

6-2016

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Recommended Citation

Ramirez, Alfa (2016) "Autonomous Sensory Meridian Response (ASMR) in relation to Flow, Relaxation, and Tingles," *Psychology Research Methods Journal*: Vol. 1 : Iss. 19 , Article 8.

Available at: https://digitalcommons.lindenwood.edu/psych_journals/vol1/iss19/8

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Autonomous Sensory Meridian Response (ASMR) in relation to Flow, Relaxation, and Tingles

Alfa Ramirez⁷

Autonomous Sensory Meridian Response (ASMR) is a community mainly on Reddit where people have reported feeling tingle sensations like goosebumps after watching YouTube videos that contain triggers such as whispering, close personal attention, and crisp sounds. This study explored ASMR in relation to flow, tingles, and relaxation. The hypothesis is that flow, tingles, and relaxation will be positively correlated when listening to ASMR. Since ASMR is new and gaining more attention every day, this will add to the body of knowledge to the field. If it is found that there are positive correlations, there maybe a use for ASMR in therapeutic settings. Participants were recruited through the principal investigator's social media such as Reddit and Facebook. While there were 118 participants who took part in this study, there was no support for the hypothesis. There was a significant finding that participants felt relaxed after listening to ASMR. Therefore, ASMR still needs to be studied, and with the significant finding of relaxation, can begin to be tested to see if it helps people in therapeutic settings.

Keywords: autonomous sensory meridian response, ASMR, flow, relaxation, tingles

Autonomous Sensory Meridian Response (ASMR) was coined in 2010 by Jennifer Allen (Richard, 2016). It is defined as a physiological response than can produce tingles and feelings of relaxation due to triggers (Poerio, 2016). Currently ASMR is a new phenomenon in psychology that has just begun its scientific exploration. Some researchers are beginning to research the strange occurrences that happen while listening to ASMR, while its popularity begins to grow more and more every day.

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Very few years have passed by since the term ASMR came about, and what makes it so interesting is how people not only feel tingles, but relaxation too. Among this, there are a variety of factors that people have not even begun exploring in the scientific community. In the following literature review, I will discuss of ASMR's impact in a plethora of interesting areas. These areas include: the identity of ASMR culture, intimacy, affect, flow, relaxation, tingles, and triggers.

The first area to explore within the ASMR community is its identity. What is ASMR, and who are the people in this community? Have there been any real answers to these questions yet? The first thing to establish is that the primary way to view ASMR videos are through YouTube and ASMRReddit, that also links back to YouTube. Anderson (2015, p. 3), comments that ASMR "creates a pleasure through a distant intimacy that relies on heteronormative gender roles of care..." What he means is that women typically are the content creators of ASMR videos who usually make 'personal attention' videos as a trigger. A trigger in the ASMR community is a type of video that induces whatever response the audience may have, such as wood carving, whispering, role-playing, etc. He also comments that in the ASMR community video stimulation takes a backseat, while audio is the primary focus. Anderson (2015) attempted to support the idea that people listen to ASMR because it is "an effective experience that demonstrates the links between affect and emotion" (Anderson, 2015, p2). A tingle is most commonly referred to as the feeling a person gets while watching ASMR, or probably a goosebump like feeling. This is not

entirely true though, because as it will later be spoken of, the goosebump feeling comes from “awe” and “surprise” and may even come from fear, while the ASMR experience is more of a ‘light touch’ feeling along the neck, spine, and other areas of the body (Maruskin, 2012). Barratt and Davis (2015), were the first people to complete a study in ASMR and write up a report, their study consisted of an exploratory view on who partakes in ASMR, to discover who was in the community. The participants responded to multiple questions which included a Beck Depression Inventory (BDI) to measure negative feelings like depression and anxiety. Barratt and Davis (2015) asked about ASMR viewing habits, kinds of triggers, location of tingles, flow, and relaxation. They wanted to figure out the identity of the ASMR community. People who listened to ASMR had more depression and anxiety than the normal population, and a lot of people used ASMR for their chronic pain relief (Barratt & Davis, 2015).

Furthermore, Gallagher (2016), calls ASMR video makers ASMRtists and says, framing ASMR as a real experience is misguided because these people are not really causing the tingles or relaxation, it is sort of a cohort effect (Gallagher, 2016, p. 10). He says people say there is proof that tingle sensations are real because ASMR viewers feel them, but no one has really studied them scientifically.

Poerio (2016), mentions that ASMR’s identity lives on YouTube; this has been mentioned before, but is an important fact to note. How long have people been feeling the tingle sensation, apart from ASMR? This is a good question to ask, but one that is not and cannot be

answered now. Poerio (2016) mainly say that the ASMR community has ways of categorizing in unique ways. The ASMR community categorizes videos into how much tingling or relaxation a person may have felt; this is all based on the triggers the video/audio creator does. Schaefer (2015) does an interview with some ASMR content creators. He points out that the community opposes mainstream YouTube due to duration, repetition of actions, and an alternate time conscious. This means that ASMR artists mainly take 30-min to an hr to listen to ASMR, and in these videos the creators are repetitive. Repetition allows the viewers to feel tingles and eventually lose track of time. Ezra, the person being interviewed, says this is different from other communities because the mainstream YouTube community, and mainstream American society can only hold their span of attention on a task such as a video for a short period of time (Fishman, 2016).

