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Table of Contents

How People Social in VR: A Behavior Mapping Study in Virtual Environments

Maozhu Mao, Chiba University, Japan

Abstract
Social VR is emerging with commercialized VR equipment in recent years. In 2020, the COVID-19 global pandemic dramatically changed people's life. Governments recommend people stay at home, and the number of people in social VR also increased. This study focused on VRChat, one of the most popular and free-to-play social VR games. A systematic observation and behavior mapping had been conducted for a week (five weekdays and two weekends) in three maps (Worlds). Based on the VRChat user number and time relationship, each map's observation was conducted every 2 hours, starting from 8:00 to 22:00 (JST), and over 1000 users have been observed. And the map selection is based on language use and cultural elements in the map, including Japan, China, and English-speaking countries. People's positions on the map, behaviors, topics of conversation, and language use have been collected. The mapping results present on maps and other data such as the number of people, people's behaviors, and distance between people are statistically analyzed. The results of this study are 1. People would like to socialize in front of mirrors with a variety of avatars. 2. Only a few people take seats in virtual environments since most users are sitting in the real world when they are in VR. 3. Most people's distances between each other are from 1 to 2 meters, and the distance is statically different compared to people in front of mirrors and other areas.

Keywords: Virtual Environment, Social VR, Behavior Mapping

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Introduction

With teleology development, virtual reality (VR) games have become more affordable and easy to access, allowing geographically separated people to interact with avatars (Perry, 2016). People could use VR as a communication tool (Riva, 1999) and increase collaboration utility (Blascovich, 2002). Many factors could affect the experience of VR. One of them is the virtual reality environment (VRE) itself (Churchill & Snowdon, 1998), and the virtual world design could change people's social interactions (Bowers, Pycock, & O'Brien, 1996). The embodiment or avatar of the users could alter the VR society (Bredikhina, Kameoka, Shimbo, & Shirai, 2020), influencing people's behavior in VRE (Benford, Bowers, Fahlén, Greenhalgh, & Snowdon, 1995). Transcultural communication could be commonly found in multiplayer online games (Thorne, 2008), and second language use and learning also occur (Peterson, 2010). One of the games been researched before is Second Life. Human-agent interactions were analyzed (Pallay, Rehm, & Kurdyukova, 2009), and people's spatial social behavior was also investigated. There are also some limitations to VR. VRE's sense of being affected by VR models (Schubert, Friedmann, & Regenbrecht, 1999), harassment behavior has also been observed in VRE (Shriram & Schwartz, 2017). Other limitations such as technical problems, price, security also been mentioned (Wang, 2020). This research focused on people in a virtual environment, finding out how VRE influences people's social behavior and how people interact with others in a VRE. Popular social VR games could be an ideal platform to conduct research to fulfill this research object.

Methodology

There are many researches focused on the virtual environment before. VRE could become a basic research tool in psychology (Loomis, Blascovich, & Beall, 1999) and suitable for conducting social psychology research (Blascovich, 2001). Ethnography in virtual worlds (Boellstroff, Nardi, Pearce, & Taylor, 2012) and Playing Ethnography (Pearce, 2011) also provided the methodology foundation. William H. Whyte's observation method, based on the real world, has also been considered for this research (Project for Public Spaces, 2010).

Game Selection

The game selection could be necessary to research social VR games, and there are several social VR games on the market. Altspace VR and Oasis VR have few active users, and Facebook Horizon is under invite-only beat, making VRChat an appropriate platform. In 2020, the COVID-19 pandemic hugely changed people's daily life. Data from World Health Organization (WHO) and Steam which is the largest digital distribution platform for PC gaming suggest that COVID-19 confirmed case and active user in VRChat may have connections (data of COVID-19 confirmed cases weekly change from Jan-2020 to Mar-2020 is so high that cannot fit into Figure 2). The pandemic limited people's social life, and the need to socialize may encourage the video game industry and increase the number of active users in VRChat (Fig 1).

Data Collection

In VRChat, people have several ways to experience the VRE. The game supports full-body tracking, but only a few people have a complete set of VR equipment, which hasn't been observed in this research. People could also use VR headsets and controllers to explore the

VR world, which has only been observed in few cases. Most players use a traditional keyboard and mouse in this game, and the data collection for this research was also conducted in this way.

During the data collection, the researcher conducted systematical observations with video recording in the game as a non-interactive player. The observation was completed in 2020, five weekdays and two weekends, are Sep.24 (Thu.), Sep.25 (Fri.), Sep.26 (Sat.), Sep.27 (Sun.), Sep.28 (Mon.), Sep.30 (Wed.) and Oct.6 (Tue.). The data were collected every two hours from 8:00 to 22:00 (JST), record people's position on the map, and write down the topic of the chat, type of interaction, and the language they are using.
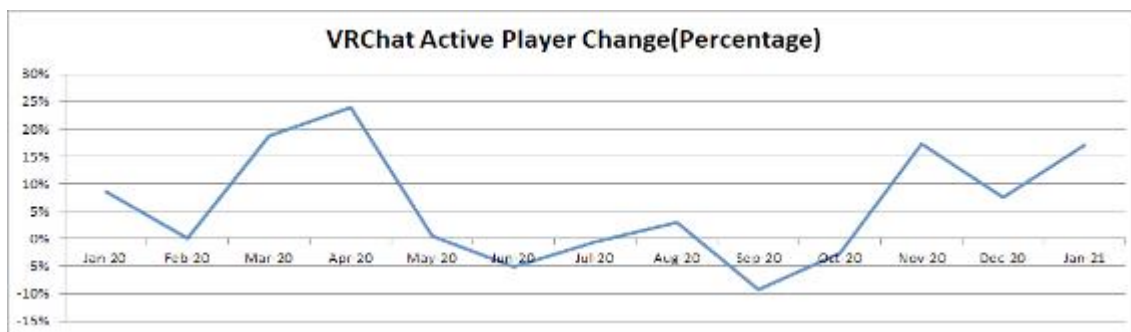
Figure 1: VRChat Active Player Change (Percentage)-Data from Steam.
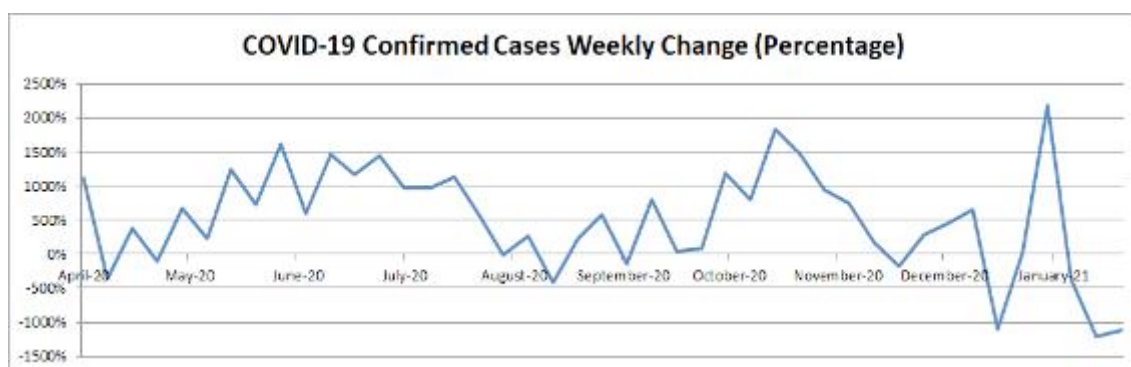
Figure 2: COVID-19 Confirmed Cases Weekly Change (Percentage)-Data from WHO.

Black Cat	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.	Sun.	Total
Public	3063	2742	2680	2621	2866	3497	3347	20816
Private	295	397	283	284	347	581	398	2585
Total	3358	3139	2963	2905	3213	4078	3745	23401
P-Public	91.22%	87.35%	90.45%	90.22%	89.20%	85.75%	89.37%	88.95%
P-Private	8.78%	12.65%	9.55%	9.78%	10.80%	14.25%	10.63%	11.05%
Chinese Bar	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.	Sun.	Total
Public	319	494	344	333	442	409	486	2827
Private	18	33	27	21	49	29	80	257
Total	337	527	371	354	491	438	566	3084
P-Public	94.66%	93.74%	92.72%	94.07%	90.02%	93.38%	85.87%	91.67%
P-Private	5.34%	6.26%	7.28%	5.93%	9.98%	6.62%	14.13%	8.33%
Japan Shrine	Mon.	Tue.	Wed.	Thu.	Fri.	Sat.	Sun.	Total
Public	644	776	577	1491	1518	1777	882	7665
Private	29	24	31	150	55	130	67	486
Total	673	800	608	1641	1573	1907	949	8151
P-Public	95.69%	97.00%	94.90%	90.86%	96.50%	93.18%	92.94%	94.04%
P-Private	4.31%	3.00%	5.10%	9.14%	3.50%	6.82%	7.06%	5.96%

Table 1: Number of Player and Percentage of Public Map.

Figure 3: Black Cat (In VRChat)

Figure 4: Chinese Bar (In VRChat)

Figure 5: Japan Shrine (In VRChat)

Map (World) Selection

In VRChat, players have to choose and get into a map (world) then interact with other players. Hundreds of maps exist in the game, many of them are created by individual players, and a group makes some players in the game community. Each map allows a certain number of players to join, and it could be public that allows everyone to join or create a private world with a password. Three popular maps that are usually created as public worlds have been selected (Table 1). Black Cat (Fig 3) is an indoor bar with that most players speak English. Chinese Bar (Fig 4) is on a beach with a structure with two floors, and this place has more Chinese speakers. Japan Shrine (Fig 5) has ample outdoor space with several facilities to find players from Japan.

Results

People's Positions in VRE

Three selected maps were measured by step off in the game, so the scale is not perfectly accurate. The layout plan also shows elements such as tables, benches, chairs, trees. The following maps (Fig 7, Fig 8, and Fig 9) show the distribution of active players who interact and talk to others represented as red crosses and inactive players who stand there represented as blue circles. Since this research focuses on people's social behavior and their interactions, players that move around were not considered.

From three maps with people's distribution, an apparent phenomenon is that many people would like to stain in front of mirrors and interact with other people. Based on the observation, about half of the people in these three maps were observed in front of mirrors.

	Mirror	Other	Total	Mirror (Percent)	Other (Percent)
Black Cat	66	43	109	60.55%	39.45%
Chinese Bar	228	293	521	43.76%	56.24%
Japan Shrine	348	255	603	57.71%	42.29%

Table 2: Number of Players been Observed
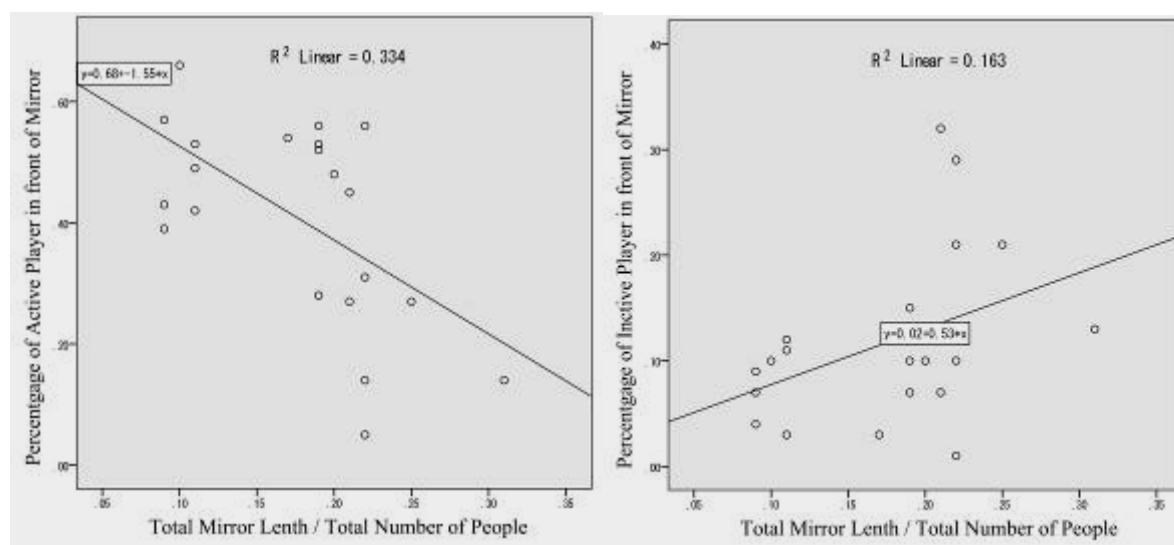
Figure 6: Regression Analysis of Active and Inactive Player in front of Mirrors

The regression analysis also indicates some results. The percentage of active players in front of the mirror will decrease with the increase of mirror length per person, with R=0.583 and Sig. of 0.006. On the other hand, the inactive player in front of the mirror will increase, with R=0.403 and Sig. of 0.07.

The results show that VRE mirrors could attract both active and inactive players, but the effect is different. The reason why people would like to stay in front of mirrors may be able to be explained in the following paragraphs.
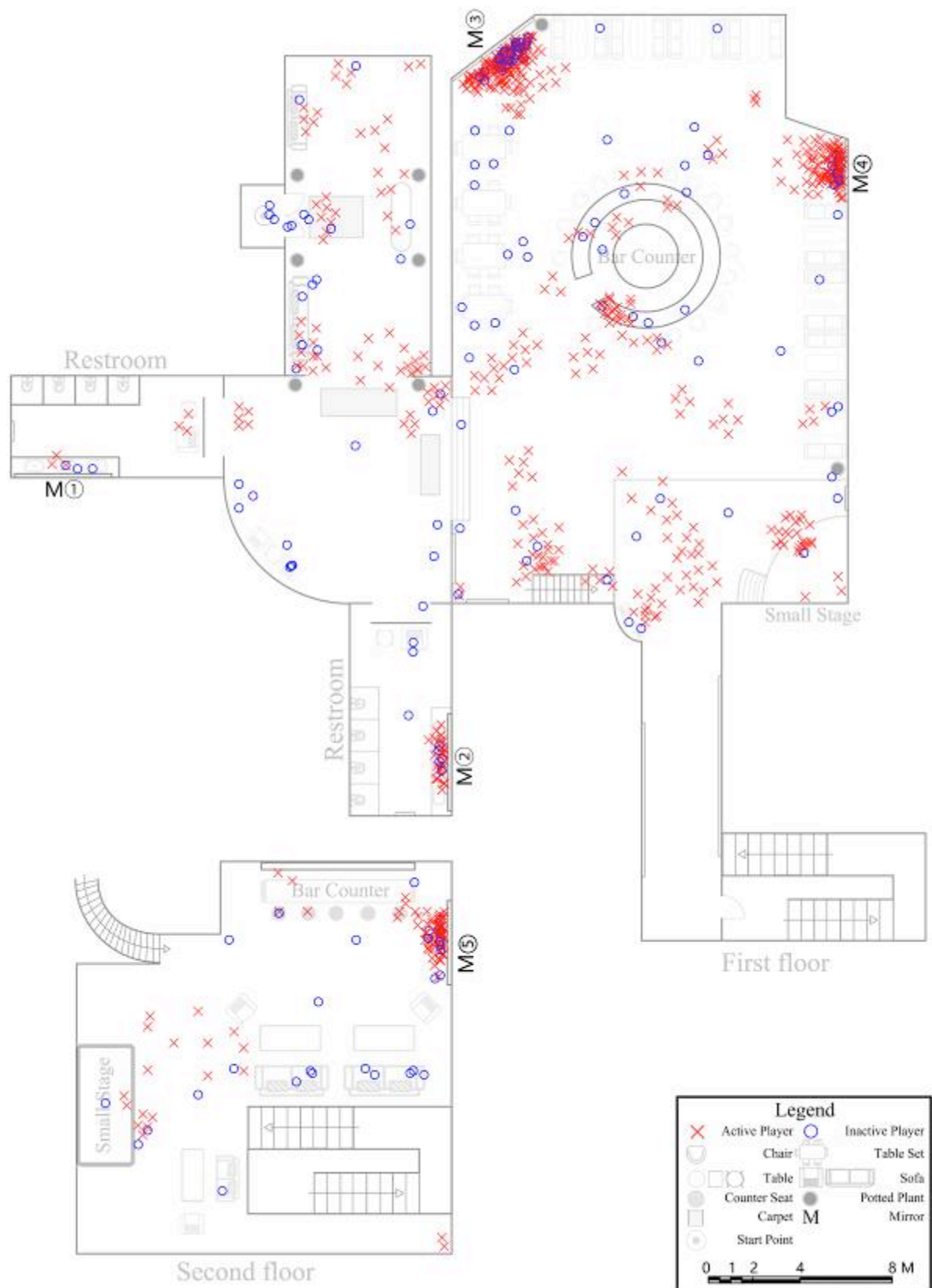
Figure 7: People's Distribution in Black Cat
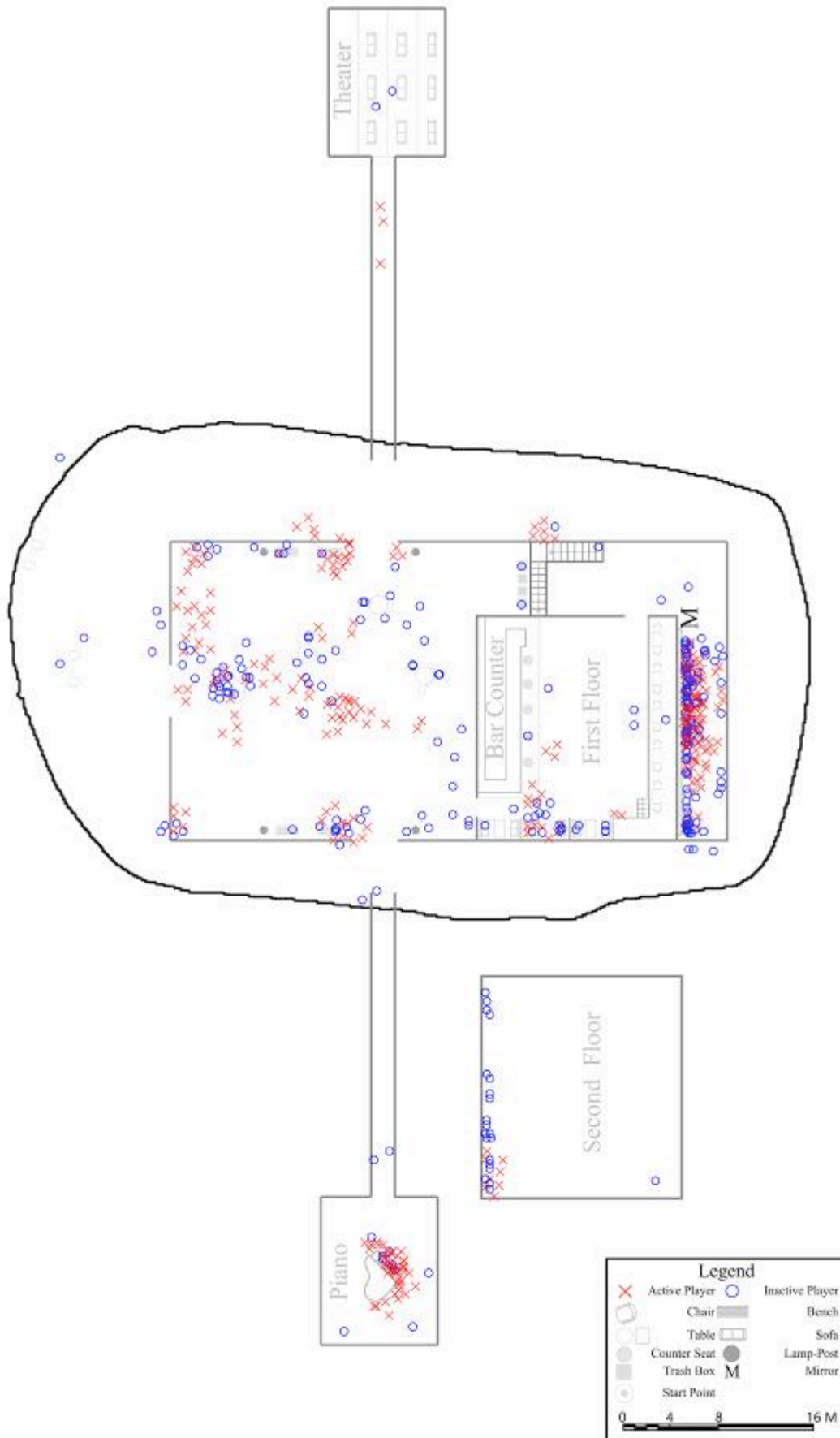
Figure 8: People's Distribution in Japan Shrine
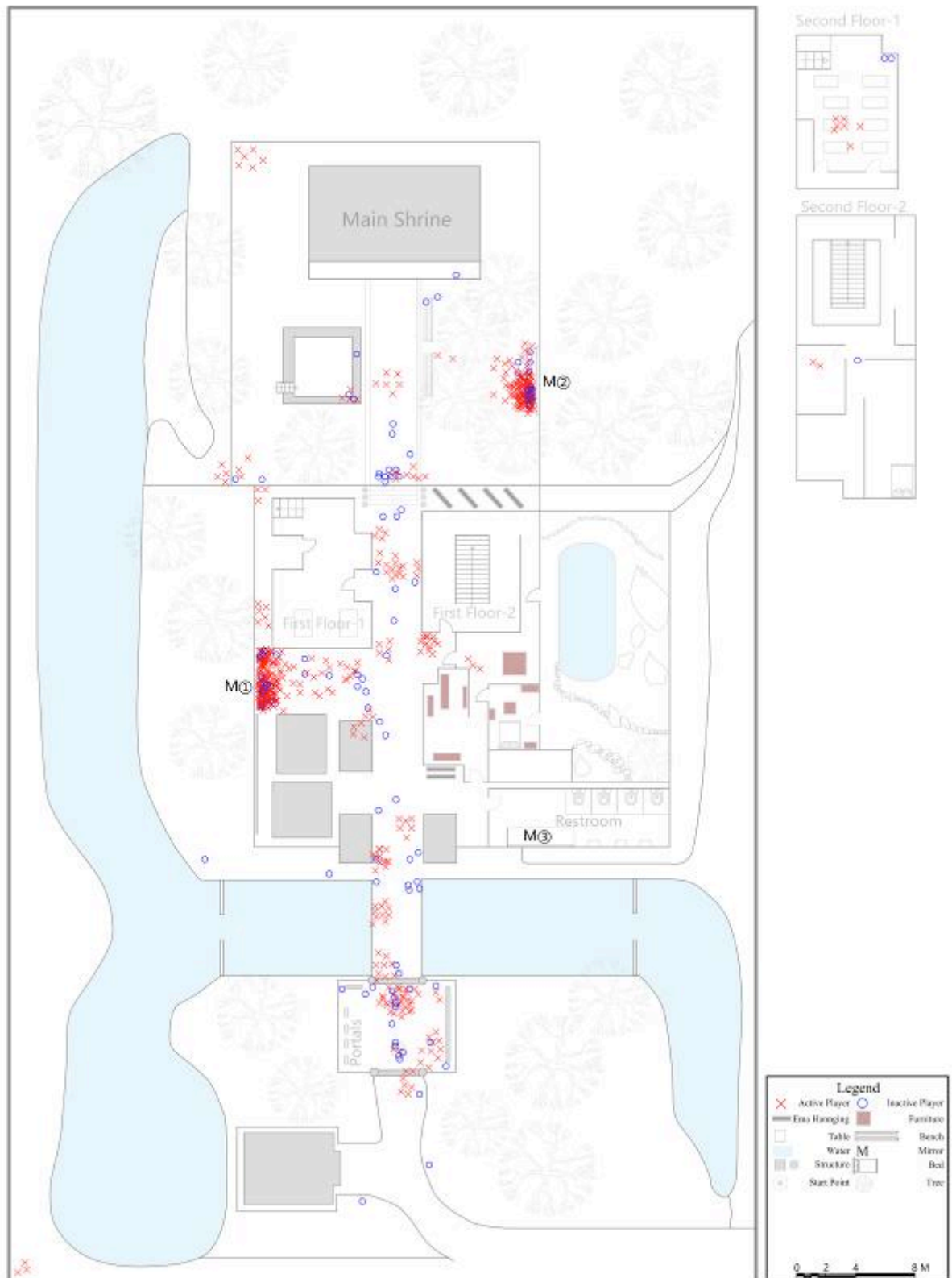
Figure 9: People's Distribution in Japan Shrine

