COGNITIVE SCIENCES AND HUMAN DEVELOPMENT

Mukbang and Me: Implications on Cognition and Physical Well-Being among Undergraduates

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ABSTRACT

Mukbang has become a global eating trend, especially among youths. Mukbang is mainly prevalent on social media platforms and has become addictive content for many who follow such videos. This study explores the effects of watching mukbang on cognitive functions, health problems and social interaction patterns. The study uses neurofeedback to analyse the brainwaves of selected participants who are university-going youths and have a regular habit of watching Mukbang every day. Two situations were recorded using neurofeedback; the first is only watching Mukbang passively, while the other is where the participant watched Mukbang and ate something simultaneously. A beta and alpha brainwave data were chosen to be analysed. Findings showed that the beta brainwave was recorded the highest in watching mukbang passively while the alpha was the highest during watching and eating mukbang. The result shows that anxiety, excitement, and focus were associated with the highest beta waves, while optimal cognitive performance was related to the activation of the upper alpha wave. The analysis provides a perspective to understand the effect of Mukbang on youths, specifically those currently studying at the tertiary level. The study links how idle interest in Mukbang affects cognitive activities and potentially triggers bingeing, worsening the relationship with food. Future research should examine how Mukbang encourages the diet *Mukbangers* would be tempted to adopt as daily food intake and how it affects long-term cognitive development among university-going youths.

Keywords: Mukbang, cognition, well-being

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1 INTRODUCTION

Mukbang is an Internet phenomenon about hosts taking video recordings of them eating a large number of unhealthy foods and posting them on media online video platforms. This trend originated in South Korea approximately around 2010 and has since become a global trend. The word "Mukbang" originates from the Korean words "meokneun" (eating) and "bangsong" (broadcast). Many mukbang hosts do not necessarily pay any attention to the ingredients of the food they consume, whether the foods are high in calories, fat or cholesterol-laden, because their main contention is to have followers (known as *mukbanger*s) feel satisfied when they watch their videos and interacting with the hosts. Today, a large part of society imitated this action of consuming food in large portions and an unbalanced diet (McCarthy, 2017) and watching mukbang will generate many nutrient and health problems because they mimic the host and take food more than it should be. Aside from that, some people make mukbang an autonomous sensory meridian response (ASMR) because the hosts produce some sounds when they eat, such as crunching, drinking, and slurping. According to Loy and Mohamad (2021), some people find listening to these sounds very calming. They enjoy hearing it, plus ASMR is about a tingling sensation induced in response to audio-visual stimulations. While some studies suggest Mukbang helps to reduce loneliness for some people (Strand and Gustaffson, 2020), it has also been criticised as a problematic watching habit associated with mental health conditions such as addictive disorders and eating disorders (Kircaburun et al., 2021).

Nowadays, the development of the internet and other technology is undeniable rapid. We have been experiencing the era where mobile phones and the internet have continuously advanced and changed the social and psychological landscape. Many people have become internet-addicted, making mukbang trending (Kircaburun & Griffiths, 2019). Mukbang is a live broadcast or recorded video of hosts posting on social media such as YouTube, Tik Tok, Instagram, and Facebook. Mukbang refers to the act of individuals, at times in groups, that consume a large portion of food and eat all of it in front of the camera. The mukbang videos are approximately 15 minutes and above because they need to finish all the food. Aside from that, the hosts are called *mukbangers,* and there have been many self-claimed *mukbangers* worldwide. Mukbang videos and live Mukbang broadcasts have received a steady positive response from many people, especially young adults (Kang et al., 2020).