Weinberg (2015) comments that there are four ways the video creators of ASMR express themselves. The first is that ASMR video creators strive for real authenticity (Weinberg, 2015, p. 81-82). ASMR video creators want to be as real as possible, which is completely different from mainstream internet, where people wear facades. Second, is that content creators share personal information to create a bond with their viewers, this can go along with how intimacy and close-personal attention is a popular ASMR trigger for people (Weinberg, 2015). Third, the creators strive for a common affect, which means that the creators want to induce relaxation and tingles in their viewers. Lastly, ASMR creators try to reply to all their messages and comments, while

embracing their flaws and taking into consideration “requests” for new YouTube videos (Weinberg, 2015).

The ASMR creators have spoken about the ASMR identity, and in sum the ASMR identity cannot be completely defined or confined, much like anyone’s identity is not just one definition. ASMR identity flourishes on the internet, mainly YouTube, but the ASMR content creators are usually women, and people in physical pain (Barratt & Davis, 2015; Poerio, 2016; Weinberg, 2015). People strive to be as authentic as content creators can be, and what makes this community unique is how ASMR viewers sort their videos (Anderson, 2015; Schaeffer, 2015). Gallagher (2016) mentions that there is not enough evidence without a fMRI study to back up all of the claims.

Within the ASMR community there is the common idea of intimacy. There are only two people who speak of intimacy within the ASMR community. First there is Anderson (2015), who believes that people who watch ASMR videos are making intimate connections with the content creators, and therefore feeling pleasure out of ASMR. Anderson (2015) supports this by saying that “ASMR enthusiasts” will gravitate towards the close personal attention videos and experience a maternal intimacy with the content creators. This is analogous to the Freudian view which suggest that people who watch ASMR are in need of close contact, and are missing some kind of maternal/paternal feeling in their life (Anderson, 2015). This can begin early in childhood, which is typically when people begin surfing the internet and finding out about

ASMR, which nowadays is becoming a roaring phenomenon. Furthermore, ASMR viewers say that this emotional contact is what is creating the sensation of the shiver. This phenomenon is reminiscent of the phantom limb syndrome. A phantom limb syndrome is when someone loses a limb, but feels it is still there. Similarly, a person is watching a content creator “touch their face” or “cut their hair” or “whisper in their ear,” ASMR viewers will feel it as well through a tingle even though the viewers are not physically with the creator (Anderson, 2015).

Gallagher takes a different approach on ASMR by looking at it on the mainframe of the internet. He calls people who watch ASMR “bodies” and where the viewers watch it on are “algorithms” (Gallagher, 2016). His idea is that the algorithms bring in more people, and the more people who say ASMR works, the more others say it works as well. This is a never ending cycle really; when one person agrees with another then it turns into a group, then it turn into a whole subreddit. A subreddit is a when a specific topic becomes a thread where people can comment on. What Gallagher (2016) says about intimacy is that there really is not any true intimacy people feel for the content creators, rather the algorithm shows a person a video then shows them another based on that video, further making viewers feel intimate with the community, when they may not be.

Gallagher (2016) goes on to say that ASMRtist’s are creating their own genre of video and audio, the content are not just videos on the internet. These people are creating videos on YouTube that gain traction and show recommendations to people in the ASMR community who

already agree that they feel close to the ASMR content creators. The two opposing views are striking; on one hand there is the belief that people who watch ASMR videos say they feel intimacy with the content creators, almost a maternal intimacy (Anderson, 2015), while the opposing view says people do not really feel close, but they think this because of the algorithmic recommendations that make the viewers feel closer to the content creator (Gallagher, 2016).

Anderson (2015) comments on the idea of affect and how the tingles are an “affective experience” that creates intimacy and emotionality towards the content creator and the viewer or audience (Anderson, 2015). Gallagher (2016), opposes these ideas and says that people think they feel affect when they watch ASMR, but there are not any conclusions without further evidence or scientific proof and/ or disproof. Schaefer (2015), comments that “the voice is the vehicle” of a person, sort of like how people who make ASMR videos will whisper, breathe, or say weird speeches in a different language or just sounds. Furthermore, if the person’s voice is the vehicle then the ASMR viewers are the ones getting hit, with tingles. Therefore, the feelings of tingles may come from feeling intimate with the creators. This creates a cycle where content creators create tingles that the viewers like, and then it makes them feel even more intimate and more tingles.

