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Phenomenological study about enhancing university student's psychosocial wellbeing through YouTube videos:

Autonomous Sensory Meridian Response (ASMR) in Finland

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Abstract. The present qualitative study aimed to explore how the attitudes, experiences, and feelings of Autonomous Sensory Meridian Response (ASMR) videos could be used to enhance psychosocial wellbeing similar to mindfulness-based treatment programs. ASMR is an atypical and multisensory phenomenon in which a tingling sensation is often elicited following specific audio-visual stimulations. Although ASMR experiences have been announced to enhance wellbeing and phenomenologically superimposed with mindfulness, there is a lack of research exploring how ASMR experiences relate to wellbeing. In this study, the theoretical underpinnings of the Differential Susceptibility to Media Effects Model (DSMM) by Patti M. Valkenburg and Jochen Peter (2013) are merged with Positive psychology's wellbeing theory (PERMA) by Seligman (2011) for the first time with the objective to explore and link the distinguishing characteristics of ASMR video with wellbeing outcomes.

The study entailed two in-depth semi-structured interviews, which were conducted with three university students (one female and two males) in Finland. Interpretative phenomenological analysis with coding schemes was employed and guided by DSMM and Seligman's five domains of well-being. Three main themes and fourteen subthemes emerged from the analyses of the interview transcripts corresponding to the research question. The main themes include ASMR intentional use, ASMR media contents, and ASMR multisensory integration. The subthemes encompass prior ASMR-like experiences, social pressure from family members and curiosity, different types of sound, voices, and movement; nostalgic thoughts, pro-change bias, and positive responses. Exploration of interviewees' narratives further brought to light issues concerning ASMR's emotional effects on wellbeing. Analyses reveal different subthemes clustered into five main themes: Positive Emotion, Engagement, Relationships (Connectedness), Meaning and Making a Connection, and Accomplishment.

The findings showed how ASMR videos enhance wellbeing through mindfulness-like experiences. These research findings are significant due to the ASMR videos' potential to increase wellbeing and happiness. Furthermore, their influence can extend to elevating the ability to concentrate on tasks at hand, improving the quality of sleep by stopping rumination, increasing self-confidence, and motivating altruistic behavior. The beneficial potential of ASMR videos to promote psychosocial wellbeing is remarkable.

Keywords: ASMR, DSMM, Interpretative phenomenological analysis (IPA), Mindfulness, PERMA, Psychosocial wellbeing

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List of Abbreviations

Augmented Reality	AR
Autonomous Sensory Meridian Response	ASMR
ASMR Artist	ASMRtist
beats per minute	bpm
Big Five Inventory Personality Test	BFI
Combined Stimuli	CS
Differential Susceptibility to Media Effects Model	DSMM
dorsal Anterior Cingulate Gyrus	dACG
Electroencephalography	EEG
functional Magnetic Resonance Imaging	fMRI
Heart Rate	HR
Inferior Frontal Gyrus	IFG
Interpretive Phenomenological Analysis	IPA
medial prefrontal cortex	mPFC
Mindful Attention and Awareness Scale	MAAS
Non-Rapid Eye Movement	NREM
Nucleus Accumbens	NAcc
Positive emotion, Engagement, Relationship, Meaning and Accomplishment	PERMA
Region-Of-Interest	ROI
Skin Conductance Level	SCL
Supplementary Motor Area	SMA
Toronto Mindfulness Scale	TMS

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1 Introduction

There has recently been a tremendous public interest in an atypical phenomenon: Autonomous Sensory Meridian Response (ASMR) by those capable of experiencing it. This multisensory phenomenon draws hundreds of thousands of people to YouTube channels dedicated to it every day. To take an example, GentleWhispering is one of the most popular channels producing ASMR content and has shown over one million subscribers and 470,000,000 views (McErlean & Banissy, 2018, 2). Notably, there were over 6 million videos on Instagram with the hashtag #asmr. This hashtag #asmr was recognized as the primary trend of 2018 on this social network. The searching for hashtags and keywords produces more than 12 million videos of this type with a large number of views and supporters on YouTube channel (Antonova, 2019, 8). According to Ahrefs, ASMR is currently (as of February 2019) the 8th most common keyword searched on YouTube worldwide (Valtakari et al., 2019, 2). There is a popular trend in both online video content and commercials of ASMR that are filmed to promote products by famous brands, for instance, Coca Cola, KFC, IKEA, Tic Tac, Taco Bell, Dove Chocolate, Michelob Ultra and others (Antonova, 2019, 9). Recently, the official Pokémon YouTube channel (Pokemon-themed ASMR) has appeared on the ASMR trend in Japan. The first video comes from the Pokémon Kids TV YouTube channel, showing Chespin eating some Poké Puffs and making exaggerated munching sounds (Scott, 2020). Besides, some Mukbang (Korean words for "eating" and "broadcast") channels on YouTube are also devoted entirely to ASMR and focus on producing different eating sounds (Anjali, 2019).

1.1 ASMR: Definition, History and Online communities

Autonomous Sensory Meridian Response (ASMR) is a multi-sensory phenomenon typically characterized by dynamic tingling sensation spreading across the scalp, moving downwards along the line of the spinal cord, and then propagating to the arms and legs (Cash, Heisick, & Papesh., 2018, 1). In this context, **Autonomous** refers to personal ability to facilitate or produce the sensation at will. **Sensory** is defined as the sense organs transmitted the nerve impulse to the brain or senses themselves in response to an external trigger. **Meridian** is defined as the highest point or apex and also so-called for euphoria. In terms of Traditional Chinese Medicine, the meridian also illustrates the pathways taken by the qi, or life energy, as it flows through the human body (Stefanov, Potroz, Kim, Lim, Cha, & Nam, 2013, 1). **Response** is referred to how the individual reacts to a triggering stimulus or thought (Del Campo & Kehle, 2016, 1).

According to Austrian writer Clemens J. Setz, Virginia Woolf's novel Mrs. Dalloway published in 1925 have a passage that may be related to the ASMR phenomenon (Setz, 2015). This passage generally refers to the human voice, and soft or whispered vocal sounds similar to ASMR triggers for many ASMR experiencers posted comments to YouTube videos that they describe someone speaking or whispering directly to the camera (Woolf, 2005, 141). On an online health forum, the ASMR sensation first appeared in 2007 as a good feeling of unknown origin. People reported to have the relevant sensation in various situations in their daily lives for years, but some of them did not remember a time when they did not feel ASMR (Bode, 2019, 3). In 2010, it was brought to the public attention again, and numerous online forums included discussions of a previously unnamed feeling termed Autonomous Sensory Meridian Response created by Jennifer Allen. Later, ASMR descriptions were proliferated in the media, and some journalists referred to the tingling sensation as "brain orgasms" (Fredborg, Clark, & Smith., 2017, 1). The first ASMR online community started in 2009 when the YouTube channel WhisperingLife was created. Other channels have appeared for sharing content that was explicitly aimed at stimulating a relaxing sensation within a short time. Today, several YouTube channels with ASMR content have more than a million subscribers and millions of views, illustrating the growing popularity of the phenomenon (Bode, 2019, 4). Nowadays, there are several Apps specialized in ASMR, such as ASMR Sleep 3D Sounds (compose own mixes and soundscapes by adding, dragging, and modulating sounds); and ASMR Slime Triggers (slime simulator with visual stimulation) (David, 2019).

1.2 ASMR in Finland

ASMR phenomenon has become popular in Finland over the last years, and numerous new ASMR content YouTube channels have been created. The first Finnish ASMR artists were Matilda Koivisto and started in the 2014 WhiteWinterWhispers channel (Turtiainen, 2019, 27-28). Then, a famous Finnish YouTube video blogger Sita Salminen (Spa-Roleplay-video), appeared, and her published ASMR channel was viewed over 20 million times in September 2019, shown in Figure 1.

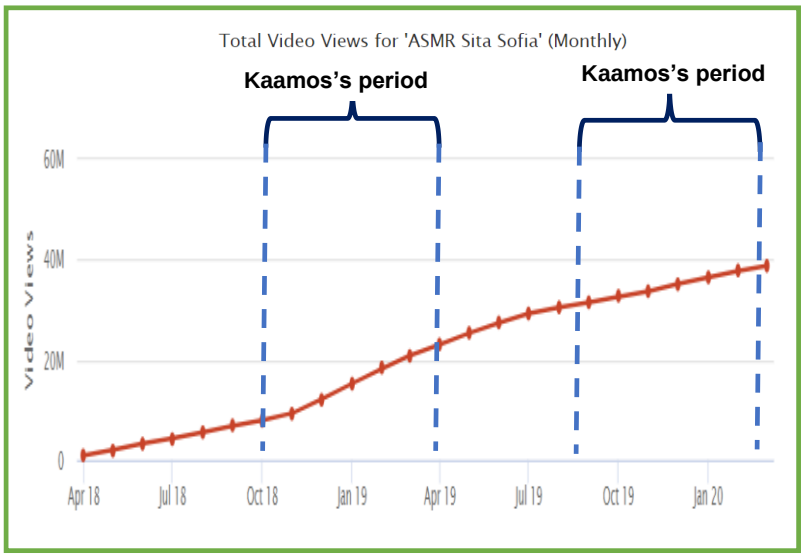

Figure 1: Total Views Per Month for Finnish ASMRist Sita Sofia on YouTube. Adapted from:https://socialblade.com/youtube/channel/UCjNyeUaGpD0o7z5VbruS6-A/monthly

Figure 1 shows that a sudden increase in the total views of Finnish ASMRtists channel in the period from October to March in 2018-2019 and 2019-2020. This trend has raised the question whether Finnish people could likely seek ASMR videos to relieve their kaamos period problems and why the number of viewing increased in that period as the previous research has shown that ASMR experiencers had reported feelings of relaxation and well-being (Barratt & Davis, 2015, 1).

1.3 Research Problem and its context

The polar night, also called kaamos, refers to the dark period that lasts for 51 days from October to the beginning of March in the most northern part of Finland. Almost 40 percent of Finnish people experience specific changes in mood and behavior, and about 9 percent have symptoms of winter depression during the Kaamos period (Grimaldi, 2009, 9). Besides, 30 percent of Finnish university students suffered from psychological problems, including continuous overstrain (43 percent), feeling unhappy and depressed (27 percent), difficulties concentrating on tasks at hand (32 percent), loss of sleep caused by worrying (23 percent), and loss of self-confidence (23 percent). One-third of students reported experiencing considerable stress, and 28 percent of female and 19 percent of male students reported they worry a lot over study-related matters even in their free time (Kunttu et al., 2017, 34-37, 68-72). It is also reported that ASMR can bring temporary relief for those suffering from depression and phenomenologically overlap with mindfulness (Barratt

& Davis, 2015 1; Fredborg, Clark & Smith., 2018, 2). The research problem is justified by previous literature, which mentions that mindfulness is associated with increased ASMR intensity (Fredborg et al., 2018, 11). Therefore, the current study explores and examines how ASMR videos can be used to enhance well-being similar to mindfulness-based treatment programs.

1.4 Research Questions & their Objectives

RQ1. How do students experience ASMR?

RQ2. What kind of emotional effects from the ASMR experiences have on the psychosocial wellbeing of students in Finland?

The RQ1 aims to explore the predictors of ASMR media use (e.g., motivation), the effects of ASMR exposure on a variety of media responses (e.g., positive feelings, and thoughts), and (RQ2) how these responses enhance media effects (psychosocial wellbeing) of the university students in Finland.

2 Background

2.1 ASMR characteristics and content

ASMR can be triggered not only by different types of external stimuli, but also by some internal stimuli, such as focusing attention, recalling the memory of a previous ASMR, meditating, or state of mind (Tihanyi, Ferentzi, Beissner, & Köteles., 2018, 7). For external stimuli, ASMR is usually not elicited spontaneously but rather in response to particular types of stimuli.

ASMR videos usually display an ASMRtist performing and producing sounds with their voices. Sometimes they used objects to generate sounds. This general format is transformed into different scenarios. Some of the videos are narrative and involving the role-play of characters in particular situations. The most popular form of ASMR videos is that the ASMRtist is performing extremely close to the camera and providing the viewer with personal attention. The most popular form of ASMR videos is that they usually involve the ASMRtist performing extremely close to the camera and providing the viewer with personal attention. Some examples of this include haircut, doctor's appointment, and ear-cleaning role-play. Other types of videos might involve only whispering or only object

sounds. A survey study by Barratt and Davis (2015) was found that whispering, low-pitched repetitive noises such as tapping sounds, close-up attention, and videos depicting socially intimate situations to show slow movements (e.g., hair-brushing) elicited tingling sensation during ASMR engagement. The authors further found that other common ASMR triggers include listening to and watching an individual tap on different objects, watching someone open a package, and watching someone complete a mundane task, such as drawing, painting the nails, or putting on make-up (Barratt & Davis, 2015, 6; Barratt, Spence & Davis., 2017, 6; Fredborg, Clark, & Smith., 2017, 6). Most individuals like to watch ASMR before bed, in quiet and relaxed environments, with binaural headphones (Kovacevich & Huron, 2019, 40). Numerous videos reflect the subjective nature of ASMR as different people prefer different triggers. As such, there are two critical aspects of ASMR that need to be focused on and are elaborated in the following literature reviews: (1) Personalities and psychological differences; and (2) Comparison with other multisensory phenomena.

2.2 ASMR and Individual differences

A remarkable characteristic of ASMR is that not everybody experiences it (Valtakari, Hooge, Benjamins, & Keizer., 2019, 1), and thus, there are individual differences between people who experience ASMR and those who do not. (McErlean & Osborne-Ford, 2020, 1). According to Baños et al.,1999, p.144, there are several personalities and psychological differences that may be relevant to the ASMR field, such as Big Five Personality Traits, Suggestibility, Fantasy-Proneness, Absorption, and Expectations. Thus, the following literature review is about the research of such individual difference traits of ASMR.

Fredborg, Clark & Smith (2017) utilized the Big Five Personality Inventory to examine the personality traits that are associated with people who experience ASMR and those who do not (Cash, Heisick, & Papesh., 2018, 2-3). The findings indicated that ASMR experiencers got higher scores on Neuroticism and Openness-to-Experience but lower on Conscientiousness, Extraversion, and Agreeableness (Kovacevich & Huron, 2019, 40). However, McErlean and Banissy correspondingly investigated personality traits associated with ASMR experiences. They used both Big Five personality inventory and Inter-personal Reactivity Index, together with viewer preferences and motivation, to undergo a survey (McErlean & Banissy, 2017, 5). Similar to Fredborg et al. (2017), their results indicated that ASMR experiencers also got a higher score in Openness-to-Experience and lower on

Conscientiousness, but did not differ with Neuroticism, Agreeableness, and Extraversion. The Interpersonal Reactivity Index was shown that ASMR viewers got a higher score in both fantasizing and empathic concern (McErlean & Banissy, 2017, 9). They concluded that ASMR could be a distinct but heterogeneous and highly personalized experience (Barratt & Davis, 2015, 7; Fredborg, Clark, & Smith., 2017, 7). In the same way, the perspective of both first-person and third-person from which the stimulus is presented may also differentially affect one's ASMR experience (Fredborg et al., 2017, 7). Even though Barratt & Davis (2015) researched participants who reported regularly watching ASMR videos, their self-reports differed in common triggers, physiological experiences, and psychological outcomes. These differences were suggested that the existence of individual differences in ASMR susceptibility and consequences (Kovacevich & Huron, 2019, 40).

Keizer et al., 2020 further extended the research to investigate whether ASMR experiencers have different self-representation in their brain. It is because bodily illusions are usually utilized as tools for directing constructs such as self-awareness, interoception, and plasticity of body representation (Keizer, Chang, O'Mahony, Schaap, & Stone., 2020, 3) and these constructs were measured by using the Sensory Suggestibility Scale (SSS). Sensory suggestibility is usually illustrated as a personality trait related to how a person responds to sensory information that is secretly being affected by someone else (Keizer et al. 2020, 2). The findings showed that participants who experience ASMR are also more inclined to have illusory sensory experience than controls (Keizer et al., 2020, 2). The results were further suggested that ASMR is not only related to cognitive traits such as imagery ability but also to how people physically experience sensory events (Keizer et al., 2020, 1).

Besides, McErlean & Osborne-Ford (2020) was to illustrate further whether ASMR is related to traits absorption (McErlean & Osborne-Ford, 2020, 7). Absorption is a stable trait and capability of getting lost in the task at hand, whether it is watching a movie, reading a book, or experiencing ASMR (Baños et al., 1999, 144). McErlean and Osborne-Ford (2020) utilized the Tellegen Absorption Scale (TAS) to measure the degree of absorption (deep involvement) and to perform an ASMR viewer survey (McErlean & Osborne-Ford., 2020, 4). The findings demonstrated that ASMR experiencers showed an increase in absorption compared to age and gender control groups (McErlean & Osborne-Ford. 2020, 5). This increase in the absorption phenomenon suggests that ASMR experiencers increased the inclination for experiential involvement and strengthened the ability to fully

engage the current experience (Tellegen, 1981, 222; Jamieson, 2005, 122). As a result, it is impressive to consider that the immersion in the virtual reality seems to be a crucial component of technologically mediated ASMR and that elevated absorption has been correlated to an extra virtual reality immersion experience (Baños et al., 1999, 147). Moreover, increased absorption has been concerning the elevated openness-to-experience (Weilbel, Wissmath & Mast., 2010, 254; Glisky et al., 1991, 263), which is also enhanced among ASMR experiencers (McErlean & Banissy, 2017, 12; Fredborg et al., 2017). ASMR has already been linked to another trait relevant to technologically mediated ASMR, e.g., increased fantasizing (McErlean & Banissy, 2017, 12), which infer to increase the imaginative proneness involvement in a fictional reality. As such, the combination of increased absorption, openness-to-experience, and fantasizing may contribute to the individual likelihood of experiencing ASMR (McErlean & Osborne-Ford, 2020, 8).

2.3 ASMR and other multisensory phenomena

ASMR has been studied in conjunction with other sensory phenomena, including synesthesia, misophonia, and aesthetic chills or frisson. In order to investigate a new phenomenon such as ASMR, it is necessary to determine and differentiate the characteristics of ASMR experience from other examples of atypical sensory associations such as synaesthesia, frisson, and misophonia (Smith, Fredborg, & Kornelsen., 2019b, 3).

Synesthesia is defined as union or blending of the senses that one stimulus, such as a number or letter, automatically initiated a secondary sensation, such as seeing a color (photism) (Smith et al., 2019b, 3). The same cognitive or perceptual stimuli can automatically trigger the same atypical sensory response (e.g., synesthetic photisms or ASMR tingles) in both ASMR and synesthesia. Barratt and Davis (2015) found that 5.9 percent of ASMR experiencers also have synesthetic experiences, and the two phenomena were suggested to overlap. (Fredborg et al., 2017, 3) Frisson, on the other hand, is reported as the emotional chills that happen during an emotional response to music (Del Campo & Kehle., 2016, 3). ASMR and frisson both involve an affective constituent, and both experiences are related to substantial individual differences in stimuli (Del Campo & Kehle, 2016, 4; Fredborg et al., 2019b, 3).

ASMR, synesthesia, and frisson are typical examples of atypical multisensory experiences, but some features of ASMR are different from those other phenomena (Del Campo & Kehle, 2016, 5). First, the triggers of ASMR are typically comprised of social

intimacy behaviors (e.g., watching someone perform make-up activities), whispering, and repetitive sounds (Barratt & Davis, 2015, 6; Fredborg et al., 2017, 5). Nevertheless, synesthesia is usually involved with the additional sensory responses to non-social stimuli such as graphemes and somatosensory mirror-touch synesthesia experiences, such as the sight of someone being touched, causing a tactile sensation on the corresponding part of the body (Ward, 2013, 1). Second, the tingling sensations in ASMR are usually reported as wave-like and dynamic, whereas the responses of grapheme-color synesthesia are often the same across exposure times (Baron-Cohen, Wyke, & Binnie., 1987, 761; Del Campo & Kehle, 2016, 1). Besides, the secondary sensory experiences with synesthesia are uncontrollable, whereas ASMR experiences are autonomous but can intentionally be stopped. (Fredborg et al., 2017, 2). Third, ASMR experiencers can predict the types of stimuli to elicit tingling sensations (Fredborg et al., 2017, 6). On the contrary, the responses of aesthetic chills are not predictable, whereas synesthetic responses are both automatic and predictable (Ramachandran & Hubbard, 2003, 51; Ward, 2013, 1). The tingling sensations associated with frisson have inclined to propagate quickly throughout the body.

On the other hand, ASMR tingles may last up to several minutes and the intensity of the tingles can be changed throughout ASMR experience and could propagate from the regions of head and neck to the peripheral regions of the whole body (Barratt & Davis, 2015, 7; Del Campo & Kehle, 2016, 1). Finally, the tingling sensations with ASMR are often together with relaxation and joy (Barratt & Davis, 2015, 11), whereas frisson experiences may be involved an exciting and arousing experience (Del Campo & Kehle, 2016, 5). All these differences have demonstrated that ASMR is a unique emotional and perceptual phenomenon and has different functional neural activities from those recruited during other atypical multisensory experiences (Smith et al., 2019b, 4).