Interactions in VRE
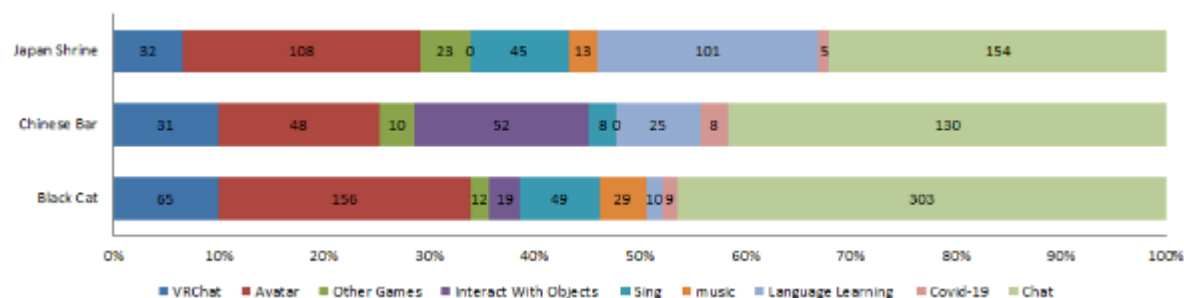
Figure 10: Interactions and Topics by Percentage

There are many kinds of interactions been observed in VRE during the data collection (Fig 10). A considerable part of them just chatting about daily life, and many people talk and interact with avatars. People also talk about games, especially about this game VRChat, and some people would like to start a free concert inside the game.

Figure 11: Avatars in VRChat

Another popular topic is avatars. People could choose avatars provided by VRChat, and there are so many avatars made by players and free for everyone to access. Based on the observation, many people choose avatars not in human shape, such as a robot, cat man, characters from anime and game, even a banana with sunglasses. As the number of the avatar in VRChart increases, the avatar becomes an interesting topic to talk about and interact.

Map	Language								
	English	Chinese	Japanese	E/C	E/J	C/J	E/C/J	Others	Total
Black Cat	635	0	0	10	5	0	0	0	650
Chinese Bar	31	148	3	73	0	20	0	4	279
Japan Shrine	307	3	12	5	81	16	20	68	512

Table 3: Language Use in Maps

Language exchanging and learning phenomenon also been observed in three maps. English, Chinese, and Japanese are the three major languages in these maps. Other languages such as

Korea, Russia, Thai, and Indonesian have also been heard. Sometimes, a group of people will communicate in more than two languages.

People Don't Take Seats

There are many benches and chairs that people could take a seat in Black Cat and Chinese Bar, but people don't like to take a seat in VRE (Table 4), and people who are sitting are more tend to stay inactive. The mao of Japan shrine also has benches, but people cannot sit on them. Based on the researcher's memory, people could sit on benches in the Japan shrine early in 2020, the map creator of the Japan shrine may also be noticed that people don't take seats, so this function in the map has been disabled.

Black Cat	Sitting		Standing		Chinese Bar	Sitting		Standing	
	Active	Inactive	Active	Inactive		Active	Inactive	Active	Inactive
Mon.	0	2	98	14	Mon.	0	4	47	35
Tue.	0	8	94	14	Tue.	0	7	40	35
Wed.	0	8	94	14	Wed.	0	5	50	22
Thu.	1	2	93	28	Thu.	0	4	25	37
Fri.	0	2	91	21	Fri.	0	7	31	37
Sat.	2	6	98	16	Sat.	1	2	70	24
Sun.	0	5	93	17	Sun.	2	5	49	30
Total	3	33	661	124	Total	3	34	312	220

Table 4: Numbers of People Take Seat in VRE

This result may explain that most of the players are using keyboard when they playing this game. They probably were sitting when they played the game, making little sense for people to take seats in a VRE.

Player distance

There is some research about personal distance in VR, but they use a human-shaped model and are conducted in a controlled laboratory environment (Iachini et al., 2016). In this research, many players' avatars were observed were not in human shape, and the closest distance between players was categorized.
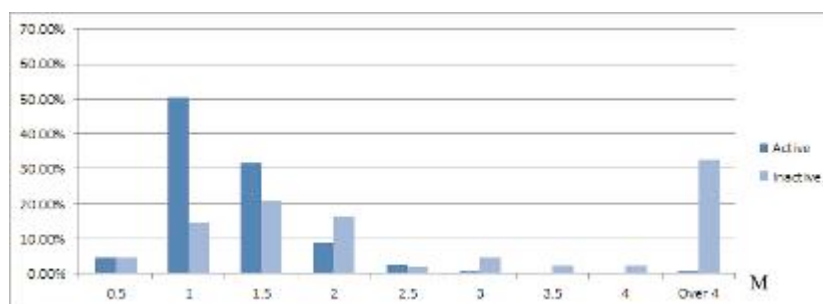
Figure 12: Personal Distance in front of Mirror
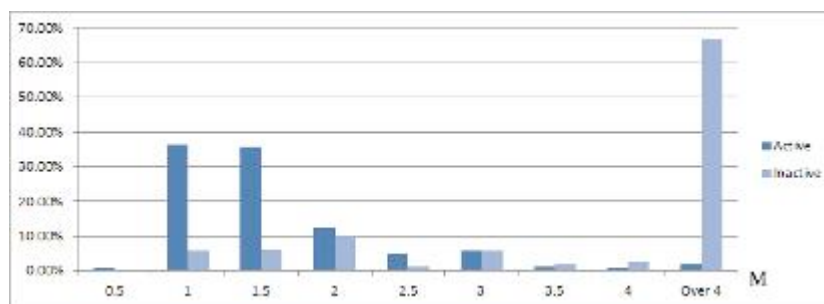
Figure 13: Personal Distance in Other Area

Player's distance is categorized in to 0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, and over 4 meters. Fig. 12 and 13 shows that many people's distance is from 1m to 2m, and for players that are not in front of the mirror, more inactive player's distances are more than 4m. Since the data of player's distance is nonparametric, Mann-Whitney U Test has been conducted for active and inactive players.
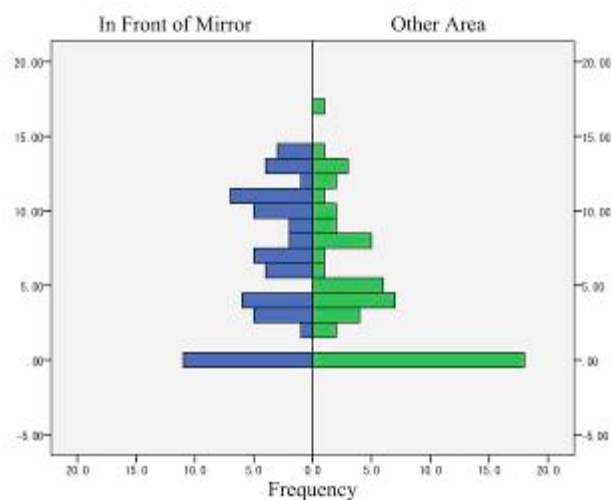
Figure 14: Frequency of Active Player's Distance
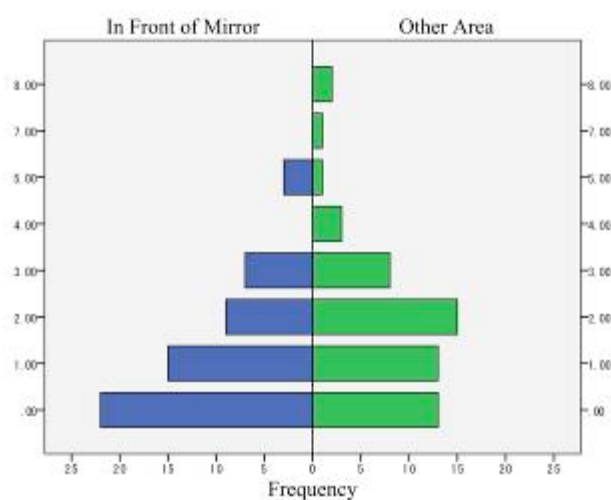
Figure 15: Frequency of Inactive Player's Distance

A Mann-Whitney U test was run to determine if there were differences in the number of active people between the mirror area and other areas. Distributions of active people's

numbers were not similar, as assessed by visual inspection. The number of active people in the mirror area (mean rank = 62.54) and in other areas (mean rank = 50.46) were statistically significantly different, U = 1229.5, z = -1.991, p=0.047, using an exact sampling distribution for U. For inactive players, the distributions of inactive people's number were similar, as assessed by visual inspection. The median number for inactive people in the mirror area (1.00) and in other areas (2.00) were statistically significantly different, U = 1209.5, z = -2.150, p=0.032, using an exact sampling distribution for U. The result of the U test shows that for both active and inactive players' distance in front of mirrors and other area has statistically different.

Conclusion

This research focused on people's social behavior in a virtual reality environment. The observation provided empirical data and suggested several residuals. 2020 is a year people live with COVID-19, limiting people's behavior in the real world. The number of players in VRChat increased, making the game become a plant form to research people's social behavior in VRE.

Mirror in VRE attracts both active and inactive players. People would like to socialize in front of mirrors, and the variety of avatars also encouraged people to interact. Only a few people take seats in virtual environments since most users are sitting in the real world when they are in VR. The data of player distance also shows that most people prefer to have 1 or 2 meters to another player. The statistical analysis supports that people's distance is different when they are in front of mirrors and other areas.

This research may help developers and researchers who work with VRE, make people's VRE experience more comfortableuuuuu, and create a more attractive virtual environment. Limitations also exist. This research was only conducted in one social VR game, and most people used the keyboard due to the cost of the VR headset. In the future, when VR equipment becomes easier to be assessed and more popular VRE open to the public, people's experience in VRE could change, and the way people socialize in VR also varies with VR equipment development.

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Contact email: maomaofreedom@gmail.com

Bullying Victimization, Self-Compassion, and Depressive Mood as Predictors for Resilience in Thai Junior High School Students

Anchidtha Bowornkittikun, Chulalongkorn University, Thailand
Kullaya Pisitsungkagarn, Chulalongkorn University, Thailand
Somboon Jarukasemthawee, Chulalongkorn University, Thailand

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Abstract
Past empirical findings suggested the significance of resilience in adolescents. Those with a higher level of resilience coped better when encountering negative life events and were less vulnerable to mental health problems. Gaps, however, remained within the Thai context. Hence, this study aimed to identify psychological variables associated with and predictive of resilience in Thai adolescents. These variables were divided into those relevant to the adolescents' internal (i.e., self-compassion and depressive mood) and external (i.e., bullying victimization) factors. Relevant data were collected in a total of 130 Thai junior high school students (i.e., Grades 7-9, average age of 13.83 years, SD = .90; 76.15% female) from the Bangkok Metropolitan. Findings revealed a significant positive correlation between self-compassion and resilience ($r = .63$, $p < .001$) and a significant negative correlation between depressive mood and the construct ($r = -.59$, $p < .001$). No association was found between bullying victimization and resilience ($r = -.12$, $p = .08$). The three study variables significantly predicted resilience, $F(3, 126) = 34.62$, $p < .001$, and explained 45.2% ($R\Delta^2 = .45$) of its variance. However, only the standard regression coefficients of self-compassion ($\beta = .42$, $p < .001$) and depressive mood ($\beta = -0.35$, $p = .001$) were statistically significant. That of bullying victimization was not ($\beta = .13$, $p = .07$). The current findings highlighted the significance of the internal factors in predicting resilience. Implications and therapeutic interventions for resilience enhancement were discussed.

Keywords: Resilience, Self-compassion, Depressive Mood, Bullying Victimization, Adolescents, Junior High School Students

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Introduction

Adolescence is a critical period for development and is a transitional period from childhood into adulthood. The development involved changes in physical appearance, cognitive, and emotional maturity (Bluth, Mullarkey & Lathren, 2018). These transitions can lead to challenges such as learning to be independent and the establishment of social life (Lerner & Steinberg, 2009). Hence, it is important to study and identify positive factors that buffer against the negative life event that adolescents may face during these transitional periods.

Recent studies had suggested that there are increases in mental health-related problems such as anxiety, depression, and substance abuse across the transition into adulthood period for adolescents (Bluth, Mullarkey & Lathren, 2018). A systematic review of 41 studies across 27 countries suggested that the prevalence of mental disorders among adolescents was 13.4% (Polanczyk, Salum, Sugaya, Caye, & Rohde, 2015). Anxiety disorder was accountable for 6.5% and depressive disorder was accountable for 2.6% (Polanczyk et al., 2015). On the other hand, a study conducted on 5,345 Thai adolescents aged between 11-19 years old found that 17.5% could be diagnosable with depression and 50.0% had mild depressive symptoms (Panyawong & Pavasuthipaisit, 2020). In addition, the study suggested that among the participants, 20.5% had thoughts associated with death (Panyawong & Pavasuthipaisit, 2020). The prevalence of mental health disorders among adolescents shown an increase in severity of this issue and there is an increasing concern of mental health issues due to the recent situation of Covid-19. A study on 1,036 children and adolescents under quarantine in China due to Covid-19 was reported with 11.78% cases of depression, 18.92% cases of anxiety, and 6.56% cases were found with both depression and anxiety (Chen, Zheng, Liu, Gong, Guan, & Lou, 2020). Therefore, adolescents must develop a healthy coping strategy to deal with the changes and challenges they are facing which can prevent further development into serious mental disorders.

The growing interest in the positive factor that could buffer against the negative outcomes due to significant life stressors is known as resilience (Hjemdal, Aune, Reinfjell & Stiles, 2007). The term resilience is used in the psychological field to explain the phenomenon in which an individual can overcome adversity that had the potential in developing into further mental health problems (Rutter, 1999). Therefore, an individual with a higher level of resilience could potentially receive less impact on their mental health when dealing with adversities. Studies on mental health-related issues due to negative life events found that adolescents with higher levels of resilience reported less psychological distress when dealing with experiences such as sexual abuse and bullying victimization (Hebert, Lavoie, & Blais, 2014; Mcvie, 2014). While other studies also suggested that a higher level of resilience could predict lower levels of anxiety, depression, stress, and obsessive-compulsive disorder in adolescents (Hjemdal, Vogel, Solem, Hagen & Stiles, 2011; Hjemdal, Aune, Reinfjell & Stiles, 2007). Furthermore, resilience could be considered as a protective factor for adolescents with a higher risk of developing depressive symptoms (Sapouna & Wolke, 2013). As shown above, resilience is a positive factor that buffers against the negative impact of life stressors and, therefore, is important to study the psychological factors that could predict resilience.

The key requirement for resilience is the presence of promotive factors and the risk that allow the phenomenon to occur (Fergus & Zimmerman, 2005). The promotive factors that help adolescents overcome negative life events could be either internal or external factors. The internal factors are positive assets that reside within the person such as coping skills (Fergus

& Zimmerman, 2005). In contrast, the external factors are the resources or social environment that could influence the individual such as parental and peer supports (Fergus & Zimmerman, 2005). Resilience will occur when the individual is presented with promotive internal and external factors that allow oneself to overcome the hardship, as such, this study aimed to identify psychological variables associated with and predictive of resilience in Thai adolescents. The two internal factors used in this study are self-compassion and depressive symptoms. Whilst the external factors dealing with relationships with peers will be bullying victimization. Identifying the predictors for resilience could be beneficial for developing interventions to increase resilience among adolescents.

The construct of self-compassion allows an individual to reflect upon their self-views that could promote resilience for children and adolescents (Neff & Mcgehee, 2009). Neff (2003) defined self-compassion as an ability to embrace one's feeling of suffering with warmth, care, and connection (Neff & Mcgehee, 2009). The act of self-compassion with the desire to reduce the pain will allow one to heal themselves with kindness (Neff & Davidson, 2016). Neff (2003) has proposed that there are three major components of self-compassion (Neff & Davidson, 2016). The first component in self-compassion is self-kindness, which is the ability to treat oneself with kindness without self-criticism and self-judgment (Neff & Mcgehee, 2009). The second component is common humanity referring to oneself recognizing that imperfections are common shared experiences rather than becoming isolated (Neff & Mcgehee, 2009). The third component is mindfulness referring to one's awareness of present experience rather than avoiding or ruminating on them (Neff & Mcgehee, 2009). With the three components of self-compassion, an individual can provide internal emotional resources which help to ensure hardship and bounce back quicker (Neff & Davidson, 2016). Put simply, self-compassion as an internal factor could increase the level of resilience among adolescents which could be beneficial when facing negative life events.