Eating in front of the camera or during live shows is a growing trend, primarily performed by food bloggers called *mukbangers*. There is a problem in the mukbang phenomenon that impacts young people's cognition and physical well-being. According to Kircaburun et al. (2020a, 2020b), the minority of the mukbang viewer may engage in the behaviour excessively, problematically, or addictively. They will also develop severe adverse consequences such as disordered eating, internet addiction, eating distortion, table manners, and obesity (Kircaburun et al., 2020b, 2020c). The viewer may also experience hunger because the hypothalamus in the brain's right hemisphere will produce a hunger sensation even though we just ate a few minutes ago (Stellar,1984). According to Edholm et al. (1955), we are stimulated by the food smell, watching the food, and thinking about it. Starting from here, the viewer may engage in disordered eating and take a large portion of food at once. This behaviour will lead them to develop anorexia nervosa, bulimia nervosa, and binge eating disorder, a severe health problem, including obesity. This binge eating disorder is proven by one of the mukbang YouTubers, who have extreme obesity after becoming a mukbanger. A possible cause of this problem is that the mukbanger wants to gain many viewers. Some of the viewers find it gives them pleasure and relief from listening to the sound of the mukbanger eating, chewing, and devouring noises (Woo, 2018).

Additionally, mukbang watching can become a considerable problematic online activity because it will affect youth cognitively, such as if the viewers have a feeling of social and spatial presence and successfully escape from the unpleasant reality of their life. According to Hartmann et al. (2013), they may feel a social presence while watching mukbang by interacting with the mukbanger/host who eats the food and other viewers. Furthermore, the real-world social network, such as interaction in mukbang video and the number of friends they get from there, were significantly associated with amygdala volume. This amygdala has been established as a critical brain region where social cognition occurs (Nora, Herweg, Michael & Kahana, 2018). However, previous literature has found that the grey matter volume of other brain regions, such as the posterior regions of the middle temporal gyrus, the superior temporal sulcus, and the right entorhinal cortex, was predicted by the viewer's numbers mukbang. However, it had no relationship to their real-world social network (Nora, Herweg, Michael & Kahana, 2018). The issue might be resolved by studying how the mukbang phenomena affect student cognition, physical health, and interaction patterns.

Mukbang watching has been reported to give viewers positive and negative effects, depending on the intent of the individual. "Mukbang is funny", for instance, was consistently the most common reaction collected from a survey of 1200 people in Korea (Kang et al., 2020). Some impact is often discussed in every research on mukbang as an eating disorder. The viewers and mukbanger will develop binge eating and eating disorders because of the consumption in large portions. Viewers may be affected just by watching the mukbanger eating virtually because of the food and the temptations of the sounds made while a *mukbanger* eats. Hong and Park (2018) found that viewers are affected by watching mukbang through their food selection, such as junk food and fast food. They also found that the eating sound will stimulate viewers' senses which all these behaviours contribute to eating disorders and viewers' eating manner. However, according to Choe (2019) and Gillespie (2019), watching mukbang also would trigger the viewers to satisfy their food cravings, motivating them to experience the feeling of binge eating themselves. They further elaborated that viewers would be drawn to experience vicarious satiations via visual and audio stimulation from the *mukbangers* themselves. Kim (2017) said mukbang watching had been described as "a double-edged sword" concerning eating disorders among the viewers and the *mukbangers* themselves. These recent studies have begun to provide insight into how the mukbang phenomenon watching may negatively impact the viewers' physical well-being.

Mukbang watches also have an impact on social interaction patterns. The introverted viewers in real life will find themselves similar to others, making them feel connected. This type of person will act aggressively in virtual life, such as giving comments, likes or disliking and interacting with the host because they are introverts in real life. Some viewers may be motivated to make new friends who watch similar mukbang videos, in which they might obtain a sense of social presence when gaining online friends and interacting with the mukbang host. If viewers consistently use mukbang watching to escape their unpleasant reality and feel a sense of social and spatial presence, this habit of mukbang watching may be considered an unhealthy online activity.

Preferences for watching mukbang vary, depending on an individual's motives and reasons (Hakimey & Yazdanifard, 2015). Some viewers want to observe somebody eat various foods because of their inability (e.g., hospital patients). Another reason people watch mukbang is to alleviate stress from their studies, fast-paced work, and hypercompetitive way of life by watching the mukbanger eat (Hakimey & Yazdanifard, 2015). By the same token, Kircaburun (2020b) described in his study how people tended to use mukbang watching to escape their actual lives.

