs to be seen critically as the apps seem to change, for instance, thinking patterns based on possibly incorrect assumptions or information. Participants hand over their thinking processes, reflections and decision power to the apps without seeing the risk of it. Additionally, it

became clear that users relinquish regular conversations about specific issues that could prevent misconceptions and solely trust in the apps. Also, they seem to outsource their responsibility regarding emotion management to the spiritual apps. Thus, participants might experience a form of dependency after regularly using the apps. Nevertheless, it is important to underline that there were indications that participants did hesitate to express to the interviewer that they trusted the apps and acted according to them. This could be caused by the fact that many people still do not take modern spirituality seriously, and talking about this freely can require much confidence.

Furthermore, it is critical that individuals seek confirmation on the apps for their initial beliefs. When they have an initial feeling about a certain situation or person, they look for confirmation on the app, leading to confirmation bias (Peters, 2020). Hence, the users do not try to converse with the other person to find out about specific issues but confirm with their app what they already thought. Consequently, there is a possibility that individuals incorrectly assess, for instance, a dispute and refrain from trying to reflect on themselves or the other person's reasons.

Lastly, the fifth theme examined that predictions about future events by the spiritual apps can make users worry more about social relationships than before opening the app. The apps seem to have a big influence on the internal feelings of their users. Participants explained that predominantly negative predictions about social relations made them worry more and led to overthinking the users throughout the day. They seem more suspicious and insecure about their social connections after using the app's features and trying to determine if the prediction will become a reality. Consequently, spiritual apps can negatively influence users' emotions and worsen their feelings after opening the app.

Limitations and Future Directions

Regarding the current study's limitations, this qualitative study, by examining 23 interviews and incorporating 19 interviews, displays a relatively small sample size with low

mean age, and the majority of participants are women familiar with spiritual practices for many years. Out of 23 participants, only seven men participated, showing less insight into the experiences of male users regarding spiritual apps and social relationships. Although the current findings seem not to expose substantial differences between women and men, it would be interesting to have a more balanced sample concerning gender to make inferences about potential differences regarding their app use. Nevertheless, the current sample indicates that male participants tend to speak less about how they use spiritual apps to navigate relationships, as women talked more in all interviews about this. Therefore, further research on this topic is needed with more male participants to receive more in-depth insight with a greater range of perspectives. However, as this topic is relatively new, the insights of this thesis can already show interesting insight into how individuals use these modern spiritual apps to navigate their relationships.

Moreover, another limitation is the way the interviews were conducted and analysed. The interviews were conducted in collaboration with other thesis students having another research focus concerning spiritual mobile applications. As every thesis writer tends to concentrate on finding answers to their research question, one could unintentionally oversee important details expressed by a participant and do to ask follow-up questions about this concerning a specific research focus of another thesis writer. Hence, the data could include more insights regarding social relations if all interviewers concentrated on the focus of this thesis. However, it can also be argued that different interviewers can increase the validity of the current research. Also, it should be considered that the preoccupation of the writer of this thesis influenced how the interviews were coded and the data was interpreted. Thus, the present results could be influenced by the writers' preconceptions and beliefs (Solbue, 2011).

Additionally, concerning the interview method, another limitation can be detected. The semi-structured interview questions gave the participants a prescribed frame that limited them to freely talking about their experiences with spiritual apps. By asking the participants directly

about their experiences regarding their social relationships, they were forced to concentrate on this and explain this further. Moreover, the essential question for this thesis, "Has using this app helped you in your social relationships?" could have been too leading. Thus, the participants might have favourably answered the question, and the results could be distorted.

In the future, research should further elaborate on the topic of the current study as it could bring enhanced understanding and offer practical impactions. As many participants expressed that the apps support them with coping in their social relationships, modern spiritual apps could function as a new form of online self-help for individuals when needed. Additionally, this thesis showed that participants believe that regularly using the apps leads to personal development and improved social connections and, therefore, a longitudinal study could bring more insights into this regarding long-term effects. Further exploration is also needed to discover the usability and effects of these apps, as they could be beneficial for psychologists. The apps could be integrated into interventions, and people who struggle to establish or continue relations can profit from this.

Moreover, conducting comparative studies could be interesting to find out whether the themes of this thesis would also appear in a different study with other participants. This way, it could be examined if the five themes are complete and universally applicable or if more meaningful patterns could be explored concerning spiritual apps and social relationships. Consequently, this could support other researchers in revealing and understanding variations within users' experiences, leading to potential new grounds for research. Additionally, it might help app designers optimise the app's features and increase its effectiveness.