Studies on self-compassion found that adolescents with a higher level of self-compassion had less psychological distress, social anxiety, stress, and depression (Gill, Watson, Williams, & Chan, 2018; Lathren, Bluth, & Park, 2019; Bluth, Mullarkey & Lathren, 2018). A meta-analysis conducted on 19 relevant studies found that there is a negative correlation between self-compassion and psychological distress such as anxiety, depression, and stress (Marsh, Chan, & Macbeth, 2017). In addition, another research suggested that self-compassion was associated with the emotional well-being of adolescents (Bluth & Blanton, 2015). Those with a higher level of self-compassion are more likely to have better emotional well-being (Bluth & Blanton, 2015). Thus, self-compassion was shown to be a psychological factor that could reduce the psychological distress that comes from difficult times and could potentially work as a factor to promote resilience.

It was suggested that many correlates of self-compassion are also components that can increase resilience and the two should be positively associated (Bluth, Mullarkey & Lathren, 2018). For instance, both self-compassion and resilience deal with the use of healthy coping skills to overcome hardship (Bluth, Mullarkey & Lathren, 2018). Several studies have demonstrated the effect of being self-compassion can help one bounce back and move on from difficult situations. An example is a study on academic failure found that those who responded to the failure with warmness and self-compassion are more likely to forgive themselves to move on (Breines & Chen, 2012). Hence, the overcome of failure with self-compassion suggested that it could potentially promote resilience. Another research on the association between self-compassion and resilience found that there are positive associations across adolescence (Bluth, Mullarkey & Lathren, 2018). The researchers also suggested that

self-compassion may have the potential in helping build resilience among adolescents and buffer the negative effects from stressors (Bluth, Mullarkey & Lathren, 2018). While a study to determine the effectiveness of mindful self-compassion programs on adolescents had found that the 8-week course is successful in decreasing perceived stress and increasing resilience (Bluth & Eisenlohr-Moul, 2017). It was suggested that the program promoting self-compassion can help the adolescents to recognize their inner strength and lessen the need to be dependent on others to be accepted, thereby increasing the level of resilience (Bluth & Eisenlohr-Moul, 2017). This shows that that self-compassion and resilience are positively correlated, and self-compassion can promote resilience among adolescents.

Another internal psychological factor that could potentially predict resilience is depressive mood. The depressive mood is defined as one's experience of feeling sadness and unhappiness for a certain period due to the occurrent of a negative situation, which is a common experience for everyone (Petersen, Compas, Brooks-Gunn, Stemmler, Ey, & Grant, 1993). The depressive mood is also concerned with depression symptoms (Petersen et al., 1993). Studies have suggested that adolescents often face depressive mood or depression due to negative life events such as poor relationships with peers, family-related issues, and other stressful events (Panyawong & Pavasuthipaisit, 2020; Polanczyk et al., 2015). Therefore, researchers must be able to identify factors that could lower the risk of developing depressive mood that could lead to major depression. A study investigating the impact of negative life events on depressive symptoms in adolescents found that the potential protective factors are the internal resilience factors such as self-confidence and external factors such as family support was associated with fewer symptoms (Askeland, Bøe, Breivik, Greca, Sivertsen & Hysing, 2020). On the other hand, a study on experiences of refugee children and adolescents found that those who suffer from depressive symptoms and other problems tend to have lower resilience (Ziaian, Anstiss, Antoniou, Baghurst, & Sawyer, 2012). It was also revealed in another study that resilience is an important protective factor against depressive symptoms and can be a predictor for depressive symptoms (Hjemdal, Aune, Reinfjell & Stiles, 2007). Past empirical studies suggested that there is an association between resilience and depressive mood, therefore, depressive mood should be an internal psychological factor that could predict resilience as well.

The external psychological factor that would be explored in this study is the relationship between adolescents and their peers. Bullying victimization was defined by Dan Olweus (1973) as a situation in which an individual has been bullied by at least one or more perpetrators intending to hurt the victims (Olweus, 1994). Bullying victimization is a serious issue, in Thailand, it was reported that at least 21% of the adolescents was a victim at one point (Ekasawin & Phothisut, 2017). In addition, 60.1% of the bullying victimization was found with at least one mental health disorder (Ekasawin & Phothisut, 2017). A systematic analysis revealed that the consequences of bullying victimization include mental health problems such as depression, anxiety disorder, poor health, and suicidal thoughts (Moore, Norman, Suetani, Thomas, Sly, & Scott, 2017). Thus, bullying victimization could result in a mental health-related issue, poor health in general, and other problematic behaviors to cope with the consequences. However, it is noted that there are adolescents who function better and were able to overcome bullying victimization with fewer consequences on their mental health. This phenomenon could be associated with resilience. A longitudinal study aiming to identify the factors are that associated with a lower level of depression after being bullying victimization found that adolescents who reported a low level of depression tended to be an individual with higher self-esteem, feel less isolated and have good relationships with their family (Sapouna & Wolke, 2013). Thus, it was suggested that family supports play a role in

promoting resilience and potentially help the victims to overcome the hardship (Sapouna & Wolke, 2013).

Another study also supported this finding suggesting that adolescents with a higher level of parent-child conflicts were reported with a higher level of depressive symptoms and risk of bullying victimization (Lahav-Kadmiel & Brunstein-Klomek, 2018). As such, it is shown that there are associations between resilience and bullying victimization. A study on relationships between peer support and bullying victimization among adolescents found that bullying victimization was negatively associated with a lower level of peer supports (Du, DeGuisto, Albright, & Alrehaili, 2018). In addition, peer support was negatively associated with depression symptoms and partially mediated the relationship between bullying victimization and depression symptoms (Du et al, 2018). On the other hand, a study conducted on Italian high schools found that conflicting parents was positively associated with both bullying and bullying victimization (Baldry & Farrington, 2005). While individual skills such as problem-solving coping skills were negatively associated with both aspects (Baldry & Farrington, 2005). Past studies suggested that there is a negative association between bullying victimization and the aspect of resilience both internal and external (peers and family support). However, little is known and explore in terms of bullying victimization as a predictor of resilience.

This study aimed to identify psychological variables associated with and predictive of resilience in Thai adolescents. The psychological variables that would be explored were the internal factors (i.e., self-compassion and depressive mood) and the external factors (i.e., bullying victimization). The findings regarding the aspect associated with the promotion of resilience should have implications in designing prevention programs and treatment interventions for adolescents who face adversity (Hjemdal, Aune, Reinfjell & Stiles, 2007). In addition, these abilities would allow a more accessible transition from childhood to adulthood and learn to develop healthy coping skills for the future (Bluth, Mullarkey & Lathren, 2018).

Method

Participants

Participants were 130 Thai adolescents from junior high schools in the Bangkok Metropolitan area aged between 12-16 years old the majority attended grade 8 (i.e., Grades 7-9, Mean Age = 13.83, SD = .90; male = 31, 23.85% and female = 99, 76.15%). The students participated in the current study voluntarily by responding to the online or paper-based questionnaires and were recruited through a gatekeeper at the school with consent from the parents.

Research Instruments

A total of five questionnaires were used for this study. Permission to use them was obtained from the developers. Then, the questionnaire was translated into Thai and adjusted to be age-appropriate. The questionnaires are as following:
1.)   General demographic information (i.e., age, gender, and psychological treatment)
2.)   A 14-item Thai version of the State Resilience Scale (SRC) for adolescents (Kittisunthorn, 2016) as adapted from Hiews et al.'s full version of State-Trait Resilience Scale (STRI) (2000). In the current study, the measure's Cronbach's alpha was 0.83, suggesting high reliability.

3.)   A 12-item Thai version of the Self-compassion scale short form (SCS-SF) for adolescents (Pornkosonsirilert, Audboon, & Laemsak, 2017) was translated from Raes et al.'s SCS-SF which was adapted from Kristen Neff (2003) full self-compassion scale. In the current study, the measure's Cronbach's alpha was 0.75, suggesting good reliability.

4.)   A 27-item Thai version of the Children's Depression Inventory (CDI) for children and adolescents (Leelatrakarnkun & Trangkasombat, 2012) was translated from the English version developed by Maria Kovacs (1981). In the current study, the measure's Cronbach's alpha was 0.91, suggesting high reliability.

5.)   A 10-item Thai version of the Olweus Bullying/Victim Questionnaire (OBVQ) for children and adolescents (Tapanya, 2007) was adapted from Dan Olweus's OBVQ (1983). In the current study, the measure's Cronbach's alpha was 0.87, suggesting high reliability.

Data Collection

An ethical clearance No. 254.1/62 was obtained from Chulalongkorn University's Institutional Ethical Review Board before the commencement of data collection. The researcher had contacted the gatekeeper of the junior high school in the Bangkok Metropolitan area directly and received approval from the participants, parents, and school director before collecting the data. The data was collected with two methods either in a paper-and-pencil format with hardcopy questionnaires in the classroom setting (10%) or online (90%) due to the social distancing policies. The students were given five sets of questionnaires to complete voluntarily and responded to them for approximately 15-20 minutes. No rewards were provided for the study participation.

Results

Pearson correlation analyses were conducted to examine the relationships between resilience and bully victimization, self-compassion, and depressive mood. The result revealed a significant positive correlation between self-compassion and resilience ($r = .63$, p < .001) as well as a significant negative correlation between depressive mood and resilience ($r = -.59$, p < .001). However, it was found that there is no association between bullying victimization and resilience ($r = -.12, p = .08$)

Table 1: Descriptive statistic and intercorrelation between variables with Cronbach's alpha reported in diagonal

Variables	M	SD	1	2	3	4
Resilience	53.90	8.37	(.83)			
Self-compassion	39.47	7.06	.63**	(.75)		
Depressive mood	16.94	7.88	-.59*	-.71*	(.91)	
Bullying victimization	8.30	5.24	-.12	-.28*	.40*	(.87)

***p<.001

A multicollinearity test was conducted before the regression model. The result did not indicate the violation of the multicollinearity assumptions. The correlation between predicted variables was ranging from $r = .40$ to $r = -.71$ and it does not meet the cut-off at .80. The value of tolerance ranges from .45 to .83 and did not approach the cut-off at .20 which could be a concern. The VIF value was between 1.19 to 2.20 and did not approach the cut-off value at 10.

A stepwise multiple regression was conducted. All together, the three study variables significantly predicted resilience, $F(3, 126) = 34.62$, $p < .001$, and explained 45.2% ($R\Delta^2 = .45$) of its variance. However, only self-compassion ($t = 4.48$, $p < .001$) and depressive mood ($t = -3.52$, $p < .001$) significantly predicted resilience. Their standard regression coefficients were .42 ($p < .001$) and -0.35 ($p = .001$), respectively. Bullying victimization did not predict resilience ($t = 1.87$, $p < .07$; $\beta = .13$, $p = .07$).

Table 2: Stepwise multiple regression results of self-compassion, depressive mood, and bullying victimization as a predictor for resilience

	B	SE B	β	t	Tolerance	VIF
Constant	38.69					
Self-compassion	.50	.11	.42***	4.48***	.84	1.19
Depressive mood	-.37	.10	-.35**	-3.52***	.50	2.02
Bullying victimization	.22	.12	.13	1.87	.45	2.22

Note: $R\Delta^2 = .45$, **p <.01, *** p < .001

Discussion

The main objective of this study is to explore the psychological variables that are associated with and could predict resilience among the group of Thai junior high school students. The variables were divided into internal factors (i.e., self-compassion and depressive mood) and external factors (i.e., bullying victimization). The findings of the variables that associated and could predict resilience are crucial as there are implications for designing prevention and treatment invention, for adolescents that face challenges during the transitional period into adulthood (Hjemdal et al., 2007). Therefore, the study was analyzed using correlational and stepwise multiple regression to investigate the effect psychological variables have on resilience among Thai adolescents.

The result indicated a significant positive association between self-compassion and resilience. This suggested that adolescents with a high level of self-compassion are more likely to have a high level of resilience as well. Thereby, adolescents with more self-compassion would have an easier time overcoming challenges and can bounce back from negative life events with less psychological distress. This is consistent with a past empirical study that found that self-compassion and resilience are positively associated across a group of adolescents (Bluth, Mullarkey & Lathren, 2018). In addition, it also suggested that this is consistent with a previous study which found that self-compassion had a buffer effect against psychological distress such as anxiety disorder, depression, and stress for adolescents (Marsh, Chan, & Macbeth, 2017). A possible explanation for the association between the two constructs is that the mindfulness component found in self-compassion facilitates being in the present while facing challenging experiences (Roeser and Pinela, 2014). Therefore, lessen the ruminating that could occur when experiencing hardship (Roeser and Pinela, 2014). Additionally, the component of self-kindness without judging oneself with criticism may promote a sense of self-worth (Bluth, Mullarkey & Lathren, 2018). While the component of common humanity helps to lessen the feeling of isolation that could potentially lead to depression (Sapouna & Wolke, 2013). The three components of self-compassion were able to explain the association between the two constructs and suggested that self-compassion could promote resilience among adolescents.

On the other hand, the result between the association of depressive mood and resilience indicated that there is a significant negative association between the two constructs. The

result suggested that adolescents with more resilience are more likely to have fewer depressive moods. This is consistent with the previous studies which suggested that there is a negative association between adolescents with more depressive mood or depressive symptoms have lower resilience (Chaveepoinkamjorn et al., 2016; Panyawong & Pavasuthipaisit, 2020; Polanczyk et al., 2015; Askeland et al., 2020; Ziaian et al., 2012). As well as resilience as a potential factor against depressive symptoms (Hjemdal, Aune, Reinfjell & Stiles, 2007). A possible explanation for the negative association could be explained that the components of resilience such as inner personal strengths and family or peer support could play a role in lower the impact of depressive mood from adolescents who experienced adversity. For instance, a study conducted on 3,136 adolescents found that those who experience bullying victimization but reported a lower level of depression are adolescents with more self-esteem, feeling less sense of isolation, and experience less conflict with family (Sapouna & Wolke, 2013). As such, the components of resilience allow adolescents to cope better when facing negative life events.

In contrast, the result indicated no significant association between resilience and bullying victimization. This result was inconsistent with the past study which suggested that those with lower resilience due to high conflict with parents and had poor problem-solving skills are found to be associated with bullying victimization (Baldry & Farrington, 2005). Adolescents which have good relationships with parents were found to be associated with less bullying victimization (Baldry & Farrington, 2005). This was explained with social learning theory by Bandura (1973) that children who are punished by at least one parent are more likely to have less resilience when dealing with peers' aggression (Baldry & Farrington, 2005). In addition, adolescents with poor problem-solving skills tend to deal with challenges in an emotionally oriented way resulting in lower resilience (Baldry & Farrington, 2005). However, it was noted by the researchers that there are limitations on this study as there is only a male sample (Baldry & Farrington, 2005). On the other hand, other previous studies with traditional bullying and cyberbullying victimization also show that adolescents who were a victim were reported with lower resilience (Sapouna & Wolke, 2013; Kabadayi & Serkan, 2018). This was potentially dues to the compromised capacities in managing the stress that comes from the bullies and the necessity to remain in these difficult situations (Kabadayi & Serkan, 2018).

While another study found that resilience does mitigate the effects of bullying victimization, however, female adolescents who reported more resilience were more prone to react negatively to bullying victimization (Gianesini & Brighi, 2015). In addition, previous studies found that resilience does not buffer against negative impact and does not work as a protective factor for bullying victimization (Narayanan & Betts, 2014; Andreou, Roussi-Vergou, Didaskalou & Skrzypiec, 2020). Thus, the result of this study is more in line with the past study which suggested that there is no association between resilience and bullying victimization. However, this cannot be concluded, and future study needs to be conducted regarding the association between bullying victimization and resilience.

Findings from the current study helped shed light on the understanding of psychological variables that are relevant to resilience. Still, unlike other studies, findings should be viewed with consideration that the study was conducted on only two schools in Bangkok metropolitan area and female adolescents were the majority in the current studying sample. Past reports of gender's impact on resilience, depressive mood, self-compassion, and bullying victimization (Dyer & Wade, 2012; Bluth, Campol, Futch, &Gaylord, 2017; Gianesini & Brighi, 2015) cannot be overlooked and future studies could address these limitations.

Conclusion

In conclusion, resilience has shown to be an effective protective factor and buffers against psychological distress that occur due to negative life events. According to the findings here, resilience could be predicted by self-compassion and depressive mood. The current findings could be applied to the preparation of intervention programs to promote resilience in adolescents. Based on the current findings, self-compassion should be cultivated in the program, and depressive moods should be addressed to reduce its impact on resilience enhancement.

Acknowledgments

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Contact email: anchidtha.kat@gmail.com

Elements of Cooperation Necessary to Foster Safety Culture in Nursing Facilities from a Nursing Perspective

Emiko Yamamoto, Aichi Medical University, Japan
Kaori Hatanaka, Kansai Medical University, Japan
Tomoko Tanaka, Okayama University, Japan
Yoshimi Hyodo, Okayama University, Japan

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Abstract

In Japan's aging society, many elderly people with dysfunction are moved to nursing facilities after being discharged. These facilities allow the elderly to recuperate while continuing to receive medical treatment. Accidents at nursing facilities, such as falls, may result in readmission and lower quality of life. Therefore, ensuring safety at nursing facilities that support life after discharge is crucial. This study clarified the elements of cooperation necessary among nurses working in multifunctional long-term care at small group homes and derived suggestions for fostering multidisciplinary cooperation for nursing facility safety. Semi-structured interviews were conducted with five nurses from August to September 2019. Responses were documented verbatim and categorized using MAXQDA. The results showed four categories of responses: "Having an attitude that acknowledges and respects care workers' expertise," "Demonstrating nurses' expertise and sharing their observations of the subject with care workers," "Coordinating care such that care workers may participate at the behavioral level and actively anticipate the deterioration of physical conditions and prevent accidents," and "Utilizing nurses' collective knowledge to implement and improve unified care by sharing adequate information with care workers." This study clarified the importance of nurses being aware of their attitudes based on each other's specialties to enable users to live safely at nursing facilities. Furthermore, it is necessary to create a safety culture with the aim of providing unified care that leads to an increase in the safety awareness of care workers.

Keywords: Nursing, Interprofessional Collaboration, Care Worker

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Introduction

In the comparison of aging rates in developed countries, Japan′s rate was at the lowest level until the 1980s and almost in the middle in the 1990s, but it was at the highest level in 2005.

The aging rates was 28.4%, the highest ever. An increasingly aging population (O'Brien, 2013) presents a global challenge for healthcare systems, especially in terms of the structure and management of future care services. Additionally, how these actions will impact patient welfare is an important issue (Caley, & Sidhu, 2011). Providing quality care in residential aged care facilities (RACFs, also aged care homes) and nursing homes is a high priority for accommodating aging populations worldwide. Older people admitted to these facilities have safety needs.

In Japan's aging society, many elderly people with health problems are moved to nursing homes after being discharged. These facilities allow the elderly to recuperate while continuing to receive medical treatment. Accidents at nursing homes, such as falls, may result in readmission and lower quality of life (Suzukawa, & Suzuki, 2009). Therefore, ensuring the safety of nursing homes that support life after discharge is crucial.

Incident's occurrence in long-term care insurance facilities have been analyzed (Mitadera, & Akazawa, 2013), however, there are only a few reports of safety studies in nursing homes. The content of accidents was also limited to case reports. Current reports indicate many life-threatening accidents, such as incorrect medication and cases of falls in hospitals (Horigome, 2016).

The member structure of Japanese nursing homes is characteristic compared to other countries. Staff consists of care workers and few nurses, so that nurses deal with care workers to provide safety care to elderly who needs medical aspect for various diseases. Therefore, it is important to clarify the elements that support safety in nursing homes.

Purpose

This study clarified the elements of cooperation necessary among nurses working in multifunctional long-term care at small group homes and derived suggestions for fostering multidisciplinary cooperation for nursing facility safety.