Spatial presence is used as a variable in the current study of mukbang because previous literature has suggested that viewers used mukbang watching as a form of escapism from real-life problems. Schubert (2009) suggests that we must understand Spatial Presence as a cognitive feeling, where he described: "feeling is immediate, given and not consciously inferred in a deliberate process". It is also based on unconscious processes, even though viewers consciously experience the sensation by interacting with the mukbanger and other people watching the mukbang content. Feelings have their function, such as informing the conscious mind about the status of unconscious processes. Spatial presence occurs highly in a virtual environment, such as watching mukbang on online platforms, even if people do not want it, do not expect it or are fully aware that they experience it. Moreover, there are assumptions that bodily interaction with a virtual environment will enhance the sense of Spatial Presence more if the interaction is intuitive, meaningful, and well-timed. Most importantly, the interactions are consistent and error-free (Haans & IJsselstijn, 2012; Sheridan, 1992a,b).

Spatial presence is located at the posterior parietal cortex and encodes spatial information using an egocentric frame of reference. It transforms sensory information coordinates into action, such as giving a feeling that the other person is in front of them while watching the mukbang content. This is also the same with digital commensality things; someone tends to eat alone while watching a video or someone else through the virtual platform (Spence, Mancini & Huisman, 2019). It has helped connect many solo diners with physically co-located, remote or even virtual dining partners (Spence, Mancini & Huisman, 2019). At the university, and particularly as an effect of social isolation during the pandemic, we can observe this scenario almost every day where students would eat with their gadgets in their hands because they do not want to feel alone while eating their food. Many people watch mukbang because they perceive eating with the mukbang host. Mainly the one who watches mukbang does not like interaction with others in reality and is rather alone. The viewers who become extroverts in virtual reality are primarily introverts in real life, and their social interactions with people around them are less than those inside the online platform. Moreover, they want to escape their unpleasant real life by interacting with others worldwide through mukbang watching. In summary, this spatial presence and digital commensality are experienced by all viewers using or watching any content on the social platform.

Mukbang watching is also related to the Autonomous Sensory Meridian Response (ASMR). ASMR evokes a light and pleasurable tingle, sparkles, and fuzziness or waves of relaxation in the head, neck, spine, and the rest of our body. This ASMR is triggered by the mukbanger when they speak softly or whisper and create a chewing sound of eating food. Due to Covid-19, this ASMR has become trendier among young people and undergraduates because, through this, they can release their stress of staying home while locked down and doing an online study. Many undergraduates found that hearing the sound of someone chewing food and seeing them eat makes them feel calm, and they enjoy it (Loy & Mohamad, 2021). According to Heather (2007), the human voice has a vast healing potential, which is why specific viewers who watch mukbang find it very pleasant to hear someone eat. The mukbang content/videos that use ASMR will likely make viewers who watch their content feel hungry and increase the desire to eat, especially at night. Moreover, the viewer loves watching mukbang videos that show high-calorie food because it will increase their appetite and is also pleasant to see. In summary, this ASMR on mukbang may positively impact the viewers in terms of emotions.

Mukbanger brainwaves can be analysed through a neurofeedback machine (NFT). This NFT will show the brainwaves of the mukbanger during eating food while watching the mukbang and during watching mukbang only. When the mukbanger only does the screen time, this is categorised as a resting state because they only watch the mukbang video. It meant that there would be no movement during the resting state as they would only watch the video on their screen, but there would be a brainwave activity that NFT would record. According to Nurul Hanim et al. (2022), resting is a part of behaviour that increases involvement in any external activity and is called intrinsic activity (Huang, 2019). Resting is also essential as it may impact an individual's mental, physical, spiritual and cognitive responses (Eades et al., 2016). Beta and alpha brainwaves were discovered in this study, though the results for both categories varied.