Other research has studied to make connections to misophonia; in a large-scale misophonia study, half of the participants are reported to have ASMR experience after (Rouw & Erfanian, 2018, 22-23), while another corresponding study showed that ASMR participants have elevated levels of misophonia (McErlean & Banissy, 2018, 1). Misophonia experiencers have automatic negative emotional reactions to a particular sound, and this response is the opposite direction in reactions to specific audio stimuli in ASMR (Barratt & Davis, 2015, 12). Moreover, the triggering sounds are originated from human movements and behaviors in both misophonia and ASMR phenomenon. Therefore,

ASMR and misophonia may be two ends of the same spectrum of synaesthesia-like emotional responses (Barratt & Davis, 2015, 13). In research about the relationship between ASMR and aesthetic chills, the authors concluded that the two phenomena share several similarities, as mentioned above, and suggested that mindfulness is an essential component in both. They both could promote various facets of happiness or subjective well-being (Del Campo & Kehle, 2016, 5).

3 Conceptual Framework

3.1 Media Use & Wellbeing

Two recent criticisms of media effects research shape the current study, and this study is an attempt to fill the research gap of the connection between ASMR media effects research and psychosocial wellbeing. The first criticism shaping this study is by De Leeuw and Buijzen (2016) that requested researchers to shift from adverse effects of media use to more work on positive outcomes (De Leeuw & Buijzen, 2016, 41). Second, Valkenburg and Peter (2013) argued that researchers are over-focused on finding "across-the-board" (Valkenburg & Peter, 2013 a, 202) media effects. Hence, this generalization tends to ignore small group variation both in the survey and experimental research because individual difference variables are often used as covariates, and the randomization is supposed to get rid of subgroup differences (Bonus, Peebles, Mares, & Sarmiento., 2018, 1). In the current study, the popularity of ASMR is exploited to answer the criticisms mentioned above. Positive psychology's wellbeing theory or PERMA (Positive emotion, Engagement, Relationship, Meaning, and Accomplishment) model (Seligman, 2011) is used to explore how short-term ASMR experiences might contribute to psychosocial well-being. Additionally, the framework of Valkenburg and Peter's (2013) Differential Susceptibility to Media Effects Model (DSMM) is utilized to investigate and trace direct and indirect media effects on individual differences in uses and responses (Bonus et al., 2018, 2). Thus, the PERMA model is embedded in DSMM and transformed into a new conceptual framework shown in Figure 2.

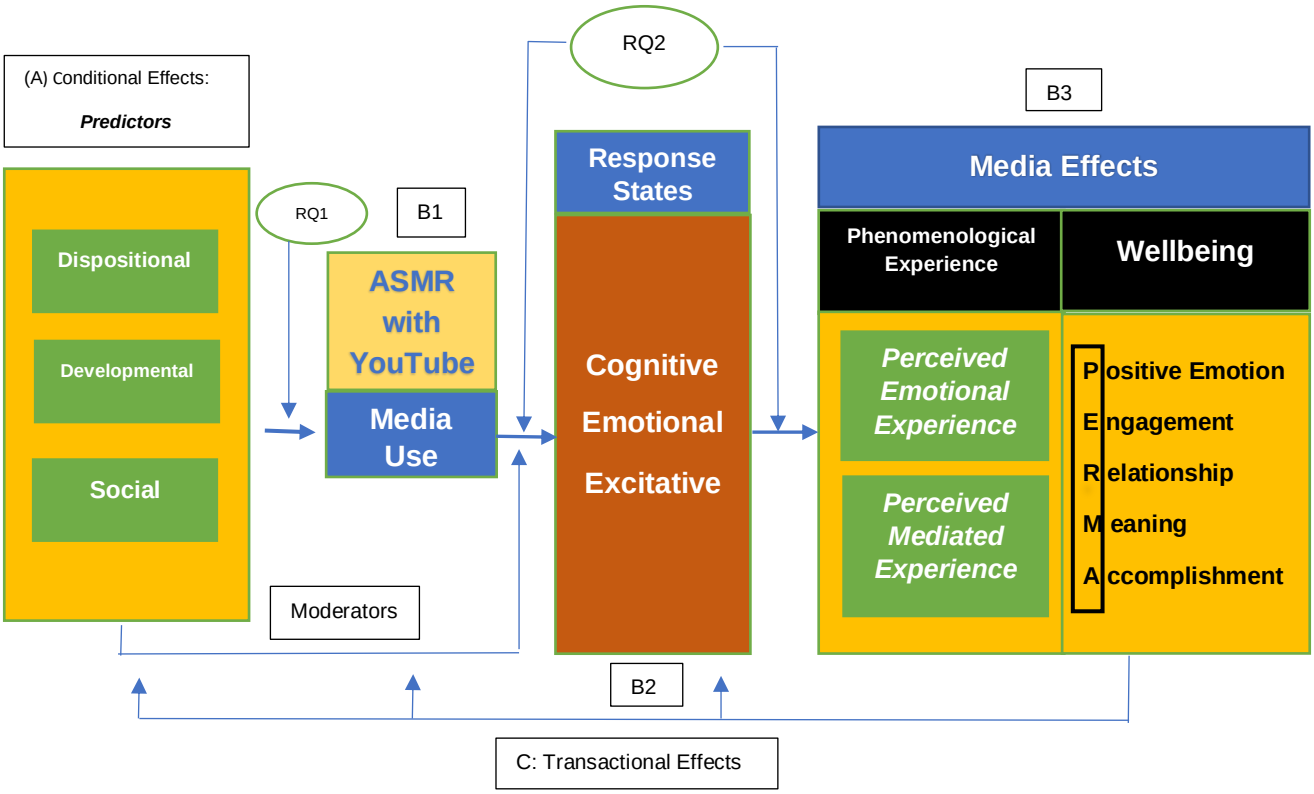

Figure 2. Conceptual diagram of research questions and objectives. Adapted from P.M. Valkenburg and J. Peter, 2013.

In Figure 2, the top two circles (RQ1 and RQ2) correspond to the research questions and aims of the current study. The research question one is, "How do students experience ASMR?". The objective is to explore the differential susceptibility variables of ASMR media use. Research question two is, "What kind of emotional effects from the ASMR experiences have on the psychosocial wellbeing of students in Finland?". The objective is to explore and trace the effects of ASMR exposure on a variety of media responses. These responses on how to enhance psychosocial wellbeing for university students in Finland. The conditional, three types of indirect and transactional effects are represented by A, B1, B2, B3, and C.

3.2 In the direction of positive media psychology

Positive psychology refers to a subfield of psychology that inspects how individuals accomplish satisfying lives. A key variable in this subfield is well-being, which is conceptualized as a multi-dimensional concept that includes happiness and eudaimonic (i.e., meaningful) experiences (Bonus et al., 2018, 2). Although psychologists have

investigated predictors of well-being for decades (Ryan & Deci. 2001, 142), communication researchers have only recently focused attention on the potential of media contributing to well-being (Rieger, Reinecke, Frischlich, & Bente., 2014, 17). For example, Wellbeing (PERMA) theory was implemented to identify the strengths in existing games that generate positive affect and social functioning, contributing to and supporting well-being written by Jones, Scholes, Johnson, Katsikitis, & Carras (2014). On the other hand, some researchers started to utilize DSMM in the positive media effects, such as Look on the bright side (of media effects): Pokémon Go as a catalyst for positive life experiences that was published by Bonus, Peebles, Mares, & Sarmiento (2018). Therefore, the current project extends this developing line of research, focusing on wellbeing as an outcome of media consumption of ASMR video (rather than video games). In the following sections, the conceptual framework will be illuminated this potential: Valkenburg and Peter's (2013) DSMM and PERMA with wellbeing theory.

3.3 Media Effect: Differential Susceptibility to Media Effects Model (DSMM)

Differential Susceptibility to Media Effects Model (DSMM, 2013) is an integrative model to improve our understanding the roles of, and relationships between, media (e.g., media use, media processing) and nonmedia (e.g., individual-difference variables, social context) variables in media-effects theories (Valkenburg & Peter, 2013, 222). It focuses on micro-level media effects and observations of the individual media user (Valkenburg & Peter, 2013, 221-222). The DSMM builds upon from earlier individual-level to some recent well-cited media effects theories, such as social cognitive theory, Bandura, 1986; the limited capacity model, Fisch, 2000; Lang, 2000; reinforcing spiral model, Slater, 2007. This model can explain theoretically how and why some individuals are more susceptible to media effects than others under certain conditions (Valkenburg & Peter, 2013, 221; Piotrowski & Valkenburg, 2015, 1780). Thus, the benefit of the DSMM approach to understanding media effects is that it provides a framework to improve the conceptualization of the roles and relationships between media and non-media variables of media effects. The benefits of conceptual coherence lead me to choose this model as part of a conceptual framework in the current study (Valkenburg & Peter, 2013, 222).

The types of media effects addressed by DSMM include (A) conditional effects, (B) indirect effects, and (C) transactional effect. There are four components in the DSMM: media use, individual/differential susceptibility variables, response states, and media effects (Landrum, Olshansky, & Richards., 2019, 3). According to the framework of the DSMM,

media use is referred to the intended use of media types, content (e.g., entertainment, advertising), and technologies (Valkenburg & Peter, 2013, 222) and also includes a variety of factors such as media content exposure, media channels selection, and frequency and length of media use. Differential susceptibility variables predict media use (Landrum et al., 2019, 4). In the current study, however, self-selected ASMR video clips are used and viewed by participants and then try to find the interaction between the ASMR video clips and the differential susceptibility variables on the response states of participants and subsequent media effects.

The media effects are referred to as the deliberative and non-deliberative short- and long-term within-person changes in cognitions, emotions, attitudes, beliefs, physiology, and behavior that result from media use (Valkenburg & Peter, 2013, 222). In the context of positive media effects, the DSMM suggests three essential tasks: 1) examine the factors that predict exposure to positive media content; 2) examine how emotional, cognitive, physiological, and social responses relate to well-being, and 3) examine how these media response states are influenced by differential susceptibility factors (Bonus et al., 2018, 3). Part of the newness of the current study lies in exploring all three tasks simultaneously and the corresponding research objectives: the factors that predict ASMR, positive responses to ASMR, the factors that moderate responses, and the associations between response states and well-being. The other newness lies in focus on how ASMR, which affords a variety of ways to positive outcomes not available in other media.

(A) Conditional effects (media exposure → media responses)

Conditional effects involve individual or social variables that moderate the direction or strength of a media effect so that these variables determine who is susceptible to effects related to media use (Houston, Spialek, & First., 2018, 7). The individual or social variables are the characteristics of the individual, environments, or situations that influence the nature of media effects. In addition to acting as moderators, these individual and social variables can also function as predictors of media use (Houston et al., 2018, 7). Valkenburg and Peter (2013b) have extended the differential susceptibility prototype to focus specifically on susceptibility to media effects. They suggest that individual differences can be grouped into three types of susceptibility: dispositional (P1), developmental (P2), and social susceptibility (P3) (Piotrowski & Valkenburg, 2015, 1779).

Dispositional susceptibility (P1) is defined as all person-based characteristics that may enhance their susceptibility to media effect; including genetics, gender, temperament, personality, cognition, values, attitudes, beliefs, motivations, and moods (Beyens, Valkenburg, & Piotrowski, 2018, 3; Valkenburg & Peter, 2013b, 226). Most dispositional variables identified in the DSMM, including gender, personality/temperament, cognition (e.g., scripts; and schemata), attitudes, motivations, identity, and moods (e.g., sadness, happiness) have been shown to predispose media use (Valkenburg & Peter, 2013b, 232). The personality/temperament includes neuroticism, trait aggression, need for affect, need for cognition, sensation seeking, and cognition encompasses scripts (i.e., a pre-existing knowledge structure involving event sequences) and schemata (i.e., a pre-existing knowledge structure in memory.).

Developmental susceptibility (P2) is defined as the selective use of and responsiveness to media due to cognitive, emotional, and social development. In general, individuals prefer media content that is only moderately discrepant from their age-related comprehension schemata and emotional experiences (Valkenburg & Peter, 2013b, 233). Its influence is the strongest in childhood and early adulthood and becomes smaller in middle and older adulthood (Valkenburg & Peter, 2013b, 227).

Social susceptibility (P3) is defined as all social-context factors that may enhance or reduce media effects, such as parenting style, media-specific parenting, or peer pressure (Beyens et al., 2018, 4). These social contexts can act on a micro (e.g., family, friends, peers), meso (e.g., school, church, work), and macro-level (e.g., cultural norms and values) (Valkenburg & Peter, 2013b, 227). Media effects are enhanced if the messages assemble with the values, norms, and opinions in the social environment/context of the media user. On the other hand, media users can either change their cognitions about the media message or their cognitions about their social environment (Valkenburg & Peter, 2013b, 234-235). Social contexts can also moderate media response states during shared media use because media users are very sensitive to others' attitudes, moods, and emotional reactions. Their own cognitive, emotional, and excitative response states can be intensified or dampened during shared media use (Valkenburg & Peter, 2013b, 234).

Importantly, the DSMM interprets predictors of media use not just as motivations, but also as moderators of the relationship between media use and responses. In other words, different attitudes and experiences that motivate people to use particular types of media might also modify the experiences that result from that use (Bonus et al., 2018, 8).

Therefore, these individual and social characteristics are likely to be media effects moderators and media use predictors (Houston et al., 2018, 7).

(B) Indirect effects

The second form of media effects includes indirect effects addressed by three types of media effect mediators (B1, B2, & B3). The first group of mediators involves situations where media use (B1) functions as the mediators between an individual or social variable and outcomes of media use (Houston et al., 2018, 7). For example, teenagers high in sensation seeking are predisposed to use violent media, which in turn will reinforce their aggressive behavior (Valkenburg & Peter, 2013b, 223). The second form of potential mediators in DSMM includes media response states. For example, exposure to an arousing news item may stimulate viewers' attention and physiological arousal, which in turn stimulates their recall of memory or attitudes toward the news issue (Valkenburg & Peter, 2013b, 223-224). Media response states include that occur during or just after exposure to media: cognitive (i.e., the attention to and processing of particular media content), emotional (i.e., affective reactions, such as fear and joy while or after watching or playing), and excitative (i.e., physiological arousal while or just after watching or playing) response states that may, in turn, mediate other effects (Beyens et al., 2018, 2; Houston et al., 2018, 7). The DSMM posits that media effects are indirectly mediated by media response states of the media user that is originated from media use (Piotrowski & Valkenburg, 2015, 1780-1781).

The cognitive response state (R1) refers to media users selectively attend to and invest cognitive effort to understand media content, which is operationalized here as self-reported concentration as well as physiological heart rate. Concepts like cognitive absorption, reality perception, the cognitive dimensions of empathy, and counterarguing also represent cognitive response states (Fikkers & Piotrowski, 2019, 3; Valkenburg & Peter, 2013b, 228).

Emotional response states (R2) are conceptualized as all affective reactions to media content (i.e., the message, the storyline, and the vicarious affective reactions to characters). The emotional dimension of state empathy (i.e., the experience of emotions that are similar to those experienced by media characters) and sympathy are also seen as emotional response states; and operationalized as positive and negative self-reported emotions (Fikkers et al., 2019, 3; Valkenburg & Peter, 2013b, 228).

Excitative response states (R3) reflect the degree of physiological arousal in response to media content, which operationalizes as self-reported and physiological arousal (Fikkers et al., 2019, 3; Piotrowski & Valkenburg, 2015, 1780-1781). For example, ASMR is an arousing (but not sexual) experience, and ASMR videos have consorted with boosted exciting sensation and skin conductance levels (an indicator of physiological arousal) (Poerio, Blakey, Hostler, & Veltri., 2018, 14). Each of these response states is expected to change in response to different media.

The mixing console analogy

The cognitive, emotional, and excitative response states may phenomenologically be distinct, but they could be the same ontologically. In the DSMM, it is useful to investigate cognitive, emotional, and excitative response states as separate units because most individuals do experience thoughts, feelings, and arousal as separate, and these response states should be studied simultaneously and interactively (Valkenburg & Peter, 2013b, 229). The mixing console is used as an analogy in order to understand the mutual inclusiveness of three media response states. Imagine a mixing console consisting of three sliders, which represent the cognitive, emotional, and excitative response states (Valkenburg & Peter, 2013b, 229). According to the DSMM, in some media use situations, all three sliders can be high. A similar intensity of engagement may occur when people play a highly involving computer game, such as a first-person shooter (Valkenburg & Peter, 2013b, 229). In other media use situations, the cognitive and emotional sliders may be particularly high, and the excitative slider relatively low. For example, when one watches sad media content, which generally leads to less arousal than violent content (Valkenburg & Peter, 2013b, 229). Some theories argue that media effects can occur when the cognitive slider of the mixing console is low or when all sliders of the mixing console are low, a state which implies an automatic or unconscious media response state (Valkenburg & Peter, 2013b, 230).

The final type of indirect effect involves first-order media effects (B3) as a mediator of other second-order media effects (Houston et al., 2018, 7). For example, adolescents' use of social media can enhance their self-disclosure to friends, which in turn influences their perceived quality of these friendships (Valkenburg & Peter, 2009, 79). Likewise, informational media use enhances interpersonal discussion, which in turn, reinforces participatory behavior (Valkenburg & Peter, 2013b, 224).

(c) Transactional effects

The final form of media effect includes transactional media effects (C), or media effects that influence media use (Houston et al., 2018, 8). The DSMM extends these earlier models in two ways. First, it proposes that media outcomes influence media response states. Second, it states that media outcomes affect the differential-susceptibility variables, and thus media effects have a reciprocal causal effect on media processing, media use, and the differential susceptibility variables (Valkenburg & Peter, 2013b, 235). The media effects drive media use, which may continue so that more media use continues to strengthen effects, and this transactional interaction can continue in a reinforcing and spiraling process as indicated by the bottom lines in Figure 2 (Houston et al., 2018, 8). As an example, exposure to disaster media might increase levels of anxiety, and anxiety might, in turn, motivate individuals to seek out more information from additional media coverage to soothe that anxiety (Houston et al., 2018, 8).

Guided by DSMM, the current study is conducted by several in-depth interviews together with interpretative phenomenological analysis to explore and summarize existing knowledge in terms of ASMR media (a) use predictors, (b) effects moderators, (c) effects mediators (response states, media use, media effects) (d) transactional effects, and (e) direct effects.

3.4 PERMA model (Wellbeing Theory)

There are two research traditions: hedonic and eudemonic perspectives within the psychological literature (Huta & Waterman, 2014, 1427). The first one (hedonic) often synonymous with subjective wellbeing, refers to someone perceived experience of pleasure or happiness (Umucu, Wu, Sanchez, Brooks, Chiu, Tu, & Chan., 2019, 1) and conceptualizes wellbeing in respect of the presence of positive and the exclusion of negative affect, together with high life satisfaction levels as a cognitive component (Diener, Suh, Lucas, & Smith., 1999, 294). The eudaimonic research tradition, or psychological wellbeing, refers to the belief that wellbeing is composed of the fulfillment of someone's true nature (Umucu et al., 2019, 1) and proposes a more complex view on wellbeing that conceptualizes well-being in connection with personal growth, and the intrinsic needs and the meaningful life experiences (Huta & Waterman, 2014, 1441).

The current focus of medical psychology on pathology has limitations as a psychological treatment approach because the "fix-what' s-wrong" approach gives an incomplete picture of the human potential to improve themselves (Umucu et al., 2019, 2). In modern psychology, the examination on well-being and its predictors has been seen as a revival since the positive psychology movement has begun to attempt shifting the traditional focus of (clinical) psychological research away from pathology and strived for a stronger emphasis on factors such as happiness and positive experiences (Seligman & Csikszentmihalyi, 2000, 6). Traditionally, media effects research has been dominated by a hedonic perspective on wellbeing and been treated media as a root of mood enhancement (Zillmann, 1988, 331). Some research has recently begun to focus on the media use and its effects on eudaimonic wellbeing, for example, by bringing up psychological growth via "meaningful entertainment" (Oliver & Bartsch, 2011, 30). As such, Seligman's Wellbeing Theory integrates the hedonic and eudaimonic views of wellbeing and proposes that optimal wellbeing occurs when these two components of wellbeing are present within an individual at the same time (Umucu et al., 2019, 2). Moreover, it allows for the measurement of each element using both objective and subjective approaches (Forgeard, Jayawickreme, Kern, & Seligman., 2011, 97) and the PERMA-Profiler is now proved as a multidimensional scale with excellent reliability and acceptable levels of convergent, divergent, and criterion-related validity (Umucu et al., 2019, 1). Thus, the PERMA model is chosen to utilize in the current study.

According to Seligman's original Authentic Happiness theory (2002), he posited that happiness could be defined in terms of three domains: positive emotion, engagement, and meaning (Tansey et al., 2018, 132). Later in 2011, he revised his theory to include two additional factors: relationships and accomplishment. Finally, his revised theory called the PERMA Model consists of five core elements: Positive Emotion (E1), Engagement (E2), Relationships (E3), Meaning (E4), and Accomplishment (E5) (Tansey et al., 2018, 132). He concluded that the wellbeing theory aims to enhance flourishing by encouraging five pathways or core elements (Hidayat et al., 2018, 149).