Nevertheless, the negative sides of these apps should not be undermined and should be considered when further investigating the topic of this thesis, as it could lead to negative feelings and potential harm to the users. Examining these negative sides, such as users taking the information provided at face value, could help app makers improve the apps by reaching their full potential and preventing a potential dependency of users. The participants do not

seem to question the apps in most cases and partly change their behaviour based on them without reassuring the information with the person they are having a relationship with. This results in a potential risk of losing the connection to the real world and developing misconceptions about certain social relationships. Thus, users should realise that the apps cannot replace real-life interactions and should be viewed as a supporting and complementary tools.

Also, a closer examination of the risks, such as becoming more worried after using the app, is important for psychologists that incorporate spirituality or spiritual apps into their interventions. Therefore, a quantitative study could give a broad insight into these issues and the positive effect of modern spiritual apps on social relationships. The quantitative method can benefit future research by indicating big groups of people regarding their thoughts and feelings. Furthermore, the results will be more objective and generalisable, enhancing the improvement of modern spiritual apps and their incorporation into psychological practices.

Moreover, as the current study examined users younger than 44 years old and most of European origin, it could be interesting to get insight into the experiences of other populations. For instance, future research could target the older population as spirituality plays an even more prominent role in their mental and physical health later in life (Peteet et al., 2018). Also, as the number of adults above 65 constantly increases, spirituality in the form of mobile apps will also be interesting for them and possibly already used by them (Harerimana et al., 2019).

Lastly, as most participants were of European origin and probably shared the same basic understanding of the concept of spirituality and social relationships, it could be interesting to conduct another qualitative study on other continents that seem to have another view on spirituality and possibly act differently in their social relationships, such as countries in Asia (Kafetsios, 2019; Sorensen & Oyserman, 2009).

Conclusion

To conclude, modern spiritual apps, including New Age practices, have many potential benefits for individuals seeking support regarding their social connections. The potential of these apps can be expanded to become helpful for many more individuals that barely or never used such apps. Modern spiritual apps can help navigate relations or create stronger bonds in existing social connections by reflecting and working on oneself and learning about others. However, there is a risk that these apps are not used as a supporting tool but as a decision tool where the information provided is overvalued by the users, possibly resulting in negative consequences and lower well-being.

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Appendix A

Interview guide

Welcome to this interview about spiritual mobile applications. My name is ___ and I am doing this interview because____ (I am part of a group of students working on this project, and we will collect interview as data for our Bachelor's theses and eventually a research paper written by our supervisor.)

Have you read the information form? Are there any questions at this point?
I will need your written consent by email in order to be able to use this interview.

Do I have your permission to record this interview? [If yes, turn on recorder.] Is it okay if I make some notes for myself during the interview?

Your participation in this interview is voluntary. Remember, you can choose to skip any question for any reason. You can also end the interview at any time.

The information I'm collecting today will be stored separately from any of your personally identifying information, such as name and email address. The interview will be transcribed and anonymized so that you cannot be identified from it.

Quotations from the interviews may be used in Bachelor's theses or publications based on this research, but all data will be presented anonymously. I will go to every length to make sure you cannot be identified, even implicitly, from your words or any locations or services you describe.

If you ever have any questions about this interview, you can contact me at____ or my supervisor Heidi Toivonen at h.k.toivonen@utwente.nl. If you have any questions about your rights as a research participant, you should contact my supervisor.

Now, let's start the interview! First, I would need some basic background information about you. Could you tell me your age, gender, and nationality as well as in which country do you live at the moment?

Thanks, now we'll go to the actual interview questions.

1. Is "spirituality" a word that describes your beliefs and values well?
   - If yes, would you like to tell me something about what it means to you?

   - If not, what concept describes your beliefs and values better, and could you tell me something about what it means to you?

2. Do you recognize the term "New Age"? If yes, do you think it describes your views on spirituality?

3. Now, let's talk about spiritual mobile applications. What spiritual app (or apps?) do you use on a regular basis?

(If they use multiple apps, ask these questions for each app)

4. When did you start using this app?

5. What made you download this app?

6. Can you tell me something about why you use this app?

7. Next, I'm going to ask you to tell me something about how you use the app. Firstly, what kinds of features does the app have and how do you use them?