2 METHODS AND MATERIALS

This study uses neurofeedback to analyse participants' brainwaves while eating food and watching mukbang. Participants of this study are recruited from a public university's undergraduate population. Two participants volunteered. The sampling procedure used in this research is a randomised control trial using a between-subjects design. The participants will be chosen randomly to do between watching mukbang only and watching mukbang plus eating food while watching mukbang. Ten periods will be completed for each participant to record the participant's brain activity.

Participants will complete a form comprising demographic information before starting the neurofeedback experiment. Aside from that, participants will be given the protocol for neurofeedback data collection for mukbang. The neurofeedback experiment contains ten periods for each participant, and this experiment will be conducted at University Malaysia Sarawak's Counselling Laboratory. For every period, it will last 3 minutes with 15-second rest, making the total for ten periods 32.5 minutes. There will be three electrodes which are two electrodes for the prefrontal cortex (Fp1 and Fp2), one electrode as a reference electrode (A1 and A2), and the location is in an earlobe area. The Fp1 used the green electrode located on the left side of the prefrontal cortex, while Fp2 used the grey electrode on the right side. The A1 refers to the vestibular region on the left side with a yellow electrode, while A2 is on the right side with red electrodes. According to Dempster (2012) and Evans and Abarbanel (1999), A1 and A2 act as reference and ground electrodes for Fp1 and Fp2. The electrodes are placed on the scalp or skin to make the data readings more accurate and allow the electrodes to record those cortical activities during the experiment.

The brainwave experiment will be conducted with the help of a professional person handling the neurofeedback. The brainwave data and experiment will be recorded to enable the researcher to analyse the data at the end of the experiment. The brainwaves have their unique characteristics; only some brainwaves will be used in this experiment, such as beta and alpha. Based on the Marzbani, Marateb and Mansourian (2016) table of specific brainwaves with its characteristics will be used as a guide in this research.

All participants signed a consent form before joining the experiment. The consent form is vital to protect participants' anonymity, dignity, integrity and rights from any potential negative consequences of participating in the study. Consent will be obtained from participants by including a statement of consent which will be embedded with the protocol of the experiment before the participants start the experiment. After the participants complete the agreement to join the experiment, they will be offered the option to consent to their involvement in this study or not. The researcher will allow the participants to consent to participate in this study. After they agree to participate, the briefing will be given and start the neurofeedback experiment. The experiment will be done in one day with two participants.

Information considered sensitive, such as the name, address, and other relevant information will be hidden and maintained during the research. The identity of the respondents will be hidden or unknown to the researchers at the survey return stage. It is because we want to protect the participant's privacy from other people. The participant's responses will be marked as participants A and B in the data. We will only reveal the gender of the respondents to compare the results between male and female respondents.

In this study, we used Microsoft Excel 2016 and Statistical Software (SPSS) Version 28. The data was keyed into Microsoft Excel 2016 and divided into beta and alpha brainwaves from period one until period 10. The data of the brainwaves were recorded, and only alpha and beta brainwaves were taken. The bar chart will be generated in Microsoft Excel 2016. Additionally, the data recorded in Microsoft Excel will be imported to SPSS to check for normality and run the data with the Friedman post hoc test. Results are presented using visualisations of graphs and charts for better comprehension and interpretation of findings. The summary and conclusions are generated to be more precise, allowing general description, conclusions, prediction, and estimation to test the proposed hypothesis.

3 RESULTS AND DISCUSSION

The results of this experiment were unsettling (Figure 1, Figure 2) over ten periods/sessions conducted on two healthy female participants of UNIMAS undergraduates. Two brainwaves appeared in the prefrontal cortex: beta and alpha variants. The frequency of these brainwaves was recorded in microvolt (μV). Each frequency wave has a unique pattern representing the range value from the beginning to end.