3.4.1 Positive emotion and previous research on ASMR

Positive emotion is the feeling of happiness, joy, cheer, and the many other descriptors of good feelings (Jones et al., 2014, 2). A good level-appropriated emotion could include feelings of deep pleasure (Hidayat et al., 2018, 149-150). It can enhance attention, help to generate creative and flexible ideas, and broaden the self-concept to include others more

readily (Kok, Catalino, & Fredrickson., 2008, 5). Moreover, it also was associated with greater self-regulation (Tice, Baumeister, Shmueli, & Muraven., 2007, 383), task persistence, and goal adoption (Fishbach & Labroo., 2007, 169). In other words, college students' feelings of strong positive emotions are more likely to absorb deeper in learning, and the students will result in better academic achievement (Hidayat et al., 2018, 150).

Rising the public acknowledgment of ASMR media suggests that people are upsurge using ASMR videos as therapeutic tools, including sleep and mood disorders (Poerio et al., 2018, 3). ASMR could be used for providing temporary relief to individuals with depression, stress, and chronic pain (Barratt & Davis, 2015, 1). The previous findings had shown that fifty percent of participants said their mood improved even in sessions when no tingling sensation was produced, and 30 percent said that achieving this sensation was vital to mood improvement (Barratt & Davis, 2015, 8). The outcomes of this research suggest that ASMR can give temporary alleviation in the mood for those suffering from depression, in company with many people consciously utilizing it for this intention (Barratt & Davis, 2015, 11). Besides, sixty-nine percent of those who scored moderate to severe on the Beck Depression Inventory (BDI) claimed using ASMR to relieve their depressive symptoms (Barratt & Davis, 2015, 8) and suggested more elevating effect of using ASMR than those without depression (Barratt & Davis, 2015, 11).

In 2018, a large-scale online experiment was further conducted where participants viewed a set of three videos (ASMR and control) and then reported their tingles and affective response (Poerio et al., 2018, 3). The participants watched both spoken and sound-only videos. For example, a spoken-only video was a haircut play-acting and included triggers of whispering, nuanced movements of the hand, and close-up personal attention. A sound-only video, for example, was a snapshot of hands folded a piece of paper, which included triggers of the repetitive and slow hand movements and scratching sounds (Poerio et al., 2018, 4). After watching both types of ASMR videos, ASMR participants compared to non-ASMR participants felt significantly more excited, calmer, and less stressed (Poerio et al., 2018, 8) and were consistent with the results in previous Barratt & Davis (2015) research. To sum up, listening to an ASMR video with inaudible or unintelligible whispering likewise forces the listener to focus and concentrate on the sound and voice itself, reducing extraneous impressions from her surroundings and achieving for relaxation purposes (Klausen, 2019, 94).

3.4.2 Engagement and previous research on ASMR Flow-like Mental State

Engagement refers to the connection one feels to the activities one is doing as well as feelings of being absorbed in and focuses on those activities (Seligman, 2011, 11). An activity with a high level of engagement in an activity is also referred to as "flow" (Csikszentmihalyi, 1990), or the overall feeling of being "in the zone" (Tansey et al., 2018, 132).

Barratt & Davis (2015) proposed that ASMR is a "flow-like" phenomenon obtained by viewing the similar state of intense focus performed by others and diminished awareness of the passage of time (Barratt & Davis, 2015, 12). Anecdotal reports of ASMR illustrate a state of focus, of more substantial "presence" and relaxation, which is similar to the non-active aspects of flow (Barratt & Davis, 2015, 3). This passive feature is notably resonant with ASMR, along with both states encompassing the sensation of deep relaxation and well-being, even if the passive feature of flow is task-directed, whereas ASMR seems to involve entire passivity from the person (Barratt, Spence, & Davis., 2017, 2). The scholar utilized a modified version of the Flow State Scale (Jackson & Marsh, 1996, 1), which taps into the passive aspects of flow. The findings showed that participants with greater susceptibility to flow had been found to report a higher number of ASMR triggers, highlighting a link between the two phenomena (Barratt & Davis, 2015, 12). It suggests that flow may be necessary to achieve sensations associated with ASMR (Barratt & Davis, 2015, 1). Intriguingly, some of the most popular ASMR triggers, such as some specialists hand movements, in immensely focused states (e.g., carrying out medical exams) or engaged in repetitive tasks (e.g., folding towels), are typical examples of being in a state of flow (McErlean & Banissy, 2017, 610). ASMR is induced by obtaining a flow-like state, which is facilitated by observing others partly in such a state. The transference of state from performers to the audience has been examined in studies pursuing the role of mirror neurons (Barratt & Davis, 2015, 12). Besides, participants prefer content that is happy, inviting, relaxed, and lacks danger, suggests that popular ASMR videos centering around the manipulation of objects may induce an effortless, flow-like feel to content that is conducive to ASMR induction (Barratt et al., 2017, 9, 11).

3.4.3 Relationship and previous research on ASMR Social Connectedness

A positive relationship is understood as the feeling of being cared about by others, socially integrated, and supported and involves a sense of connectedness, loving, and sharing emotions with others (Tansey et al., 2018, 132). The previous research has been found that good relationships with friends are positively related to self-esteem, and that increase in friendship quality perception is associated with the elevation of wellbeing (Bagwell, Bender, Andreassi, Kinoshita, Montarello, & Muller., 2005, 252). Furthermore, college students socialize more frequently and have more solid romantic and social relationships, and they have a tendency to be happier than students without these relationships (Diener & Seligman, 2002, 82).

Poerio et al. (2018) researched to investigate whether ASMR videos produced feelings of connectedness. The results were shown that the spoken-only ASMR videos also made ASMR participants feel more socially connected compared to non-ASMR participants, a result that did not occur for the sound-only ASMR videos (Poerio et al., 2018, 8). This result suggests that increase connectedness may be an additional benefit of ASMR because of the social and interpersonal context triggered by ASMR. One possible explanation is that ASMR simulates a form of social grooming, for instance, being calmed and comforted by another through the tactile-like tingling sensations induced by ASMR triggers. This grooming simulation enhances well-being and interpersonal bonding through diminutions in heart rate and circulation of endorphins (Poerio et al., 2018, 14). ASMR videos create a form of embodied and technologically mediated presence, tactile sensations, and distant intimacy or closeness through sonically binaural qualities as well as through narratives supported by sound in the form of ASMR role-play videos, vibrations of sound and image (Klausen, 2019, 99). Thus, ASMR can be characterized as a form of 'social audio-grooming,' as the ASMR videos provide first-person-like social attention and care in the form of technologically mediated grooming (Klausen, 2019, 94).

3.4.4 Meaning and Sense of Purpose

Meaning is a feeling of doing something meaningful and having connected to something bigger. People have meaning in life because it gives a sense of fulfillment and makes a worth-while life. A higher perception of meaning has been reported to have a positive association with life satisfaction as well as academic achievement for students (Hidayat et al., 2018, 150-151). Students have a sense of purpose that is closely related to a sense of

meaning in life and frequently involves a pro-social or altruistic intent such as a commitment to helping others or improving the world (Noble & McGrath, 2015, 11).

3.4.5 Accomplishment and Sense of Achievement

Accomplishment is an individual's perception of making progress toward goals and having a sense of achievement in one's life (Seligman, 2011, 18). Accomplishment is described by Seligman (2011) as the desire to achieve something (e.g., having a persevering attitude) rather than one's actual accomplishments (Tansey et al., 2018, 133). Interestingly, accomplishment has a strong association with meaning because someone who experiences accomplishments is likely to derive intense feelings of meaning (Hidayat et al., 2018, 151).

3.5 PERMA: Exploring media effects

PERMA reconciles various perspectives regarding the measurement and theory surrounding wellbeing in that it includes both eudemonic and hedonic components (Forgeard et al., 2011, 97). Seligman (2011) suggested that while each domain can be pursued individually, the interrelations among the domains play an essential role in the model. For example, positive relationships contribute to feelings of positive emotions, and having a sense of accomplishment may give one meaning in life (Tansey et al., 2018, 133). Individuals can use PERMA to increase their sense of wellbeing by focusing on feeling good, living meaningfully, establishing good relationships, accomplishing goals, and being fully engaged with life (Jones et al., 2014, 3). ASMR might via positive affect, engagement, and social connection contribute to viewers' wellbeing, and thus the current study examines five wellbeing core elements often examined in positive psychology.

Additionally, recent work has suggested that media can indirectly impact wellbeing via short-term responses to exposure. For example, playing an (Augmented Reality) AR video game can lead to an array of positive, short-term outcomes that also relate to shifts in well-being (Bonus et al., 2018, 18). Thus, the current study can extend this idea to explore how and in what ways the indirect effects of viewing ASMR on "PERMA" wellbeing via ASMR users' media response states.

4 Literature Review

ASMR has upsurge in popularity, and the research about ASMR has simultaneously increased since 2015 up to now continued. However, whether it is a real phenomenon still under debate. In an investigation of how expectancy effects alter ASMR, participants with earlier unfamiliarity of ASMR were more likely to get the experience of ASMR after their expectations were manipulated (Cash, Heisick, & Papesh., 2018, 11). ASMR participants, however, were not influenced by the same manipulations. The researchers construed that ASMR experiencers might be the consequence of expectancy effects; that merely accepting a specific type of stimulus to bring on a sensory experience will give rise to that sensory experience. (Cash, Heisick, & Papesh., 2018, 12). Thus, ASMR experience, or part of it, could be suggested as the product of a placebo effect (Valtakari, Hooge, Benjamins, & Keizer., 2019, 2). On account of the controversial essence of ASMR, researchers have been vastly interested in an attempt to examine whether the subjective experience of ASMR can be utilized to more objective physiological measures (Valtakari et al., 2019, 2). Besides, the neurophysiological underpinnings may give other insights into the possible mechanism of the ASMR phenomenon (Smith, Fredborg, & Kornelsen., 2019, 3). Therefore, the objective approaches enable scholars to investigate how ASMR influences somatosensation and emotion rather than describing those experiences (Smith et al., 2019, 3). Thus, this chapter will review the available literature in various objective scientific methods relevant to this study, namely psychophysiological and neurophysiological, and the literature concerning DSMM and PERMA model has already been included in the previous chapter 3. Finally, this chapter will explore other ASMR benefits and how it could be used within the online community.

4.1 Psychophysiological study about ASMR and affective responses

A recent psychophysiological study examined ASMR by measuring autonomic nervous system responses during the ASMR experience itself (Smith et al., 2019a, 2). ASMR experiencers and controls needed to record their physiological and affective responses while they viewed two ASMR videos and non-ASMR videos for comparison (Poerio et al., 2018, 1). The standard ASMR video is female, demonstrating how to fold a towel neatly and patiently in a soft-spoken voice with delicate hand movements, whereas control (non-ASMR) video did not contain softly spoken instructions or slow, delicate, hand movements (Poerio et al., 2018, 9). Heart rate (HR) data was acquired through a photoplethysmography that reflects infra-red light on the surface of the skin to detect the

change of blood volume, and skin conductance level (SCL) was recorded via two Ag-AgCl electrodes. Finally, both types of data calculated by the biofeedback program automatically provide these values in beats per minute (bpm) and microseimens (μS), respectively (Poerio et al., 2018,10).

The findings showed that ASMR videos promoted both calmness and excitement feelings while diminishing heart rate and elevating skin conductance levels (Valtakari et al., 2019, 2). These results are curious in that increased SCLs are typically associated with physiological arousal, whereas a slowed heart rate has consorted with the opposite side of arousal (Johnston & Anastasiades, 1990, 25; Shapiro et al., 2001, 12). The researchers concluded that these apparently contradictory results are possibly related to the complicated situations of the ASMR experience. Self-report studies have consistently shown that ASMR is associated with a feeling of calm (Barratt & Davis, 2015, 11; Fredborg, Clark & Smith., 2017, 2). However, the psychophysiological data gives a clue that ASMR is an experience of physiological arousal as well (Smith et al., 2019a, 2). The same pattern of somatovisceral activity has been associated with surprisingly different emotions, and the same emotion has been associated with different patterns of somatovisceral activity (Norman, Berntson, & Cacioppo., 2014, 117). Recent findings also pointed out that physiological responses in various somatic systems (e.g., heart, skin) are likely underlying different patterns of neural interactions (Poerio et al., 2018, 14) and both the sympathetic and parasympathetic interactions and compartments in HR and SCL are in different involvement (Eisenbarth, Chang, & Wager., 2016, 11995).

Emotions are sometimes more complex than how we feel, and the mixed emotions have been defined as affective experiences characterized by the co-activation of two emotions, usually opposite in valence (Berrios, Totterdell, & Kellett., 2015, 1). As such, ASMR is a complex emotional blend comprising of activating and deactivating positive affect (Poerio et al., 2018, 14) and that affect system is flexible enough to spontaneously permit multiple activation patterns, ranging from bipolar affect reactions to different blends of mixed emotions (Berrios et al., 2015, 12). The presence of positive and negative emotions enhances physical health; people find a way to feel good when feeling bad; allowing for positive affect to be experienced concurrently with negative affect prompts individuals to face adverse events in life and gain insight into them (Hershfield, Scheibe, Sims, & Carstensen., 2013, 54). ASMR may offer an opportunity to understand the emotional

complexity of individual differences capabilities, and the potential positive influences of mixed emotional experiences on health and wellbeing (Poerio et al., 2018, 14).

4.2 Neurophysiological imaging studies about ASMR and Social Connectedness

Researchers have recently performed a task-based fMRI (functional magnetic resonance imaging) study to measure brain activity during the ASMR response itself. Lochte et al. gave five 7-min various ASMR videos to ten participants with ASMR while they underwent an fMRI scan (Lochte, Guillory, Richard, & Kelley., 2018, 299). A region-of-interest (ROI) analysis was shown that the ASMR tingles experience was accompanied by elevated activity in the nucleus accumbens (NAcc), dorsal anterior cingulate gyrus (dACG), supplementary motor area (SMA), and a region encompassing the insula and inferior frontal gyrus (IFG) (Smith et al., 2019a, 3). The more conservative whole-brain analysis was shown significant activity in parts of the medial prefrontal cortex (mPFC), insula, and nucleus accumbens (NAcc). These activated brain areas corresponding to both emotional and reward responses were consistent with the subjective reports of individuals experiencing ASMR (Smith et al., 2019a, 3). The following discussions are summarized the possible illustrations of the findings.

4.2.1 ASMR related to empathy and social engagement

There was a significant brain activation in the mPFC regions that were associated with self-awareness, social cognition, and social grooming during ASMR, and the result may be indicated that ASMR videos could activate the brain regions similar to that of actual social engagement (Lochte et al., 2018, 300). In the meantime, oxytocin has been shown to bind to receptors in the mPFC and mediate relaxation responses (Sabihi, Dong, Durosko, & Leuner., 2014, 1) and mPFC was activated during ASMR to be possibly suggested that a potential contribution of oxytocin to the relaxing sensations during tingles (Lochte et al., 2018, 300). On the other hand, the network of the dACC, SMA, and insula was also considered to be involved in empathy (Fan, Duncan, De Greck, & Northoff., 2011, 903) and the activation of these regions during ASMR tingles further was given the evidence for the correlation of ASMR with social cognition and caring feelings towards others (Lochte et al., 2018, 301). This finding was in line with a prior study reported that ASMR experiencers scored higher for empathic concern than control participants (McErlean & Banissy, 2017, 613). Also, the association of ASMR and increased empathy may be suggested that ASMR could also be associated with personality traits and mental health. The previous

study utilized the Big Five Inventory to assess five personality traits in ASMR experiences and control, and the findings showed that ASMR experiencers had significantly higher scores for the trait of 'openness-to-experience' than control (Fredborg et al., 2017, 1).

4.2.2 ASMR related to affiliative behaviors

Affiliative behaviors are the caring behaviors that occur between parents and children, romantic partners, and friends, and these behaviors involve close interpersonal bonds and can include grooming behaviors along with a broader array of caregiving and care-receiving behaviors (Feldman, 2012, 381). The attention-receiving or observation granting behaviors in many ASMR videos have similarities to being cared for or to looking after someone (Lochte et al., 2018, 302). Previous fMRI studies have shown that some affiliate behaviors include potent activation of the mPFC, NAcc, insula, and IFG that were strongly activated during ASMR (Feldman, 2012, 384). Moreover, the neurohormones widely reported to be responsible for most affiliative behaviors including dopamine, oxytocin, and endorphins (Feldman, 2012, 382-384; Colonnello, Petrocchi, Farinelli, & Ottaviani., 2017, 545), and these hormones were known for inducing feelings of comfort, relaxation, and sleepiness that were self-reported with ASMR. Thus, ASMR may be activating the brain regions and releasing neurochemicals typically associated with affiliative behaviors (Lochte et al., 2018, 302). This neurobiochemical pathway may give reasons why ASMR video makes individuals relax, cope with stress, diminish their anxiety, and quickly fall asleep.

4.3 Other studies on the benefits of ASMR engagement

4.3.1 Sensory Channel effects of ASMR on Short-term memory

Previous studies were never focused on investigating sensory channels for delivering ASMR stimuli but tried to examine the overall mental states and neural involvement associated with ASMR (Kim et al., 2019, 226). There was enough evidence for the relationship between emotion and memory; such as recent findings indicated that emotional stimuli engaged specific cognitive and neural mechanisms that enhanced explicit memory (Hamann, 2001, 396); and the amygdala and hippocampal complex acted in concert when emotional situations happened (Phelps, 2004, 201). Hence, Kim et al. (2019) underwent research to examine the sensory channel effects of ASMR on short-term memory. ASMR and negative affect contents were prepared to compare their differences of short-term memory performance according to three types of sensory channels; such as

'visual,' 'auditory,' and 'visual + auditory' channels (Kim et al., 2019, 226). Forty-five participants who were randomly assigned to each of three sensory channel conditions took part in the experiments, which consisted of three sessions: training session, negative affect session, and ASMR session (Kim et al., 2019, 227). Through three sessions, each of the participants perceived negative affect and ASMR contents using the assigned sensory channel and then conducted short-term memory tests, respectively. The experimental results showed that the difference in short-term memory test scores between negative affect and ASMR contents is statistically significant only for the 'auditory' channel (Kim et al., 2019, 229). It means that the positive effects of ASMR contents on short-term memory are significant only through the 'auditory' channel, so it would be recommended to use ASMR sounds for increasing short-term memory performance (Kim et al., 2019, 230).

4.3.2 ASMR combined with Binaural Beat Inducing for Sleep

Sleep is essential to maintain physical and cognitive functions in everyday life, but sleep disorders are on the rise (Song & Lee, 2019, 1). This problem could be better solved by inducing sleep employing an auditory stimulus to improve the quality of sleep than other methods; such as transcranial direct current stimulation, transcranial magnetic stimulation, and pharmacological approaches (Song & Lee, 2019, 2).

Two almost equivalent pure tones of acoustic beats could have listened in each ear simultaneously, and a binaural beat is generated, which induces brain signals at a specific desired frequency (Song & Lee, 2019, 2). The binaural beat cannot be measured directly but can be perceived by us because the brain is the origin of the beat, and it is observed as an auditory illusion (Jirakittayakorn & Wongsawat, 2018, 1; Perez, Dumas, & Lehmann., 2019, 4). Nevertheless, the unnatural and repetitive sound of the binaural beat could make people feel uncomfortable (Crespo, Recuero, Galvez, & Begoña., 2013, 527), and thus, this auditory stimulus is discomfort for users to induce sleep. To overcome the disadvantage of the binaural beat, the perceptual phenomenon ASMR can be exploited to trigger the calmness and relaxation feelings that are utilized by many people to relax their negative moods to result in sleep (Barratt et al., 2017, 1) and the ASMR triggers were presented from natural sound as the sensory stimuli (Song & Lee, 2019, 3).

The researcher proposed a novel auditory stimulus for inducing sleep that the binaural beat was combined with randomized natural sounds (e.g., rain, sea waves, waterfall, forest, and river) to entrain brainwaves with ASMR because some ASMR triggers (e.g.,

whispering, tapping, and crisp sounds) can induce a tingling sensation (Barratt & Davis, 2015, 6; Song & Lee, 2019, 3). Specifically, a 6 Hz binaural beat was utilized because this frequency at which brain activity is entrained during non-rapid eye movement (NREM) in sleep stage 1 (Song & Lee, 2019, 2-3). The best brainwave frequencies are studied as five bands: (1) delta (0.5-4 Hz) are associated with deep sleep; (2) theta (4-8 Hz) are associated with light sleep, creativity, and insight; (3) alpha (8-13 Hz) reflect a calm and peaceful yet alert state; (4) beta (13-21 Hz) are associated with thinking, focusing state; (5) high beta (20-32 Hz) are associated with intensity or anxiety (Huang & Charyton, 2008, 39). Prior studies suggested that the transition from wakefulness to sleep is noted by the elevation of theta wave activity in the midline region of the brain (Wright, Badia, & Wauquier., 1995, 888; Marzano, Moroni, Gorgoni, Nobili, Ferrara, & De Gennaro., 2013, 1). Thus, the research suggested that the change in the midline region of the brain should be noted for sleep induction (Song & Lee, 2019, 3).