8. How often do you use it?

9. When you open the app, how long do you usually spend on it?

10. Tell me about the last time you used the app. Try to place yourself in that situation and share with me as much detail as you can.
   - If you don't remember the last time you used the app, tell me about any recent time you recall
   - *Prompts: When was this? Why did you use the app? How did you use it? Who were you with? Where were you? How did it feel to you?*

Note to the interviewer: Try to understand the situation, the nature of the interaction with the app. Try to get the interviewee discuss the meaning of the app, what it makes them think and feel.

11. Would you say using this app has had an impact on you or your life?
   - On your thoughts, feelings, or experiences?
   - Has using this app had an impact on your daily habits and/or routines?

12. Has using this app had an impact on your mental wellbeing?
   - If yes, which functionalities have been beneficial/detrimental to your wellbeing?

13. Has using this app helped you in your social relationships?
   - If yes, which functionalities have been helpful to your social relationships?

14. If you could change one thing about the app, what would it be?

15. How well do you think this app fits with your worldview? Is there something that isn't a fit?

NOTE: IF THERE IS ANOTHER APP TO BE DISCUSSED, GO BACK TO QUESTION 4!

16. Has the use of these apps inspired you to seek additional information on other spiritual practices outside the app?

17. Would you like to add any additional comments?

Appendix B

Ethical approval

UNIVERSITY OF TWENTE.
FACULTY BMS

221430 REQUEST FOR ETHICAL REVIEW

Request nr: 221430

Researcher: Toivonen, H.K.

Supervisor: -

Reviewer: Klooster, P.M. ten

Status: Approved by commission

Version: 2

1. START

A. TITLE AND CONTEXT OF THE RESEARCH PROJECT

1. What is the title of the research project? (max. 100 characters)

    User Experiences with Smartphone Apps for Spirituality

2. In which context will you conduct this research?

    Academic research conducted by a faculty member

3. Date of the application

    02-12-2022

5. Is this research project closely connected to a research project previously assessed by the BMS Ethics Committee?

    No/Unknown

B. CONTACT INFORMATION

6. Contact information for the lead researcher

    6a. Initials:

        H.K.

    6b. Surname:

        Toivonen

    6c. Education/Department (if applicable):

        BMS-PGT

    6d. Staff or Student number:

        77024080

    6e. Email address:

        h.k.toivonen@utwente.nl

    6f. Telephone number (during the research project):

```
+358407458418
```

6g. If additional researchers (students and/or staff) will be involved in carrying out this research, please name them:

```
h.k.toivonen@utwente.nl
```

6h. Have you completed a PhD degree?

```
Yes
```

8. Is one of the ethics committee reviewers involved in your research? Note: not everyone is a reviewer.

```
No
```

C. RESEARCH PROJECT DESCRIPTION

9a. Please provide a brief description (150 words max.) of the background and aim(s) of your research project in non-expert language.

```
This is an exploratory study on the experiences of people who use
smartphone applications somehow connected to spirituality (New Age)
lifestyle and practices (e.g. Saged, Sadhguru, Spiritual Stories
Daily). Me and my co-researcher, Assistant Teaching Professor Tim
Gorichanaz from the Drexel University College of Computing &
Informatics, are planning to recruit people who are already using
these apps and conduct semi-structured interviews with a
phenomenological approach. The study aims to understand the role and
function the users perceive the apps as having in their everyday life
and meaning-making, as well as the connection of the app to their
values and worldviews. While there is an increasing number of
conceptual studies on modern spirituality and New Age, often from a
critical standpoint, there are very few studies focusing on the
experiences and perceptions of self-declared spiritual people
themselves. Furthermore, while different mobile applications revolving
around New Age beliefs and practices are becoming increasingly common,
there are no studies investigating the use of these apps and the
meanings given to them by the users. The study aims to contribute a)
to our understanding of the deeper user experiences of mobile
applications with a focus on a group of less known apps and b) to HCI
field with a new methodological approach, which combines qualitative
narrative analysis of the users' stories to a comparative analysis of
the stories told by the apps (researcher construct based on the
functionalities, visualities, and text materials included in the
apps). Findings of the study will increase our understanding of the
interplay of the increasingly common New Age lifestyles with
technology use and thus, expand the current understanding of wellbeing
applications towards the direction of spiritual wellbeing.
```

9b. Approximate starting date/end date of data collection:

```
Starting date: 2022-12-31
```

```
End date: 2023-12-30
```

9c. If applicable: indicate which external organization(s) has/have commissioned and/or provided funding for your research.