In the study by Pageau and Sorgan (2015, p133), “flow involves full engagement in a task and is characterized by both positive affect and a feeling that time has passed quickly,” and in their study of 77 undergraduate participants, they sought out to see if the passage of time and

complexity of a task affected someone's mood. Basically, they wanted to see if we had more fun when time flies. Pageau and Sorgan (2015) found that the perception of time to people was important in determining if they were having fun and feeling happier is better. If the participants thought time was going quickly, they had a heightened positive mood over those who thought time was going slower, and were not as happy. This is important to note because when people listen to autonomous sensory meridian response (ASMR) they are said to be in a 'flow like' mental state (Barratt & Davis, 2015). This flow like mental state study wanted to see the correlations between ASMR and, viewing habits of the community already on ASMRReddit, and how they felt relaxed, the tingles they felt, their flow, mood and chronic pain levels in relation to the new phenomenon. Barratt and Davis (2015) obtained 475 participants to take part in their study, the majority of people did not answer, but with the results of the participants that answered, the researched found a highly significant amount of correlation (Barratt & Davis, 2015). In Ramirez (2016), I also did a general study based off Barratt and Davis's (2015) study, and hypothesized that the more flow people felt, the more tingles and triggers they would feel (Ramirez, 2016). In this study a majority of people also did not answer just like in Barratt and Davis (2015), but for those who did the results were inconclusive. This is why in this current study; flow is approached differently than the other studies. In this current study flow state questions are more condensed and precise so that it will hopefully give more accurate results of the phenomenon between flow and ASMR (Payne, et al. 2011).

Furthermore, relaxation has been looked at in ASMR through Barratt and Davis (2015) study. In their study 98% of individuals answered that they sought out ASMR for relaxation. This is the only data they gathered about relaxation, but the alarmingly high number means a lot. Out of 475 participants, more than half of the people said they felt relaxed (Barratt & Davis, 2015). This is a common theme within the ASMR community and the videos, people may feel relaxed after watching and listening to them. In Ramirez's (2016) study, 419 participants recorded responses, and 57.42% of people said they felt relaxed. This is interesting to note since both studies were only a year apart, and yet there was such a large difference among results. While one study had a large sample of people feel relaxed (Barratt & Davis, 2015), the other had a little over half of people say they felt relaxed (Ramirez, 2016). A new voice comments that the ASMR community who watch the videos usually feel relaxed as well, further supporting the idea that people do feel relaxed after listening to ASMR.

Anderson (2015) vouches upon the tingles in his paper, and calls them the shiveries. He connects the tingles to how people feel intimately and emotionally connected to the content creator. Barratt and Davis (2015) found that 50% of their participants felt tingles, and the majority of participants who did, felt them on the back of their head down to their neck and spinal cord (Barratt & Davis, 2015). Outliers include other body parts that are not as prominent to feeling this.

Habibi (2014), describes the tingles apart from ASMR and focuses on psychomusicology and how there are changes to the body when listening to music, much like there are changes in the body when listening to ASMR. What is interesting is that Habibi (2014) says the chilling feeling is a way for homeostasis to happen, a way for our body to maintain an equal state within ourselves. He goes on to talk about the brain and imaging that people have seen while people listen to music. Usually the occipital lobe lights up, and other regions in the brain, but what says that instead of studying the brain scientists should be studying the brain stem. Surprisingly enough, ASMR viewers feel tingles more in that area as well. Furthermore, Habibi (2014) ponders whether people feel these feelings because they anticipate them. This would make a lot of sense in the ASMR community because if a person anticipates feeling a tingle and relaxation, they will feel those once they view the video, much like the placebo effect, or power of suggestion.

Maruskin and Thrash (2012), the authors make a reference to tingles, goosebumps, and chills. They do four studies on a vast amount of participants to figure out how to categorize the different meanings and how people categorize and feel them, themselves. What Maruskin and Thrash (2012) found was that people usually felt tingles, the same type of feeling that ASMR viewers feel, during times of great emotion and that the different terms were attributed to different emotions. For example, tingles were referred to as a relaxing feeling, while shivers were not. The one thing that does not align with ASMR is when Maruskin and Thrash (2012)

mention that even though tingles did make people feel relaxed, they usually were surprised and did not feel enjoyment

This is different from the community because people typically do enjoy watching the ASMR videos, and feeling relaxed and possibly some tingles. Finally, Schaefer (2015) found support the idea that people feel tingles in ASMR, too. The creators have started a new sort of language that has made people feel more close and intimate, therefore feeling more tingles.

The final idea in the ASMR community that must be discussed are the triggers. Triggers are audio and visuals that induce tingling. Triggers are usually felt in the audio and the video usually comes second (Anderson, 2015). In Barratt and Davis (2015), the top trigger in their study was whispering. This is also supported by Ramirez (2016), where the top trigger was also whispering (Figure 1). Poerio (2015) says that the common triggers in ASMR are “whispering, soft speaking, tapping, scratching, crinkling, slow deliberate hand movement, watching repetitive tasks, and close personal attention,” (Poerio, 2015, p. 120). Schaefer (2015) suggests that triggers are sort of a new language in the ASMR community, that they take on a new meaning to the creators and viewers, sort of like tapping on pottery, drawing on chalkboard, and touching milk on a screen (Schaefer, 2015). All of these writers have supported the idea that ASMR has a variety of triggers. In my study I focused on exploring if there are correlations between ASMR, flow, relaxation, and tingles. Finding support in this will add knowledge to the body of psychology, and could possibly be used in future research and therapy.