There were two sessions for this experiment. In session 1, two auditory stimuli (the 6 Hz binaural beat and ASMR triggers) were combined at three-decibel ratios to identify the optimal ratio and the combined stimuli (CS) ratios were shown as follows: (i) CS1- binaural beats: ASMR triggers = 45:60; (ii) *CS2 - binaural beats: ASMR triggers = 30:60*; and (iii) CS3 - binaural beats: ASMR triggers = 20:60 (Song & Lee, 2019, 3). The aim of the session 1 was focused on whether theta power happens in each of the three CS conditions with different decibel rates. In session 2, the outcomes of these CS were compared with an only ASMR trigger, only binaural beat, or a sham condition (i.e., monaural beats: a silent stimulus was used with earphones in each ear). The objective of this session investigated sleep induction and the continuous effects of auditory stimuli (Song & Lee, 2019, 4). In both sessions, the changes of auditory stimuli in five frequency bands were analyzed as the spectral elements of the electroencephalography (EEG) signals (Jirakittayakorn & Wongsawat, 2018, 2). A paired t-test was then utilized to analyze further which frequency was induced after listening to each auditory stimulus (Song & Lee, 2019, 5).

The results were shown as below: In session 1, the findings showed that the ratio of binaural beat and ASMR trigger at 30:60 dB (CS2) was the most effective combinations to induce both the theta power and psychological stability (Song & Lee, 2019, 5). In session 2, the combined stimulus still preserved the benefits of the binaural beat and settled its weakness with the ASMR triggers, including psychological self-reports (Song & Lee, 2019,

6). The power of the theta power increased sharply in the midline brain region associated with transition into sleep, especially after listening to CS2. The researchers supposed that the escalation of theta power after CS2 in the midline region could induce sleep (Song & Lee, 2019, 11).

Possible explanations and illustrations

Sleep and wakefulness are controlled by ascending arousal sleep-promoting and the wake-promoting systems that are inhibited by each other, and these changes of different neural oscillations are observed through EEG signals (Jirakittayakorn & Wongsawat, 2018, 2). When the binaural beats get into the primary auditory cortex, the nerve impulses are transmitted directly to the relevant auditory areas and other associated areas. The arrival impulse then induces the brain to resonate at a rate of the expected frequency of binaural beats which can be measured by EEG rhythms and the phenomenon is called entrainment of neural oscillation (Jirakittayakorn & Wongsawat, 2018, 2; Wahbeh, Calabrese, Zwickey, & Zajdel., 2007, 200). Accurately, these signals enter the thalamus, where audio sensory information is processed through the sensory neural pathway (Tang, Vitiello, Perlis, Mao, & Riegel., 2014, 3). Eventually, the auditory signals in the thalamus may affect the sleep-promoting system. As such, binaural beats can regulate the sleep cycle similar to their usage for the modulation of behavioral states by entrainment effects (Jirakittayakorn & Wongsawat, 2018, 3; Perez et al., 2019, 13). Regarding this mechanism, CS could potentially induce sleep while keeping 6 Hz theta waves, which is the feature of NREM in sleep stage 1 (Song & Lee, 2019, 12).

Finally, the findings indicated that the proposed auditory stimulus could induce sleep while keeping the user in a psychologically relaxed state at the same time. This technology provides a significant opportunity to develop a novel method for increasing the quality of sleep (Song & Lee, 2019, 13).

4.3.3 The linkage between ASMR & Mindfulness Meditation

Many people self-reported that ASMR is triggered when focusing on the external triggers, which resembles mindfulness practice (Fredborg, Clark & Smith., 2018, 2). The researchers underwent survey research to investigate the link between ASMR and mindfulness. Mindfulness can be conceptualized as a trait and as a state. State mindfulness refers to an ephemeral, from one moment to the next conscious experience (Tanay & Bernstein, 2013, 1286), whereas trait mindfulness is a more stable and long-

lasting inclination to experience the world in a mindful manner (Brown & Ryan, 2003, 824). Two hundred eighty-four people with ASMR completed the Toronto Mindfulness Scale (TMS), the Mindful Attention and Awareness Scale (MAAS), and a questionnaire examining ASMR experiences (Fredborg et al., 2018, 2). On the other hand, the controls were requested to watch two ASMR videos to make sure that they did not experience tingling sensations consorted with ASMR; and then they answered the TMS and MAAS questionnaires (Fredborg et al., 2018, 5). The results were shown that ASMR experiencers have a higher MAAS questionnaire score in terms of trait mindfulness than controls, and this score differences further implicated one's general predisposing to attention to and the awareness of the present moment (Brown & Ryan, 2003, 824). Besides, they also scored higher on the Curiosity subscale in terms of state mindfulness measure in TMS. The findings further implicated the interest in one's own inner experiences were elevated among the ASMR group (Lau et al., 2006, 1447). ASMR female experiencers have a higher Curiosity score than males one and further suggest that the cognitive foundations of ASMR may be different between the sexes, and ASMR is a cognitively active process (Fredborg et al., 2018, 7). The findings also indicated that perceptual curiosity is a factor of ASMR experiences according to the pattern of ASMR triggers. The "Touching" and "Repetitive Sounds" triggers significantly correlated with curiosity, and both types of triggers may involve more top-down cognitive interpretation than triggers such as whispering (Fredborg et al., 2018, 10). Listening to repetitive sounds and watching people touch things may induce the observer to create a mental structure of the perceived stimuli. Individuals have the motivation or curiosity to do so, and they would be more likely to experience tingles (Fredborg et al., 2018, 10 -11).

Conclusion

This chapter has reviewed the literature that relates to this study and discusses previous research and understanding of the subject area. It has discussed the current scientific research approach from psychophysiological to neuroimaging techniques. Moreover, the final part of the review mentioned the linkage between ASMR and mindfulness. The authors further asked for additional research to examine whether ASMR has a connection to well-being like mindfulness-based treatment programs (Fredborg et al., 2018, 11). Hence, the current study attempts to explore and fill the research gap.

5. Research Methodology

The previous chapters reviewed the literature related to the ASMR phenomenon and PERMA model concerning both subjective self-report and more objective scientific (e.g., psychophysiological and neurophysiological) ways of examination. The images on the fMRI are not only a representation of reality, but they are necessary subjectively interpreted by someone (first-person) who knows how to read rather than objective in the phenomenological view (Stadlander, 2011, 43). Therefore, phenomenology could give neuroscience an insight to pinpoint what structures need to be explained in human experience and what to seek for (Stadlande, 2011, 44). Now, ASMR was identified as the multisensory atypical phenomenon under the empirical study. This chapter outlines the methodology that was employed including the phenomenological approach to inquiry, the use of Interpretive Phenomenological Analysis (IPA) as a methodology for exploring ASMR experiences of YouTube video, by the selection of participants and ASMR video types, (informed consent) ethical considerations, how data were collected and analyzed and the quality and validity of the study.

5.1 Phenomenological Approach to Inquiry

Phenomenology is the study of human lived experience and structures of consciousness perceived from the first-person perspective (Langdridge, 2007,10). Merleau-Ponty mentioned that the lived body as the unity of the mind-body-world system and is always directed towards the world outside itself (otherness) under a constant flow (Bullington, 2013, 25-26). The concept of the lived body maintains the reality of the psychosocial domain of existence but also introduces the meaning-constitution ideas at the level of the body (Bullington, 2013, 91-92). The particular ways of being-in-the-world (lived body) are framed by different universal facets of human existence, such as embodiment, sociality, spatiality, selfhood, temporality, and life projects (Boden, Larkin, & Iyer., 2019, 3). Phenomenological research is an in-depth investigation of lived experiences to disclose the meaning to people (Bliss, 2016, 14). In terms of phenomenology, lived experience is defined as our encounters with everything and places us in-relation-to events, objects, and others within our lifeworld. As such, the experience is both facets of perspectival (embodied and situated) and relational (Boden et al., 2019, 2). In the experience of ASMR, ASMR experiencers perceived both emotional (e.g., pleasant & tingling sensation) and technological mediated (e.g., social audio-grooming, mental flow-like state & distant intimacy) experiences. The current study used the phenomenological approach to explore

and find the meaning of both types of ASMR experiences. Of the different phenomenological approaches, IPA has been chosen to this exploration of ASMR lived experience in the relation of psychosocial wellbeing with others in the environment, an underexplored area of research in the published literature.

5.2 Interpretative Phenomenological Analysis (IPA)

IPA was developed by Johnathan Smith and his colleagues and has become a popular methodology of phenomenological analysis. It focuses on the individual human experiences and insights to understand the subjective world of people under consideration of the sociocultural context (Larkin, Watts, & Clifton., 2006, 107). In this study, IPA was utilized as the optimal way to examine and capture a complicated and challenging phenomenon (Priyadarshini, Dubey, Kumar, & Jha., 2020, 184) and enabled the researcher to unveil the individuals' lived experiences (Dowling & Cooney, 2012, 14). Now, there is still no phenomenological studies in the dimension of ASMR concerning psychosocial wellbeing. The current study strives to gain insight into participants' lived experiences, and the lived experience is usually under the subconscious mental state. The scarcity of the conceptual framework in the ASMR-related literature, especially in the aspects of wellbeing, indicates the necessity of qualitative study. Of all the qualitative methodologies, IPA is chosen because it is the best way to construe and deduce the lived experiences of the participants (e.g., ASMR experiences). As has been shown in the literature review, research into ASMR has mostly utilized quantitative studies but very few qualitative studies. Thus, the present study explored the beliefs, lived experiences of embodied and encultured, and feelings of ASMR about wellbeing and discovered more meaningful experiences via qualitative phenomenological inquiries that made use of the e-communication method. Besides, IPA was considered a suitable methodology to implement in response to the research questions, with data collected directly from each of several participants.

5.3 Theoretical Descriptions of IPA

The theoretical underpinnings of IPA are described as followed: (A) Phenomenology: uncovering the meanings of participants ASMR lived experiences, such as mental process with ASMR sensory experience, feelings, and emotion; and memories about their experiences with the environment and their interaction with others (e.g., daily university activities). (B) Hermeneutics (From experience to meaning): The participant(s) can make sense of his/her ASMR experience through self-conscious, reflective thinking during the process of in-depth phenomenological inquiry. Then later, the researcher engages a double hermeneutic and meaning-making co-construction that researcher seeks to make sense of the participant(s) making sense of what is happening to them through the phenomenological analysis for text interpretation on the transcript. (C) Holism (Meaningful experience): To foster this meaning-making process, researchers further implement the hermeneutic circle that involves an iterative process of moving between the smaller and larger units of meaning, or between the parts and the whole of the ASMR lived experience. Making an intrinsic connection between each part and the whole allows the researcher to find out the relationship between ASMR and the psychosocial wellbeing of participants' experience in the events of the university. (D) Idiography: focus on the meaning of something for an ‘individual’ because the lived experience is uniquely embodied, situated, and perspectival, and it is also a worldly and relational phenomenon. The research methodology of the current study and its rationale are illustrated in Figure 3.

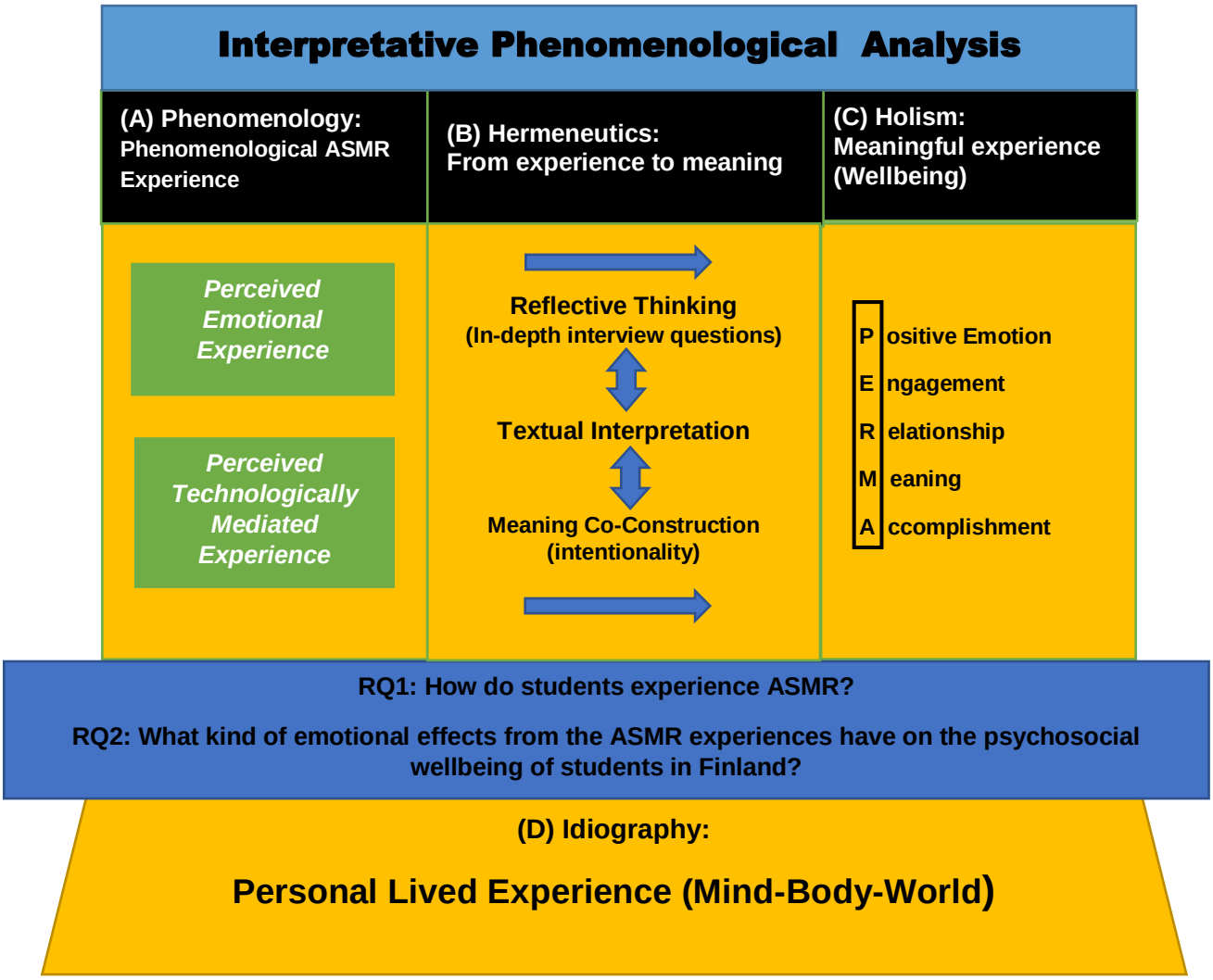

Figure 3. Diagram of Research Methodology and rationale.

The diagram (Figure 3) shows that the theoretical underpinnings of IPA have four stages: Phenomenology (Back to experience), hermeneutics (From experience to meaning), holism (Meaningful experience); and idiography. Adapted from: Smith et al., 2009 and Daher et al., 2017.

In IPA, the researcher endeavors a balance between listening empathetically to participants' experiences and asking in-depth interview questions for deeper interpretation. There are no formal hypotheses developed in the current exploratory study because IPA avoids conceptual assumptions and does not test hypotheses (Reid et al., 2005, 20).

5.4 Participants

A total of 3 participants had a mean age of 26.3 years, ranging from Bachelor to master's degree. Reflecting on the sampling area, the participants were Finnish. Each interviewee is anonymous and labeled as A, C, and D. See Table 1 for the characteristics of individual study participants and their ASMR usage profiles.

Table 1. Participants' demographic and ASMR profile

Participants		A	C	D
Age		26	27	26
Gender		Male	Female	Male
Ethnicity		Finnish	Finnish	Finnish
Level of Education		Master's degree	Bachelor's degree	Bachelor's degree
Big Five Personality Test Result (High Score)		• Agreeableness • Openness-to-Experience	• Agreeableness • Conscientiousness	• Openness-to-Experience • Agreeableness
Reason for engagement		Relaxation and help to fall asleep	Help to fall asleep	Relaxation & eases for stress
Viewing habit	ASMR use	• Once a week • Not usually watch but listen • Before sleep	• 4-5 days per month • 1-2 ASMR videos in a single session • Before sleep	• Three times a day • 3-5 ASMR videos in a single session • Before sleep
	Environmental Conditions to achieve ASMR sensations	Peaceful time & Space	Darkroom & quiet place	Dark & silence room
Tingling Sensations	Period	A few minutes	Not sure	A few to ten seconds
	Information on the tingling sensation	Originates in head, shoulders and sometimes arms	• Start from the right side • Ears and arms • Both sides • Both ears are the same on triggering the sensation	• Spread from upper back to forehead • The neck is the most sensitive • More on the right side • Both ears are the same on triggering the sensation

As seen in Table 1, participant A is a Finnish male student and studying a master's degree in Finland. He got high scores in Agreeableness and Openness-to-Experience personality in the BFI test. He usually consumes ASMR videos once a week and only listening through the headphones before sleep. He mentioned the environment to be peaceful, quiet, and ample space in order to get the maximum effects. He does not always get the tingling sensation, but in case it comes, the sensation can last for several minutes. Typically, the tingling sensation originates in head, shoulders, and sometimes arms. Participant C is a Finnish female and has graduated with a bachelor's degree in Finland. She got high scores in Agreeableness and Conscientiousness of the BFI test. Her optimal environment for engagement of ASMR is a quiet and dark place.

Moreover, the reason for ASMR consumption is mainly improving the quality of sleep. She usually watches one to two ASMR videos per session and four to five times per month. She always got the tingling sensation, but the period is not sure. Also, she describes the tingling sensation starting from the right side of the head and then spread both sides of ears and arms. Participant D is a Finnish male student and still studying a master's degree in Finland. His BFI test score is mainly focused on Agreeableness and Openness-to-Experience. He needs a quiet and darkroom in his ASMR engagement and consumes videos three times a day and three to five ASMR videos per session. He is a pop music performer and usually gets the tingling sensations along with ASMR videos. The tingling sensation can last for ten seconds and usually occurred on the right side, and the neck is the most intense region.

Rationales of participants' selection and process

The samples are selected purposively rather than the probability method because they can offer a research project insight into a particular experience. (Smith et al., 2009, 48). The sample sizes should be small because IPA is an idiographic approach and tries to understand particular phenomena in particular contexts. Moreover, each case can be conducted in a detailed analysis to develop three separate case studies, and this allows for a micro-analysis of similarities and differences across cases. (Smith et al., 2009, 52). Moreover, a homogeneous sample should be used because the research question will become more meaningful (Smith et al., 2009, 49). The inclusion criteria in this research were that the participants with significant experience in ASMR (Barratt, Spence & Davis., 2017, 4). On the one hand, exclusion criteria were that individuals reported without any

tingling sensation, in response to music, or without any external stimulation before or after watching selected ASMR videos were excluded from the study. (Lochte et al., 2018, 296).

Digital flyer (Appendix E) was posted on the Facebook page for Media education of the University of Lapland, and four participants with ASMR experience were recruited by purposive sampling in the current study. They were either known to the researcher or recruited through snowball sampling. Interested potential participants then contacted the researcher through phone or email, and their questions were clarified. One of the potential participants withdrew from the study of their own accord so that ultimately the study got three participants. Potential participants were sent an email giving brief details of the study. Attached to the email was a consent form should they wish to participate. Participants then were briefed, and informed consent obtained, predicated on using pseudonyms to protect privacy. The design of informed consent followed the ethical principles of research with human participants guided by Finnish National Broad on Research integrity (TENK 2019), and the University of Lapland commits to this guideline. As such, Informed Consent (Appendix B) of the current study includes that participants are well informed about the research, the potential benefits, and risks of their participation. The individual has the right to confidentiality and the right to withdraw from the study at any time without any consequences (Kohonen, Kuula-Luumi, & Spoof., 2019, 51-52).

5.5 Material and Method

Self-selected and standardized stimuli approach (Poerio et al., 2018, 8) were utilized for ASMR video selection because this approach can maximize the chances of triggering ASMR. Hence, participants were asked for self-selecting ASMR video clips and also suggested to them the inclusion video clips from previous research that produced the most reliable ASMR response (Poerio et al., 2018, 9). Inclusion: The content of the selected ASMR videos included the interaction of ASMRtist with an object, the viewer, or another actor. Moreover, the video contained the characteristic ASMR triggers such as whispering, crinkle sounds, tapping, caring inclinations, task manifestation, personal attention, ear-to-ear vocals, hair touching, and role-playing (Lochte et al., 2018, 296). Exclusion: Videos with music, atypical ASMR triggers, or unusual (e.g., black and white film, video "cuts," still picture with audio) visual elements (Lochte et al., 2018, 296).

The interviewees were given informed consent before the interview and then completed the demographic questionnaire with Big Five Personality Test (BFI; John et al., 1991; Appendix A). Semi-structured interviews were conducted for four months (from December 2019 to March 2020). The interviews were mainly carried out via email with Instant Messenger and Skype. Participates over the Internet might be willing to disclose more intimate details about the research topic than they would share in face-to-face interviews. Email interviews also provide the participants time to reflect on their answers to the questions without any pressure (Beck, 2005, 412). The interviews began with a few structured questions regarding demographics, then asked semi-structured questions about interviewees' feelings and experiences concerning their day-to-day activities and behavior. The open-ended questions of the interviews allowed participants to develop their narrative by exploring their experiences of ASMR. The participants were sent reminders one week before the deadline in case of no reply. Follow-up questions were sent to them after each email transcript returned, especially when clarifications, explanations, or elaborations are needed. The interview protocol was revised and refined at different stages of the research process. Therefore, questions were modified, recorded, added, or eliminated as subsequent interviews were completed. The interview schedule and its procedures are shown in the following section.