Methods

The subjects were nurses who work in multifunctional care of small group homes. Focused on collaboration of nurses and care workers regard to the characteristics of the facility where care workers involved elderly care in Japan. Semi-structured interviews were conducted with five nurses from August to September 2019. Responses were documented verbatim and categorized using MAXQDA software.

In the semi-structured interviews, participants were asked to answer the following questions.

1)   From your professional standpoint as a nurse, please tell us about your efforts to protect the safety of patients in nursing homes, and your efforts in collaboration with care workers.

2)   Please tell us about your best practices for protecting the safety of elderly people living in nursing homes.

Result

Five nurses were interviewed in the two facilities. The average age of the participants was 47.2 years old (female)(Table1), while the average interview time was 28 minutes. The total number of codes was 56, the category was four, and the subcategory was 14 (Table2).

Nurses	Gender	Age	The experience of a Nurse
A	F	57	37 yrs. (Hospitals14yrs)
B	F	52	24 yrs. (Hospitals 4 yrs.)
C	F	46	24 yrs. (Hospitals21yrs)
D	F	37	14 yrs. (Hospitals13yrs)
E	F	44	17 yrs. (Hospitals17yrs)

Table 1: The Profiles of the Participants

The results showed four categories of responses: "Having an attitude that acknowledges and respects care workers' expertise," "Demonstrating nurses' expertise and sharing their observations of the subject with care workers," "Coordinating care such that care workers may participate at the behavioral level and actively anticipate the deterioration of physical conditions and prevent accidents," "Utilizing nurses' collective knowledge to implement and improve unified care by sharing adequate information with care workers."

Category	Sub-categories
Having an attitude that acknowledges and respects care workers' expertise	・Attitudes that recognize care workers' expertise
	・Respect and acknowledge the care worker's expertise by observing the care worker's life and collaborating with them.
	・Empathize with and support care　workers when they encounter end-of-life care and guide them to make the most of their experiences in the future.
Demonstrating nurses' expertise and sharing their observations of the subject with care workers,	・Give specific instructions to care　workers on observation perspectives.
	・Collaborate with multidisciplinary professionals and family members, and provide specific information to care workers.
	・Sharing clinical decisions with care　workers after confirming it among nurses.
	・Focusing on the viewpoint of information collection and sharing the observation viewpoint with care workers.

	· Care workers and nurses verbalize and express their observations to each other, and provide feedback to care workers in daily conversations and through notes.
Coordinating care such that care workers can participate at the behavioral level and actively anticipate the deterioration of physical conditions and prevent accidents"	· Engage care　workers in a way that encourages their awareness.
	· Use the nurse's expertise to assess the situation of the elderly and formulate care that the care　workers can implement at the behavioral level.
	· Consult with care workers to alleviate their concerns and liaise with them to provide care.
	· Predict deterioration of the patient's physical condition or prevent accidents based on the nurse's expertise, and inform care workers and prepare countermeasures.
Utilizing nurses' collective knowledge to implement and improve unified care by sharing adequate information with care workers	· Guide nurses to implement common care at their discretion while monitoring timing.
	· Nurses will be involved in the end-of-life care experience in a supportive environment and grow together in order to provide better care.
	· Interpretation of medical conditions and medications of the elderly from nurses to care workers to improve care.

Table 2: Collaboration elements for safety with care workers from the perspective of nurses

Discussion

The purpose of this study was to identify the elements of collaboration necessary for nurses working in nursing homes. The findings of this study are the specific behaviors and attitudes of nurses that are necessary to work with care workers in nursing homes.

First, from these two categories; "Having an attitude that acknowledges and respects care workers' expertise," "Demonstrating nurses' expertise and sharing their observations of the subject with care workers," were considered the following. To protect the safety of the elderly in nursing homes, it is important to integrate the perspectives of the people living in the homes and the medical observation perspective in their care. To integrate these two perspectives, the nurses at the elderly care facility showed respect for the other person, presented the medical observation perspective, and worked to share information. This made it possible to identify changes in the medical condition and living level of the elderly in both directions at an early stage. Information sharing is considered to lead to better care, as a common understanding can be obtained, and specific behaviors are possible.

Secondly, from these two categories; "Coordinating care such that care workers may participate at the behavioral level and actively anticipate the deterioration of physical conditions and prevent accidents," "Utilizing nurses' collective knowledge to implement and improve unified care by sharing adequate information with care workers." were considered the following. The activation of the care worker's behavior is expected to create a synergistic effect by enabling nurses to obtain quality and sensitive information. This means that nurses can coordinate care in such a way that they can proactively predict the deterioration of physical conditions and prevent accidents. Therefore, it can be used as an accident prevention

measure in nursing homes. Furthermore, by sharing the nurses' ideas on accident prevention measures with care workers and collaborating with them, unified care can be implemented and used for improvement. These efforts will lead to the development of a safety culture in an organization.

Haruta, et al. (2018) developed an interprofessional competency framework in Japan which consists of two core and four peripheral domains. This competency framework included two core domains of "Patient-/client-/family-/community-centered" and "Interprofessional communication", and four peripheral domains of "Role contribution", "Facilitation of relationships", "Reflection" and "Understanding of others". The results of this study considered Haruta's competency framework (2018). The core domain is communication between care workers and nurses, with a focus on the elderly. Also understanding interprofessional regards respecting the expertise of care workers and caring for elderly with medical perspective of nurse, which completes the role of the profession. In other words, the findings of this study may be said to embody some of the competencies of nurses working in nursing homes.

The World Health Organization's (WHO) Framework for Action on Interprofessional Education and Collaborative Practice (2010) states that "interprofessional education occurs when two or more professionals learn from each other in order to enable effective collaboration and improve health outcomes." Then, Interprofessional education is utilized in fundamental education.

Yokoyama, et al. (2010) conducted Interprofessional education role-playing session for university students and reported that changes in asking alter the content of communication, improve the quantity and quality of information. As this study shows, interactional learning has the potential in Social Skill Training education at nursing care filed.

In summary, we believe that we can derive suggestions for fostering multidisciplinary cooperation for safety in nursing homes. In professional collaboration in nursing homes, a mutual recognition of each other's expertise can stimulate professional observation perspectives and extract a great deal of information from the elderly.

Second, it will encourage effective information-sharing opportunities, which will activate mutual actions and create synergy effects. It will then be possible to coordinate care and proactively prevent accidents by predicting the deterioration of physical conditions. Since care methods for accident prevention based on specific proposals derived by both parties are fostered from the bottom up, unified care can be easily implemented and used for improvement. Much of the cost of safety measures in nursing homes has been spent on environmental aspects, such as beds and handrails sensor mats. However, human resource development is especially important to ensure the safety of elderly people with complex medical systems and diverse diseases (Figure 1).

This study suggests the following for a human resource development program that fosters a culture of safety in nursing homes. Sharing the perspectives of experts on both sides. Learning opportunities to look at illustrations and photographs of scenes from the lives of elderly people and then predict what could happen when they move. Social skills training (communication training). This is a training for nurses to communicate their expert knowledge of medical conditions to care   workers in an easy-to-understand manner while

observing the reactions of others. The development of these learning opportunities in institutions for the elderly can be effective and easily linked to practice.
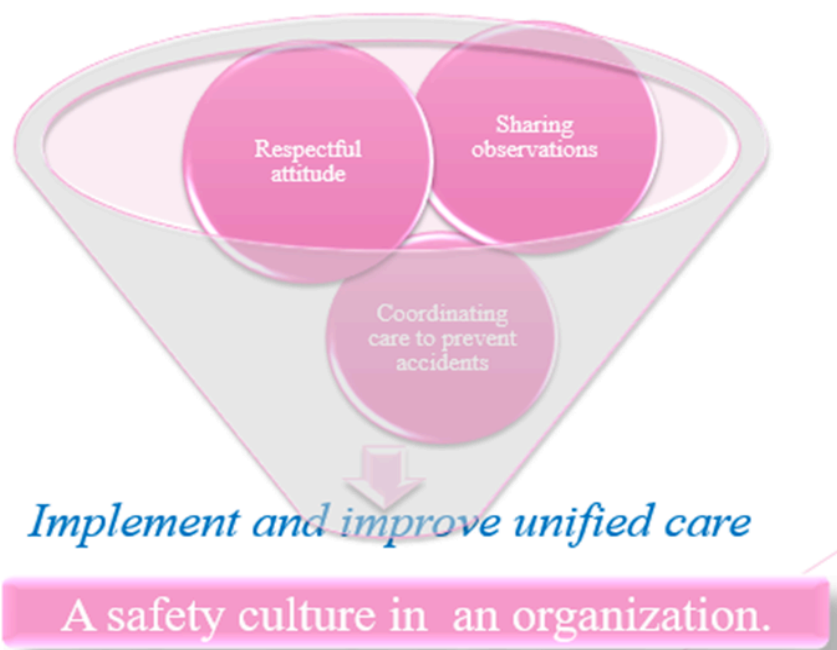
Figure 1: Collaboration for safety from the perspective of nursing home nurses.

Conclusion

This study clarified how nurses' awareness of their attitudes based on their specialty and the specialty of care workers enable them to collaborate to ensure safely for elderly people at nursing facilities. Furthermore, it is necessary to create a safety culture with the aim of providing unified care that leads to an increase in the safety awareness of care workers.

Acknowledgements

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Contact email: yama-e@aichi-med-u.ac.jp

An Exploratory Study on Workers' Characteristics Affecting the Use of Different Acting Strategies in Emotional Labor

Sae Nakagawa, Advantage Risk Management Co., Ltd., Japan
Daiki Sekiya, Tokyo Seitoku University, Japan

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Abstract

There are two acting strategies in emotional labor: surface acting and deep acting. Previous studies have shown that surface acting has negative effects, such as depression, burnout, and increased turnover of workers. For deep acting, the findings are inconsistent with both positive and negative effects being reported. In addition, these acting strategies are thought to be used according to the environment the worker is in, the situation at that time, and the personality characteristics of the worker himself/herself. However, there are still many unclear aspects about what specifically affects the use of the worker's acting strategy. The purpose of this study was to quantitatively as well as qualitatively examine the recognition and use of acting strategies by emotional labor workers. Semi-structured interviews and web questionnaires were carried out for 13 counselors and 4 telephone operators related to insurance claims at an employee assistance program company. In the semi-structured interview, the sense and use of the acting strategy were asked. In the web questionnaire, the Emotional Labor Scale-Japanese version (Sekiya & Yukawa, 2014) was administered in which demographic details, such as educational history, work history, and years of experience, were also asked. As a result, it was found that the tendency to use either of the acting strategies differed depending on the type of work. Furthermore, it was suggested that attitudes toward emotional labor may differ depending on an individual's educational background and the presence of the supervisor, even in the same job category.

Keywords: Emotional Labor, Acting Strategies, Deep Acting

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Introduction

Emotional labor is a concept proposed by Hohschild (1983), an American sociologist, and is a term referring to work or occupations that require workers to control their emotional state to a certain degree, with the aim of bringing about some kind of change in others involved during their work. For example, just as physical labor requires control of the physical aspects of the body, and mental labor requires the use and application of knowledge and information, emotional labor requires the worker to use his or her emotions appropriately for the work. The management of workers' emotions in emotional labor can be likened to "acting". In other words, just as professional actors, create emotions on the stage and bring about changes in the audience's feelings by skillfully changing their facial expressions and verbal expressions, emotional workers are also considered to perform a kind of act for their clients on the "stage" of the workplace.

It is said that these acting styles can be categorized into two major types. One is surface acting and the other is deep acting. Surface acting is a form of acting in which the parts that are directly visible to the other person, such as facial expressions, tone of voice, and posture, are changed as necessary, and the inner feelings (true feelings) and emotional expressions do not have to be the same. Previous studies have shown that surface acting has negative effects, such as depression, burnout, and increased turnover of workers (e.g. Bono & Vey, 2005; Brotheridge & Lee, 2003).

Deep acting, on the other hand, is a method of attempting to change one's true emotions according to the needs of the job. If deep acting is successful, there will be no discrepancy between the true emotions and the expressed emotions, which is said to have the effect of reducing stress. On the other hand, it has been pointed out that the concept of deep acting, in particular, has not been sufficiently elaborated conceptually (Sakakibara, 2011). While it is said that deep acting is an adaptive strategy for workers, there are findings that it can also be a stressor, and the ambiguity of the deep acting concept may exist behind the unstable results.

By the way, these acting strategies are thought to be used according to the environment the worker is in, the situation at that time, and the personality characteristics of the worker himself/herself. However, there are still many unclear aspects about what specifically affects the use of the worker's acting strategy. In addition, although most of the previous studies separated the two acting strategies and examined each effect independently, however, it is possible that the two are used in combination. For example, some of the previous studies actually classified the patterns of the use of surface and deep acting into five types and examined the effects of each pattern (Gabriel et al., 2015). However, these studies are also based on quantitative categorization, and it remains unclear how the two acting strategies are related or used differently depending on the job and other factors.

The purpose of this study was to obtain more detailed and specific information on the acting strategies of emotional labor by investigating the use of different acting strategies, and subjective feelings when using them through both qualitative and quantitative approaches among the employees of Employee Assistance Program (EAP) companies.

Method

Participants

In this study, counselors and telephone operators related to insurance claims were selected as the survey targets, as they are assumed to be engaged in emotional labor, and the survey cooperators were recruited. As a result, 14 counselors and 5 telephone operators for insurance claims who work for an EAP company in Japan participated in the interviews. The survey was conducted in February and March 2020.

Interview

Semi-structured interviews were conducted in the form of individual interviews, which took about 50 minutes per interviewee. A conference room in the EAP company was used as the interview site. The purpose of the interview was mainly to examine the subjective feelings and perceptions of the participants when they were switching or acting out their roles.

The interviews were recorded with the consent of the participants.

The questions were as follows;
1.   Whether or not they switch between their private and professional selves at work, and they have a sense or awareness of this and how they do so.
2.   Whether or not they have a sense or awareness of "acting" while on the job.
3.   The subjective feeling when switching or acting well, or the parts of the self that differ from the normal self.

Questionnaire

In this study, a questionnaire survey was also conducted after the interviews through a web-based questionnaire tool. The Emotional Labor Scale Japanese version (ELS-J; Sekiya & Yukawa, 2014) consists of six factors: (a) surface acting, (b) deep acting, (c) intensity, (d) frequency, (e) type, and (f) duration. (c) intensity, (d) frequency, (e) type, and (f) duration. However, for the one item measuring duration, respondents were asked to enter a numerical value directly for the amount of time (in minutes) they spend in interpersonal work, while the other five factors were measured using the Likert method ("never," "almost never ", "Sometimes", "Often", and "Always") for the other five factors.

We also asked the respondents about five demographic variables: major field of study at university or vocational school, qualifications held, company history, work history, and previous work experience, and at the same time, we asked them to write freely about their past experiences that they found useful, especially in dealing with customers and clients.

Ethical considerations

As ethical considerations in conducting the survey, we explained the purpose and significance of the research, the method of presenting the research results, the method of protecting personal information (data storage and management method), and safety management considerations in writing and orally to the survey cooperators before conducting the interviews, and asked them to sign a consent form. This study was approved by the ethical review of "Research on Human Subjects" at Tokyo Seitoku University.

Result

In this study, one counselor and one telephone operator who were not asked to respond to the questionnaire survey were excluded from the analysis, and finally 17 participants (4 males and 13 females) were included in the analysis. Participants' demographics are shown in Table 1. The breakdown of occupations was 13 counselors (4 males, 9 females) and 4 telephone operators (all females), and the age range was 25-54 years. The average number of years of service in their current occupation was 9.06 years, with about half of the respondents being veterans of 10 years or more, while two respondents had been in their current occupation for 5 years or less.

		counselors					telephone operators		
	sex	age	Years in current position	duration of service		sex	age	Years in current position	duration of service
A	female	50〜54	15	15	N	female	35〜39	9	9
B	female	40〜44	6	7	O	female	25〜29	7	5
C	female	40〜44	10	10	P	female	35〜39	12	12
D	female	40〜44	8	8	Q	female	25〜29	7	3
E	female	40〜44	10	12					
F	male	30〜34	10	5					
G	male	25〜29	2	5					
H	male	40〜44	8	8					
I	female	40〜44	13	9					
J	female	45〜49	15	5					
K	female	40〜44	12	8					
L	female	35〜39	4	16					
M	male	30〜34	6	3					

Table 1: Participants' Demographics

Differences in Emotional Labor Scores by Occupation

The mean scores in each subscale of the emotional labor scores and mean durations for each occupation were calculated and are shown in Table 2.

	ELS-J					
	frequency	intensity	variety	surface acting	deep acting	duration
counselor	3.51 (0.95)	2.04 (0.57)	3.21 (0.79)	3.15 (0.52)	2.56 (0.87)	50.83 (16.56)
telephone operator	2.92 (0.55)	2.25 (0.90)	2.42 (0.36)	3.42 (0.49)	3.00 (0.62)	7.00 (2.94)
all	3.37 (0.91)	2.09 (0.67)	3.02 (0.79)	3.22 (0.52)	2.67 (0.84)	42.07 (22.99)

Table2: The Mean Scores in Each Subscale of the Emotional Labor Scores and Mean Durations for Each Occupation

The results showed that counselors scored higher than counselors on frequency and type, while telephone counselors scored higher than counselors on intensity, surface acting and deep acting. Furthermore, a t-test without correspondence revealed a significant difference in type (t (10) = 2.56, $p < .05$, $r = .63$).

Types of Acting Strategies

In order to further examine the types of acting strategies of the participants, they were categorized into low group and high group for surface acting and deep acting based on their overall average scores (surface acting: $M = 3.22$, $SD = 0.52$, deep acting: $M = 2.67$, $SD = 0.84$). We then attempted to classify them into four types: (1) surface acting-low group x deep acting-low group (LL type), (2) surface acting-low group x deep acting-high group (LH type), (3) surface acting-high group x deep acting-low group (HL type), and (4) surface acting-high group x deep acting-high group (HH type). The breakdown of the number of people in each type is as follows: 5 LL-type (all counselors), 2 LH-type (1 counselor and 1 telephone operator), 5 HL-type (3 counselors and 2 telephone operators), and 5 HH-type (4 counselors and 1 telephone operator).

All of the participants in the telephone appointee were classified as a type other than LL type, and either one or both of the acting strategies showed higher scores than the average. On the other hand, in the counselor category, there was a LL type who did not use any of the acting strategies very much. In addition, the results of the demographic variables were also examined, and it was found that the LL type was characterized by the fact that they had experienced a different type of job from the current one in their previous job. On the other hand, HH type had the same type of job in their previous job.

Analysis of Interview

The following sections describe the characteristics of the use of the acting strategies that were found as a result of a more detailed examination of the interviews. The group that scored high in surface acting seems to have a tendency to be clearly aware of their work roles and the objectives to be achieved in their duties and work, and to be conscious of carrying them out in a rational manner. In addition, it can be said that workers who use a lot of surface acting are more aware of the risk of presenting their "true reactions" to others.

On the other hand, the group that scored higher in deep acting tended to be more aware of the psychological situation and emotional transition of the other party and tried to utilize it in their work. This may be the reason why more counselors intentionally used deep acting in their narratives than telephone appointments. In other words, workers who use deep acting more often tend to be conscious of how to handle the emotions that actually arise in themselves. In other words, workers who use deep acting frequently tend to be more conscious of how they handle the actual emotions that arise in themselves. They have an eye for the risk of showing false or fake reactions to others.

In addition, even in the group with low scores in surface or deep acting, there were many cases in which we noticed that they intentionally presented themselves differently from their usual selves when we interviewed them in detail. This means that they are acting even if they are not very conscious of it. However, it was not reflected in the scores of the emotional labor scale.

We also examined the differences by occupation. As a result, counselors need to improve their techniques in terms of listening so that they can imagine the emotions experienced by their clients and become aware of their own inner changes. On the other hand, all of the telephone operators did not deeply sympathize with the psychological circumstances and experiences of the customers, but consciously stopped their emotional changes to a level that was not too deep.

Even those who answered that they were not very conscious of their on-off switching were able to switch naturally when they were placed in a work environment, such as picking up the phone or entering a counseling room.

Discussion

In this study, we attempted an exploratory examination of the use of acting strategies in emotional labor from both qualitative and quantitative aspects in counselors and telephone operators. As a result, even when people are engaged in the same kind of work, the acting strategies they use are unique to each person, such as those who mainly use surface acting and those who mainly use deep acting. It is presumed that this is due in part to the influence of personality, such as "what kind of characteristics do I originally have?"