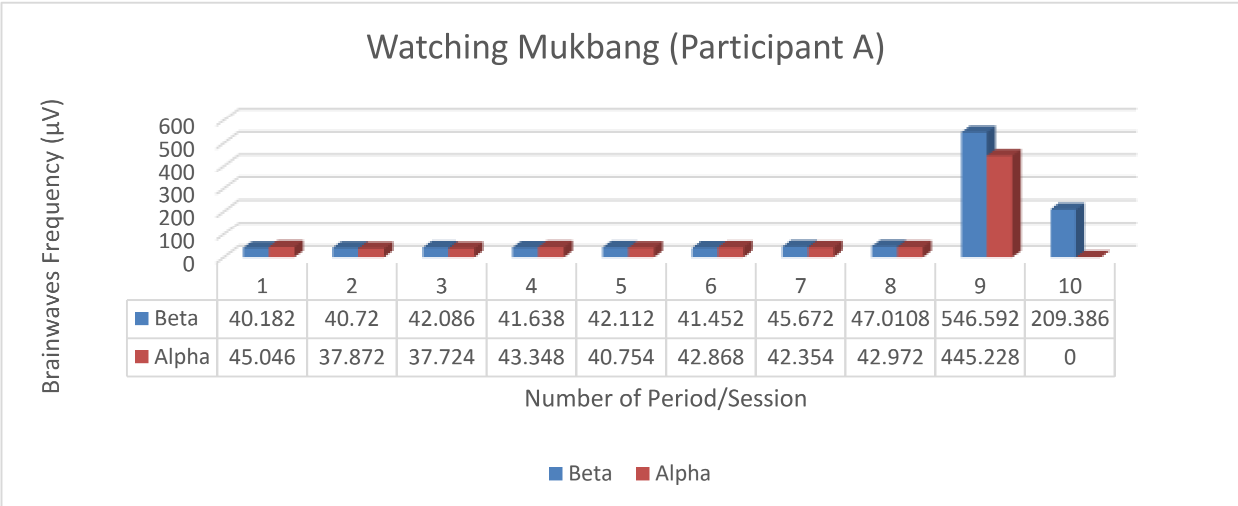

Figure 1. Beta and Alpha wave readings for Participant A

The frequency gap between beta in Figure 1 from the first to eighth periods was not continuous, and the frequency was low. In the ninth period, the frequency data of the beta positively increased from the previous period, and on the 10th, the beta frequency slowly decreased to 209.39µV. The difference between the 9th and 10th periods is only 337.2 µV. Aside from that, the disparity between alpha-band frequency fluctuated from the 1st to 8th periods and was not stable but slightly dispersed among periods until the 9th period, which had a more significant numerical gap than the preceding. The alpha-band recorded the highest data with 445.23µV; in the 10th period, the data were negatively decreased to 0µV. Based on the findings, the alpha frequency exhibited non-data dispersion due to a lower standard deviation value (SD = 129.78) than beta (SD = 162.23).

Furthermore, the alpha wave had the lowest mean value (77.82 ± 129.78), followed by the highest best (109.69 ± 163.23). In this bar chart, the beta had a higher frequency than the alpha because beta characteristics are thinking, focusing, tension, alertness and excitement. Participants were only given full attention to watching mukbang, which might make them tense because they only watch mukbang videos without interacting with others.

The range between alpha-band frequency was not stable from the 1st to 10th periods, but the highest alpha was in the fourth period with 423.9µV. On the other hand, the beta frequency gap was not steady from the 1st, 3rd to 10th periods, but in the second period, the data recorded the highest frequency than other periods with 407.36µV. The beta and alpha frequency experienced up and down, and the difference between the highest alpha and beta was 16.54µV. In the 8th period, the beta frequency recorded a big gap with other period data with 41.768µV, and the data slowly increased positively until the 10th period. The beta frequency suggested non-data dispersion with the lowest standard deviation (SD =102.51) compared to alpha (SD = 104.84).