Method

Participants and Materials

A total of 118 participants were recruited (57 women, 26 men; $M_{age} = 19$ years, age range: 18-72) where 30 people did not answer the gender question, and using a recruitment statement through my social media, including: Facebook, Reddit, and Twitter (see Appendix A). An online Qualtrics survey was created for this study, and no one was compensated for taking part in it. The majority of participants were from the Autonomous Sensory Meridian Response (ASMR) community. There were 97 people who reported listening to ASMR before, and 10 who reported not listening to ASMR before, there were 11 missing responses. 72 participants reported being White, 8 people reported being Hispanic, Latino, or Spanish origin, 1 person reported being: American Indian or Alaska Native, Asian, or some other race. 3 people preferred not to answer and 29 participants did not answer. All participants were asked in the informed consent form to have headphones with them while taking the survey (see Appendix B).

Video. A video from YouTube by the content creator named “Made in France ASMR” was used in the survey. The video was called “[ASMR] Zen Garden Sleep AID (*decreasing brightness*) 45 min - No Talking”, and was chosen because it is possibly both relaxing and tingle inducing, with 14,000+ likes on YouTube ([Made in France ASMR], 2014).

Flow. Flow was taken from a five point Likert scale from an established flow state scale taken from previous researchers (see Appendix C). I took the most relevant questions from the

flow state scale and reworded them to fit the survey for example, on the flow state scale a question said “I lost my normal awareness of time” and I reworded it to say “I lost awareness of time (time slowed down, stopped, or sped up)”. A total of five questions were responded to in a Qualtrics survey (see Appendix D).

Relaxation. Relaxation was judged based on 10-point scales (0= not at all relaxed and 10= extremely relaxed). One question was asked before the video, which prompted the participants to answer “How relaxed do you feel right now?,” and after the video, “How relaxed do you feel after watching this video?” If a participant felt more relaxed after the video they would be considered relaxed, if the participant felt less relaxed after the video they would be considered not relaxed. For example, if a person put 2 then 10, they would be relaxed, but if a person put 10 then 2, they would not be “more” relaxed. For those who stayed the same such as 2 and 2, they would be considered not relaxed, and those who stayed the same at 7 and 7 would be considered relaxed. The people who were 10 then 9 would be considered less relaxed before, even though they are both relaxed, they self-report that they were less relaxed.

Tingle Effect. Participants were asked if they felt tingles or a goosebump feeling on their body. If they selected ‘yes’ they were prompted to answer the body heat map (Appendix E). If they selected ‘no’ they were prompted to the demographic questions block.

Body Heat Map. Participants were redirected to the body heat map if they selected ‘yes’ when asked if they felt tingles or goosebumps. The body heat map was made in GIMP, an image

editing program. The principal investigator put two images together; the top image was of four bodies from all points of views, and the bottom image was of four heads from all points of views. This way a person could click anywhere they felt the tingles or goosebumps. In addition to that, 92 different regions were coded for participants to click (see Appendix E).

Procedure

The study was conducted online using an online Qualtrics survey, so that participants could watch the video and complete the questionnaire when and where it was convenient for them. The principle investigator posted the survey on their social media accounts such as Facebook, Twitter, and Reddit. Prior to beginning the study, participants were asked to sign the informed consent statement, and the secondary age verification statement (see Appendix B). The secondary age verification statement asked if the participants were “Under 18” or “At or Above 18” (see Appendix F), if they answered they were under 18 they would be redirected to the thank you statement (see Appendix G). If they answered they were at or above 18 they would be directed to the survey. Right before taking the survey there was one last reminder about having headphones for the survey (see Appendix H). The first question the participants were asked was if they had listened to ASMR, a yes or no question. They were asked how relaxed they felt on a 10 point Likert scale, 0 being not at all relaxed, and 10 being extremely relaxed. The participants were told to listen to the video by “Made In France ASMR” for a minimum of 5 minutes, and then proceed to the next questions. I also added an invisible timer to see how long the

participants stayed on the page to watch the video. They were asked how they felt after listening to the video on a 10 point Likert scale where 0 was not at all relaxed, and 10 was extremely relaxed. Then they were asked if they felt tingles or goosebumps, if they said yes they would be redirected to the body heat map (see Appendix E), and if they said no they would be redirected to the demographic questions. The demographic questions were used to describe the sample and asked their age, gender, and race and-or ethnicity (see Appendix I). Once the participants were done they received the thank you statement with the principal investigators contact information, and the survey ended.