In addition, it is possible that the strategies that are easy to adopt are determined by what people value and what roles they place importance on in their jobs. In other words, the purposeful nature of the job may define the performance strategies that are more likely to be used in that job.

However, it may not be possible to simply determine which performance is more likely to lead to stress. For example, in the case of telephone operators, they are able to perform their duties reasonably well by honing their surface acting skills and consciously using them to make the other person sound as if they are sincerely concerned. In addition, having an environment where they can talk about anything and immediately consult with others may be important in preventing their stress from becoming severe. However, being forced to suppress one's emotions for a long time, as in dealing with claimers, is likely to be stressful for anyone.

In light of these results, if we were to compare and describe the two acting strategies focusing on how to handle one's own emotions, we could say that surface acting is closer to the image of "detaching one's own emotions" and deep acting is closer to the image of "intentionally utilizing one's own emotions.

The majority of respondents were conscious of switching when they were not yet familiar with their work or when they were too busy to spare time. On the other hand, as they become more familiar with their work or gain more experience, they may be able to switch routinely. In this case, switching is actually taking place, but it may be automated to some extent, and the person may not be very aware of it.

Limitations and Future Directions

This study is a preliminary survey of employees belonging to one specific company, and it is undeniable that the results are somewhat biased. Therefore, it is necessary to collect more generalizable data in the future.

Furthermore, there are some cases in which the scale scores do not reflect the use of acting strategies even by people who clearly seem to use them based on their speech results. This is a problem related to the measurement scale, and it is a case that needs to be re-examined especially in terms of validity. Therefore, it is necessary to develop a new scale with higher reliability and validity is expected.

The relationship between surface performance and deep acting is not limited to the relationship between which is better or worse, but may also be influenced to a certain extent by the job, the area of work, and the personality of the individual. Empirical investigation from this perspective is desirable in the future.

Based on the findings of this study, we would like to develop a scale that can measure deep acting more accurately, and in the future, we would like to obtain empirical findings that can be used to improve work engagement, for example, by typifying acting strategies with less psychological load for each emotional laborer.

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Contact email: snakagawa@armg.jp

The Law School Experience: Adopting Regulation Strategies

Maryrose C. Macaraan, De La Salle University, Philippines

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Abstract
Law school is the training ground for all future lawyers. While the law profession can be a compelling career opportunity, developing the necessary skills required for the profession can be tough a tough journey, and can be overwhelming. Experience of psychological distress among law students is evident in various research studies. The aim of this paper is to explore the literature on regulation strategies that would help law students survive the rigors of law school focusing on both academic and emotional regulation approaches. Self-regulated learning promotes and sustains behaviors that help an individual maintain motivation to achieve goals. Regulating emotions enables a person to manage emotional experiences effectively. The capacity to regulate learning and emotions are essential skills for law students to help them survive the challenges they encounter in law school.

Keywords: Law School, Law Students, Self-Regulation Learning, Emotion Regulation

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Introduction

Training law students to think and act like lawyers happens in the law school. The legal training entails years of persistence and hard work. The rigors of law school can provide a stimulating and yet stressful climate. Various studies on the rigors of law school, its corresponding stressors and its effect on mental health conditions have been looked into. With that, interventions have been recommended at both the institutional and organizational levels. The aim of this paper is to explore various literature on law students' experience in law school and how regulation strategies would help in managing the difficulties that they would experience along the way. Recommendations would likewise be discussed.

The law school atmosphere may be a daunting and alienating experience for some law students which can make a student question their purpose for pursuing the profession. Research studies indicated that law students are ill-prepared before going to law school in areas of analytical, research, writing and study skills (Bloom, 2013). The competitive nature of law school causes distress among law students exacerbated by the lack and appropriate method of giving feedback (Sheehy et al, 2004). Fear of failure among law students leads to a fixed mindset as a student and as a professional. Having a fixed mindset can be paralyzing, leading to fear of trying new skills in cases of uncertainty (Bishop, 2017). The difficulties in managing academics coupled with the lack of feedback about their performance makes the students' experience in law school challenging which can be exacerbated by a fixed mindset in times of uncertainty.

Whereas, effective and efficient academic strategies adopted in law school leads to exemplary work performance as future lawyers. Working conscientiously on academic tasks, effective organization strategies, regular evaluation of academic performance and personal responsibility translates to the production of excellent work output, effective work management, professional growth and personal improvement respectively (Jarmon, 2011). The challenges that law students will encounter in law school, if they were able to navigate successfully, would train them to be more adept in handling the difficulties that they would encounter as a lawyer in the future. Likewise, this leads to both personal and professional growth.

Aside from academic struggles, law students would also deal with mental health concerns that goes along with their training. Elevations of psychological distress was reported among law students who are in their final in an Australian university (Kelk et.al., 2010). As compared with students of medicine and psychology, law students have significantly higher levels of distress (Leahy et.al., 2010). Depression and anxiety are also correlated with academic demands, career pressure, social isolation and study/life balance whereas life satisfaction is related to career pressure, social isolation and study/life balance discounting academic demands. Feelings of isolation and lack of social connectedness affected well-being (Bergin and Pakenham, 2015). Significant increase in depressive symptoms and health problems were likewise observed among first year law students in an Australian university (Lester et.al., 2011).

The University of Michigan law school found that students' level of depression is comparable to the norms of the general population upon their entry, but the level of emotional distress elevates and persists as they go on with their training. Therefore, persistence of emotional symptoms cannot be merely attributed to the transitioning life in law school which suggests that other factors might be involved. It is noteworthy that levels of distress reported is similar

people who experienced major life trauma such as death of spouse and marital separation (Reifman et.al, 2001).

Declines in psychological need satisfaction and well-being were also observed over the course of 3 years' study in a study done in the United States. Perceived autonomy support buffered the decline in need satisfaction accounting for better wellbeing, higher GPA and better performance in the bar exam (Sheldon and Krieger, 2007)

Fines (2007) emphasized not only identifying, reducing and eliminating stressors in law school but more so helping students manage what cannot be eliminated. There are various factors contributing to psychological distress but still the strongest shield is one's ability to withstand whatever life throws at him.

Methodology

This paper would look into various literature sources on regulation strategies that could be helpful for law students as they navigate their life in law school. Recommendations will be presented as well.

Findings and Conclusion

Assessing student's motivation is an important concept in understanding and enhancing student's learning experience and academic self-regulation is strongly linked to the foundations of self-determination theory (Gomes et al, 2019). Self-determination theory stipulates that students need to have a sense of control and ownership over their learning experience and helping the students understand the purpose of their learning in order to succeed (Svinicki, 2010).

"Self-regulation refers to thoughts, feelings and actions that are planned and cyclically adapted to the attainment of personal goals" (Zimmerman, 2000). In a study with high school students, self-regulation moderated the relationship between perceived stress and psychological well-being (Kadzikowska-Wrzosek, 2012). Armstrong and Sanson (2012) emphasized the need to help law students achieve independence and self-regulation strategies in the first year.

Self-regulated learning is a cyclical framework which shows how students manage their behavior, motivation and thinking process as they engage in academic tasks. Self-regulated learners recognize that learning is a constructive process where they take on a more active rather than a passive role in their learning. These types of learners employ strategic learning skills. They are self-starters, they have the ability to effectively set goals, follow through, monitor, evaluate their learning and make the necessary adjustments in order to improve their academic performance (Schwartz, 2008).

Zimmerman (2000) postulated the three phases of self-regulated learning: the forethought phase, the performance phase and the self-reflection phase. The forethought phase consists of the thinking process that a student goes through before engaging in the academic task including the ability to perceive and classify the task, invoke interest, set goals and planning for strategies. The performance phase consists of focusing attention, implementation and self-monitoring. This phase includes the motivational control strategies that the learners employ to sustain their attention. Lastly, the reflection phase consists of being able to evaluate

themselves, identifying the causes of the results, invoking emotional feelings about the result of their performance and making the necessary adjustments (Schwartz, 2008). An effective learner is measured by one's ability to monitor the progress of their learning and making the necessary adjustments (Ertmer & Newby 1996; Bjork et al. 2013). The ability to self-regulate is a strong predictor of academic performance (Pintrich & Degroot, 1990). The goal of self-regulation training is to give the students a sense of ownership and control in their own learning experience (Svinicki, 2010).

Emotion regulation is the ability to manage impulsive and inappropriate behaviors at the onset of an intense emotion (Linehan, 2014). This refers to the ability to influence emotions (Gross, 1998). This can significantly affect one's physical and mental health and difficulties in regulating emotions can contribute to depression and anxiety (Hu et al, 2014). Regulating emotions contributes to one's well-being and over-all functioning (Amazue et al, 2019). This is a skill that needs to be practiced (Nigg, 2016). Urges to act on emotions in times of psychological distress is quite common. Self-awareness helps lawyers deal with the demands of the profession and be efficient in their work and this is an essential component of emotion regulation. In order to effectively regulate distressing emotions among lawyers, the following activities are recommended: engage in regular physical exercise, healthy sleep habits, engage in meditation and mindfulness practices. (Austin et al, 2016). In addition, mindfulness practices allow the person to be aware of thoughts and emotions. This strategy would help students to improve physical and mental health and improve academic performance (Lewinbuk, 2016).

Law school is indeed a challenging experience given the kind of training that law students have to go through. Training law students to adopt regulation strategies, both at the academic and emotional level is an effective strategy to help them navigate the challenges in law school and eventually lead to professional and personal growth and development.

Self-regulated learning involves using the cyclical model as the students intentionally accomplish their academic tasks. This consists of carefully assessing and planning for a given task, consciously maintain and sustaining attention, and objectively assessing their performance so as to make the necessary adjustments. Collaterally, emotional distress may be experienced by law students during their training. Awareness of the ability to regulate emotions by way of adopting a healthy lifestyle and engaging in mindfulness practices would be helpful in managing distressing periods.

A whole school approach to providing awareness, campaign and training programs can be utilized in order to promote these strategies. Institution and faculty buy-in is an essential strategy for this to be effectively carried out. Guidance and counseling programs can likewise be geared towards using this strategy.

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Conflict Resolution Styles and Marital Satisfaction in Men and Women: Study in the First Five Years of Marriage

Syifa Rasyida Adriani, University of Indonesia, Indonesia
Yudiana Ratnasari, University of Indonesia, Indonesia

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Abstract

Men and women have differences in conflict resolution styles that tend to be used to resolve their marital conflicts, affecting their marital satisfaction. This study was conducted to examine whether there was a significant effect of conflict resolution styles on marital satisfaction in men and women in the first five years of marriage, and also to know whether there was a significant difference in the level of marital satisfaction and the use of conflict resolution styles in both groups. Independent sample t-test and multiple regression tests were conducted on 625 participants (171 men and 454 women) aged 20-40 years old in marital relationships with marital duration equal to or less than five years. Conflict resolution was measured by CRSI (Conflict Resolution Styles Inventory), and marital satisfaction was measured by QMI (Quality of Marriage Index). It was found that men had a significantly higher level of marital satisfaction than women. A significant difference was also found in the use of conflict resolution styles in men and women. The conflict resolution styles used more often are positive problem solving and compliance in men, and conflict engagement in women. Then, there was also a significant effect of conflict resolution styles on marital satisfaction. The conflict resolution style that can best predict the level of marital satisfaction in both men and women was positive problem-solving. It is recommended for married individuals to apply a conflict resolution style that has a positive influence to maintain or increase their marital satisfaction.

Keywords: Conflict Resolution, Early Years of Marriage, Marital Satisfaction, Men, Women

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Introduction

Marriage is one of the stages of developmental transition for adults. Marriage aims to create a prosperous, harmonious, and happy family, which can be said as marital satisfaction. Marital satisfaction is a condition in which married couples feel happy and satisfied with each other (Khalatbari, Ghorbanshiroudi, Azari, Bazleh, Safaryadi, 2013). Marital satisfaction can have a positive impact on the individual and the relationship itself, and it needs to be cultivated since the early marriage years because the early marriage years are the initial period for couples to adapt to differences and similarities in their backgrounds and understand each other. The early years of marriage also play an important role as a reference regarding adulthood (adulthood) and have a long-term effect on the marital relationship (Davila, Karney, Bradbury, 1999).

However, evidence from several studies shows that divorce most often occurs in couples with a duration of marriage under five years (Sullivan, Pasch, Johnson & Bradbury, 2010; Lavner & Bradbury, 2012; Meltzer, Novak, McNulty, Butler & Karney, 2013). In Indonesia itself, according to the Director-General of Islamic Community Guidance at the Ministry of Religion, Prof. Nasaruddin Umar, as many as 80% of divorce cases occur in marriages under the age of 5 years (Hapsari, 2013). Also, referring to the Indonesian National Population and Family Planning Board (BKKBN), Indonesia is considered to have the highest number of divorce couples in Asia-Pacific (Nawawi, 2013). Several other studies regarding marital satisfaction have also stated that marital satisfaction has decreased in the early days of marriage (VanLaningham, Johnson, Amato, 2001; Lavner & Bradbury, 2014). In fact, marital satisfaction plays an essential role in married life, and it can determine the success and stability of the marital relationship (Ardhianita & Andayani, 2005).

In establishing interpersonal relationships, including marital relationships, it cannot be separated from conflict. In the early days of marriage, conflict is usually caused by an adaptation process that the couple faces where they have to face new responsibilities and face the realities of married life (Hyun and Shin, 2009), emotional stress and disputes caused by the adjustment and adaptation process (Toomey, 2002), or facing various developmental and change tasks (Toomey, 2002). Furthermore, in Indonesia itself, during the early years of marriage, several conditions may differ from the state of the marital relationship in Western countries, and it can cause different conflicts in Indonesian marriage.

Then, the level of marital satisfaction can be influenced by various factors, one of which is the conflict resolution factor (Renanita & Setiawan, 2018). There are several types of conflict resolution styles. According to Kurdek (1995), there are four conflict resolution styles related to the satisfaction of a partner's marriage. They are 1) conflict engagement (such as attacking and losing control), 2) withdrawal (such as refusing to discuss the problem further or looking for another partner), 3) compliance (such as giving up and not maintaining their position), and 4) positive problem solving (such as compromising and negotiating).

Aside from being influenced by conflict resolution, the level of marital satisfaction is also influenced by other factors such as gender (Sorokowski et al., 2017). Many studies have shown that men and women feel different levels of satisfaction in their marriage. Several studies suggest that generally, women report significantly lower marital satisfaction than men, one of which was mentioned by Whiteman, McHale, & Crouter (2007). Some studies also suggest differences in men's and women's conflict resolution strategies (e.g., Maccoby, 1998) in their marriages.

By looking at the things that have been described above, the authors are interested in researching the effect of conflict resolution on marital satisfaction for men and women in the context of early years of marriage. In this study, conflict resolution styles will be measured using the Conflict Resolution Styles Inventory (CRSI) developed by Kurdek (1994). Meanwhile, marital satisfaction will be measured using the measuring tool Quality of Marriage Index (QMI) developed by Norton (1983).

Theoretical Review

Norton (1983) defines marital satisfaction as a unidimensional variable, a global or overall evaluation of the marital-relationship itself. Li and Fung (2011) define marital satisfaction as a subjective evaluation of a person globally of the quality of the marriage he lives in. According to Khalatbari et al. (2013), marital satisfaction is a condition in which married couples feel happy and satisfied with each other. From several definitions of marital satisfaction above, it can be concluded that marital satisfaction is a subjective perception and global evaluation that a person has of all aspects of his marital relationship. These perceptions are formed by perceptions of the quality of interactions between partners and whether they feel happy and satisfied with their marital relationship.

Several factors affect marital satisfaction, such as demographic factors (gender, age, duration of the marriage, religiosity, number of children, economic status, educational level, and culture) (Sorokowski et al., 2017). In addition to demographic factors, other researchers, Kocchar and Sharma (2015), also suggest interpersonal factors related to marital satisfaction such as commitment to relationships, ability to resolve conflicts and positivity in relationships.

Murdiana and Agustani (2015) state that factors can influence conflict resolution in marital relations, which consists of internal and external factors. The internal factors consist of the ability to manage emotions, attachment (attachment), and one's character, while the external factors consist of child and family factors. Besides the factors mentioned above, in many studies, it has been found that gender also has a significant relationship with the conflict resolution strategies used by couples. According to Maccoby (1998), from the gender socialization perspective, women tend to use interactive and supportive styles because of high exposure to this strategy, for example, when interacting with other women. Meanwhile, men tend to use styles that limit and control others. Furthermore, in marital relationships, women value conflict resolution styles that increase expressiveness and intimacy and are direct with their partners. Meanwhile, men will feel more anxiety than their wives when they resolve a conflict face-to-face (the Levant, 1996). These different styles lead to differences in conflict resolution between genders.

According to Kurdek (1995), there are four conflict resolution styles related to marital satisfaction. 1) Conflict engagement. This style involves behaviors such as assaulting others, humiliation, exploding, losing control, getting carried away, and saying things someone did not mean. According to Wagner, Mosmann, Sheeren, and Levandowski (2019), conflict resolution with this style has the highest negative contribution to marital satisfaction. 2) Withdrawal, such as refusing to discuss the problem further or looking for another partner. According to Wagner et al. (2019), conflict resolution with withdrawal style gives the second-highest negative contribution after the conflict engagement style on marital satisfaction. 3) Compliance. An acceptance of any proposed solution characterizes compliance to avoid further discussion before both parties express their opinion or defend

their point of view (Kurdek, 1994). This style also includes being satisfied with oneself, no defense of one's position, and giving up quickly after making an effort to express an opinion. According to Wagner et al. (2019), resolving conflicts using this strategy negatively correlates with marital satisfaction. That means, the more often a person uses this conflict resolution style, the lower marital satisfaction he/she has. This style also contributes the third-largest after conflict engagement and withdrawal styles on marital dissatisfaction. 4) Positive problem-solving. This style involves constructive ways to resolve disputes, where individuals can negotiate and compromise and direct talks on solutions that benefit both partners (Wagner et al., 2019). A study conducted by Wagner et al. (2019) stated that the positive problem-solving style is the most significant predictor of good marriage quality among other predictor variables.

On the other hand, according to Hysi (2016), ways of conflict resolution are generally divided into two categories, namely constructive and destructive methods of conflict resolution. Based on Kurdek's conflict resolution style, conflict engagement, withdrawal, and compliance can be classified into destructive conflict resolution styles. Sierau and Herzberg (2011) state that the three conflict resolution styles are positively related to avoidance and anxiety. Additionally, in research conducted by Scheeren, Vieira, Goulart, and Wagner (2014), it was found that conflict engagement behaviors such as personal attacks, humiliation, and loss of control in dealing with marital conflicts were associated with lower levels of marital satisfaction. Furthermore, conflict resolution with withdrawal style is non-assertive, uncooperative, and associated with failure to take positions in conflict situations. Rands, Levinger, and Mellinger (1981), in their research, found that marital satisfaction has the lowest value when partners raise or avoid their conflicts, especially when one partner is seen as a person who cannot compromise. Then, conflict resolution with compliance style in a wife was a predictor of decreasing marital satisfaction over time (Gottman & Krokoff, 1989).

On the other hand, a positive-problem-solving style is classified into a constructive conflict resolution style. Positive conflict resolution strategies have been found to contribute to marital happiness and satisfaction in couples from various cultural backgrounds (Ridley, Wilhelm, Surra, 2001; Dush & Taylor Camp, 2012; Scheeren et al., 2014). Moreover, a study conducted by Wagner et al. (2019) stated that positive problem solving is the most significant predictor of marriage quality among other predictor variables.

Research Methods

This research is categorized as quantitative correlational research, namely research conducted to find a relationship, association, or dependence between two or more aspects of a situation. In the context of this research, what we want to find out is whether there is an effect of conflict resolution on marital satisfaction for men and women in the early years of marriage. Furthermore, this study also wanted to find the types of conflict resolution styles that had the most significant effect on marital satisfaction, both for men and women.

This research population is Indonesian citizens (both male and female) who are currently in a marital relationship, with a marriage duration below or equal to 5 years. The characteristics of the participants who participated in this study were as follows: 1) Male or female who is currently in a marital relationship, 2) Marital duration is less than or equal to 5 years, 3) Between 18-40 years old, 4) Indonesian nationality. This study involved 625 participants, with details of 171 male participants and 454 female participants. The sampling technique in this study using the accidental sampling method.