5.6 Interview schedule and protocol

Two primary email interviews will be arranged and spaced approximately 20-30 days apart (See Table 2). In between, the interviewees were asked for further discussion details through Instant Messenger (e.g., WhatsApp and Skype). The design and content of the interview protocol were based on the previous ASMR literature review and relevant wellbeing questions in the articles (Kern et al., 2015).

Table 2. A timetable of the interview schedule

	2019	2020		
	Dec	Jan	Feb	Mar
Interview One				
Interview Two				

Referring to Table 2, interview One (Appendix C) is focused on ASMR's lived history experience and asked, "How did you experience ASMR from the beginning up to now?". Interview Two (Appendix D:, including the detailed instructions) is focused on the details of ASMR experience and the meaning related to wellbeing. The interview involved an in-depth discussion of the details of the participant's experience in Psychosocial Wellbeing after ASMR exposures and take part in school function activities, such as group projects, assignments, general examination, winter sports activities, Christmas party organization, etc. The Interview One was mainly corresponded to Research Question One and its objectives to explore the predictors and mediators (moderators) of ASMR. In contrast, interview two was corresponded to the Research Question Two to explore how ASMR media responses (e.g., positive feelings and thoughts) enhanced the meaning-making of psychosocial wellbeing and lived experiences for university students in Finland. Besides, ASMR participants were asked to abstain from watching ASMR videos for the three days before the study to elevate the chance of eliciting ASMR. (Poerio et al., 2018,10).

5.7 Data Analysis

The data collected do not require transcription and are thus already in written format and readily available for analysis. Themes and subthemes were developed by following analysis of the three transcripts; 22 pages and 529 lines. The supporting extracts are provided, and all names have been changed to the anonymity of participants, and the format of extract quotation is (Participant name: Page number, Line number), such as *(A. P.1, line: 101–111)*. Data analysis followed standard interpretative phenomenological methods (Smith, Flowers, & Larkin., 2009, 72–93) involving several readings and re-readings the initial transcript to search significant quotes and interest for ASMR-related responses and PERMA five domains. Then, concise phrases representing units of meaning were coded and repeating for the other transcripts to identify emergent themes from PERMA to get the ideas of media effects. Then, each coded transcript is made conceptual connections between subthemes and condensed into clusters. Each cluster of themes was given a descriptive subtheme label shown in Figures 4 and 5.

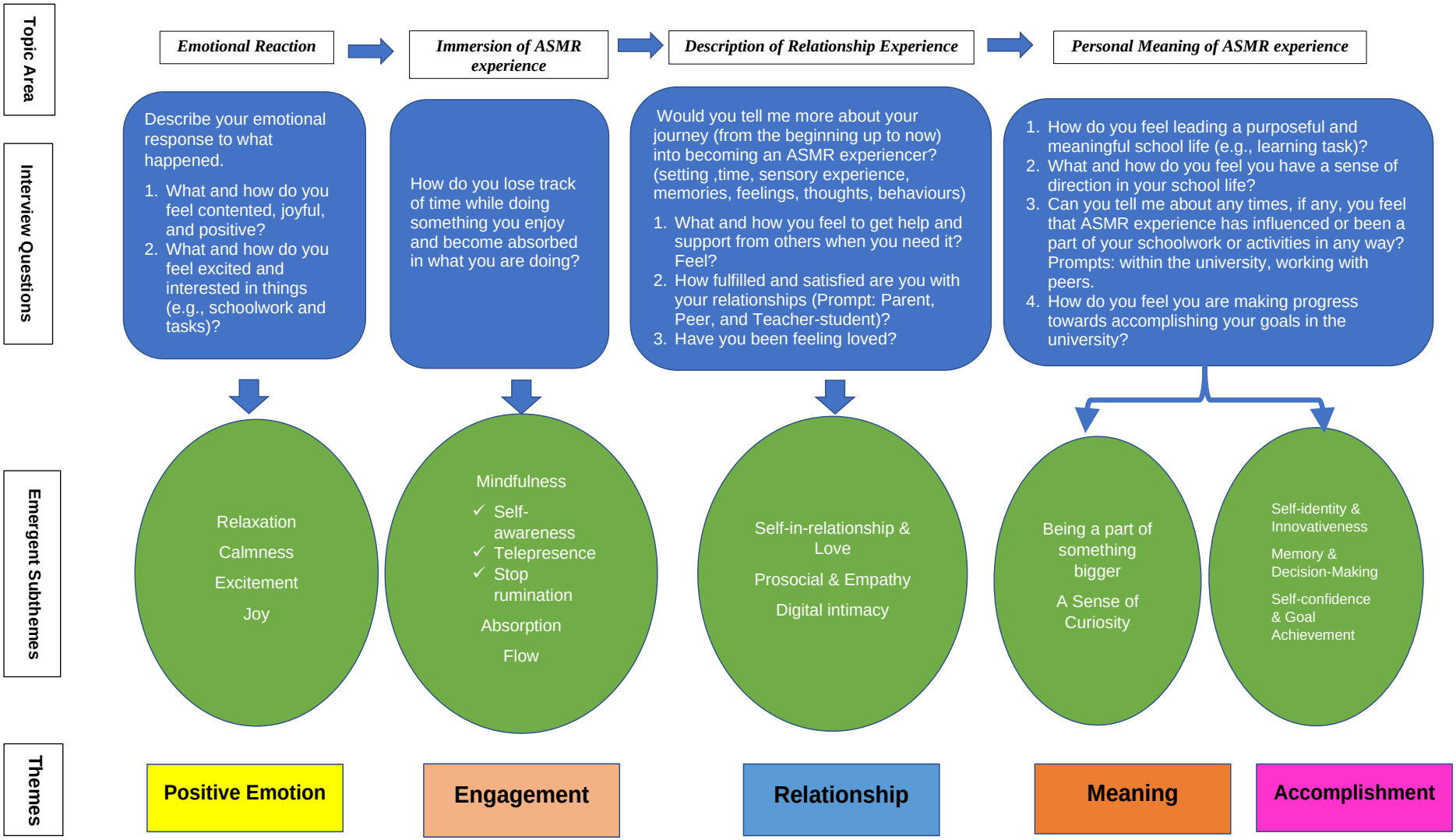

Figure. 4. Flow process of the emergent subthemes and subsequent application to the themes of the PERMA model, identified through IPA. Adapted & modified from Yerbury, R. M., & Boyd, W. E. (2019).

All transcripts were first individually analyzed before the identified themes were considered together as a whole to form a group analysis, and organized into interconnected hierarchies (i.e., themes, subthemes, and categories). In Figure 4, the subthemes are emerged from the narratives of the corresponding interview questions and giving rise to four topic areas, emotional reaction, the immersion of ASMR experience, description of relationships experience, and personal meaning of the experience. The subthemes are subsequently applied to the similar themes of the PERMA model. Moreover, the flow process and information of topic areas and the emergent subthemes expressed as a mind map in Figure 5.

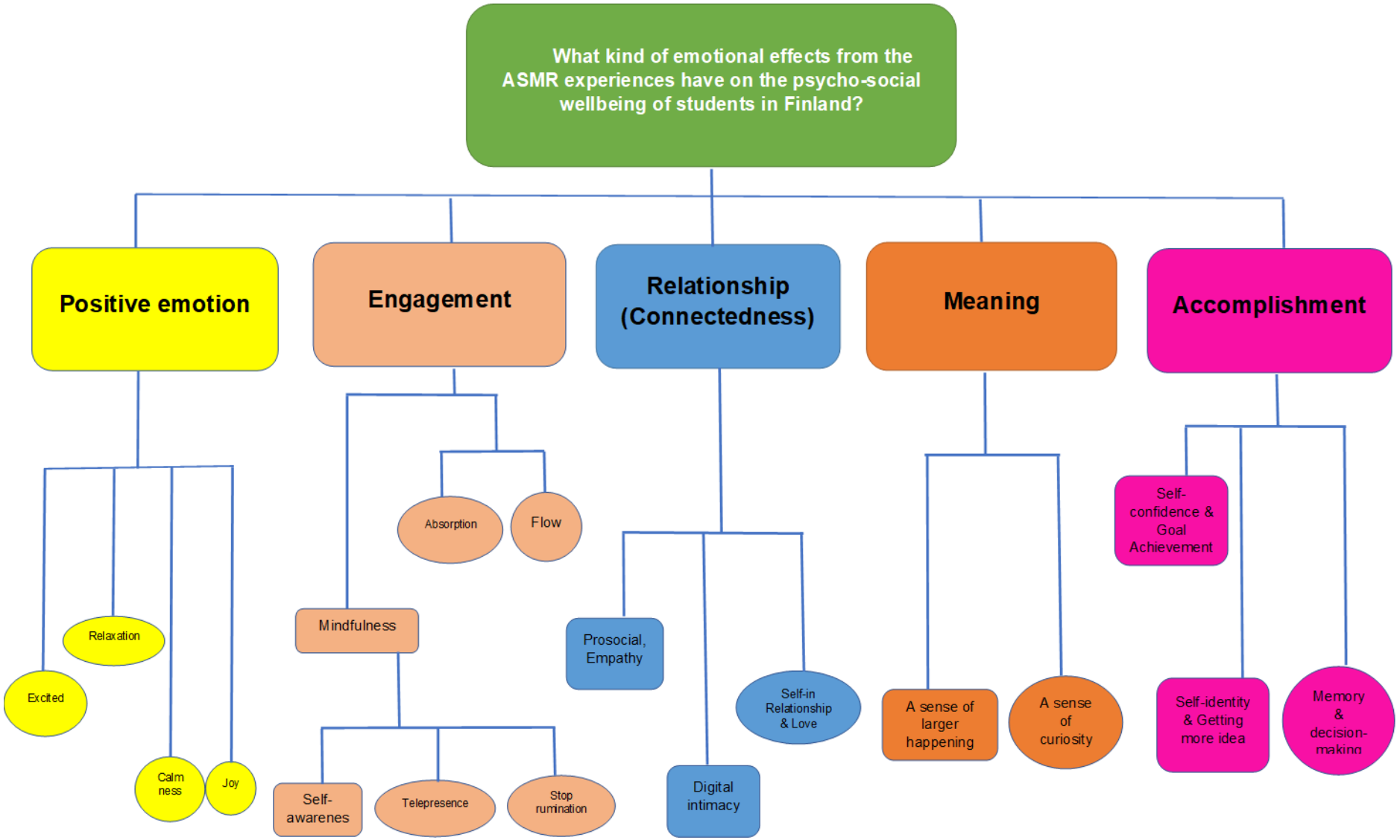

Figure. 5. Mind map of interview narrative subthemes and themes of the PERMA model concerning ASMR experience.

As seen in Figure 5, the interview narrative themes and subthemes of ASMR experience and wellbeing are organized and corresponding to the research question two. The remaining transcripts are coded by using the master list of themes that was regarded as a guideline for subsequent transcripts. Finally, a summary of the interviews by incorporating cross-case analysis among that themes extracted from the data (Yerbury & Boyd, 2019, 203; Priyadarshini, Dubey, Kumar, & Jha., 2020, 185; Chappell, Eatough, Davies, & Griffiths., 2006, 207; Ilias, Liaw, Cornish, Park, & Golden., 2017, 78). The relevant components of the IPA and related stages are outlined in Table 3.

Table 3. Stages in IPA Analysis

Reading & rereading	Regarding "immersion" into the data, several readings are accompanied by a feeling of being overwhelmed by ideas and possible connections (Smith, Flowers et al. 2009, 82).
Initial noting	Exploratory comments include (1) descriptive comments, (2) linguistic comments, and (3) conceptual comments. These comments are also useful in the subsequent step of identifying themes.
Developing emergent themes	Themes are likely to be identified as much from the researcher's exploratory comments as the transcript itself, and thus emergent themes might emerge as a natural next step from prior notes.
Connecting emergent themes	Abstraction (i.e., identifying patterns and super-ordinate theme), polarization (i.e., looking for differences rather than similarities), contextualization, and function attempt to connect themes for write-up summaries.
Moving to the next case	Each case is taken as an individual unit before broader comparisons, and a cross-case review is conducted. Therefore, care should be made to bracket any assumptions or crossover knowledge from one interview, when analyzing the next.
Patterns across cases	In the current study, the patterns across cases are represented graphically and through table structures, pulling cross-case themes into focus while referring to the supporting cases for each.

Note: Adapted and summarized by Smith et al., 2009.

As seen in Table 3, the detailed examination of one transcript recollects the ideas of the interview. Then, the meaning of relevant topics is tried to capture and develop the emergent themes through the exploratory commenting. The emergent themes were connected by identifying common links between them. The remaining transcripts were then analyzed by using previous stages, and each case was moving in its right direction, and finally, the main and subthemes were relabelled and drawn together, and this resulted in several main themes for the group each with some related subthemes.

5.8 Coding Strategy

The coding scheme (Appendix F) is based on the conceptualized and operationalized variables of DSMM and five dimensions of PERMA model mentioned in Theoretical chapter of this study and the article (written by Houston, Spialek, & First., 2018) of Disaster Media Effects: A Systematic Review and Synthesis Based on the DSMM. All transcripts are coded qualitatively into DSMM categories, and the steps are described below. The coder first read each transcript and marked details with DSMM variables. Then the observations and notes are written and to enter the final data into a spreadsheet. ASMR media use predictors were coded for the following categories: disposition (e.g., previous ASMR experience, gender), developmental, social, and ASMR (e.g., ASMR media exposure). These same categories were also coded for ASMR media effect moderators. ASMR media effect mediators were coded for (a) media use, (b) response states, and (c) media effects. Transactional effects and direct effects were also coded (Houston et al., 2018, 8,10). For the media effects of the Wellbeing coding part, the coding stage was guided by the five domains of wellbeing that form the PERMA framework. Primarily, the exact words of the interviewees were compared to the dimensions associated with PERMA. The most frequent and significant codes were identified and categorized into themes (Mirehie & Gibson, 2019, 7).

5.9 Validity and reliability

Yardley's (2000) principles were chosen to guide the quality of the current study because Smith et al. (2009, 153–157) particularly recommended this guideline that has four principles: sensitivity to context, commitment and rigor, transparency, and coherence; and impact and importance.

Sensitivity to context relates to the degree of awareness of the relevant literature and previous empirical work related to lived experience (Yardley, 2000, 220). Hence, the researcher familiarised with the literature review on ASMR and wellbeing and immersing in the literature relating to the theoretical underpinnings of IPA. Moreover, sensitivity also related to the socio-cultural context of the sample, ethics, and data generation (Yardley, 2000, 220-221). Thus, numerous verbatim extracts and quotations are required to meet this quality standard and give participants a voice in this ASMR research and let the reader check the interpretations (Smith et al., 2009,154). ***Rigour and Commitment*** refer to

thorough data collection and the depth and breadth of analysis (Yardley, 2000, 222). In current research would be fulfilled the requirements: the homogenous and purposive sampling (i.e., Finnish university students with significant ASMR experience); appropriateness of the interview schedule and conducted a thorough and systematic data analysis while maintaining IPA's idiographic commitment. ***Transparency and coherence*** relate to the clarity of write-up and presentation (Yardley, 2000, 222). The methodology chapter lets the reader see the coherence and an appropriate fit between the research question and the methodology selected according to the objectives and conceptual framework of research. Transparency would be heightened by describing the details of participant selection, the formation of the interview schedule, interview process, and analysis steps of the IPA and coding strategy shown in the Appendix and this chapter. ***Impact and Importance*** are about both theoretical and practical impact when applied to practical issues by other researchers (Yardley, 2000, 223). As such, the current research will be expected other researchers to reflect on possible ASMR and Wellbeing implications for their practice and inspire them to continue with investigations in this area.

This chapter described an overview of the research methodology and procedures to answer the research questions. To be as transparent as possible, the data analysis process presented in detail from raw data to fully worked-up themes was demonstrated. The following chapter presents and discusses the themes and subthemes which constitute the main findings for this study.

6 Findings

The purposes of this chapter are provided a phenomenological and interpretative narrative of the research findings. The findings included themes in two main overarching areas regarding research questions identified through IPA data analysis and coding strategy. Each theme has several related sub-themes shown in Tables 4 and 5, and then further interpreted after the presentations of tables. Each subtheme will be discussed in turn of each theme, with a thorough account of how themes are relevant within individual participant transcripts. Transcript extracts and quotations will be included proportionally across participants so that individual voices can be heard, and individual experiences can be illuminated.

6.1 Students' ASMR experiences

Participants presented a picture of the ASMR effects on their lives. The identified themes and subthemes included ASMR intentional use and corresponding to subthemes prior to ASMR-like experiences, social pressure from family members, and curiosity. The second main theme, called ASMR multisensory integration, including nostalgic thoughts, pro-change bias, positive activating, and deactivating affects. The final main theme is called ASMR media use, and corresponding subthemes included different types of sound and movements. The themes and subthemes are shown in Table 4.

Table 4. Themes and Subthemes for ASMR Intentional use and responses

Theme	***Sub-Theme***	
ASMR Intentional use	Prior ASMR-like experience Social Pressure from family members Curiosity	
ASMR Multisensory Integration	1. Nostalgic thoughts 2. Pro-change Bias 3. Positive Activating Affect • Excited • Happy Positive Deactivating Affect • Content • Relax • Calm 4. Tingling Sensation	
ASMR Media content	1. Sound • Whispering • Soft and kindness words 2. Nature landscape 3. Roleplay	• Painter • Librarian • Teacher 4. Movement • Repetitive hand movements • Slow movement

The subthemes of Table 4 will be interpreted and analyzed in the following section.

ASMR Intentional Use

Prior ASMR-like experiences

Previous ASMR-like experience was explicitly related to later use of new ASMR media sources, and the following typical quotes showed their unique past experiences of ASMR sensation:

> *Extract 1: "My mother used to read most of the Harry Potter books to my brother and me when we were little, so I remember listening to her pleasant voice for hours on end. Nevertheless, I have not thought about ASMR experiences before engaging with the videos (C: P.2, line: 55-57)."*
>
> *Extract 2: "I've felt ASMR experiences as a child in elementary school. The previous experiences came from someone's hand movements, teachers writing, paper noise, teacher, is licking the finger while turning the page of a book. I remember feeling ASMR when we were doing a group task in 3rd grade. One of the groups was doing something with her hands (drawing or something), and I was just starting the process. In a way, I linked in her activity (D: P.6, line: 163-169)."*

These quotes show that both participants' past experiences (related to both family members and the social activities) store the ASMR-like memories and strengthen their later ASMR videos engagement. Besides, people who were previously familiar with the use of old brand products would be more likely to engage with the products as adults (Bonus et al., 2018, 6). One participant described what he felt as a young boy watching ASMR-like TV show:

> *Extract 3: "As a kid, I use to relax with one of the Finnish comedic show Kummeli's sketches, "Virsikirjan lisälehdillä." The main characters speak softly and whisper a lot, which made me relaxed. When I got to know to ASMR, I've been hooked (D: P.1, line: 10-14)."*

The participant watched ASMR-like TV show in the childhood stage, and then he got this pre-ASMR experience to develop ASMR YouTube video engagement later. Moreover, the DSMM proposed predictors of media use not just as motivations, but also as moderators of the relationship between media use and responses (Bonus et al., 2018, 8). For participants C & D, individuals with previous ASMR experience and prior exposure to the ASMR-like videos might not only be more likely to engage ASMR videos later, but they may also be more likely to experience nostalgic thoughts.

Social Pressure from family members

The DSMM suggests that social factors, like preferences of friends and family members, impact the types of media people choose, either because these social forces actively enable or restrict access to media, or because they encourage exposure to certain types of media (Valkenburg & Peter, 2013b, 227). Participant A was influenced by his sister's experience about relieving her sleeping problem of using ASMR video, and finally, he engaged ASMR videos:

> *Extract 4: "About half a year ago my sister told that she uses ASMR videos to relax and fall asleep, and she recommended ASMR for me, so I decided to try the videos for insomnia (A: P.1, line 7, 10)"*

Curiosity

Curiosity is operationalized as the perceived ability and desire to close an information gap in one's knowledge. Generally speaking, it is interrelated with other human connectedness, such as social interaction and general experience-seeking (Schaekermann et al., 2017, 144). In terms of curiosity, one participant reported:

> *Extract 5: "I first started watching ASMR videos a couple of years ago out of curiosity after reading an article about the phenomenon. So, what influenced me to engage myself in ASMR was first curiosity (C: P.1, line: 18-19; 26-27)."*

This quote shows how the news media (one article) arouse her interest and novelty-seeking sensation and later decided to engage ASMR videos.

ASMR Multisensory Integration

Cognitive response state: Nostalgic thoughts

Nostalgic thoughts are represented by memories of highly social activities that are preserved in person and often associated with an exaggerated experience (Bonus et al., 2018, 7). For instance:

> *Extract 6: "I felt like when I was a child, and my teacher came to advise me near me. I remember only that it felt comfortable and relaxing. I think that ASMR has helped me to relax and get to feel safe (A: P.1, line 21-25)."*
> *Extract 7: "I feel that some videos help me creating student identity (D: P.6, line: 150)."*

These quotes highlighted that ASMR video recalls the childhood-teacher relationships and linked the past affect and feelings with present events through ASMR experiences; whereas, some other ASMR video can trigger him to recreate and understand the self-identity (student identity).