Results

I hypothesized that people who report high immersion will report having greater relaxation, and feel more tingles. This hypothesis was not supported when statistical analysis was run. Descriptive statistics were done with flow and tingles, where 36% of people felt flow, and 43% of people reported feeling tingles in the regions 1, 2, 25, 26, 27, and 29 (see Figure 2). Participants relaxation before listening to the ASMR video was compared to relaxation after listening to the ASMR video. Where 79% of people reported feeling relaxed and a paired samples t-test was run. Where participants pre-video relaxation ($M=6.17$, $SD= 1.695$) and participants post-video relaxation ($M=7.30$, $SD= 1.871$; $t(93)= -5.664$, $p= 0.000$). Only 22% of participants reported feeling all three variables, which were flow, relaxation, and tingles.

Discussion

What I expected to find was that all three variables would be positively correlated to each other after participants listened to the ASMR video. My hypothesis was not supported because a low amount of participants did not feel immersed in the video, which I defined as flow, relaxed, or the tingle sensations all together.

There wasn't a significant amount of people who felt flow which I expected there to be because there were correlations with ASMR and flow state in a study conducted by Barratt & Davis (2015), where flow state was higher with more triggers. Pageau and Surgan (2015) also found that flow state affected people's moods which is why I believed it would correlate with the other variables, flow state has come up unsupported with most studies including mine.

There was also not a significant amount of people who felt the tingle sensation. The most tingle sensations were felt on the back of the head and down the spine which was supported by Barratt & Davis (2015) by their research in ASMR (Barratt & Davis, 2015, p8). There was also the fact that 43% of people reported feeling tingles in the current study and 42% of people reported feeling tingles in Ramirez (2016). This is an interesting trend especially noting the difference in sample size, where in this current study there were only 118 participants but in Ramirez (2016) there were over 400 participants. This could possibly mean that around 40% plus or minus people in the ASMR community feel tingles, while others do not. There is also the fact that the community could have been expecting the tingles much like in Habibi (2014), where

people felt tingles because they expected them, maybe participants in this study also didn't feel the tingles because they didn't expect to feel them as well.

There was a significant number of people who felt relaxed after listening to the ASMR video. While there were 79% of participants who felt relaxed, there were 63% of participants in Barratt & Davis (2016, p7) that felt relaxed. On top of that 98% of participants answered they sought out ASMR for relaxation. The significance of relaxation in this study can be seen in the comparison of the means where people who responded to the second relaxation question reported feeling more relaxed than they did before watching the ASMR video.

Based on the results I can conclude that people may feel relaxed after listening to ASMR which would be a great tool to use in therapy. I can also conclude that people mostly feel tingle sensations on the top of their head and down their spine, but there isn't any support that people who listen to ASMR feel immersed in the video as in flow, relaxed while listening to the video, and tingles all at the same time.

Some limitations to these study was that I didn't take into account counterbalancing with a within-subjects design that could have affected the results. There is also the limitation of my knowledge on statistics that didn't allow me to do factor analysis on flow, which could have affected results as well. On top of this, the targeted community has been repeatedly studied and done tests, also they listen to ASMR videos all of the time too. This may have caused a fatigue

effect and caused inaccurate results. Another limitation is that there was a video accompanied with the audio, whereas I should have provided only an audio file.

Future directions for research would be to explore why tingle sensations occur and possibly begin doing brain scan studies on participants who watch or listen to ASMR. There is also interest in looking at trigger choices and how they affect relaxation or tingles. Furthermore, there should be more research in why people feel so relaxed by ASMR videos, why the tingle sensations are sometimes reported and sometimes not, and if flow still has anything to do with ASMR at all.

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Figure 1. Top triggers reported by the ASMR community in a study by Ramirez (2016).