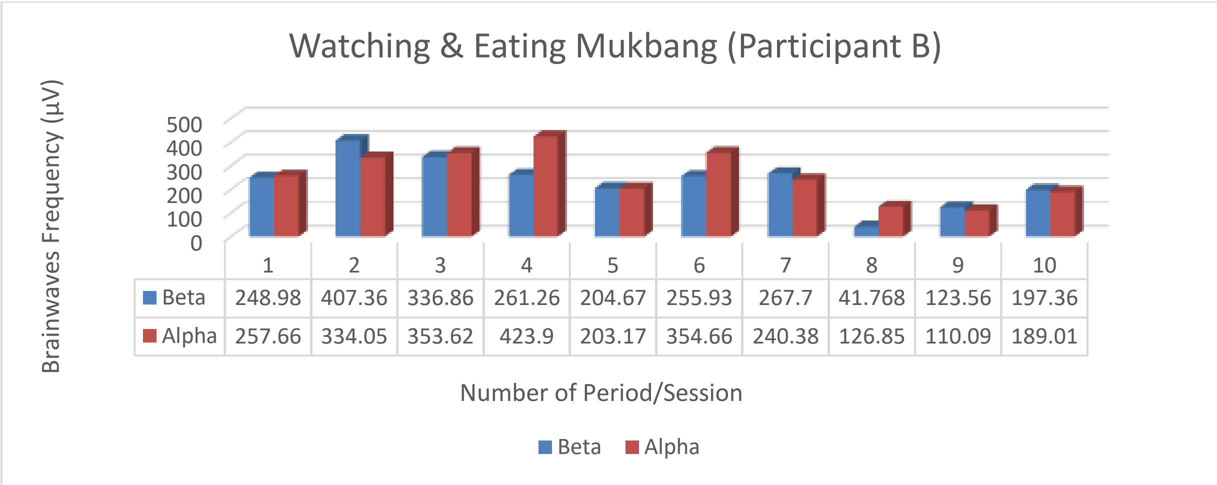

Figure 2. Beta and alpha wave readings for Participant B

Based on participant B's results of watching and eating mukbang, the highest brainwave recorded for this experiment is the alpha variant. Additionally, the beta variant recorded the lowest mean value (234.55 ± 102.51), while the alpha experienced the highest mean value (259.34 ± 104.84). Alpha characteristics are alertness, feeling peaceful, ready and deeply relaxed. This attitude was shown by participant B in this experiment because the alpha brainwaves are high. After all, the participants can interact with people while eating and watching the mukbang videos.

Table 1. Normality test for brainwave frequencies participant A.

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Beta	.450	10	<.001	.510	10	<.001
Alpha	.500	10	<.001	.444	10	<.001

a. Lilliefors Significance Correction

Table 2. Normality test for brainwave frequencies participant B.

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Beta	.173	10	.200*	.966	10	.850
Alpha	.162	10	.200*	.953	10	.702

*. This is a lower bound of the true significance.
a. Lilliefors Significance Correction

Normality tests were taken before the mean and standard deviation were produced. Before producing mean and standard deviation figures for brainwave frequencies, the normality test was performed to determine whether the sample collection was customarily distributed (Ghasemi & Zahediasl, 2012; Laerd Statistics). Based on the table above, the Shapiro-Wilk's test ($p<.05$) and a visual bar chart as shown in Figure 1 and Figure 2, normal Q-Q plots and box plots presented the number of periods that being carried out was not normally distributed for brainwave types (beta, alpha).

Table 1 and Figure 1 show that the alpha skewness is 3.097 with a standard error (SE) of 0.687 and kurtosis of 9.721 (SE= 1.334). Consequently, the beta also recorded skewness with 2.666, a standard error (SE) of 0.687, followed by a kurtosis of 7.225 (SE= 1.334). According to the Kolmogorov-Smirnov test in Table 1, all brainwave frequencies were lower than 0.05 ($p<0.01$); Hence, the null hypothesis was rejected.