Cognitive response state: Pro-change Bias

For some participants, they claimed that they have pre-conception or bias to ASMR, such as seeing it as a joke and thought it as noises and showed in the following quotes:

> *Extract 8: "When I first got to know the videos about two years ago, I was amused, and I thought that it was a joke (A: P.1, line 15-16)."*
> *Extract 9: "First, I thought it was just irritating noises of banging and stroking and looking at people making those noises. How boring! However, as I realized that ASMR has such a wide variety of videos, I got hooked. I was under the assumption that ASMR was only about making noises with objects. When I came across a video from a Finnish vlogger who whispered instead of just making noises with objects, I was hooked as I noticed the tingles (C: P.1, line: 3-4; 19-21)."*

To protect themselves from the risk of change, the participants' bias motivates them to select evidence based on the status quo or reject evidence supporting change. However, they reset their rigidity of mind after they engaged in ASMR, and they noticed they got the tingling sensations from ASMR triggers.

Emotional & Excitative response state: Excited, Happy, Content, Relax & Calm

Participants reported that ASMR videos made them excited, happy, relaxed, calm, and contented as activating and deactivating positive affect, respectively. For instance:

> *Extract 10: "ASMRtist gives me the energy to be excited about everything. (D: P.4, line: 93)."*
> *Extract 11: "That brings me joy, knowing that there are good books to read, and good perceptions to dive in to (D: P.8, line: 213-215)."*
> *Extract 12: "My feeling is pleasant and relaxing (A: page 1, line14)."*
> *Extract 13: "I feel contented (A: P.2, line 52)."*
> *Extract 14: "I realized that whispers gave me good calming feelings that made me sleepy (C: P.1, line: 23-24)."*

Tingling Sensation

Many of the accounts claimed that they got the tingling sensation after watching ASMR videos. In the following extract, some participants describe the feelings of tingling sensation in details:

> *Extract 15: "Tingling sensation yeah anyways help me feel my body how it's feeling occurring in the sense of my whole body. I feel that my mind and the body connect to be my body in a one and help me feel the whole body (D: P.8, line: 228-230)".*
> *Extract 16: "Sometimes it's more arousal, sometimes more calming and relaxing. What this means to me and what my body does in my mind in a way I'm exploring more connectivity with my body and mind (D: P.10, line: 258-260)."*
> *Extract 17: "When I noticed that specific videos relaxed my mind after a busy day, I started going back to them when I felt like it (C: P.1, line: 27-28)."*

The quotes above show that the tingling sensation can provide mixed physiological responses: arousal, relaxed, and calm. Besides, tingling sensation seems to be through the channels and vessels to connect with his body and mind. For the other participant, tingling sensation also made her relax, and she tends to seek this sensation but not addiction.

ASMR Media Content

Sound: Whispering, Tapping sound, Non-spoken sound, & Soft and kindness words

> *Extract 18: "At least whisper as well as soft and relaxing talk (A: P.1, line 14)."*
> *Extract 19: "I always ended up listening to only a small selection of people and videos who were all women whispering in Finnish, who made a minimal amount of noises with objects (C: P.1, line: 7-10)."*
> *Extract 20: "Listening to no-talk ASMR videos that had consistent sounds helped me to lose track. (C: P.4, line: 120-121)."*
> *Extract 21: "The affirmations and kind words ASMR videos (C: P.5, line: 153)."*

Roleplay: Painter, Librarian & Teacher

> *Extract 24: "Sometimes, I find myself watching ASMR videos with a library roleplay. In the video, she is calmly pottering about the books and so on. She is introducing books that are interesting to me, and she even reads some of them out loud. Some of the ASMR videos are roleplayed by a friend, who tries to get your feeling more comfortable. Bob Ross (Painter) is a master of this. Some ASMR YouTubers have exciting thoughts and episodes about these subjects. One example is 'Let's Find Out ASMR..' Some of the ideas, discussion, and subjects of the ASMR videos (D: P.5, line: 90 -119)."*

Nature landscape

> *Extract 25: "Recently, I have listened to more ASMR videos that concern nature and animal (A: P.2, line 55)."*

Movement: Repetitive hand movements & Slow movement

> *Extract 22: "Unintentional ASMR -videos do, his delicate hand movements. (D: P.4, line: 103)."*
> *Extract 23: "ASMR card magic tricks (D: P.8, line: 241)."*

6.2 The effect of ASMR experiences on the psychosocial wellbeing of students in Finland

Five main themes emerged from the analyses: Positive Emotion, Engagement, Relationships, Meaning and Making Connection, and Accomplishment. Both individual and collective themes are discussed, including overlapping (shown in Table 5 & Figure 6).

Table 5. Themes and Sub-themes for ASMR media effects with wellbeing

Theme	***Sub-Theme***
Positive Emotion	Relaxation Calmness Excitement Joy
Engagement	Mindfulness ➢ Self-awareness ➢ Telepresence ➢ Stop rumination Absorption Flow
Relationship (Connectedness)	Self-in-relationship & love Prosocial behavior, Empathy Digital intimacy
Meaning and Making Connection	Being a part of something bigger A sense of curiosity: Finding a meaningful life
Accomplishment	Self-identity & Innovativeness Memory & decision-making Self-confidence & goal achievement

The subthemes of Table 5 will be interpreted and analyzed in the following section.

Positive Emotion: Relaxation, Calmness, Joy & Excitement

The first subtheme related to the PERMA framework is positive emotions with various range of emotions described: relaxation, calmness, excitement, and joy. Seligman (2011, p. 25) posited that positive emotion is a subjective term that defined by what you think and feel. Feelings of relaxation and calmness (B3; E1) when engaging with ASMR were the most common. Participant C tends to seek both relaxed and calm (B2; R2) feelings and to relieve the "worry" & "busy" mind and showed in the following extracts:

> *Extract 26: "When I noticed that specific videos relaxed my mind after a busy day, I started going back to them when I felt like it (C: P.1, line: 27-28)."*
> *Extract 27: "I certainly calm me down and makes me more balanced after running around or worrying too much the whole day (C: P.3, line: 89-90)."*

For participant D, ASMR video makes him relaxed and calm (B2; R2) feelings so that his "headspace" can be expanded and open the door to relieve his stress and busy mind and then induce sleeping (B3). Meaning was also highly linked with Emotion. He commented, for example, that

> *Extract 28: "I try to get more 'headspace' in my brain with these via calming, soothing, and relaxing sensations. I have a busy schedule with three active bands, school, work, 'Speksi,' and in organizing live music events. Maybe this is my gateway to sleep and turning off stress. So, I try to keep my wellbeing holistic and meaningful in many ways (D: P.8, line: 216-219)."*

On the other hand, the repetitive natural sound (horse walking) (B1) gives the feeling of calm (B2) and then induce the sleeping (B3) in the following quotes:

Extract 29: "Before sleeping, I have listened to horse walking ASMR. I think that it is very calming because there is a smooth and stable rhythm in the horse's walk. At times I have also watched the ASMR horse walking video because it has a beautiful landscape (A: P.2, line 56-58)."

In summary, ASMR videos released the body and mind tension through relaxation, leading to a psychophysiological state of decreased arousal that opposes that of the stress response and is experienced as a calming state and improved quality of sleep.

Excitement & Joy

Participant D frequently described feelings of joy and excitement (E1) in response to ASMR videos, for whom it was a fantastic experience. The accomplishment was linked with Emotion mentioned by him: Some lecture-type ASMR videos related to academic theories can elicit his exciting feeling (B2) to arouse the academic interest and promote him to achieve his goal (E5). The following extract showed his descriptions:

Extract 30: "Some ASMR YouTubers have exciting thoughts and episodes about these subjects. One example is 'Let's Find Out ASMR' -channel. He gives me the energy to be excited about everything. Theories about the universe, humanity, society, and writing about that kind of subject (D: P.4, line: 91-95)."

The slow tapping finger movement (B1) triggers his happy feeling (B2; R2) and enhance his joy (B3; E1) emotion and reading interest.

Extract 31: "In ASMR video, she is calmly pottering about the books and so on. She is introducing books that are interesting to me, and she even reads some of them out loud. That brings me joy, knowing that there are good books to read, and good perceptions to dive in to (D: P.8, line: 213-215)."

The engagement was linked with Emotion: ASMR video also makes him more self-awareness (E2) his positive feelings (E1) and again “headspace” is just like a bridge to link between Emotion and engagement. The repetitive hand movement (B1) can trigger him more joy and excitement of feelings (B2; R2), even in both ASMR video and real music performance.

> *Extract 32: “ASMR gives me more headspace, so I am more present and conscious of my feelings in general. ASMR experiences sometimes come from music - when I’m seeing someone playing so smoothly and calmly. The movements of the hands and finger sometimes give me ASMR experiences. Joy and positiveness come from activities like music, exercise, social life, group work, recording, and so on. Maybe these “unintentional ASMR” -videos do, his delicate hand movements I also feel super-excited when we are working on songs that are meaningful and creative (D: P.3-4; line: 83-88, 96-104).”*

As evident in the interviewees’ statements, ASMR videos generate a range of positive emotions that comprise one facet of wellbeing in the PERMA framework (Seligman, 2004, 81). Some of these emotions were stated by using words such as joy or excitement, which are associated with pleasure. Other emotions were implied from the participant’s descriptions about the relaxation and calmness of expanding “headspace” or enjoying the natural environment via the repetitive sound in ASMR videos.

Engagement: Mindfulness, Absorption & Flow

In the current study, engagement was manifested in both subthemes, (a) as mindfulness meditation: self-awareness, telepresence and stop rumination, and (b) as full immersion in the ASMR videos and activities.

Mindfulness: Self-awareness, Telepresence, Stop Rumination

Mindfulness is defined as intentionally focusing one's awareness on the present-moment experience in an accepting way (Baer & Krietemeyer, 2006, 3). Body awareness was constructed by the participants as becoming in connection with the body to experience oneself through being aware of the body from within and empower one's identity (Gyllensten, Skär, Miller, & Gard., 2010, 441). On the other hand, telepresence adopted by Steuer (1992) to define as being there experience in a mediated environment (Ratan, 2013, 323). Participant A focused attention on the body, breath and sensations, and awareness of whatever arises in each moment. The natural repetitive walking sounds (B1) in ASMR decreased his physiological arousal (heartbeat rate) (B2; R2) and turned his awareness to the present-moment experience and stop his mind wandering (B3).

> *Extract 33: "ASMR video can help me to focus on breath deeper and feel a presence. When I am listening to ASMR Horse walking, at best, I feel how my heart rate drops, and I feel a strong presence. At that moment, I forget all the stress and worries (A: P.2, line 33-34, 58-60)."*

Participant D also reported that ASMR triggered the tingling sensation and "headspace" to facilitate and empower the insight and self-awareness that enabled him to create a pause that allowed them to stop his repetitive spiral rumination.

> *Extract 34: "ASMR gives me more headspace, so I am more present. They shut down my spiral of thoughts (D: P.3, line: 61, 85).*
> *Extract 35: It feels like some sort of meditation where I find my own empty space and white canvas of my mind. So, it's more about engagement for me. Tingling sensation helps me the awareness about my body and the surroundings and similar to some sorts of mindfulness meditation. (D: P.10, line: 206-208, 265-266)."*

Engagement overlapped with Relationships. ASMR video makes him more aware of the present-moment experience (E2) and enhances his love with a girlfriend (E3).

Extract 36: "When I watch the ASMR video with my girlfriend next to me, I'm watching the video and get the body feels more present. (D: P.8, line: 232-233)."

Absorption and Flow

In positive psychology, engagement is referred to as a full absorption state (Seligman, 2011, 12), and the fully mindful absorption is being lost in the moment; finally, a subjective flow state is fully realized in retrospect activities (Nakamura & Csikszentmihalyi, 2014, 243). The engagement was linked with Positive Emotion & Accomplishment. Participant A reported ASMR experiences reaching deeply "immersive" and "flow" states of consciousness and provided him with relaxation (E1) as well as some of the most satisfying, meaningful experiences of schoolwork (E5).

Extract 37: "When I feel excited and interested in things, for example, my schoolwork, I feel very focused on what I do, and I have a flow mode. If I am restless before my schoolwork, listening ASMR videos might help me to relax and concentrate better to do my schoolwork (A: P.3, line 64-66)."

Participant C listened to non-talking sound ASMR videos during the noisy working environment. It helped her to absorbed in the task and experienced time loss and worked longer than intended.

Extract 38: "I listened to long trigger sound videos while working, and those helped me to concentrate. I was much more restless while working when I was not listening to ASMR videos. I felt better about myself after having been able to concentrate on my work better. My work is quite susceptible to being 'interrupted' by something all the time because I do communication work. Listening to no-talk ASMR videos that had consistent sounds helped me to lose track of time. The videos were putting me in flow when I had to do some longer writing work or thinking work (C: P.4, line: 104-107, 119-122)."

Participant D felt that time went by quickly, and he mentioned that ASMR engagement time is different from real-world time and can lead to not noticing real-world time and experienced time loss. He felt just like the connection of mind, body, and sound music altogether.

> *Extract 39: "This happens in music and playing it, especially when I'm doing a demo of some new song or inspirational piece of music. I feel a connection with the music. It feels in my body and fills my mind. In a way, the mind and body become one. This sometimes happens during ASMR videos. So, in a way, the video I've been watching has done its work (D: P.4, line: 107-112)."*

The above in-depth immersion reflected a state of flow that Seligman (2011) regarded as one domain of wellbeing in the PERMA framework; Indeed, in describing flow, Csikszentmihalyi (1990) posits that this state of mind/body necessitates an optimal balance between challenge and skill, results in happiness (Mirehie, & Gibson, 2019, 9).

Relationships (Connectedness): Self-in-relationship, Prosocial behavior & digital intimacy

The third sub-theme associated with PERMA is relationships that are emerged when participants mentioned extensively about the importance of ASMR's companions in shaping their digital-intimacy experiences. Numerous statements described the presence of others in the interaction of ASMR videos as generating a sense of prosocial, self-compassion, and digital intimacy relationships.

<u>Self-in-relationship & love</u>

Participant C can be more sensitive to the love of others after watching the ASMR affirmation and kindness videos. The soft and kind words of ASMR videos change her prior self-negative thought and enhance her self-compassion and accept that everybody has challenging life experiences and makes mistakes (common humanity) and take actions with kindness and understanding for herself (self-kindness).

Extract 40: "I feel being loved by my friends and family very often. I still feel like the person talking is someone who does not know me. On the other hand, the affirmations and kind words do make me think about positive and gentle thoughts about myself, and they help me not be so hard on myself (C: P.5, line: 141-144)."

Prosocial behavior & Empathy

Relationships were connected with positive emotion. Non-speaking and affirmation contents of ASMR videos make her calm (B2; R2) and increased acceptance of her peers and could let go of things more easily. In stressful situations, such as business meetings and group working, she could more clearly see and understand what was happening and accept with others more quickly, which seemed to help her move on. Thus, she decreased reactivity and increased response to cognitive flexibility in the group working environment.

Extract 41: "Listening to ASMR videos calmed me down and made me feel less irritated when something bothered me at work. I tried to listen to affirmation videos … and calming down videos. Again, it was no-talk calm trigger sounds, which made me calmer (C: P.5, line: 133-137)."

Extract 42: "ASMR videos have helped me to calm down if I'm doing group work. I can be quite tense and straightforward if I am irritated by the people in the group, so I have listened to ASMR videos to calm myself down before meetings (C: P.6, line: 160-162)."

ASMR videos with slow painting movement enhance his ability to experience and communicate to feel a sense of others' (friends and his girlfriend) inner experiences; be more present to others' feelings; empower other's their body sensations and feelings.

Extract 43: "When I watch the ASMR video with my girlfriend next to me, I'm watching the video and get the body feels more present. I've sometimes been watching this Ross the painter ASMR video with some friends at the same time. In a way, sometimes, when I am sharing that sensation about ASMR more powerful (D: P.8, line: 232-236)."

The specific discussion topics of ASMR videos enhance him to have present-focused awareness and get more ideas to understand others' perspectives and notice how to help them. Besides, these types of ASMR videos also increase his sensitivity to getting help from others (by changing his thoughts) in the school.

Extract 44: "Some of the ideas, discussion, and subjects of the ASMR videos enhance the ideas for helping others and so on (D: P.5, line: 118-119)."

Extract 45: "I am helping with some tasks from school. I get help from my friends when I need some help to organize my chains of thoughts or feelings (D: P.4, line: 114-116)."

Digital intimacy

The slowing and repetitive movement ASMR videos elevate his sensitivity to being loved and also giving love to others.

Extract 46: "ASMR videos are usually very slow, and there isn't much happening. So, in a way, I find the sensation of loving in those little things. I think love is the clue of our existence toward others, and it's in life's every thingness, and it is seen in short forms (D: P.5, line: 138-139, 141-142)."

These types of ASMR also induce his awareness to make a connection with the others and the world. This aspect was further exemplified by the relationships that participant D formed while engaging in (ASMR) virtual worlds.

Extract 47: "After the ASMR video, I feel like I'm more connected to the person and engaging after watching ASMR videos. Some of the very simple searching's like slow movements or some kind of visual triggers ASMR videos gives me more headspace, so they make me more aware of the world, of the room in the situation of the surrounding and make me more aware of the world, so they make me in a way more aware of the persons I have relations with roommate or girlfriend (D: P.8, line: 221-227)."

The intimacy enhanced through the ASMR videos was affected in real life, revealing the way these virtual stimulating triggers with simple and slow movements created new forms of closeness (loves and the world) to extend and continue.

Meaning and Making A Connection

The fourth sub-theme associated with PERMA, meaning, was mainly depicted in the narratives of the Participant D. Almost all interviewees referred to Meaning, with some variation: ''Meaningful? I don't know how to answer that question with ASMR". The participant showed a more in-depth understanding and stronger emotional attachment, engagement, and relationship to ASMR videos and to his both environment and activities, all of which created meaning for them. Seligman (2011) suggests that a central part of the meaning domain is a feeling that you are doing something meaningful and part of something bigger (Mirehie & Gibson, 2019, 11). Meaning and Making the connection of experiences was also the central theme. Subthemes included being a part of something bigger and personal curiosity relevance of the experience.

Being a part of something bigger

Participant D emphasized ASMR YouTube videos to act as a platform to let him connect with others and the world meaningfully. The platform can also make the networks link to understanding the others. All these connections can give him a sense that he is part of something bigger than himself. Meaning is essential not just to him, friends and family, but rather to a much larger group, such as the whole world human race. Also, the slow and repetitive hand movements in the videos can trigger him to connect the ASMR platform and others.

> *Extract 48: "Maybe these "unintentional ASMR" -videos do. For example, this is super meaningful. I just love the simplicity of this, his delicate hand movements, and a sense of something larger happening (D: P.4, line: 101-104).*
> *Extract 49: ASMR experiences and videos help me to connect to the world when you are connected to the world might have more meaningful relationships and more meaningful relationships with the world. It gives me a platform for a meaningful life. (D: P.9, line: 238-240)."*

A sense of curiosity: Finding a meaningful life

Participant D's narrative shows the links between the three themes of Meaning, Relationships, and Emotion as he describes the encounter: He has the unwillingness subjective experience, such as shyness feelings, taking action to avoid and escape to make a friendship with others in his childhood development. However, the ASMR-like experiences promote him exposure to previously avoided experiences and giving him good feelings (B2, R2; E1) by focusing full attention (E2) and curiosity to explore others' inner meaningful thinking and also help himself connect with others and more understand the meaning of his own life. Later, he actively engaged ASMR videos instead of ASMR-like real experiences to extend his curiosity and exploration of other meaningful life. Again, the repetitive mundane movements are the primary trigger of this effect.

Extract 50: "As a child, I was very shy and didn't meet new people very much. However, later years, I've learned to get to know people in a meaningful way. I see humans fundamentally a social animal, so I try to explore that. I think I have a great social life, on which I'm truly grateful. I've heard people saying that I have a large amount of social capital. I've always wanted to know people's true meanings in life, asking about what they want and try to connect to every people in a meaningful and deep way. I would like to see the doctor, the librarian, and the people in their specific works, which give me ASMR experiences. The offices, sound of paper, typing, and intense focus gives me shivers and good feelings. I don't have that much in my life, so I'm trying to compensate it with the ASMR videos. (D: P.5, line: 122-135)."

As noted above, this theme was more prominent in the experiences of high-level ASMR participants. For him, ASMR videos and experiences become a central part of life, and associated activities provide them with meaning, which seems to be consistent with Seligman's (2011) conception of the meaning domain.

Accomplishment

The fifth and final subtheme related to PERMA, accomplishment, emerged through the participant's descriptions about his sense of achievement to ASMR. Narratives about enhancing self-identity, memory & decision-making, and self-confidence were associated with a sense of achievement. The participant mentioned the term of headspace that is mainly involved in relation to both memory processing and self-identity.