Researchers collect data offline and online. Offline, the researchers distributed the printed (hardcopy) questionnaire directly to participants who matched the criteria and were willing to fill out the questionnaire and ask for help from friends and relatives who know or know participants with predetermined criteria. Meanwhile, the online collection is done by distributing broadcast messages accompanied by research posters.

This study uses two measurement instruments. The first measuring tool is the QMI (Quality of Marriage Index) developed by Norton (1983) to measure the level of marital satisfaction. QMI consists of 6 items. The items on QMI are in the form of evaluative statements regarding marital satisfaction, and participants are asked to rate the extent to which they agree with the statement using a Likert scale. In items 1 to 5, the response categories ranged from 1 (strongly disagree) to 7 (strongly agree). In the 6th item, the response categories ranged from 1 (very unhappy) to 10 (very happy). The QMI score is obtained by adding the value of each item into one overall total score. The total score ranges from 6 to 45, where the higher the value indicates the higher level of marital satisfaction (Maroufizadeh, 2019).

The second measuring tool is the CRSI (Conflict Resolution Styles Inventory) developed by Kurdek (1994) to measure conflict resolution styles. The CRSI consists of 16 items that measure the conflict resolution style used by a person in dealing with disputes with their partner, of which 16 items are divided into four subscales of conflict resolution styles based on the theory of Gottman & Krokoff (1989). The four domains are conflict engagement (conflict involvement), withdrawal (withdrawal), compliance, and positive problem solving (positive problem solving). Each subscale of the conflict resolution style consists of 4 items. In this measuring tool, participants are asked to determine how much they agree or disagree with the items given using a Likert scale, where the response categories range from never (1) to always (5). There are four scores generated, where each score reflects a different style of conflict resolution.

There are several statistical analysis techniques used in this study. Researchers used descriptive analysis to obtain an overview of the participants and research variables. Then, to answer the first and second hypotheses, the researcher conducted an independent sample t-test analysis to see the difference in the mean of conflict resolution and marital satisfaction in the two groups, namely men and women. Furthermore, to answer the third and fourth hypotheses, multiple regression analysis was carried out to see the effect of conflict resolution styles on marital satisfaction and know which conflict resolution style had the most influence or prediction of marital satisfaction in men and women in the early years of marriage.

Research Result

Based on the descriptive test, it is known that the female participants in this study mostly lived independently (with their spouses and children) (61.2%), worked as employees or professional workers (58.8%), their last education was a bachelor (72.2%), were Muslim (70.7 %), and had one child (44.3%). They also have a core expenditure of IDR 2,500,001 - IDR 4,999,999 per month (33.0%), where according to the Boston Consulting Group (2013), people with this amount of spending are in the middle to upper economic class. Other than that, the ages of the female participant's children ranged from 1 month to 4 years old, with an average age of 1,610 years. That shows that the female participants' children are at the toddler age (under three years). On average, the age of female participants was 27.65 years old, the age difference was 2.57 years from their partners, and the duration of marriage was 2.3 years.

Meanwhile, the male participants mostly lived independently (with spouses and children) (74.3%), worked as employees or professional workers (89.5%), their last education is a bachelor (65.5%), were Muslim (94.2%), and did not have children (47.4%). They also have a core expenditure of IDR 2,500,001 - IDR 4,999,999 per month (49.7%), where according to the Boston Consulting Group (2013), people with this amount of spending are in the middle to upper economic class. Along with that, the male participant's children ranged in age from 2 weeks to 4 years old, with an average age of 1,523 years. That shows that the male participants' children are at the toddler age (under three years). On average, male participants were 28.33 years old, the difference was 2.19 years old from their partners, and the duration of marriage was 1.9 years.

Table 1. Description of Conflict Resolution and Participants' Marital Satisfaction (N = 625)

	Men (N = 171)				Women (N = 454)			
	M	*SD*	*Min*	*Max*	*M*	*SD*	*Min*	*Max*
Conflict Engagement	7,26	2,77	4	17	9,20	3,07	4	18
Positive Problem Solving	16,58	2,54	8	20	16,10	2,45	8	20
Withdrawal	8,68	2,62	4	16	9,00	3,10	4	17
Compliance	10,10	2,42	4	18	9,25	2,69	4	16
Marital Satisfaction	39,50	4,90	22	45	36.85	6.99	12	45

In table 1, it can be seen that generally, positive problem solving is the style of conflict resolution most often used by participants, both men and women. Meanwhile, the conflict resolution styles rarely used are conflict engagement on male participants and withdrawal on female participants.

Also, it can be seen that in the male participant group, the average level of marital satisfaction is 39.50 with an SD of 4.90, and the score ranges from 22 to 45. In the female participants' group, the average marital satisfaction is 36.85 with an SD of 6.99, and the score ranges from 12 to 45. Based on these data, it can be said that the average marital satisfaction of male participants was higher than female participants.

Furthermore, to test the first hypothesis, whether there are significant differences in each conflict resolution style between men and women in the early years of marriage, the researchers used data processing using an independent sample t-test. In this test, alpha or the significance level was used for 0.05. From this test, the following results were obtained.

Table 2. Differences in Mean Conflict Resolution of Men and Women

Conflict Resolution Styles	*Mean*		t	*p.* 2-tailed
	Men (N = 171)	Women (N = 454)		
Conflict Engagement	7,2573	9,1960	-7,226*	0.000
Positive Problem Solving	16,5789	16,0969	2,170*	0.030
Withdrawal	8,6842	9,0022	-1,284	0.200
Compliance	10,1053	9,2511	5,346*	0.000

significance $p < 0.05$ (two tailed)

From the table above, it can be seen that there are significant differences in conflict engagement, positive problem solving, and compliance style between men and women (p <0.05). Meanwhile, withdrawal style has no significant difference between men and women (p> 0.05).

Furthermore, the researcher used the independent sample t-test technique to test the second hypothesis, namely whether there was a significant difference in marital satisfaction between men and women in the early years of marriage. In this test, an alpha or the significance level of 0.05 was used.

Table 3. Differences in Marital Satisfaction's Mean of Men and Women

	Mean		t	*p.* 2-tailed
	Men (N = 171)	Women (N = 454)		
Marital Satsifaction	39.5088	36.8480	4,574*	0.000

significant p < 0,05 (two tailed)

From this test, it was found that there was a significant difference in marital satisfaction between men and women t (623) = 4.574, p = 0.000. These results indicate that men (M = 39.5088, SD = 4.90) have higher marital satisfaction than women (M = 36.8480, SD = 6.98572).

To test the third research hypothesis, multiple linear regression tests were used to calculate predictions of the level of marital satisfaction based on the use of conflict engagement, positive problem solving, withdrawal, and compliance in resolving marital-conflicts in men and women.

Table 4. Multiple Linear Regression Effect of Conflict Resolution on Marital Satisfaction of Participants in General

Variables	*B*	*SE B*	β	t	*p*
Conflict Engagement	-0.354	0.072	-0.167	-4.922	0.000
Positive Problem Solving	1.070	0.092	0.403	11.573	0.000
Withdrawal	-0.564	0.080	-0.255	-7.086	0.000
Compliance	0.046	0.080	0.018	0.568	0.570
R²			0.411		
F			108.372		

For the participants in general, the coefficient of determination is $R^2 = 0.411$, or it can be said that changes in marital satisfaction are influenced by the predictor variable (conflict resolution) of 41.1%, while other variables influence the remaining 58.9%. Furthermore, it is known that the value of F (4, 620) = 108.372, p <0.05 indicates that this equation is significant and can be used to predict marital satisfaction through conflict engagement styles, positive problem solving, withdrawal, and compliance.

Table 5. Multiple Linear Regression Analysis of Conflict Resolution's Effect on Marital Satisfaction in Men (N = 171) and Women (N = 454)

Variables	Men					Women				
	B	SE B	β	t	p	B	SE B	β	t	p
Conflict Engagement	-0.463	0.115	-0.262	-4.018	.000*	-0.235	0.091	-0.103	-2.589	0.010*
Positive Problem Solving	0.764	0.128	0.396	5.958	.000*	1.193	0.118	0.419	10.111	0.000*
Withdrawal	-0.297	0.128	-0.159	-2.322	.021*	-0.636	0.096	-0.282	-6.609	0.000*
Compliance	-0.061	0.129	-0.030	-0.472	.637	0.045	0.099	0.017	0.452	0.652
R^2		0.385					0.415			
F		26.033					79.622			

For the men participants, the coefficient of determination is $R^2 = 0.385$, or it can be said that changes in marital satisfaction are influenced by the predictor variable (conflict resolution) of 38.5%, while other variables influence the remaining 61.5%. Furthermore, it is known that the value of $F_{(4, 166)} = 26.033$, $p < 0.05$ indicates that this equation is significant and can be used to predict marital satisfaction through conflict engagement styles, positive problem solving, withdrawal, and compliance.

For the women participants, the coefficient of determination is $R^2 = 0.415$, or it can be said that changes in marital satisfaction are influenced by the predictor variable (conflict resolution) of 41.5%, while other variables influence the remaining 58.5%. Furthermore, it is known that the value of $F_{(4, 449)} = 79.622$, $p < 0.05$ indicates that this equation is significant and can be used to predict marital satisfaction through conflict engagement styles, positive problem solving, withdrawal, and compliance.

Conclusions

From the research results, several findings can be described in this conclusions. This study found significant differences in conflict resolution styles between women and men, where women used the conflict engagement style more often, while men used the compliance style and positive problem solving more often. The statement that women use a conflict engagement style more often is in line with research conducted by Delatorre & Wagner (2018) that found that women use attack strategies more often, such as carrying out physical or verbal attacks on partners, wherein this study this strategy is similar to conflict engagement style. The result of this study where men more often use positive-problem-solving is also in line with the research by Delatorre & Wagner (2018) that found that men more often use compromise strategies such as negotiations and discussing problems together.

Apart from the differences in conflict resolution styles that men and women tend to use, in both groups, the conflict resolution style used most often is positive problem-solving. The possible explanation of these findings relates to the feminine culture that Indonesia has. According to Hofstede (2020), in countries that its people have feminine cultures, conflicts are also resolved mainly by compromise and negotiation.

Furthermore, this study was conducted to answer whether there is a significant effect of conflict resolution style on the level of marital satisfaction of men and women in the early years of marriage. The results showed a significant effect of conflict resolution style on the level of marital satisfaction for men and women in the early years of marriage, where conflict engagement, withdrawal, and positive problem solving could significantly predict marital satisfaction. Meanwhile, compliance style cannot predict marital satisfaction significantly. That is in line with previous studies that state that conflict resolution is one of the determinants of relationship happiness (Crohan, 1992) and marital satisfaction (Alberts & Driscoll, 1992; Heavey, Layne, & Christensen, 1993; Metz & Dwyer, 1993).

Furthermore, for participants in general, conflict engagement and withdrawal styles have a negative and significant effect with a coefficient of -0.354 and -0.564, respectively, while positive problem solving has a positive and significant effect with a coefficient of 1.070. Meanwhile, compliance style has a positive effect but does not have a significant effect on marital satisfaction. This finding is in line with the results of previous studies from Wagner et al. (2019) stated that positive problem solving is a predictor of the quality of a good marriage and the most significant among other predictor variables. However, in this study, it was also found that conflict engagement is a style of conflict resolution that has the largest negative contribution to marital satisfaction, followed by withdrawal, then compliance. This statement is not in line with this study's results, where the style of conflict resolution that has the largest negative contribution to marital satisfaction is withdrawal, followed by conflict engagement. Also, this study's compliance style is known to have a positive effect on marital satisfaction, although the results are not significant.

Regarding the use of compliance styles, when analyzed separately for males and females, compliance styles have different directions of influence in the two groups, although this prediction was not significant. Based on the results of the regression analysis prediction of marital satisfaction based on conflict resolution styles, the style of compliance performed by men turns out to have a negative direction, which means that the more often the compliance style is used in resolving conflicts with a partner, the more it will reduce the level of male marital satisfaction. On the other hand, the compliance style carried out by women has a positive direction where it means that the more often compliance style is used in resolving conflicts with a partner, the more it will increase the level of women's marital satisfaction. That is in contrast to the research result by Gottman and Krokoff (1989), which states that in wives, conflict resolution using compliance was found to be a predictor of decreasing marital satisfaction over time.

Another finding of this study, there is a significant difference in the average level of marital satisfaction between men and women, where women have lower marital satisfaction than men, in line with the findings of previous studies (Whiteman et al., 2007; Camp Dush et al., 2008; Stevenson & Wolfers, 2009) that wives report lower marital satisfaction than husbands. There are several possible explanations for this.

First, in this study, it is known that women use the conflict engagement style more often, while men use the compliance style and positive problem solving more often in resolving conflicts in marriage. As has been explained in the theoretical review, it is known that based on the research conducted by Wagner et al. (2019), conflict engagement style is the most contributor that is negatively related to marital satisfaction, followed by withdrawal style and then compliance. That means that based on this research, conflict engagement style is a conflict resolution style that has the most significant impact on marital dissatisfaction

compared to withdrawal and compliance styles. Thus, although men and women in this study both often use conflict resolution styles that are theoretically destructive, according to Kudek (1995), conflict engagement on women has more of a larger effect in reducing their marital satisfaction.

Second, women participants have lower marital satisfaction than men can also be explained by gender role differences between men and women in taking care of the child. Women are associated with doing household chores and taking care of children (Bernard, 1972). They are expected to work hard and give more time and energy to their children. Moreover, in this study, generally, the participants' children were under three years old. Younger children, such as toddlers, need more time to care for them because they need constant attention and care. On the other hand, older children need less time to take care of themselves, and they spend more time in school. This study's results are also in line with the research conducted by Yamamura (2011), which states that the presence of children can reduce the level of satisfaction of a woman's marriage.

Based on the analysis results, several conclusions can be drawn: 1) There is a significant difference in the level of use of conflict resolution styles in men and women in the early years of marriage. Men more often use positive problem-solving and compliance styles than women, and women more often use conflict engagement styles to resolve their marital conflicts than men. 2) There is a significant difference in the level of marital satisfaction between men and women in the early years of marriage, where men have higher marital satisfaction than women. 3) There is an effect of conflict resolution on marital satisfaction for men and women in the early years of marriage: (a) conflict engagement has a negative and significant effect on marital satisfaction, (b) withdrawals have a negative and significant effect on marital satisfaction, (c)) compliance has a positive effect on marital satisfaction, but not significant, (d) positive problem solving has a positive and significant effect on marital satisfaction. 4) The style of conflict resolution that can best predict the level of marital satisfaction for men and women in the early years of marriage is positive problem-solving.

For further research, it is necessary to balance the proportion of participants by involving participants more equally and more heterogeneously so that the study results can be more generalized and can more accurately describe the relationship between variables. Besides, revisions are needed to items that measure compliance conflict resolution styles to improve reliability. Further research can also involve married couples and use the CRSI Partner measurement tool to determine the effect of couples' conflict resolution styles on each partner's marital satisfaction.

Also, this study's main result is that conflict resolution has a significant effect on marital satisfaction. It is hoped that it can be applied in marriage counseling for individuals who experience dissatisfaction in their marriage, along with counseling couples before entering marriage as counseling material. Then, for both men and women, because the positive-problem-solving style is the conflict resolution style that can increase marital satisfaction the most, it can be suggested for married individuals to apply a conflict resolution style that has a positive influence so that they can maintain or increase their marital satisfaction. Practitioners can also assist couples in learning these positive problem-solving techniques.

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Contact email: syifarasyida99@gmail.com

Impact on Short-Term Mood by Two Factors of Viewing "Kawaii" Objects and Linguistic Communication

Masako Nunokawa, Hokkaido University, Japan

Abstract

It is a general behavior for people who have similar tastes to share their feelings about an object related to "kawaii" and to communicate linguistically. It seems that communication by utterance of "kawaii" has a positive effect on short-term mood by the action of relieving psychological stress, and it improves the adaptability of human relationships. An experiment was conducted to measure short-term mood changes by two factors – viewing images considered "kawaii" or not, and with or without communication when viewing image of "kawaii" impression- and the results were evaluated by analysis of variance. As a result, the degree of activity, comfort, and arousal was increased when there was communication. The vitality increased after viewing images with a high impression of "kawaii", and participants became comfortable and active. However, in the case of viewing images with a low impression of "kawaii", there was no change after viewing the images regardless of whether it was with or without of communication, indicating that the communication had no effect. This suggests that only linguistic communication related to "kawaii" may amplify pleasure emotions. In terms of gender difference, the same results as those of all the experiment participants were seen in males, but in the case of females, viewing images with a low "kawaii" impression made them feel uncomfortable and depressed, regardless of communication. Therefore, for females, it was found that the image condition affects the short-term mood more than the communication condition.

Keywords: Kawaii, Cuteness, Communication, Mood, Feeling, Linguistic

Introduction

In recent years, the Japanese government has launched the "Cool Japan Strategy" to spread the culture overseas. According to the "Cool Japan Strategy Initiative" announced by the Intellectual Property Strategy Promotion Office of the Cabinet Office on December 21, 2018, not only lifestyles and traditional cultures that represent Japan's nature, but also modern forms of culture including anime, manga and "kawaii" fashion is also designated as an important resource. Content with a modern "kawaii" impression is spread to other countries via Internet, so it is thought that it will have a high economic effect in the future. The study by Yamada and Morimoto (2015), it was shown that there was a unique process of communication via the Internet in the process of spreading "kawaii" culture. In communication through social media that accompanies "kawaii," people with similar tastes share the feeling of "kawaii" while exchanging information with each other on the Internet without feeling a distance. Even if the feelings for "kawaii" things are ambiguous at first glance, they have a certain unique power, and the feelings of other people are involved. There is also a phenomenon in which the sense of sharing of "kawaii" objects increases, which gradually forms a large group. There is an analysis showing that expression using "kawaii" spread through such a process is increasing year on year via overseas SNS in general society. When searching for "kawaii" on Instagram, the number of posts - excluding Japanese posts - from April 1, 2017 to March 31, 2018 was 302,269 in the United States, 76,233 in the United Kingdom, and 75,027 in Russia. Furthermore, if you look at the hashtag "#kawaii", you can see that the top countries using it are the United States of America, Russia, France, Brazil, and Indonesia. Among the words that identify the "kawaii" culture, such as "#anime", "#art", "#cosplay", and "#japan", the word that occupies the first or second place in any country is "#love". From this phenomenon, it can be seen that the keyword "kawaii" may be related to the positive emotions inherent in individuals not only in Japan but also in other countries around the world. The reason why the expression "kawaii" spread instead of "cuteness" needs to be traced back to the origin of kawaii research.

Many of the overseas research examples related to "kawaii" are based on the concept of "baby-schema" by Animal psychologist Konrad. He found that when humans encounter the physical characteristics of baby animals, they have a psychological desire to protect their subjects. The concept of "baby-schema" was later evolved as the basis of a multifaceted research approach as a study of "cuteness". After that, research on "baby-schema" and the brain was also advanced, and in the research by Grocker et al. on the nucleus accumbency, which was activated by stimulus with cute objects, it was shown that elements of the "baby-schema" activate sensations such as reward, pleasure, and addiction. However, it has been pointed out that previous studies on "baby-schemas" may differ from the nuances of Japanese "kawaii". Nittono (2013) describes a behavioral approach to "kawaii" which was a study by cognitive science Donald Arthur Norman (2004).   Norman argued that the feeling of "cute" was transformed into feelings of "joy" and "fun", and this feeling of "shallow cuteness" becomes deep and long-lasting through wisdom. Regarding language issues, Nittono states that English "cuteness" refers to the attribute of the subject, and Japanese "kawaii" refers to the viewer's emotion. Etymologically, the Japanese expression "kawaii" comes from "poor", which expresses a feeling of pity for others, and it cannot be denied that the Japanese word "kawaii" is closely related to emotions. The Japanese study by Kanai et al. revealed that the higher the empathy, the easier it is for a person to have a "kawaii" feeling towards an object. People with a high degree of other-oriented tendency tend to want to protect the other person and stay with them because it is easy to imagine the feelings and conditions of the target person, especially when the target person is a baby human or animal. Furthermore, an

analysis of variance regarding gender for empathy and affinity motivation revealed that the main effect of gender was significant for empathy, and that female had more empathy than male. Their another study deals with "smiles" as a way to share emotions when looking at "kawaii" objects. In this study, Kanai et al. examined the correlation between "kawaii" emotions and smiles through physiological measurements of facial muscles. After that, subjective and behavioral items were investigated using a questionnaire. In addition, the activity of the zygomaticus major and corrugator supercilii muscles during browsing was also examined by physiological measurements. As a result, when the researcher saw the images of the category with the element of "kawaii" and got the pleasant feeling of "kawaii", he said that he saw a lively reaction in the facial muscles. However, the zygomaticus major muscle did not respond even when subjects were looking at images of beautiful scenery. The results of this study show that when people feel "kawaii", they express their emotions outwardly and try to express something through communication.