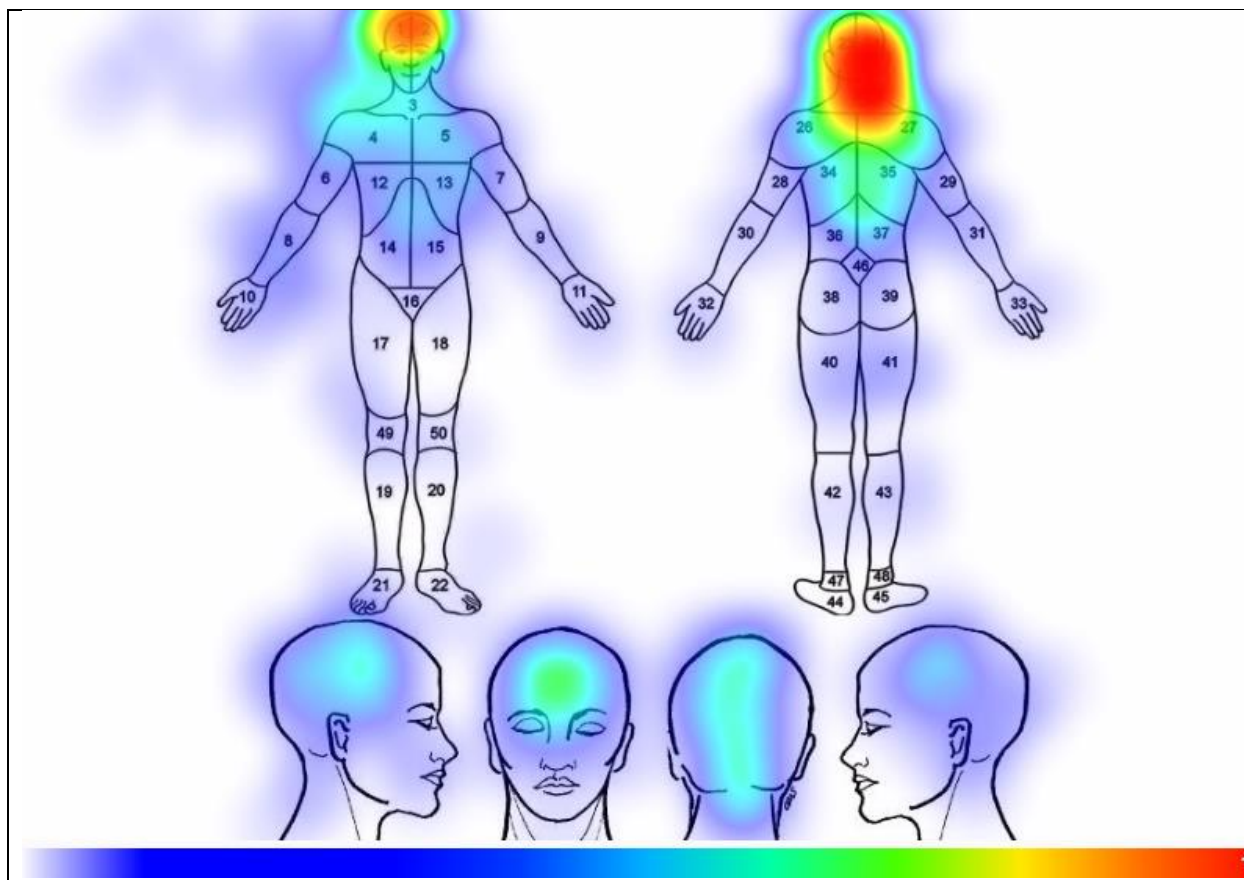


Figure 2. Tingles felt in regions 1, 2, 25, 26, 27, and 29 where red is the where most people felt tingles.

Appendix A

Recruitment Statement

Please consider taking my anonymous survey on Autonomous Sensory Meridian Response (ASMR): an auditory stimulus that may cause relaxation and a tingle feeling. I'll be asking about immersion in the task, relaxation, and the tingle effect. You will need headphones for this survey. This is my research project for my Advanced Research Methods class at Lindenwood University and shouldn't take more than 15 minutes of your time. Your participation is completely voluntary and you may stop at any time. Thank you!

Appendix B

Informed Consent Form

Informed Consent Form

Introduction

The researcher that is conducting this project is an undergraduate student at Lindenwood University who is enrolled in the PSY40400: Advanced Research Methods course. The primary purpose of this project is to continue exploring Autonomous Sensory Meridian Response (ASMR).

Procedures

This survey asks you to respond to a few basic demographic items as well as questions asking about your knowledge of ASMR, immersive state, relaxation, and the tingle effect that is perceived through ASMR. Autonomous Sensory Meridian Response (ASMR) is an auditory stimulus that has been observed to create relaxation and a tingle effect on the body. The tingle effect is a slight goosebump sensation somewhere on your body. An auditory stimulus is a sound that causes you to feel something such as goosebumps when you listen to a great song. This survey can be used in order to see whether there is a relationship among the following three variables: flow, relaxation, and the tingle effect. This questionnaire will be conducted with an online Qualtrics-created survey, and should not take any more than 15 minutes of your time. Five of these minutes will be taken to watch an ASMR video. You will need headphones/earphones for this survey.

Risks/Discomforts

Some people may experience discomfort after feeling the tingle sensation. If you do not feel comfortable completing any part of this survey, you are free to skip any questions or withdraw without penalty.

Compensation and Benefits

If you are a student or of the general public, you will also gain experience taking part in a psychological survey project and potentially learn more about the field. If you are interested in learning more about this project or would like to learn about the results of this project once completed, please contact XXX at XXX@lionmail.lindenwood.edu.

Confidentiality

All data obtained from participants will be kept confidential and will only be reported in an aggregate format (by reporting only combined results and never reporting individual ones). All questionnaires will be concealed, and no one other than the researchers listed below and her course professor, Dr. Nohara-LeClair. The data collected will be stored in the HIPPA-compliant, Qualtrics-secure database until it has been deleted by the primary investigator.

Anonymity

Your responses will be anonymous. No information that identifies you personally will be collected, not even your IP address. The primary investigator will not be able to identify your answers as belonging to you; data will be examined at the group level only. All data will be kept securely, in accord with the standards of the University, Federal regulations, and the American Psychological Association.