<u>Self-identity and Innovativeness</u>

The accomplishment was linked with Relationship and Meaning. ASMR videos make him recall the memory of the student identity through the headspace and time. The student identity can be implicated to recall further and give more ideas about the coping skills to deal with different tasks in the university, such as examinations, playing music, and other social activities (E4). In creating his narrative of student identity, he and objects are tightly

interconnected (E3). Everything is instrumental in setting up the world and moved memory into his mind and finally are implicated in creating future ideas.

> *Extract 51: "I feel that some videos help me creating student identity by giving ideas or just giving me time to think about something else. ASMR helps me aware of the daily tasks in school or giving me more ideas about social life. I think the answer lies again in the solid student identity. But also, I need to have a feeling of great social life so that I feel appreciated and loved. Everything is connected (D: P.6, line: 152-158)."*
>
> *Extract 52: "When I'm watching the ASMR videos, I remember how to make music meaningful and how to make the world meaningful, sometimes the video reminds me. Sometimes they remind me of more awareness. (D: P.9, line: 246-248)."*

ASMR videos content enhance him remember something and create student identity and a psychological link between past himself experience and current himself memory. Finally, the connection between past and current experiences can further extend the new ideas into his future meaningful life, music, and the world. He mentioned that ASMR media effects are the same as mindfulness meditation.

> *Extract 53: "ASMR is in the way the same as meditation. On the other hand, it fills your headspace with sounds and visuals to engage. I feel that some videos help me creating student identity by giving ideas or just giving me time to think about something else (D: P.6, line: 150-151).*
>
> *Extract 54: It gives me headspace and a sense of awareness, and it helps me to organize my thoughts and feelings. Then I try to remember why I am in school. I'm in so that I have a connection to my "student-identity." If I don't remember or have my solid student identity, I'm a mess, unmotivated, unenergized, etc. (D: P.5, line: 144-148)."*

Memory & decision-making

The accomplishment was connected with Meaning, Engagement, and Positive Emotion. ASMR video makes the informant decrease the physiological arousal (i.e., calm and relax) (B2, R2) and more focus attention (E2) to headspace. To take Participant D as an example:

> *Extract 55: "ASMR something calming you down and relaxing and more headspace again. It helps me to concentrate on my headspace and more room to memorize. (D: P.10, line: 262-263)."*

Slow hand movement ASMR video triggers the informant's specific memory to remember how to play the music meaningfully (E4).

> *Extract 56: "The one about the ASMR card magic tricks, but the way he does it reminds me of the question in music on how to compose and how to play music and how to play and remind me about the question about how to play, not what to play. So, you don't have to have a fast-playing all real technical songs you have to have simple songs which you play meaningfully. (D: P.9, line: 241-245)."*

ASMR video also stops his mind wandering and more focus on the present-moment situation and triggers the informant's headspace to recall past experiences and help him decision-making and problem-solving.

> *Extract 57: "I have different goals in music, work, and in school, so maybe ASMR is a way to get away from the things and giving me more headspace. In a way, some of those ASMR videos are again reminding me about what is essential in life, and then they will affect my goals as well. (D: P.10, line: 250-253)."*

Self-confidence & Goal Achievement

The repetitive painting movements ASMR video give the informant's positive affect and stop rumination and finally elevate self-confidence to re-organize the ideas in connection with the world and keep the right track and pathway towards the goals (See, for example, participant D).

> *Extract 58: "Sometimes, I feel I don't have the time to do everything in a way I want to. Moreover, sometimes I'm scared that I don't have the capacity to do some tasks (feeling to the dump or stupid or lazy.) (D: P.6, line: 175-177)."*
>
> *Extract 59: "ASMR helps me organize my thoughts. It gives me a sensation about the world itself as a whole. Some of the ASMR videos are roleplayed by a friend, who tries to get your feeling more comfortable. Bob Ross is master of this. His worldview is so relaxing that I'll usually forget my problems. It gives a feeling that I am in the right place and that I have things to do for the whole world. (D: P.7, line: 180-188)."*

The fact that ASMR enhances the Emotion and engagement for him to recall the learning skills and dare to take part in the activities and generates a sense of accomplishment that seems to contribute to their overall sense of wellbeing.

Different facets of PERMA were combined in the participants' accounts. Specifically, this was the case for accomplishment and positive emotion, engagement, positive emotion, relationships and accomplishment, relationships and positive emotion, accomplishment, engagement, meaning, and positive emotion. The interconnections between five PERMA themes are shown in Figure 6.

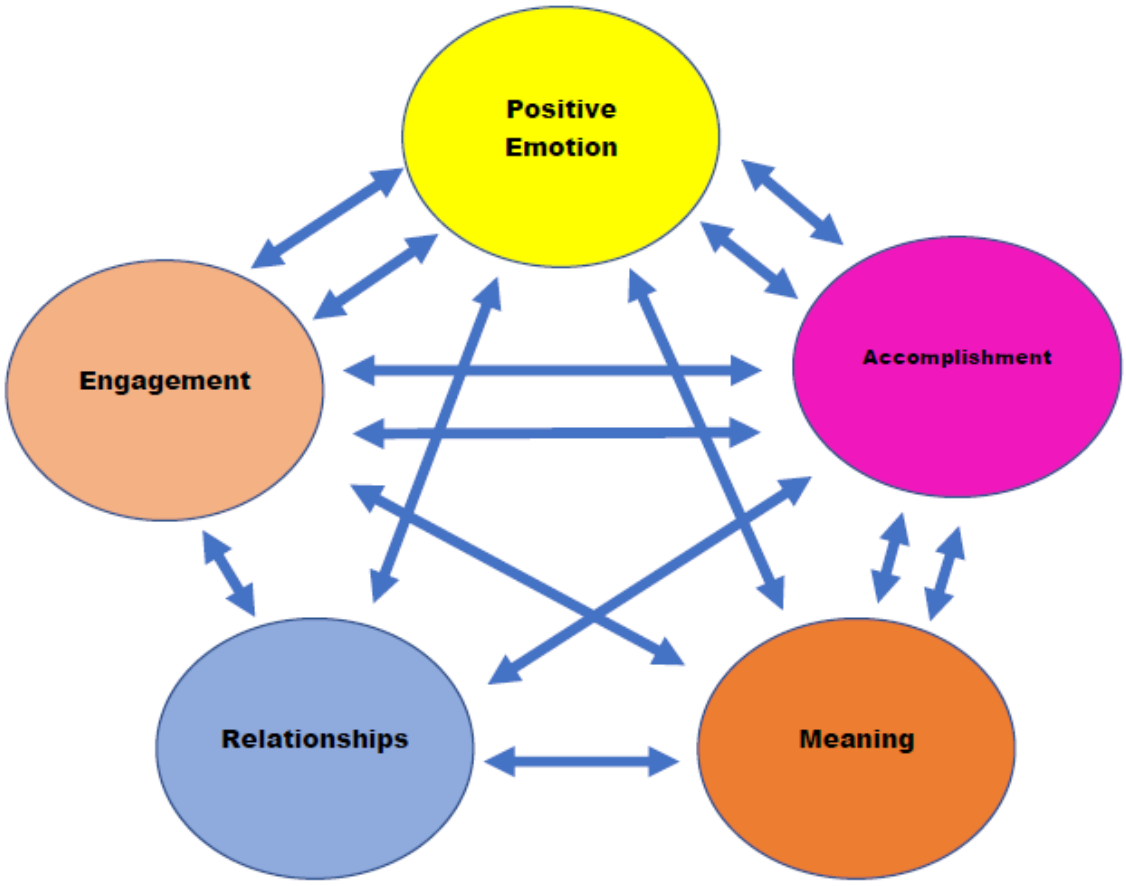

Figure 6. The relative strength of the five PERMA themes and interconnections between themes. This diagram indicates the relative strength of both the individual themes and their associations (number of arrows represented), based on the numbers of references in interview transcripts.

Figure 6 showed that the relative individual strength of the five themes of PERMA is ordered according to the number of arrows as follows: 1. Accomplishment, 2. Emotion and Engagement, 3. Meaning; and 4. Relationships. All these themes with their multiple subthemes will be discussed in detail in the following chapter. The chapter will discuss these themes about existing research literature and will address the implications of the findings of this study.

7 Summary of Findings & Discussion

Through the participants' recollections and expressions of ASMR lived experiences, this study gives insight into the phenomenon of ASMR engagement and its effect on multiple dimensions of human well-being. This is the first study to unite the DSMM with the PERMA framework (Seligman, 2011) and the first to explore and link the distinguishing characteristics of ASMR video with well-being outcomes. Hence, this study proposed the elaboration of the ASMR media effects model shown in Figure 7 to represent the ASMR experiences with psychosocial wellbeing. The current findings point to which conclusions and several directions for future research.

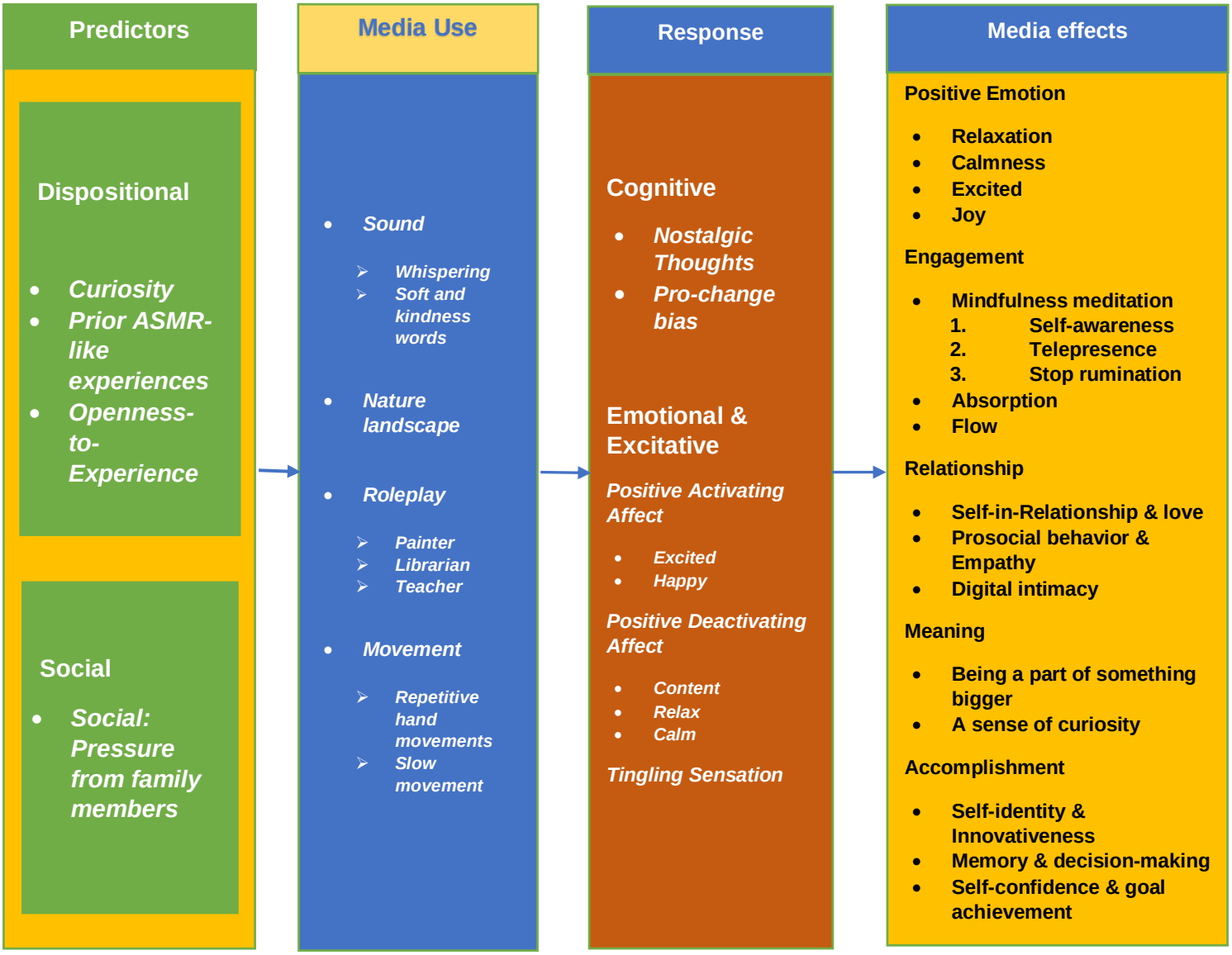

Figure 7. Proposed model for ASMR media effects with wellbeing

In figure 7, the proposed model is composed of four building blocks. The first one represents the predictors of ASMR media use, including dispositional and social subthemes. The subthemes include prior ASMR-like experiences, social pressure from family members, and curiosity. The second building block represents the subthemes of media use and contents of ASMR, including sound, nature landscape, roleplay, and different types of movement. The third one represents the body sensation and reactions during or just after media exposure. The subthemes include cognitive (e.g., nostalgic thoughts and pro-change bias), emotional and excitative (e.g., tingling sensation) states. The last block represents the media effects based on the five themes of PERMA, and multiple subthemes emerged shown in figure 7. In this study, participants expressed their personal stories through unique ASMR lived experiences and interpretations with their common points and suggested that engagements with ASMR can have a significant effect on human well-being. The details of each theme and subthemes' meanings are discussed in the following sections.

7.1 ASMR Intentional Use and Multisensory Integration

The findings of the current study show that the prior ASMR-like experiences and Openness-to-Experience personality traits were identified as media and non–media use predictors and moderators to predict and moderate ASMR media use or as its influencing effects. All participants have completed the BFI test before the first interview, and the result found that two-thirds of participants scored higher on Openness-to Experience (See Table 1). The findings are consistent with prior research that ASMR experiencers have higher scores on the Openness to Experience and lower scores on Conscientiousness subscales of BFI (Fredborg & Smith, 2017, 1). Openness to Experience refers to an individual's curiosity and preference for novel and stimulating experiences (McErlean & Banissy, 2017, 9). However, one participant has lower scores in Openness-to-Experience but a high curiosity tendency to the use of ASMR videos (Extract 5). It may be the inconsistency between the previous studies and the findings to reflect differences in sampling sizes and methodology. Additionally, participants who had experienced previous ASMR-like events (Extracts 1 & 2) were more prone to ASMR media use later. Also, the similar situations of affecting ASMR media use was found to be related to participants who consumed previous television coverage of ASMR-like programs (Extract 3). These findings linked with the previous self-report experiencing ASMR since childhood (Poerio et al., 2018, 2). Future research examining media effects related to ASMR media predictors

should further explore how these previous ASMR-like experiences moderate the ASMR media effects, such as nostalgic thoughts. Social aspects of ASMR media effects are also explored and identified in the current study. The findings indicate that the preferences of family members (Extract 4) could influence the ASMR media use. This result is aligned with previous research about a familial aspect of the ability to ASMR experience (Barratt & Davis, 2015, 10).

The current findings (Extracts 18-24) in terms of the types of ASMR media contents and triggers are similar to both Barratt and Davis (2015) & McErlean and Banissy (2017) studies. They identified whispering, attention, crisp sounds, finger tapping, hair brushing, various role-playing scenarios, and slow movements as common triggers (Barratt & Davis, 2015, 6; McErlean & Banissy, 2017, 10). Also, the current results show that the reasons for watching ASMR videos described by participants (See Table 4) were similar to those found in the Barratt and Davis (2015) study. All participants mentioned that ASMR videos made them relaxed, enhanced sleeping, and reduced stress. Moreover, some of them used ASMR videos while working, doing the assignment, and playing music. These results directly concur with previous results and indicate that ASMR videos are usually utilized for helping sleeping, relaxation, and for easing stress (Barratt & Davis, 2015, 11; McErlean & Banissy, 2017, 10).

Regarding media response states, there are several responses are expressed by participants, including the experience of ASMR regarded as pleasurable, the calming and relaxation effects of the video, feeling comforted or cared-for of ASMR videos, expressions of nostalgic thoughts and pro-change bias, and the complicated and mixed feelings of tingling sensations. Participants mentioned that the tingling sensations were started from the right side and can spread from the head (from upper back to forehead) to ears, neck, and arms. These findings reinforce previous study results that the physiological response of a tingling sensation most often originated at the back of the head and neck (Barratt & Davis, 2015, 11). Moreover, the result also shows that the tingling sensation could be acted as a central hub to regulate the physiological responses of arousal, relaxed, and calm (Extracts: 16 & 17). It seems to be involved in a unique internal system connecting the body and mind through the channels & vessels (Extract 15), and that special internal system would be described as a regulatory role in the mixing console analogy in DSMM. In terms of DSMM, these emotional reactions and mediators are also related to other media effects, such as empathy (Extracts 43 & 44), confidence (Extracts 58 & 59), and

compassion (Extract 40). Besides, the media use of ASMR could act as a moderator to change the cognitive bias thoughts of resisting ASMR usage (Extract 8 & 9) and recall the nostalgic reverie (Extract 6).

7.2 Bodily Self-awareness in harmony with Psychosocial Wellbeing

In terms of both DSMM and Seligman's first PERMA element, positive emotions are appeared as joy & excitement (Extracts 30 & 31) and relaxation & calmness (Extracts 26-29) through the activating (happy & excited) and deactivating (relaxed & calm) positive affects (Extracts 10-14) of ASMR media response states by watching ASMR videos (indirect media effects). These findings are consistent with the earlier work on ASMR self-reports and physiological measurements. First, ASMR experiencers are reported that more frequent tingling, increased levels of excitement and calmness, and decreased levels of stress after watching a range of ASMR videos. (Poerio et al., 2018, 8). Second, ASMR is explicitly associated with the reduced heart rate and increased skin conductance level in ASMR participants while watching ASMR videos. (Poerio et al., 2018, 13). When taken together, these studies provide cumulative support that ASMR engagement is mainly associated with such activating and deactivating self-reported emotions and physiology coincided. These responses are corresponding to the emotional complexity of the ASMR phenomenon (Poerio et al., 2018, 14). Besides, the present findings suggested that the spoken voices, slow and repetitive hand movements (Extracts 29, 30 & 31), maybe the indicative of these complex emotional responses. These results are consistent with the previous research that both spoken and sound-only ASMR videos triggered significantly more excited, calmer, and less stressed (Poerio et al., 2018, 8).

Engagement, the second pillar of PERMA, emerged in the ASMR experiences, which were in the form of mindfulness, full absorption, and flow-like mental state in the activity. The present findings showed that the ASMR videos (e.g., non-spoken) caused time loss and absorbed into their activities. For participants (Extracts 38 & 39), the experience of time loss causes them to neglect the time flow of real-world tasks such as working in an unfavorable environment and playing the music. This result aligns with Barratt & Davis's (2015) findings in that the passive component of flow was associated with the ASMR experience and also concurred with the increased absorption when ASMR experiencers engaged in music or when concentrating on a work-related task which are typical examples of flow-inducing activities (McErlean & Osborne-Ford, 2020, 9). Moreover, the

interviews also yield data to find that ASMR experiencers used ASMR videos to alleviate negative feelings by enhancing both self-regulation of attention and non-judgmental awareness of the present moment. For participants (Extracts 33,34, & 35) state that the ASMR videos made them more aware and accepting of their present- moment experience, including their own inner emotions and body sensations, and distract their repetitive spiral thoughts. The findings are consistent with previous results of increased mindfulness in ASMR (Fredborg et al., 2018, 8). The repetitive sound (Extract 33) of ASMR videos is the main trigger to enhance the reminiscent of mindfulness meditation, and the previous literature suggested that the repetitive sounds and watching people touch things may enhance the viewers to get more tingles and create the mental structures (mindfulness) (Fredborg et al., 2018, 10). Combining the results as mentioned earlier, people absorbed in ASMR videos may distract from psychological distress (e.g., ruminations), which is similar to the other immersive means as effective pain reduction strategies (McErlean & Osborne-Ford, 2020, 8).

Relationship was the third domain in PERMA among ASMR experiencers in this study. Strengthening existing intimate relationships (Extracts 43, 46 & 47) and developing the altruistic behaviors (Extracts 42 & 44) after watching ASMR videos is an essential aspect of these ASMR's experiences. The sound-only (e.g., slow, repetitive painting movement) ASMR videos enhanced participants' sense of love towards others. On the other hand, the spoken-only (e.g., affirmation and discussion contents) ones strengthened their awareness of others and made them more prone to help others. This finding aligns not only with previous studies on ASMR research that the spoken-only ASMR videos made ASMR participants feel more socially connected (Poerio et al., 2018, 8) but also noted the importance of social interactions (empowering the loved ones and friendships) (McErlean & Banissy, 2017, 613). Lochte et al. (2018) further suggested that the attention-receiving contents in many ASMR videos were similar to being cared for someone, and this suggestion is fitted into the current result. Also, some soft and kindness spoken ASMR videos (Extract 40) seem to enhance participant's self-compassion to change the negative thoughts and feel the others' love. Davis et al. (2011) stated that self-compassion fully mediated the relationship between empathy and mindfulness. Hence, the results suggest that spoken-only ASMR videos are most likely to improve self-acceptance and interpersonal relationships.