These studies have shown that viewing "kawaii" objects has an emotional effect. However, most of the studies have verified the experimental results by having a single participant viewing an object. Few studies discuss the emotions during communication that occur when multiple people view the same object related to "kawaii". However, it is undeniable that feelings about "kawaii" not only spring up toward the object, but also occur or are amplified by sharing feelings. The utterance of "kawaii" is intended to actively communicate with human beings, and it facilitates mutual relationships and increases intimacy through empathy. I presume that the existence of a common theme of "kawaii" creates empathic communication and leads to mutual understanding, which may have an impact on individual emotions and short-term mood. Therefore, the purpose of this study is to explore short-term mood change due to linguistic communication between humans accompanying the utterance of "kawaii". Specifically, I will explore short-term mood change depending on the presence or absence of conversation before and after viewing images related to "kawaii" through experiment. I set the hypothesis that short-term mood change is more likely to occur with linguistic communication with a "kawaii" emotion than when" kawaii" emotion occurs in the brain without linguistic communication. If the emotions associated with "kawaii" are shared by linguistic communication and the pleasure feelings are amplified in groups, it may be applied in fields such as clinical psychology in the future, making this a meaningful study.

Experiment and Stimulus

I recruited 48 participants who were divided into two groups. One group had two people participate in the experiment in pairs (with communication by utterance = C group) and 32 people (16 pairs) participated. The other group comprised single people participating in the experiment (with non-communication by utterance = NC group), and 16 people participated. In the experiment, I decided to analyze by two factors: the presence or absence of communication by utterance and whether the image used for the experimental task was evaluated as "kawaii". The experiment participants in C Group, who had communication by utterance, evaluated while viewing the images. The experiment participants in NC group evaluated images by thinking alone without communication by utterances. Two types of image presented in the experiment were prepared: an image with a strong impression of "kawaii" (High = H image) and an image with a low impression of "kawaii" (Low = L image). At the time of the experiment, six H or six L images were presented to the participants, and they were instructed to view and evaluate the images for 10 minutes. In order to measure short-term mood, TDMS-SD (two-dimensional mood scale) was used to measure four levels of "activity", "stability", "comfort", and "arousal" of the participants, and

the psychological state (short-term mood) was measured. TDMS-SD is a self-test that visualizes the state of mind. The eight questions were "calm", "irritated", "lethargic", "active", "relaxed", "uptight", "slack", and "lively". In response to those questions, the psychological state at the time of measurement can be quantified by answering on a 6-point Likert scale, with responses ranging from "not at all" to "very much so". In the experiment of this study, before and after viewing the images for 10 minutes, and the mood change was measured by TDMS-SD and those are compared.

For images related to "kawaii" used for stimulation, the use of The International Affective Picture System (IAPS) was initially considered. IAPS images are accompanied by scores (pleasant / unpleasant, arousal, superiority) when downloaded, so those scores can be used as reference levels for comparison of feelings with pleasant and unpleasant, but images were not scored for "kawaii" impression, so IAPS images were not appropriate for the experiment. Therefore, I decided to use 40 images with which Nittono and Ihara (2017) performed their own image selection for a "kawaii" study and evaluation analysis. I conducted unique selection process and decided to select 6 images each for H images and L images from the 40 images as stimulation images for the experimental task. I randomly presented all images online and obtained image evaluations from respondents by questionnaire. For the survey, 89 people aged between 20 and 50 participated in the survey, and those experiment participants answered questions in terms of "kawaii" impression with a five-point Likert scale ranging from "strongly agree" to "do not agree at all". The evaluation results of the top six H images (Fig. 1) were: image#1: M = 4.602, image#2: M = 4.489, image#3: M = 4.375, image#4: M = 4.318, image#5: M = 4.227, image#6: M = 4.205 (n= 89). The top six L images (Figure 2) were: image#7: M = 1.705, image#8: M = 1.705, image#9: M = 1.716, image#10: M = 1.761, image#11: M = 1.761, image#12: M = 1.761 (n = 89). These images were prepared and printed on a white styrene board with a size of 150mm x 150mm, and 6 images were presented to the participants.

Analysis of variance was conducted by the score of the change of the level of the TDMS-ST on the two factors of "presence or absence of communication" and "whether or not there was kawaii impression" and all analyzes were performed by SPSS.
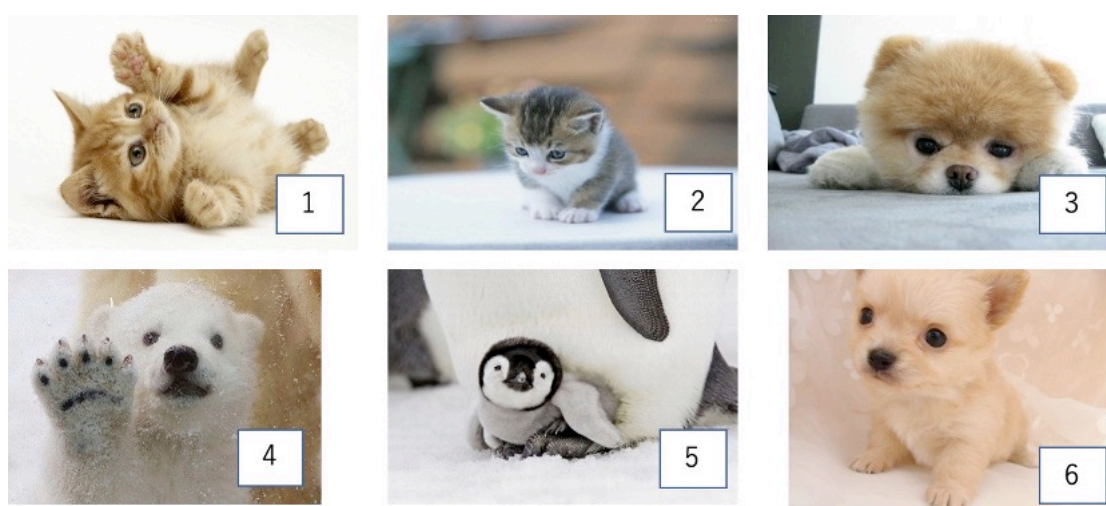
Figure 1: Selected Six H (=High Impression of "Kawaii") Image
From Original Forty Images by Online Survey
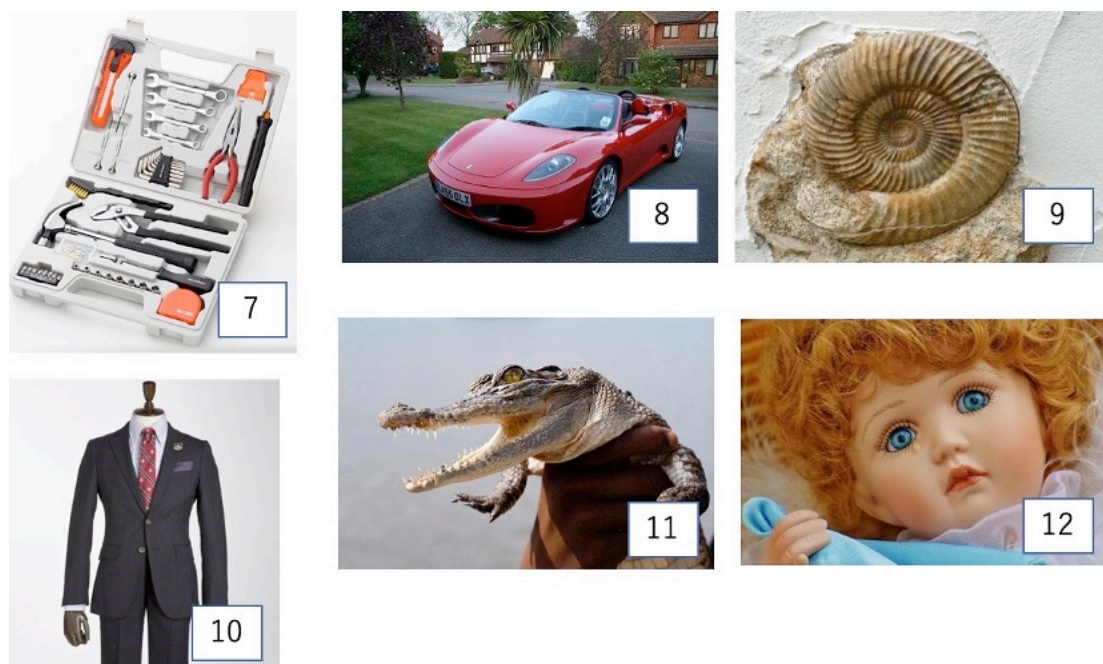
Figure 2: Selected Six L (=Low Impression of "Kawaii") Image
From Original Forty Images by Online Survey

Results

A two-factor analysis of variance was performed on the change in the level of the TDMS-ST in the H and L image and the conditions of communications in the all participants and gender different of the experiment participants, and the following was confirmed.

Viewing H Image (All Participants)

• Activity: the main effect before and after the task was not significant (F (1,22) =. 41, n.s.), and the main effect of the experiment participants was significant (F (1,22) = 10.68, p <.01). The interaction was not significant (F ((1,22) =. 64, n.s.).
• Stability: the main effects before and after the task and the main effects and interactions of the experiment participants were not significant (F ((1,22) = 3.10, ns; F (1,22) = .08, n.s.). F (1,22) = .00, n.s.).
• Comfort: the main effect before and after the task was not significant (F (1,22) =. 26, ns), but the main effect of the experiment participants was significant (F (1,22) = 4.41, p <.05). The interaction was not significant (F ((1,22) =. 39, n.s.).
• Arousal: the main effect before and after the task was not significant (F (1,22) = 2.85, n.s.), but the main effect of the experiment participants was significant (F (1,22) = 13.81, p <.01). The interaction was not significant (F ((1,22) =. 43, n.s.).
*n.s. means "not significant". (The same applies to the following data)

From the above results, in both the C group and the NC group, the activity, stability, comfort, and arousal of the TDMS-ST did not change before/after the task depending on the content of the image. However, there were significant differences in the levels of activity, comfort, and arousal among the experiment participants, and the levels in the C group were higher than those in the NC group (Figure 3).

Two-factor analysis (ANOVA) - TDMS-ST score and experimental group condition

		NC group (n=8)		C group (n=16)		main effect		interaction
		before	after	before	after	before/after	group condition	
activity level	M	5.75	4.63	8.13	8.25	.41	10.68 **	.64
	SD	2.05	2.72	2.92	2.98			
stability level	M	6.75	7.75	6.94	8.00	3.10	.08	.00
	SD	2.12	2.77	2.18	2.13			
comfort level	M	12.50	12.38	15.06	16.25	.26	4.41 *	.39
	SD	3.51	4.98	4.49	4.04			
arousal level	M	-1.00	-3.12	1.19	.25	2.85	13.81 **	.43
	SD	2.27	2.30	2.51	3.24			

Image: H image
Experiment participants : All participants

* p <.01 ** p <.05

Figure 3: ANOVA of TDMS-SD - H Images / All Participants

Viewing L Image (All Participants)

- Activity: the main effects before and after the task and the main effects and interactions of the experiment participants were not significant (F $((1,22) = 4.13$, n.s.; F $(1,22) = 2.72$, n.s.; F $(1,22) =.27$, n.s.).
- Stability: the main effects before and after the task and the main effects and interactions of the experiment participants were not significant (F $(1,22) = 1.62$, n.s.; F $(1,22) = .26$, n.s.). F $(1,22) = .07$, n.s.).
- Comfort: the main effects before and after the task and the main effects and interactions of the experiment participants were not significant (F $((1,22) = 4.15$, n.s.; F $(1,22) = 1.77$, n.s.; F $(1,22) = .24$, n.s.).
- Arousal: the main effects before and after the task and the main effects and interactions of the experimental experiment participants were not significant (F $(1,22) = 1.22$, n.s.; F $(1,22) = 2.07$, n.s.; F $(1,22) =. 11$, n.s.).

From the above results, TDMS-ST cannot be said to have changed by viewing the L image in C group or the NC group (Figure 4).

Two-factor analysis (ANOVA) - TDMS-ST score and experimental group condition

| | | NC group (n=8) | | C group (n=16) | | main effect | | interaction |
		before	after	before	after	before/after	group condition	
activity level	M	5.63	4.63	7.88	6.19	4.13	2.72	.27
	SD	2.26	2.50	3.42	3.27			
stability level	M	6.38	5.88	6.94	6.19	1.62	.26	.07
	SD	2.13	2.36	2.29	2.32			
comfort level	M	12.00	10.50	14.81	12.38	4.15	1.77	.24
	SD	3.78	3.93	4.90	5.03			
arousal level	M	-.75	.94	-1.25	.00	1.22	2.07	.11
	SD	2.25	3.15	2.87	2.61			

Image: L image
Experiment participants : All participants

$^{*}p<.01$ $^{**}p<.05$

Figure 4: ANOVA of TDMS-SD - L Images / All Participants

Viewing H Image (Male Participants)

•   Activity: the main effect before and after the task was not significant (F (1,7) = 3.17, n.s.), and the main effect of the participants was significant (F (1,7) = 40.33, p <.01). The interaction was not significant (F (1,7) = .66, n.s.).

•   Stability: the main effects before and after the task and the main effects and interactions of the participants were not significant (F ((1,7) =. 00, n.s.; F (1,7) = 2.61, n.s.; F (1,7) = .15, n.s.).

•   Comfort: the main effect before and after the task was not significant (F (1,7) = 2.35, n.s.), and the main effect of the participants was significant (F (1,7) 15.14, p <.01). The interaction was not significant (F (1,7) = .18, n.s.).

•   Arousal: the main effect before and after the task was not significant (F (1,7) = 1.53, n.s.), but the main effect of the participants was significant (F (1,7) = 14.29, p <.01). The interaction was not significant (F (1,7) = .62, n.s.).

From the above results, the activity, stability, comfort, and arousal of the TDMS-ST cannot be said to change in both the C group and NC group for men by viewing H images. In addition, there were significant differences in the levels of activity, comfort, and arousal among the participants, and the levels in the C group were higher than those in the NC group (Figure 5).
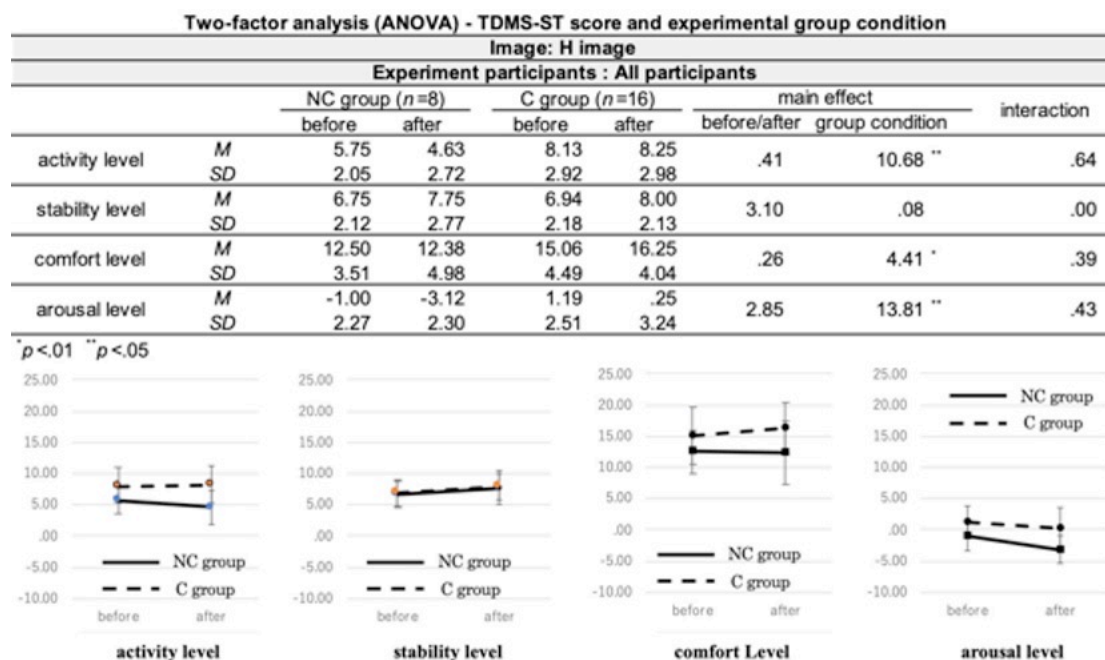
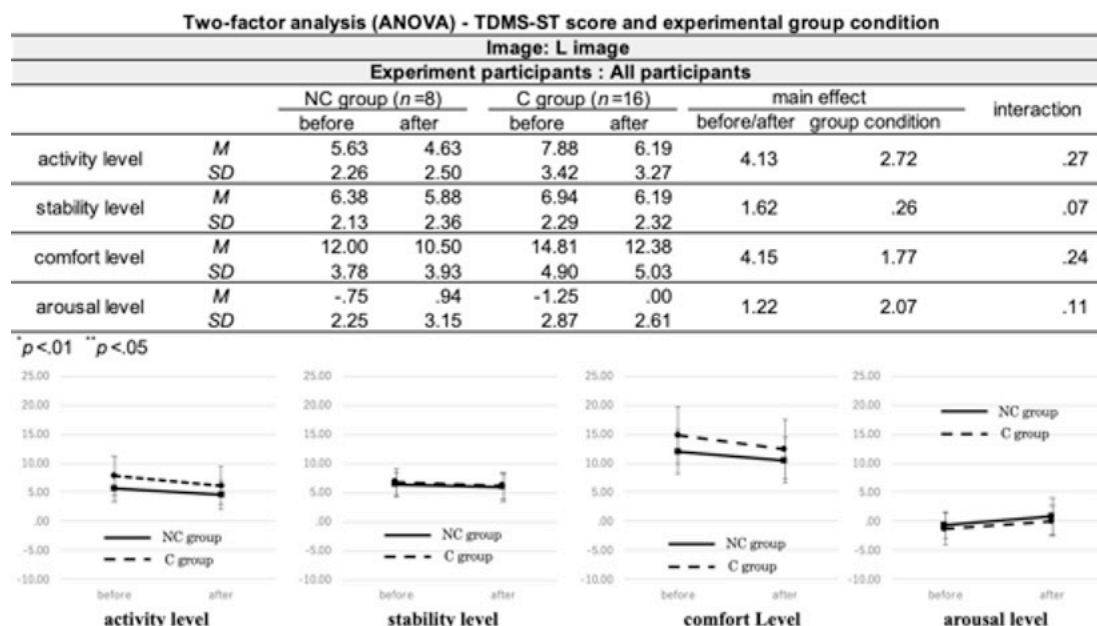| Two-factor analysis (ANOVA) - TDMS-ST score andexperimental group condition								
Image: H image								
Experiment participants : Male participants								
		NC group (n=3)		C group (n=6)		main effect		interaction
		before	after	before	after	before/after	group condition	
activity level	M	3.67	2.67	10.00	7.33	3.17	40.33 **	.66
	SD	.58	2.08	2.37	1.63			
stability level	M	5.33	5.00	7.00	7.33	.00	2.61	.15
	SD	1.53	2.65	1.27	2.73			
comfort level	M	9.00	7.67	17.00	14.67	2.35	15.14 **	.18
	SD	1.73	3.51	3.58	3.14			
arousal level	M	-1.67	-2.33	3.00	.00	1.53	14.29 **	.62
	SD	1.53	3.22	1.27	3.23			

*$p<.01$　**$p<.05$

Figure 5: ANOVA of TDMS-SD - H Images / Male Participants

Viewing L Image (Male Participants)

• Activity: the main effects before and after the task, the main effects of the participants, and the interactions were not significant (F (1,5) = .04, n.s.; F (1,5) = .40, n.s.; F (1,5) = .22, n.s.).