Questions about the Research

If you have any questions or concerns regarding this study, you may email or call the Investigator, XXX, at XXX@lionmail.lindenwood.edu, and 954-294-4368, or the Supervising Faculty, Dr. Nohara-LeClair, at 636-949-4371. You may also ask questions of or state concerns regarding your participation to the Lindenwood Institutional Review Board (IRB) through contacting Lindenwood's Provost, Dr. Marilyn Abbott at mabbott@lindenwood.edu or 636-949-4912.

ELECTRONIC CONSENT: Please select your choice below.

Choosing to participate indicates that:

- You have read the above information.
- You voluntarily agree to participate.
- You are at least 18 years of age

Appendix C

Original Flow State Scale

<p style="text-align: center;">Activity Flow State Scale Version Attached: Full Test</p> <p>PsycTESTS[®]</p> <p>PsycTESTS Citation: Payne, B. R., Jackson, J. J., Noh, S. R., & Stine-Morrow, E. A. L. (2011). Activity Flow State Scale [Database record]. Retrieved from PsycTESTS. doi: http://dx.doi.org/10.1037/a0022359</p> <p>Instrument Type: Rating Scale</p> <p>Test Format: Items are rated on a 5-point Likert ranging from 1 (strongly disagree) to 5 (strongly agree).</p> <p>Source: Payne, Brennan R., Jackson, Joshua J., Noh, Soo Rim, & Stine-Morrow, Elizabeth A. L. (2011). In the zone: Flow state and cognition in older adults. <i>Psychology and Aging</i>, Vol 26(3), 738-743. doi: 10.1037/a0022359</p> <p>Permissions: Test content may be reproduced and used for non-commercial research and educational purposes without seeking written permission. Distribution must be controlled, meaning only to the participants engaged in the research or enrolled in the educational activity. Any other type of reproduction or distribution of test content is not authorized without written permission from the author and publisher. Always include a credit line that contains the source citation and copyright owner when writing about or using any test.</p> <p style="font-size: small;">PsycTESTS™ is a database of the American Psychological Association</p>	<p style="text-align: center;">Activity Flow State Scale AFSS</p> <p>PsycTESTS[®] doi: 10.1037/a06855-000</p> <p>Items</p> <p>MAA I performed automatically, without having to think about it. Things just seemed to happen automatically. I did things spontaneously without having to think.</p> <p>CG I had a strong sense of what I wanted to accomplish. I knew what I want to achieve. My goals were clearly defined.</p> <p>CO My attention was focused entirely on what I was doing. It was no effort to keep my mind on what was happening. I had total concentration. I had no difficulty concentrating.</p> <p>UF It was really clear to me how my performance was going. I had a good idea while I was performing about how well I was doing.</p> <p>CS I was challenged, but I believe my skills will allow me to meet that challenge. The challenge and my skills were at an equally high level. I felt just the right amount of challenge.</p> <p>TT Time seemed to alter (either slows down or speeds up). The way time passed seemed to be different from normal. I lost my normal awareness of time.</p> <p>CN I felt as though I had everything under control. I felt that I had everything under control.</p> <p>SC I was not concerned with how others might be evaluating me. I was not concerned with how I was presenting myself. I was not worried about what others might be thinking of me.</p> <p>AE I really enjoyed the experience. The experience left me feeling great. The experience was extremely rewarding.</p> <p style="font-size: x-small;">Note. MAA = merging actions and awareness; CG = clear goals; CO = concentration on task at hand; UF = unambiguous feedback; CS = challenge skill balance; TT = transformation of time; CN = sense of control; SC = loss of self-consciousness; AE = autotelic experience.</p> <p style="font-size: small;">PsycTESTS™ is a database of the American Psychological Association</p>
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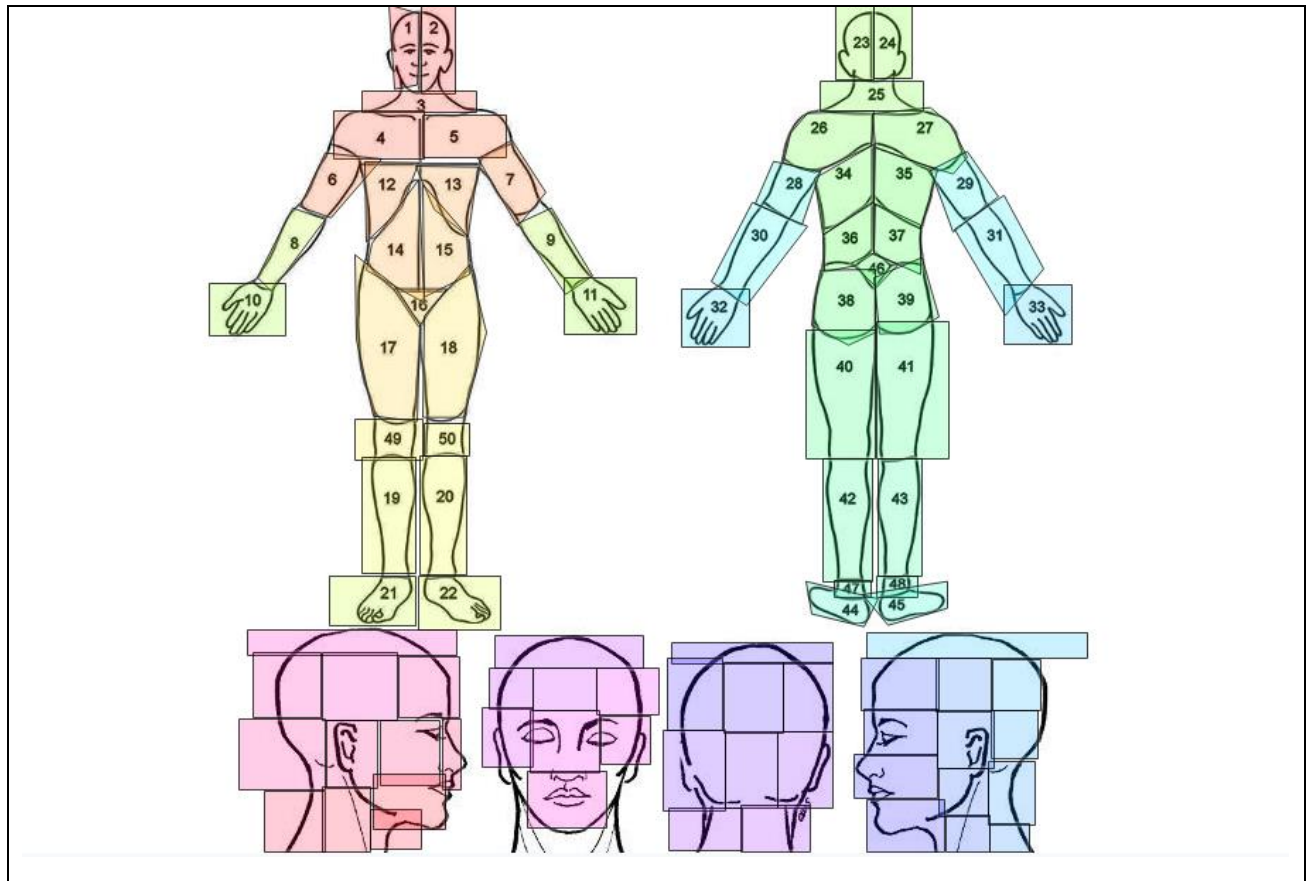
Appendix D