      Commissioning organization(s):

```
Not applicable
```

      Funding organization(s):

```
Not applicable
```

2. TYPE OF STUDY

Please select the type of study you plan to conduct:

```
I will be collecting new data from individuals acting as respondents,
interviewees, participants or informants.
```

4. RESEARCH INVOLVING THE COLLECTION OF NEW DATA

A: RESEARCH POPULATION

20. Please provide a brief description of the intended research population(s):

```
The research population covers adults who have already (prior to the
interview) been using any mobile application that they themselves
consider spiritual/New Age (some examples are apps such as Saged or
Sadhguru). Participants will be recruited using the researchers' own
networks, ads on social media, contacting the app developers, and
possibly by using the student pool SONA. The participants can be of
any nationality and live anywhere in the world, as long as they can
participate in an online interview conducted in English or in another
language in which the interviewer is fluent (Finnish, Swedish, etc.).
```

21. How many individuals will be involved in your research?

```
We expect to include at least 10 and up to 40 interview participants
altogether.
```

22. Which characteristics must participants/sources possess in order to be included in your research?

```
The participants must be at least 18 years old, able to speak English
well enough to participate in an online interview (or native in some
other language in which the interviewer is fluent), as well as have
used for any period of time any of the various spiritual applications
out there. We will recruit participants that have been using an app
(or several of them) that the participants themselves define as
"spiritual". That is, we will not be pre-defining what
spirituality/New Age means or which apps they should have been using.
However, people who have only used apps that have to do with
traditional religion (e.g., any of the various Christian or Muslim
apps) will not be included in the study.
```

23. Does this research specifically target minors (<16 years), people with cognitive impairments, people under institutional care (e.g. hospitals, nursing homes, prisons), specific ethnic groups, people in another

country or any other special group that may be more vulnerable than the general population?

    No

24. Are you planning to recruit participants for your research through the BMS test subject pool, SONA

    Yes

B. METHODS OF DATA COLLECTION

25. What is the best description of your research?

    • Interview research

26. Please prove a brief yet sufficiently detailed overview of activities, as you would in the Procedure section of your thesis or paper. Among other things, please provide information about the information given to your research population, the manipulations (if applicable), the measures you use (at construct level), etc. in a way that is understandable for a relative lay person.

    The study set up is transparent: We will recruit participants that
    have been using any modern spirituality related smartphone
    application. The recruitment text will name some examples, such as
    Saged, Sadhguru, or Spiritual Stories Daily. The participants will
    take part in a semi-structured interview in an online setting such as
    Teams or Zoom. The interviews will be recorded. The questions asked
    will concern 1) the participant's definition and experiences of New
    Age spirituality and 2) their experiences of using a particular app or
    apps revolving around spirituality. The interview will start out by
    asking e.g., "How do you define spirituality?" and "What does
    "spirituality" mean to you?" and then proceed to more specific app-
    related questions such as "What app (or apps?) do you use as part of
    your spirituality?", "How do you use this app?", and lastly, "Tell me
    about the last time you used the app. Try to place yourself in that
    situation and share with me as much detail as you can."

How much time will each participant spend (mention the number of sessions/meetings in which they will participate and the time per session/meeting)?

    One interview of 30-60 minutes

C: BURDEN AND RISKS OF PARTICIPATION

27. Please provide a brief description of these burdens and/or risks and how you plan to minimize them:

    The participant burden is minimized by keeping the interview scheme as
    concise as possible and by only including questions that are needed to
    answer the research question. Since some of the interview questions
    are relatively personal (e.g., concerning their views on
    spirituality), it cannot be excluded that some participants might feel
    discomfort about this. To minimize any discomfort, the interview
    questions are kept relatively open to allow the participants
    themselves define at what depth they will be answering the questions;
    by making clear to all participants that they can discontinue the
    interview at any point without any consequences for them; and by

```
conducting the interview itself in a sensitive and professional
manner. Should any students participate in collecting the data, they
will be trained beforehand to make sure they conduct it in the best
way possible. In case the participants will feel any psychological
discomfort during or after the interview, they are offered the chance
to discuss with the interviewer and provided with both the main
researchers' (Heidi Toivonen and Timothy Gorichanaz) contact
information to be able to contact them later to discuss the interview.
```

28. Can the participants benefit from the research and/or their participation in any way?

```
Yes
```

Please Explain:

```
The interview is designed to offer the participants an interesting
chance to have a reflective discussion on their personal views and
lifestyle, from the perspective of their use of spiritual mobile
applications.
```