Besides that, in Table 2, the alpha obtained skewness of 0.048 with a standard error (SE) of 0.687, followed by a kurtosis data of -1.151 (SE = 1.334). Subsequently, the beta skewness is -0.298, standard error (SE) of 0.687 and kurtosis of 0.68 (SE=1.334). The p-values of the normality test in Table 2 for both beta and alpha were higher than 0.05 ($p>0.20$); thus, the null hypothesis was accepted.

Table 3. Friedman test for brainwave frequencies of participant A.

N	10
Chi-Square	1.600
df	1
Asymp. Sig.	.206

a. Friedman Test

Table 4. Friedman test for brainwave frequencies of participant B.

N	10
Chi-Square	.000
df	1
Asymp. Sig.	1.000

a. Friedman Test

The optimal brainwave frequency for the activity performed in the resting state has not been determined based on the non-normal data distribution. The Friedman test is excellent for determining the distinctions between groups of brainwave activity (Laerd Statistics, n.d). There were substantial variations in the alpha, and beta bands, as shown in Table 3 (X^2(2) =1.600 , p=0.206). Asides from that, Table 4 recorded X^2(2) =0.00 with p=1.000. The p-value for the null hypothesis in Table 3 was rejected, while the p-value for the null hypothesis in Table 4 was accepted because the p>0.05. Furthermore, there was a mean rank in the Friedman test, which for Table 1, beta score the highest score (M=1.70), and alpha ranked in second place with a mean score (M=1.30). On the other hand, the mean score in Table 4 was the same as the mean score for alpha and beta were M=1.50.

Table 5. Post-hoc test for alpha-beta brainwaves for participants A.

	Alpha - Beta
Z	-1.478[b]
Asymp. Sig. (2-tailed)	.139

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

Since the Friedman test yielded significant results, a post hoc test was performed on the data set to identify the specific brainwaves that differed from the others (Galili, 2010; Laerd Statistics, n.d.). After applying Bonferroni correction to the Wilcoxon signed-rank test results, statistically significant differences between alpha-beta activity were observed during the resting state (Z= -1.478, p= 0.139) in Table 5. In contrast, Table 6 shows that the resting state for beta-alpha is different from the previous result (Z= -0.764, p= 0.445).

Table 6. Post-hoc test for beta-alpha brainwaves for participants B.

	Beta - Alpha
Z	-.764[b]
Asymp. Sig. (2-tailed)	.445

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

In this study, beta and alpha brainwaves were chosen for observations because these two brainwaves have their unique characteristics when compared to others. According to Marzbani, Marateb and Mansourian (2016), each brain region represents a specific feeling or task, such as in the prefrontal cortex (Fp1, Fp2). The prefrontal cortex is where alpha and beta waves are detected. Placing an electrode in the area of the frontal lobes will provide the best and most accurate neurofeedback data. Beta activity is a good indicator of mental performance (Egner & Gruzelier, 2004) because it is linked to mindful accuracy, intense focus, and problem-solving abilities. Besides that, according to Evans and Abarbanel (1999), the alpha wave is associated with alert relaxation and is mainly used to relax muscles. Alpha waves would spread out rapidly on the skin, and alpha frequency would increase when muscles feel relaxed.

Despite a non-normal sample, brainwave frequencies were statistically significant. Based on Figure 1, the beta frequency experienced the highest in the resting state compared to alpha brainwaves. Figure 2 showed that the alpha was on the top, with the highest frequency value than the beta variant during the resting state. The investigation looked at the subject's brain hemispheres and transitions from closed eyes to active cognitive task participation. The cognitive task the participants had to do varied for every participant. Participant A watched mukbang videos, and participant B watched mukbang videos and ate food that had been prepared for them. According to Dias (2012), the beta waves are high in intense pressure, anxiety, excitement, and minimal focus.