Flow State Scale for ASMR Study

Please answer the following questions about the video you just watched, on a scale from 1 (being strongly disagree)-5 (being strongly agree).

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly agree
I felt like I didn't have to think about what I was listening to	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I was not concerned with my surroundings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My attention was focused entirely on what I was listening to	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I lost awareness of time (time slowed down, stopped, or sped up)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Listening to this video made me feel great	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Appendix E Body Heat Map



Appendix F

Age Verification

<p>What is your age?</p> <ul style="list-style-type: none">-Under 18-At or Above 18
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Appendix G

Thank You Statement

Thank You Statement

Thank you for taking the time to complete this survey for my class project at Lindenwood University. I am investigating ASMR (Autonomous Sensory Meridian Response) in relation to how immersed people get into the video, how relaxed people are, and if and where people feel the tingle sensations. I hypothesize that people who report higher immersion will report greater relaxation as well as more tingle effects.

If you would like to see the results of my survey after May 6, 2017, please feel free to contact me using the contact information below. Again, thank you very much for your time and effort

Principal Investigator,
XXX
XXX-XXX-XXXX
XXX@lionmail.lindenwood.edu

Faculty Supervisor
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Appendix H

Headphone Statement

Headphones will be needed for this study, any of the following headphones can be used. If you do not have headphones please retrieve them.



Appendix I

Demographic Questions

What is your age?

How do you currently describe your gender identity?

- Man, male, or masculine
- Transgender man, male, or masculine
- Transgender woman, female, or feminine
- Woman, female, or feminine
- Gender nonconforming, genderqueer or gender questioning
- Intersex, or two-spirit
- Other
- I prefer not to answer

Which categories describe you? Select all that apply to you.

- American Indian or Alaska Native- For Example, Navajo Nation, Blackfeet Tribe, Mayan, Aztec, Native Village of Barrow Inupiat Traditional Government, Nome Eskimo Community
- Asian- For example, Chinese, Filipino, Asian Indian, Vietnamese, Korean, Japanese
- Black or African American- For example, Jamaican, Haitian, Nigerian, Ethiopian, Somalian
- Hispanic, Latino or Spanish Origin- For example Mexican or Mexican American, Puerto Rican, Cuban, Salvadoran, Dominican, Colombian
- Middle Eastern or North African- For example, Lebanese, Iranian, Egyptian, Syrian, Moroccan, Algerian
- Native Hawaiian or Other Pacific Islander- For example, Native Hawaiian, Samoan, Chamorro, Tongan, Fijian, Marshallese
- White- For Example, German, Irish, English, Italian, Polish, French
- Some other race, ethnicity, or origin, please specify:
- I prefer not to answer