29. Will the study expose the researcher to any risks (e.g. when collecting data in potentially dangerous environments or through dangerous activities, when dealing with sensitive or distressing topics, or when working in a setting that may pose 'lone worker' risks)?

```
No
```

D. INFORMED CONSENT

30. Will you inform potential research participants (and/or their legal repsentative(s), in case of non-competent participants) about the aims, activities, burdens and risks of the research before they decide whether to take part in the research?

```
Yes
```

Briefly clarify how:

```
The participants will be provided with an information sheet, sent to
them by email after they indicated interest in participating in the
study. The sheet will explain the aim of the study, how the interview
is conducted and what topics will be covered, as well as the
participants' rights and how their anonymity will be protected.
```

32. How will you obtain the voluntary, informed consent of the research participants (or their legal repsentatives in case of non-competent participants)?

```
Signed
```

33. Will you clearly inform research participants that they can withdraw from the research at any time without explanation/justification?

```
Yes
```

34. Are the research participants somehow dependent on or in a subordinate position to the researcher(s) (e.g. students or relatives)?

```
No
```

35. Will participants receive any rewards, incentives or payments for participating in the research?

- No

36. In the interest of transparency, it is a good practice to inform participants about what will happen after their participation is completed. How will you inform participants about what will happen after their participation is concluded?

- Participants will receive the researcher's contact details, so that they can contact the researcher if they have questions/would like to know more.
- Other (Please specify):
  Participants who indicate their interest will receive the final publication(s) written using this interview data.

E. CONFIDENTIALITY AND ANONYMITY

37. Does the data collected contain personal identifiable information that can be traced back to specific individuals/organizations?

Yes

38. Will all research data be anonymized before they are stored and analysed?

Yes

39. Will you make use of audio or video recording?

Yes

• What steps have you taken to ensure safe audio/video data storage?

The videos will be stored in the UT Teams environment, in a Teams folder accessible only to the researchers of the project.

• At what point in the research will tapes/digital recordings/files be destroyed?

After the interview has been fully transcribed into text, the original video will be destroyed.

5. DATA MANAGEMENT

- I have read the UT Data policy.
- I am aware of my responsibilities for the proper handling of data, regarding working with personal data, storage of data, sharing and presentation/publication of data.

6. OTHER POTENTIAL ETHICAL ISSUES/CONFLICTS OF INTEREST

40. Do you anticipate any other ethical issues/conflicts of interest in your research project that have not been previously noted in this application? Please state any issues and explain how you propose to deal with them. Additionally, if known indicate the purpose your results have (i.e. the results are used for e.g. policy, management, strategic or societal purposes).

I do not anticipate any ethical issues or conflicts of interest.

7. ATTACHMENTS

Participant information sheet.pdf, Informed consent sheet final.pdf

8. COMMENTS

9. CONCLUSION

Status: `Approved by commission`

The BMS ethical committee / Domain Humanities & Social Sciences has assessed the ethical aspects of your research project. On the basis of the information you provided, the committee does not have any ethical concerns regarding this research project. It is your responsibility to ensure that the research is carried out in line with the information provided in the application you submitted for ethical review. If you make changes to the proposal that affect the approach to research on humans, you must resubmit the changed project or grant agreement to the ethical committee with these changes highlighted.

Moreover, novel ethical issues may emerge while carrying out your research. It is important that you re-consider and discuss the ethical aspects and implications of your research regularly, and that you proceed as a responsible scientist.

Finally, your research is subject to regulations such as the EU General Data Protection Regulation (GDPR), the Code of Conduct for the use of personal data in Scientific Research by VSNU (the Association of Universities in the Netherlands), further codes of conduct that are applicable in your field, and the obligation to report a security incident (data breach or otherwise) at the UT.

Appendix C

Information sheet

Participant information sheet

Research Project: **User Experiences with Smartphone Apps for Spirituality**

Smartphone applications focusing on modern spirituality (New Age) have been increasing in number, but very little is known about the experiences of people using such apps. This study is conducted as a collaboration between Assistant Professor Heidi Toivonen from Psychology, Health, and Technology at the University of Twente, the Netherlands, and Assistant Teaching Professor Tim Gorichanaz from the College of Computing and Informatics at the Drexel University, Philadelphia, the US. We study the experiences of people who use spiritual applications such as Saged, Sadhguru, Spiritual Stories Daily, or any of the other applications available focusing on modern spirituality/New Age lifestyle and practices. Note that we are not recruiting participants using applications focused on traditional religions, such as any of the existing Christian or Muslim applications.