Based on Nur Afiqah and Nurul Hanim (2022), low beta frequency indicated that frequency is a healthy range associated with cognitive processing, focus and decision-making. Contrary to that, high beta waves are linked to mental wellness (Aamidfar et al., 2017) and cognitive processes (Dias M et al., 2012; Sugata et al., 2020). The participants for this experiment might likely be under pressure or had low attention when the participants watched the videos and ate simultaneously. This might cause the beta frequency to become the highest data and increase significantly throughout ten sessions (Dias M et al., 2012). Other beta frequencies are adversely associated with resting conditions, despite being targeted in the prefrontal cortex (Dias M et al., 2019; Zhang et al., 2020; Barry et al., 2017).

The mukbanger physical well-being will be seriously affected when the participants watch mukbang when they eat food. This was proved by the alpha frequency data in Figure 2, in which participants or mukbanger that watched mukbang will experience more intensity of eating while watching mukbang. According to Nur Afiqah and Nurul Hanim (2022), the alpha had lower and upper alpha representing recalling, optimal cognitive performance, readiness, and alertness. The participants were alert to the host eating and resting while enjoying the food, and an active cognitive activity happened during this time. After some time, the alpha frequency drop again means there is lower alpha present, and the participants are in a recalling state of what they were watching just now. The participants were too focused on the food only and did not remember the place of the host hosting their video, and the participants imagined the food they eat is the same as the host. Here the participant did not realise they were eating their food unconsciously in a tremendous amount. According to Choe and Gillespie (2019), mukbanger watches mukbang to satisfy their food craving, and mukbanger also watches mukbang because they cannot perform it in real life (Brennan, 2017)

Addicting in watching mukbang is correlated with social interaction. According to Kuss and Griffiths (2012b), those who formed or made new friends through online platforms have higher rates of being addicted to using online platforms than those who did not. In Beta data of watching mukbang, the data was not high as others. The beta data only show higher activities during the first periods and decrease slowly. The reason is that the participants only feel the excitement at the beginning, and then their excitement is gone after many minutes. High beta was present when the participants were alert to the host in the video, such as what the host talked about, ate, and where the host was hosting their videos. Unfortunately, the beta variant decreased, showing that the participants need interaction with others, similar to a *mukbanger* wanting to make watching their mukbang more exciting and fun. Therefore, every form of brainwave was present in the prefrontal cortex when it was resting. In sum, the results are synonymous with a description by Cole and Griffiths (2017), who described how a mukbanger would spend their time watching mukbang and interacting with people virtually, and consequently, it would help them to maintain their existing social relationships.

There were a few limitations encountered when conducting the study. First, only two participants were recruited for the study. The study was conducted during the pandemic lockdowns in Malaysia, where face-to-face class meetings were scarce and far between. Many potential participants were approached but eventually declined due to the fear of the pandemic. The analysis would have been more descriptive and comprehensive using an EEG machine instead of a Neurofeedback machine. Larger samples would have allowed for more in-depth analysis with mixed models to account for individual trajectories in mukbang. Secondly, the analysis would have been more comprehensive if the participants' Mukbang sessions had captured a deeper brain function. Unfortunately, the study relied on a single EEG machine available at the time of the study, and it did not operate as anticipated.

Additionally, the study also revealed that only a handful of previous studies looked into the use of neurofeedback to understand the mukbang phenomenon. From a reflective perspective, the study has revealed an exciting gap in the literature. The neurofeedback machine used for examination was short in electrodes; consequently, only a few electrodes could be used in the prefrontal cortex area. Further research should utilise a more extensive set of electrodes to capture a more comprehensive data set from participants.

5 CONCLUSION

In essence, the human brain has distinct roles and specialities. Mukbang is a relatively new phenomenon among young people, and most rhetorics have described it as a means of escape. EEG and neurofeedback are effective techniques for recording brainwave activity during mukbang. Future research should use an EEG machine to acquire data from additional brain regions. To fully comprehend the Mukbang phenomena, analysis of the variety of food types, length of Mukbang sessions, interaction with Mukbang hosts, and familiarity with the diction used throughout the sessions is also possible.

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