In PERMA (Seligman, 2011), meaning referred that individual life is valuable and feeling connected to something greater. The participant spoke of finding meaning and a sense of purpose through the ASMR YouTube video as a platform to connect with others, and they linked this personal growth perspective with better wellbeing. Moreover, the meaningfulness of the experience is associated with the development process of character, such as developing the curiosity of others and focusing on the present moment. They move towards the acceptance of self and use reframing situations to find meaning and promote positive emotion. The findings linked with the previous research suggested that mindful awareness helps to strive for the purpose in life and enhances mental health (Crego, Gómez-Martínez, & Karim., 2019, 2). Curiosity can motivate the exploration of the self and the world by reducing the self-discrepancy gap between actual and ideal self (Ivtzan, Gardner, & Smailova., 2011, 322). It could be possible to link this ASMR mediated self-regulatory and positive meaning effect with some exploratory findings: (1) ASMR videos serve as novel inputs triggering new interpretive information and arousing one's curiosity, (2) allow stimulus increases openness to alternative viewpoints and reframing the adverse events through self-reflection; (3) shifting the attention toward the positive aspects of self and world and enhance positive emotion; and (4) deepened the sense of meaning and finally engaged in prosocial behavior (Garland, Farb, Goldin, & Fredrickson., 2015, 7-12).

In terms of the fifth PERMA element, accomplishments referred to making progress toward goals and having a sense of achievement (Seligman, 2011). Participants seem to gain a sense of accomplishment (e.g., skills & goal settings) through ASMR videos utilizing the mindful awareness and headspace of self-identity, recalling the memories, and broaden the connections with others. The sense of confidence in their ability further empowers a sense of meaning and purpose. Grégoire et al. (2012) suggested that individuals being more attentive and aware tend to be more motivated autonomously and fosters their wellbeing (Grégoire, Bouffard, & Vezeau., 2012, 244). Moreover, autobiographical memory has two components; episodic to re-experience past events and semantic self-knowledge that comprises facts and details about oneself. Haslam et al. (2011) stated that knowledge of personal semantics mediated the relationship between episodic self-knowledge and identity and hence one's sense of self may determine what one remembers (i.e., knowing who I determine what I remember) and vice versa (Haslam, Jetten, Pugliese, & Tonks., 2011, 198-199). Also, semantic memory is used to provide the contextual information in

order to activate the relevant action rules in the procedural memory (Wang, Teow, & Tan., 2014, 1476), and listening ASMR positive contents can enhance the short-term memory (Kim et al., 2019, 229). Therefore, the present study's findings complement and link the description of the relevance of ASMR for fostering meaning, skills & goal settings by using awareness of self and enhancing the retrieval of memories, such as episodic, semantic, and working memory.

7.3 Limitations

There were several limitations to the current study. The combination of synchronous and asynchronous data collection may affect the findings. Moreover, lacking the body language and tone of voice, for instance, is making it difficult for the interviewer to know the psychological responses of the interviewees. Furthermore, the findings from this study are not generalizable owing to an exploratory study using a small sample (though perfectly suitable for IPA). The ASMR videos sampling is also self-selecting, and the ASMR experiencers that participated are not possible to represent all experiences. The data are all self-report and thus lead to different biases, such as recall biases. Replication using larger samples and other methodologies (e.g., quantitative) are therefore needed. Furthermore, DSMM's developmental susceptibility factors and transactional effect cannot be identified in the study; that is, the failure to include younger adolescents and the cross-sectional work are undoubtedly limitations of explorations in both elements of DSMM.

8. Conclusion and suggestions for future research

This study illuminates the variables in ASMR media effects research and moving forward, ASMR media effects researchers can utilize ASMR media effect variables and ASMR media effects model to inform the design of their studies. Moreover, they may choose to examine further the variables included in this model or may work to identify other missing variables and which could be included in future work to increase understanding. By using quantitative methods, examining these variables in the psychosocial wellbeing among larger samples could be a new direction for future research. Second, the social and cultural aspects of ASMR media effects are not understood in the current study. Thus, how the social and cultural aspects of consuming, understanding, and applications of ASMR video affected the cross-cultural phenomenon (e.g., ASMR Mukbang in South Korea) is needed to research in the future.

Furthermore, future research could also expand on the current findings by investigating teens' cognitive and emotional reactions to ASMR videos and assessing whether they get similar benefits as adults. Longitudinal work would facilitate examination of relationships between ASMR media use and subsequent wellbeing; it could also examine whether positive media effects and ASMR media use over several months has decreasing returns or, conversely, has increased the benefits. Therefore, future research should include a longitudinal approach. Additionally, the result suggested that tingling sensation seems to be controlled by a specific unknown system, and this system may act as a central hub to connect body and mind through the complex physiological responses. At the same time, the meridian is one of the terms in autonomous sensory meridian response, and the meridians are invisible pathways in which Qi flows through the energy network that connects all parts of the body, and the mind to the environment according to Traditional Chinese Medicine (TCM) theory (Jeon & Lee, 2013, 3; Li & Zhao, 2012). ASMR phenomenon is characterized by pleasant tingling sensations similar to the description of De-qi sensations (e.g., tingling) in TCM (Zhu et al., 2013, 1); but the physiological mechanisms that produce De-qi effect are still not well understood (Yang et al., 2013, 1) and the same situation happened in the tingling sensation of ASMR (Valtakari et al., 2019, 3). Therefore, ASMR media effect researchers can explore this unknown area in multidisciplinary approaches, such as biochemistry, genetics, neuroscience, and psychophysiology. Hence, longitudinal studies with multidisciplinary methods are recommended to illustrate and explore the challenges and the lived experiences of ASMR in unknown research regions.

Research with a focus on the relationships of wellbeing with ASMR media effects experiences is the first time using both DSMM and PERMA framework. The findings suggest that ASMR experiences are shown to be linked to wellbeing, and as such, I propose an ASMR media effects model to elaborate both DSMM and PERMA framework that characterizes the five wellbeing domains and DSMM variables. The results show that ASMR has flow-like and absorption states, and both occur when there is focused on attention to present-moment stimuli and simultaneous awareness of self. Ultimately, based on the role of attention, both tingling sensations and awareness appear to be linked to mindfulness. The mindfulness-like practice in ASMR of which can result in the elevation of positive emotions and other facets of wellbeing. As such, the findings provide support for the connection of ASMR and wellbeing through mindfulness, as noted by Fredborg et al.,

(2018, 11) and Del Campo & Kehle. (2016, 5) that ASMR linked with intrinsically to mindfulness to improve a variety of psychological wellbeing similar to mindfulness-based treatment programs. In conclusion, this study suggests that university student's engagement with ASMR may uniquely contribute to enhancing wellbeing, such as feeling happy, elevating the concentration on tasks at hand, improving the quality of sleep by stopping rumination, increase self-confidence, and motivating altruistic behavior. This has societal implications for the pursuit of flourishing and reaching wellbeing goals at-university or at-home stress and adaptive program.

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Appendix A

Student Demographics Questionnaire

Name: Email:

Phone #: Academic major:

Sex: female /male/ other Age:

Are you a Finnish citizen: yes no If no - Country of origin? _____

The Big Five Personality Test

(Source: John, O. P., Donahue, E. M., and Kentle, R. L. (1991). The Big Five Inventory-Versions 4A and 54. Berkeley, CA: University of California, Berkeley, Institute of Personality and Social Research.)

Instructions

In the following table, you mark the statement (1-50) on the left side of the box: on the scale 1-5, where 1=disagree, 2=slightly disagree, 3=neutral, 4=slightly agree and 5=agree.

Rating	I…..	Rating	I…..
	1. Am the life of the party.		26. Have little to say
	2. Feel little concern for others.		27. Have a soft heart.
	3. Am always prepared.		28. Often forget to put things back in the first place.
	4. Get stressed out easily		29. Get upset easily.
	5. Have a rich vocabulary.		30. Do not have a good imagination.
	6. Don't talk a lot.		31. Talk to different people at different parties.
	7. Am interested in people.		32. Am not really interested in others.
	8. Leave my belongings around.		33. Like order.
	9. Am relaxed most of the time.		34. Change my mood a lot.
	10. Have difficulty understanding abstract ideas.		35. Am quick to understand things.
	11. Feel comfortable around people.		36. Don't like to draw attention to myself.
	12. Insult people.		37. Take time out for others.
	13. Pay attention to details.		38. Shirk my duties.
	14. Worry about things.		39. Have frequent mood swings.
	15. Have a vivid imagination.		40. Use difficult words.
	16. Keep in the background		41. Don't mind being the center of attention.
	17. Sympathize with others' feelings.		42. Feel others' emotions.
	18. Make a mess of things.		43. Follow a schedule.
	19. Seldom feel blue.		44. Get irritated easily.
	20. Am not interested in abstract ideas.		45. Spend time reflecting on things.
	21. Start conversations.		46. Am quiet around strangers.
	22. Am not interested in other people's problems.		47. Make people feel at ease.
	23. Get chores done right away.		48. Am exacting in my work.
	24. Am easily disturbed.		49. Often feel blue.
	25. Have excellent ideas.		50. Am full of ideas.

Appendix B

Informed Consent Form

Research Institution: University of Lapland

Department of Institution: Faculty of Education

Research Supervisor: Frangou Satu-Maarit

Student Researcher: Chan Ko Wai (Desmond)

Title of Study: Phenomenological study about enhancing university student's psychosocial Wellbeing through YouTube videos: Autonomous Sensory Meridian Response (ASMR) in Finland.

You are invited to participate in a master's research study being conducted by Chan Ko Wai, who is studying the master's degree in media education at the University of Lapland. This consent form is designed to inform individuals of their research involvement entirely. Please review the document carefully and feel free to ask for additional clarification.

What is the purpose of this research?

I am interested in exploring how ASMR experience through YouTube video enhances Psychosocial Wellbeing for university students in Finland.

Who can participate in this study?

Students selected have confirmed experience in the ASMR phenomenon.

What is the time to agree to participate in this research?

You will be asked to participate in two in-depth interview series regarding how ASMR experience through YouTube video enhances Psychosocial Wellbeing at the University of Lapland. You will be provided with Personality Test before the study and interview questions during the study and ask to check for accuracy and share any additional commentary within seven days of receiving the transcription through email.

What are the possible disadvantages of participating in this study, and how should these risks be minimized?

As in all research, there may be unforeseen risks to you as a participant. This study presents only minimal risk because data is collected and communicated through the anonymity of a pseudonym.

What are the advantages of participating in this study?

Your participation in this study may help me shape the way to understand the relationship between ASMR experiences and Psychosocial Wellbeing. You may benefit from knowing you are participating in sharing precious experiences of ASMR and Welling at the University of Lapland. All the information collected from you is confidential. Your name will not appear on any documents where information is recorded. Names will be changed with a pseudonym of your choosing and will be kept in a separate master list. Once the interview transcripts are collected and analyzed, the master list will be destroyed.

What if you want to cease participating in this study?

You can choose to stop participating in the study at any time for any reason.

If you have any inquiries before or during the study, you can contact the Researcher, Mr. Chan Ko Wai, at kchan@ulapland.fi if questions arise during the study.

I understand my participation in this informed consent document. The risks and benefits have been explained to me. I consent and voluntarily agree to participate in this study.

Your Name Participant's signature

_____ _____

Date: _____

Appendix C

Interview One: Focused ASMR lived experiences History

1. “How did you experience ASMR from the beginning up to now?”
2. “Would you tell me more about your journey (from the beginning up to now) into becoming an ASMR experiencer? Prompt: What influenced your decision to engage in ASMR?”

(A review of the participant's life history related to the topic of inquiry, up to the time s/he ASMR experiences. Objective: to find out as much as possible about the context of the participant has lived ASMR experiences leading up to now: early experiences with ASMR experiences? what were the perceived emotional and mediated experiences of the ASMR phenomenon?)

Sub-Questions/Explorations:

The participants do NOT need to answer ALL sub-questions. These questions help them to think deeper.

ASMR Viewing Habit

1. How often, on average, do you use ASMR-triggering videos to relax?
2. How many ASMR videos do you watch in a single period?
3. What is the time of day do you usually watch ASMR videos?
4. Please briefly describe the conditions you require to achieve ASMR sensations (e.g., busy room, bright lighting, etc.)
5. Why you engage in ASMR experience?

ASMR experience: Tingling Sensation

1. What are the earliest age you can recall having an ASMR experience and describe what you feel and happenings?
2. How long does the tingling sensation typically last?
3. What do you feel a tingling sensation when watching ASMR videos?
    a. Where can your tingles originate? (Possible list: Head, Shoulders, Chest, Back, Arms, Stomach/lower abdomen, Genitals, Hips, Legs, and Feet, etc.)
    b. Does this tingling sensation always originate in one area of your body?
    c. Do you feel this tingling sensation more on one side of your body than the other? If yes, which side, or both sides?
    d. Which body areas that experience tingles when the sensation is most intense?
    e. Is the tingling sensation triggered more easily by hearing in one ear than the other? (left ear, right ear, or both ears are the same)

ASMR experience: Mood and Sleeping issues

1. What do you feel that watching ASMR videos helps with your sleeping issues? How often do you use ASMR videos or audio files to help you go to sleep?
2. What do you feel that watching ASMR videos affects your mood? How often do you use ASMR videos or audio files to help you relax (but not sleep)?

Appendix D

Interview Two: The Details of Experience

Instructions:

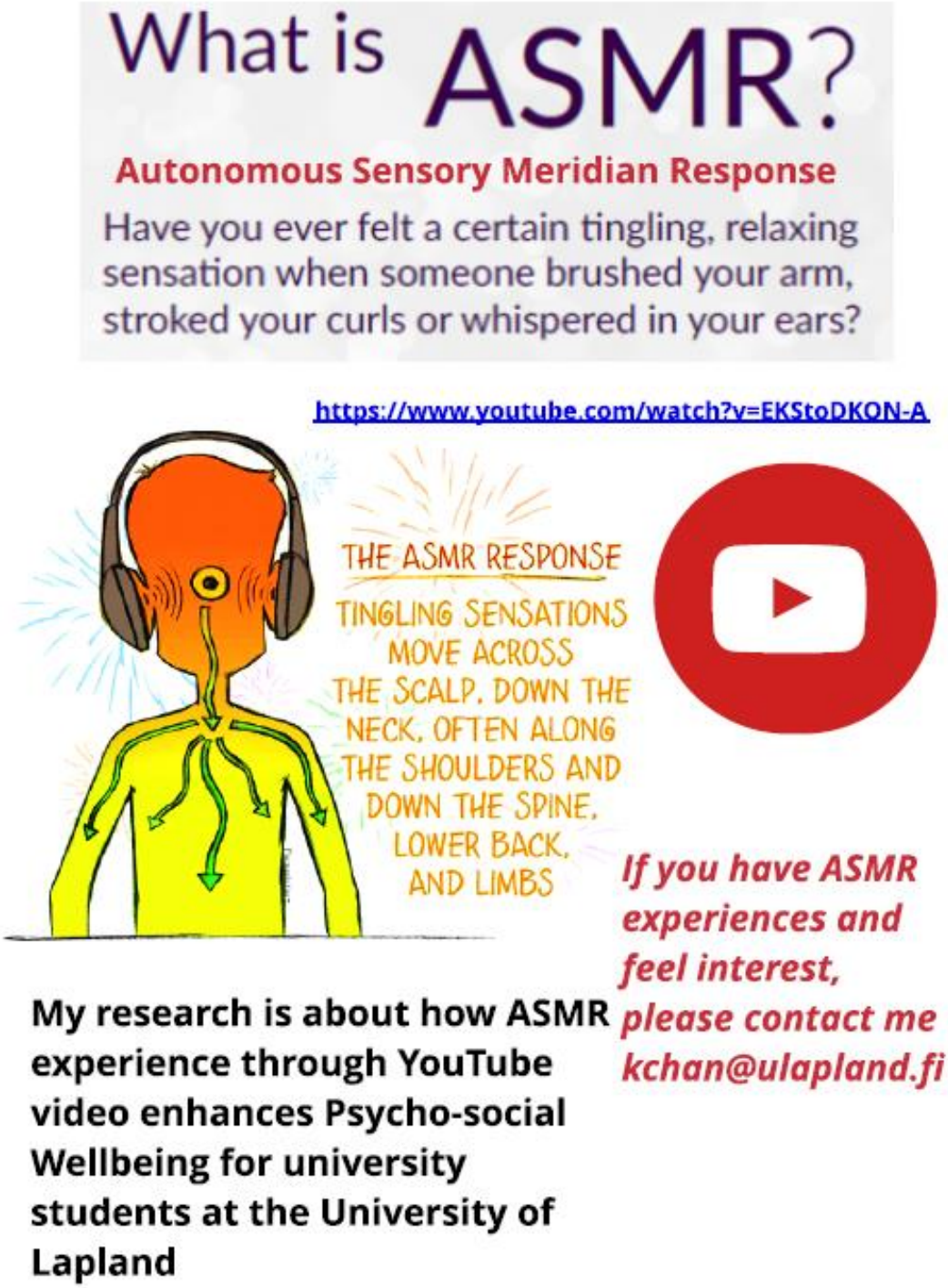
1. After ASMR exposures and you choose to take part in one of the school activities (such as group projects, assignments, general examination, winter sports activities, Christmas party organization, or other group activities.) and then answer the following interview questions.
2. In the following each question, you need to think and feel more about the effect of ASMR exposures on wellbeing.
3. You can try to use your autobiographical memory, experience, metaphor, and imagination to answer the questions when you feel something to be elicited during the engagement of activities and ASMR.
4. You can try to watch different types of ASMR genres to trigger more experiences.
5. In the answer, the best you describe the details of ASMR Video (characteristics) how to arouse and affect your wellbeing.

Questions/Explorations:

1. How and what do you feel contented, joyful, and positive?
2. How and what do you feel excited and interested in things (e.g., schoolwork and tasks)?
3. How do you lose track of time while doing something you enjoy and become absorbed in what you are doing?
4. How and what do you get help and support from others when you need it?
5. How fulfilled and satisfied are you with your relationships (Prompt: Parent, Peer, and Teacher-student)?
6. Have you been feeling loved? How?
7. How do you lead a purposeful and meaningful school life (e.g., learning task)?
8. How do you feel you have a sense of direction in your school life?
9. Can you tell me about any times, if any, you feel that ASMR experience has influenced or been a part of your schoolwork or activities in any way? Prompts: within the university, working with peers.
10. How do you feel you are making progress towards accomplishing your goals in the university?

Appendix E

ASMR digital flyer



Appendix F

Coding scheme on ASMR & Wellbeing

Variables			Code	Conceptualization & Operationalization
Media Effects	**Conditional** (Predictors/Moderators)	Dispositional	P1	• All person-based characteristics that may enhance their susceptibility to media effect; • Including gender, personality/temperament, cognition (e.g., scripts; and schemata), attitudes, motivations, identity, and moods (e.g., sadness, happiness) have been shown to predispose media use
		Developmental	P2	Defined as the selective use of and responsiveness to media due to cognitive, emotional, and social development
		Social	P3	Defined as all social-context factors that may enhance or reduce media effects, such as parenting style, media-specific parenting, or peer pressure
	Indirect Effects (mediators)	Media use	B1	• Functions as the mediators between an individual or social variable and outcomes of media use • Media use is referred to the intended use of media types, content, and technologies and includes a variety of factors such as media content exposure, media channels selection, and frequency and length of media use
		Media response states	B2	• Cognitive response state (R1) refers to media users selectively attend to and invest cognitive effort to understand media content, which is operationalized here as self-reported concentration as well as physiological heart rate. Concepts like cognitive absorption, reality perception, the cognitive dimensions of empathy (i.e., perspective-taking) • Emotional response states (R2) are conceptualized as all affective reactions to media content (i.e., the message, the storyline, and the vicarious affective reactions to characters). The emotional dimension of state empathy (i.e., the experience of emotions that are similar to those experienced by media characters) and sympathy (concern for media characters) are also seen as emotional response states; and operationalized as positive and negative self-reported emotions • Excitative response states (R3) reflect the degree of physiological arousal in response to media content, which operationalizes as self-reported and physiological arousal
		Media effects	B3	• (First-order) media effects (B3) as a mediator of other (second-order) media effects • Media effects are referred to as the deliberative and non-deliberative short- and long-term within-person changes in cognitions, emotions, attitudes, beliefs, physiology, and behavior that result from media use
	Transactional Effects		C	Media effects have a reciprocal causal effect on media processing, media use, and the differential susceptibility variables
PERMA Model		Positive emotion	E1	• The feeling of happiness, joy, cheer, and the many other descriptors of good feelings • Enhance attention, help to generate creative and flexible ideas, and broaden the self-concept to include others more readily • Associated with greater self-regulation, task persistence, and goal adoption
		Engagement	E2	This refers to the connection one feels to the activities one is doing as well as feelings of being absorbed in and focused on those activities. An activity with a high level of engagement in an activity is also referred to as "flow."
		Relationship	E3	The feeling of being cared about by others, socially integrated, and supported and involves a sense of connectedness, loving, and sharing emotions with others related to self-esteem, and that increase in friendship quality perception
		Meaning	E4	• A feeling of doing something meaningful and having connected to something bigger • A sense of purpose that is closely related to a sense of meaning in life and frequently involves a pro-social or altruistic intent such as a commitment to helping others or improving the world
		Accomplishment	E5	• An individual's perception of making progress toward goals and having a sense of achievement in one's life • Desire to achieve something (e.g., having a persevering attitude) rather than one's actual accomplishments