Participation in this research is voluntary and no incentive for participation will be provided. The research involves participating in a one-on-one interview on an online video call, using e.g. Zoom or Teams. The interview will be conducted either in English but also in other languages, in case the interviewer is fluent in it and it is the participants' first language. The interview will last for 30-60 minutes. The participant will be asked questions about their personal views on modern spirituality and their thoughts and experiences of using any smartphone application related to spirituality. The participant can decline to participate and withdraw from the research at any time, without any negative consequences, and without providing any reasons.

The interviews will be audio- and videorecorded. The interview data will be fully anonymized upon transcription, and all interviewees will be referred to with pseudonyms throughout the analysis and in the final written works produced from the data. Individual participants cannot be identified from the articles written using this data. The data will be stored online in a safe environment according to the rules of the University of Twente for a period of ten years. The interview data will be used for scientific research published in research articles written by Profs. Toivonen and Gorichanaz.

Responsible researchers and contact persons for questions about the research and rights of research participants: Assistant Professor Heidi Toivonen h.k.toivonen@utwente.nl and Assistant Teaching Professor Tim Gorichanaz gorichanaz@drexel.edu
If you have questions about your rights as a research participant, or wish to obtain information, ask questions, or discuss any concerns about this study with someone other than the researcher(s), please contact the Secretary of the Ethics Committee/domain Humanities & Social Sciences of the Faculty of Behavioural, Management and Social Sciences at the University of Twente by ethicscommittee-hss@utwente.nl

Appendix D

Consent form

Informed consent

This is a research project concerning spiritual smartphone applications. The project is designed to gather information about people's experiences and thoughts on applications revolving around modern spirituality/New Age.

Consent Form for *User Experiences with Smartphone Apps for Spirituality*
YOU WILL BE GIVEN A COPY OF THIS INFORMED CONSENT FORM

Please tick the appropriate boxes	Yes	No
Taking part in the study		
I have read and understood the study information dated [02-12-2022], or it has been read to me. I have been able to ask questions about the study and my questions have been answered to my satisfaction.	☐	☐
I consent voluntarily to be a participant in this study. I understand that I will not be paid for my participation. I can refuse to answer questions and I can withdraw from the study at any time, without having to give a reason and without any negative consequences. If I decline to participate or withdraw from the study, no one will be told and it will not affect my relationship with the University of Twente or with Drexel University.	☐	☐
I understand that taking part in the study involves being interviewed on the Zoom or Teams video call platform. The interview will last approximately 30-60 minutes. Notes will be written during the interview. The interview will be audio- and video recorded, and after the video call has been transcribed into text, the recording will be destroyed.	☐	☐
Use of the information in the study		
I understand that information I provide will be used for scientific articles published in academic journals. I understand that the researcher will not identify me by name in any reports using information obtained from this interview, and that my confidentiality as a participant in this study will remain secure.	☐	☐
I agree that my words can be quoted in research articles. The research output will refer to me with a pseudonym and I will not be identifiable from the paper.	☐	☐

I agree to be audio/video recorded. Yes/no   ☐   ☐

I understand that most interviewees will find the discussion interesting and thought-provoking. If, however, I feel uncomfortable in any way during the interview session, I have the right to decline to answer any question or to end the interview.   ☐   ☐

Future use and reuse of the information by others

I give permission for the transcribed, anonymized interview that I provide to be archived in an online repository by the University of Twente for 10 years, so it can be used for future research and learning. Subsequent uses of records and data will be subject to standard data use policies which protect the anonymity of individuals and institutions. Personal information collected about me that can identify me, such as [e.g. my name or where I live], will not be shared beyond the study team.   ☐   ☐

Signatures

_____   _____ _____

Name of participant [printed]

            Signature   Date

I have accurately read out the information sheet to the potential participant and, to the best of my ability, ensured that the participant understands to what they are freely consenting.

_____   _____   _____

Researcher name [printed]   Signature   Date

Study contact details for further information: h.k.toivonen@utwente.nl

Contact Information for Questions about Your Rights as a Research Participant

If you have questions about your rights as a research participant, or wish to obtain information, ask questions, or discuss any concerns about this study with someone other than the researcher(s), please contact the Secretary of the Ethics Committee/domain Humanities & Social Sciences of the Faculty of Behavioural, Management and Social Sciences at the University of Twente by ethicscommittee-hss@utwente.nl