• Stability: the main effects before and after the task, the main effects of the participants, and the interactions were not significant (F (1,5) = 1.78, n.s.; F (1,5) = .06, n.s.; F (1,5) = .33, n.s.).

• Comfort: the main effects before and after the task, the main effects of the participants, and the interactions were not significant (F (1,5) = .38, n.s.; F (1,5) = .03, n.s.; F (1,5) = .28, n.s.).

• Arousal: the main effects before and after the task, the main effects of the experimental participants, and the interactions were not significant (F (1,5) = .56, n.s.; F (1,5) = .99, n.s.; F (1,5) = .06, n.s.).

From the above results, it can be seen that in males, viewing the L images did not change the activity, stability, comfort, and arousal of the TDMS-ST in both the C group and the NC group (Figure 6).

Two-factor analysis (ANOVA) - TDMS-ST score and wxperimental group conditions

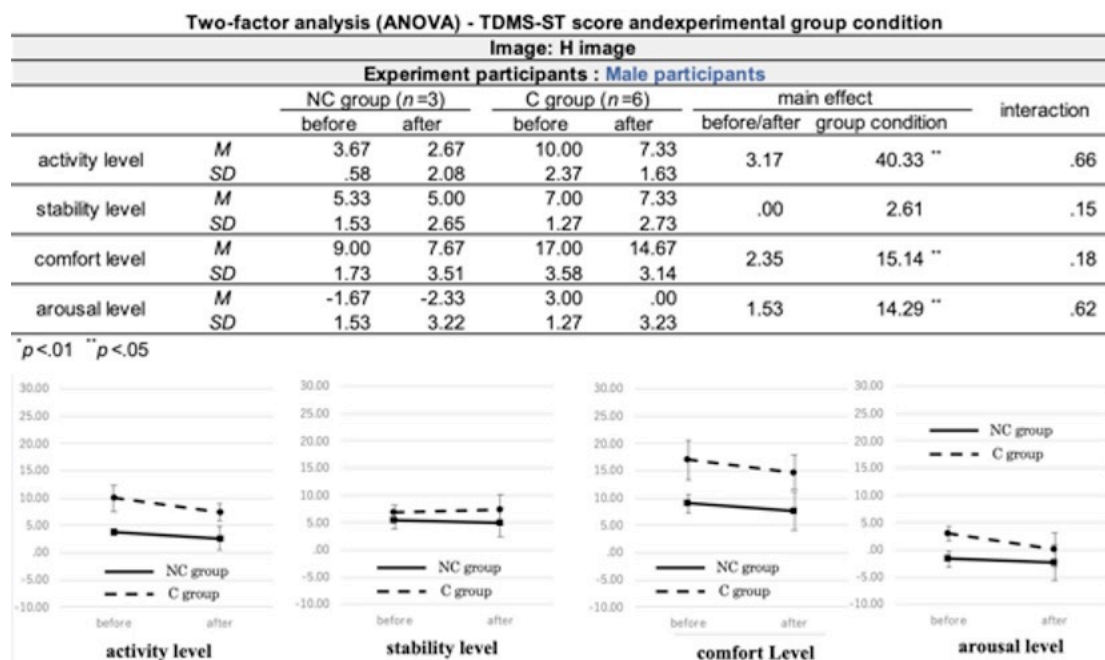|		NC group (n=5)		C group (n=2)		main effect		interaction
		before	after	before	after	before/after	group condition	
activity level	M	6.00	5.60	6.50	7.50	.04	.40	.22
	SD	2.55	2.07	.71	6.36			
stability level	M	6.00	6.60	5.00	6.50	1.78	.06	.33
	SD	2.65	2.19	2.83	4.95			
comfort level	M	12.00	12.20	11.50	14.00	.38	.03	.28
	SD	4.85	2.95	3.54	11.31			
arousal level	M	.00	-1.00	1.50	1.00	.56	.99	.06
	SD	1.87	3.08	2.12	1.41			

*$p<.01$ **$p<.05$

Figure 6: ANOVA of TDMS-SD - L Images / Male Participants

Viewing H Image (Female Participants)

•   Activity: the main effects before and after the task, the main effects of the participants, and the interactions were not significant (F (1,11) = .01, n.s.; F (1,11) = 1.86, n.s.; F (1,11) = 1.57, n.s.).
•   Stability: the main effects before and after the task, the main effects of the participants, and the interactions were not significant (F (1,11 = 3.21, n.s.; F (1,11) = .41, n.s.; F (1,11) = .26, n.s.).
•   Comfort: the main effects before and after the task, the main effects of the participants, and the interactions were not significant (F (1,11) = 1.24, n.s.; F (1,11) = .46, n.s.; F (1,11) = .44, n.s.).
•   Arousal: the main effects before and after the task, the main effects of the experimental participants, and the interactions were not significant (F (1,11) = 1.11, n.s.; F (1,11) = 3.78, n.s.; F (1,11) = 1.84, n.s.).

From the above results, the activity, stability, comfort, and arousal of the TDMS-ST cannot be said to change in both the C group and NC group in females by viewing H images (Figure 7).

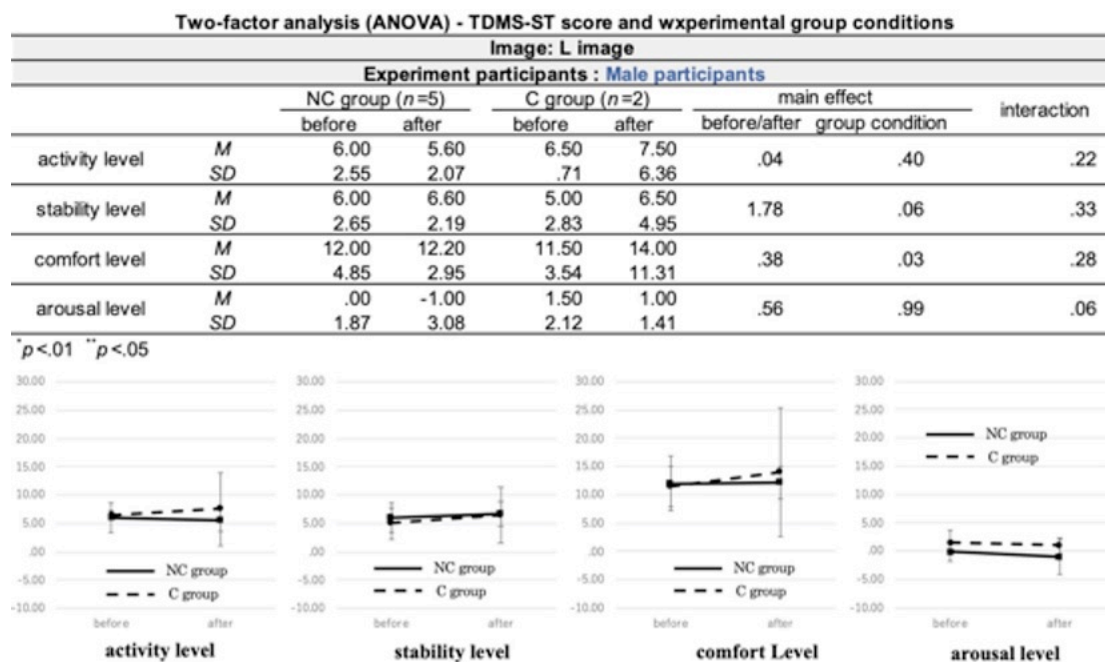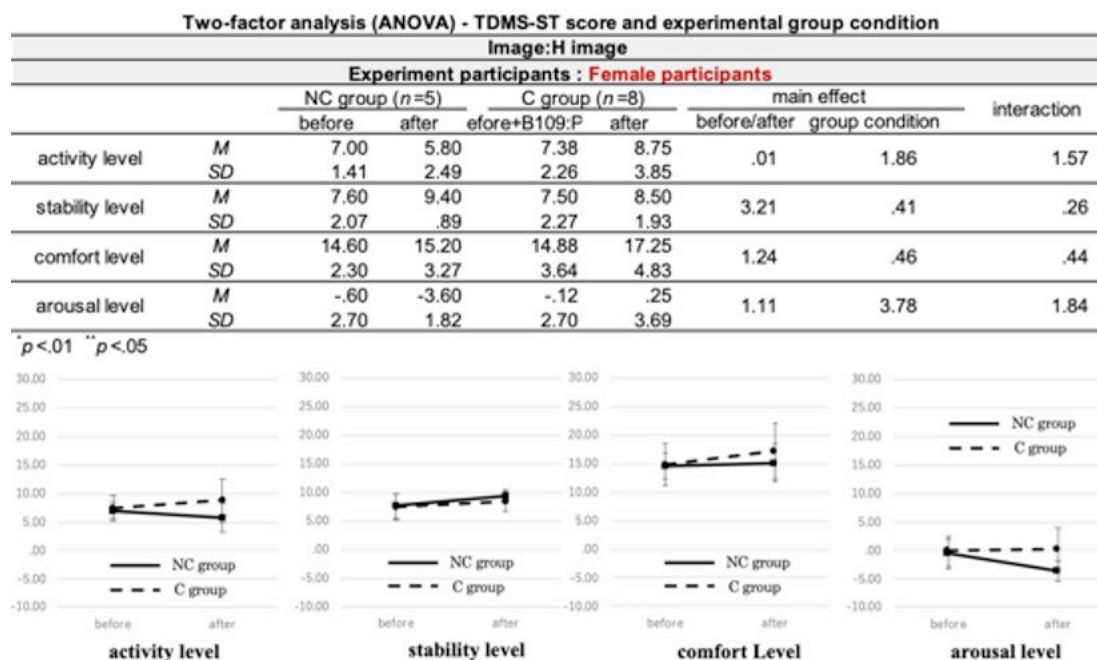| Two-factor analysis (ANOVA) - TDMS-ST score and experimental group condition								
Image:H image								
Experiment participants : Female participants								
		NC group (n=5)		C group (n=8)		main effect		interaction
		before	after	efore+B109:P	after	before/after	group condition	
activity level	M	7.00	5.80	7.38	8.75	.01	1.86	1.57
	SD	1.41	2.49	2.26	3.85			
stability level	M	7.60	9.40	7.50	8.50	3.21	.41	.26
	SD	2.07	.89	2.27	1.93			
comfort level	M	14.60	15.20	14.88	17.25	1.24	.46	.44
	SD	2.30	3.27	3.64	4.83			
arousal level	M	-.60	-3.60	-.12	.25	1.11	3.78	1.84
	SD	2.70	1.82	2.70	3.69			

p<.01 p<.05

Figure 7: ANOVA of TDMS-SD - H Images / Female Participants

Viewing L Image (Female Participants)

• Activity: the main effects before and after the task, the main effects of the participants, and the interactions were not significant (F (1,11) = 4.65, n.s.; F (1,11) = 2.54, n.s.; F (1,11) = .06, n.s.).
• Stability: the main effects before and after the task, the main effects of the participants, and the interactions were not significant (F (1,11 = 4.28, n.s.; F (1,11) = .02, n.s.; F (1,11) = 1.02, n.s.).
• Comfort: the main effects before and after the task were significant (F (1,11) = 7.67, p<.05), however, the main effects and interactions of the participants were not significant (F (1,11) = 1.27, n.s.; F (1,5) = .14, n.s.).
• Arousal the main effects before and after the task, the main effects of the experimental participants, and the interactions were not significant (F (1,11) = .33, n.s.; F (1,11) = 3.55, n.s.; F (1,5) = .73, n.s.).

Comparing the average levels of comfort before and after viewing the image, it can be said that the score after viewing the image was lower than that before viewing the image, so the comfort was lower (Figure 8).

| Two-factor analysis (ANOVA) - TDMS-ST score and experimental group conditions | | | | | | | |
Image: L image							
Experiment participants : Female participants							
		NC group (n=3)		C group (n=10)		main effect		interaction
		before	after	before	after	before/after	group condition	
activity level	M	5.00	3.00	8.00	5.50	4.65	2.54	.06
	SD	2.00	2.65	3.68	2.64			
stability level	M	7.00	4.67	6.40	5.60	4.28	.02	1.02
	SD	1.00	2.52	2.01	2.22			
comfort level	M	12.00	7.67	14.40	11.10	7.67 *	1.27	.14
	SD	1.73	4.16	5.06	4.28			
arousal level	M	-2.00	-1.67	1.60	-.10	.33	3.55	.73
	SD	2.65	3.06	3.10	2.33			

*p<.01 **p<.05
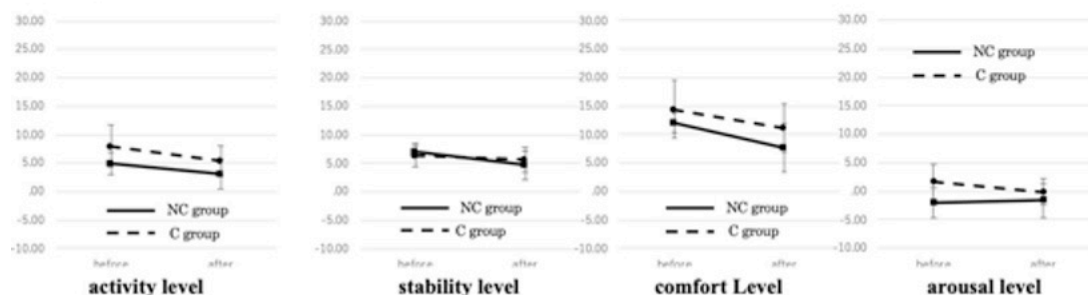
Figure 8: ANOVA of TDMS-SD - L Images / Female Participants

Finally, among the experimental participants, I targeted a mixed-gender pair in Group C and A two-factor analysis of variance was performed. The purpose of the analysis was to verify whether the results of the male-only or female-only pair and the male-female pair would be different.

Viewing H Image (Pair Participants – Male and Female Together)

- Activity: the main effects before and after the task and the main effects of the experimental participants were not significant ($F (1,8) = 1.67$, n.s.; $F (1,8) = 1.18$, n.s), however, the interaction was significant ($F (1,8) = 6.31$, $p < .05$.). Since the interaction was significant, a simple main effect test was performed, and there was no significant difference between the C group and NC group before the task and the C group and NC group after the task. In addition, there was no significant difference between the comparison before and after the experiment in the C group and the comparison before and after the task in the NC group.
- Stability: the main effects before and after the task and the main effects and interactions of the participants were not significant ($F (1,8) = 4.94$, n.s.; $F (1,8) = .36$, n.s.; $F (1,8) = 1.52$, n.s.).

- Comfort: the main effects before and after the task were significant ($F (1,8) = 9.05$, $p < .05$), however, the main effect of the participants in the experiment was not significant ($F (1,8) = .09$, n.s.), but the interaction was significant ($F (1,8) = 9.72$, $p < .05$). Since the interaction was significant, a simple main effect test I performed, and there was no significant difference between the C group and NC group before the task and the C group and NC group after the task. In addition, although there was no significant difference in the comparison before and after the task in the NC group, in the comparison before and after the task in the C group, the score after the task was significantly higher at the 1% level than before the task.

- Arousal: the main effect before and after the task was not significant (F (1,8) = .46, n.s.), however, the main effect of the participants was significant, (F (1,8) = .46, n.s.) but the interaction was not significant (F (1,8) = 11.75, p < .01).

Comparing the average levels of comfort before and after viewing the image under the mixed pair condition, it can be said that the comfort level increased after viewing the image because the score was higher than before viewing the image. The levels of comfort did not change for the experimental participants of the NC group by viewing the H image, but the level of the experimental participants of the C group increased (Figure 9).

Two-factor analysis (ANOVA) - TDMS-ST score and experimental group conditions
Image: H image
Experiment participants : Male and female together

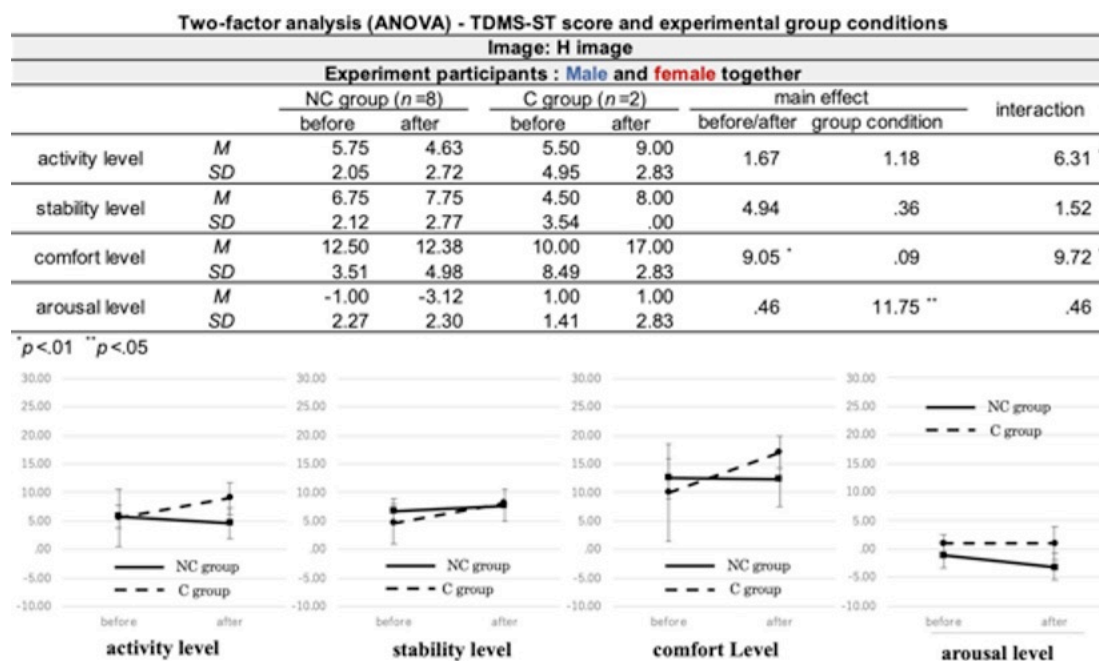|		NC group (n=8)		C group (n=2)		main effect		interaction
		before	after	before	after	before/after	group condition	
activity level	M	5.75	4.63	5.50	9.00	1.67	1.18	6.31 *
	SD	2.05	2.72	4.95	2.83			
stability level	M	6.75	7.75	4.50	8.00	4.94	.36	1.52
	SD	2.12	2.77	3.54	.00			
comfort level	M	12.50	12.38	10.00	17.00	9.05 *	.09	9.72 *
	SD	3.51	4.98	8.49	2.83			
arousal level	M	-1.00	-3.12	1.00	1.00	.46	11.75 **	.46
	SD	2.27	2.30	1.41	2.83			

*p<.01 **p<.05

Figure 9: ANOVA of TDMS-SD - H Images / Pair of Male and Female Participants

Viewing L Image (Pair Participants – Male and Female Together)

- Activity: the main effects before and after the task, the main effects of the participants, and the interactions were not significant. (F (1,10 = 1.62, n.s.; F (1,10) = 2.62, n.s.; F (1,10) = .00, n.s.).
- Stability: the main effects before and after the task were not significant (F (1,10) = 3.02, n.s.), however, the main effect of the participants was significant (F (1,10) = 5.18, p < .05), and the interaction was not significant (F (1,10) = .93, n.s.).
- Comfort: the main effects before and after the task were not significant (F (1,10) = 2.73, n.s.), however, the main effect of the participants was significant (F (1,10) = 5.57, p < .05), and the interaction was not significant (F (1,10) = .24, n.s.).
- Arousal: the main effects before and after the task, the main effects of the experimental collaborators, and the interactions were not significant (F (1,10 = .04, n.s.; F (1,10) = .05, n.s.; F (1,10) = .93, n.s.).

From the above results, the L image did not change the activity, stability, comfort, and arousal of the two-dimensional mood scale in either the C group or the NC group.

In addition, there was a significant difference in the scores of the experiment participants in terms of stability and comfort, and the scores of the male and female pair of experimental

participants were higher than those of the other experimental participants in C group (Figure 10).
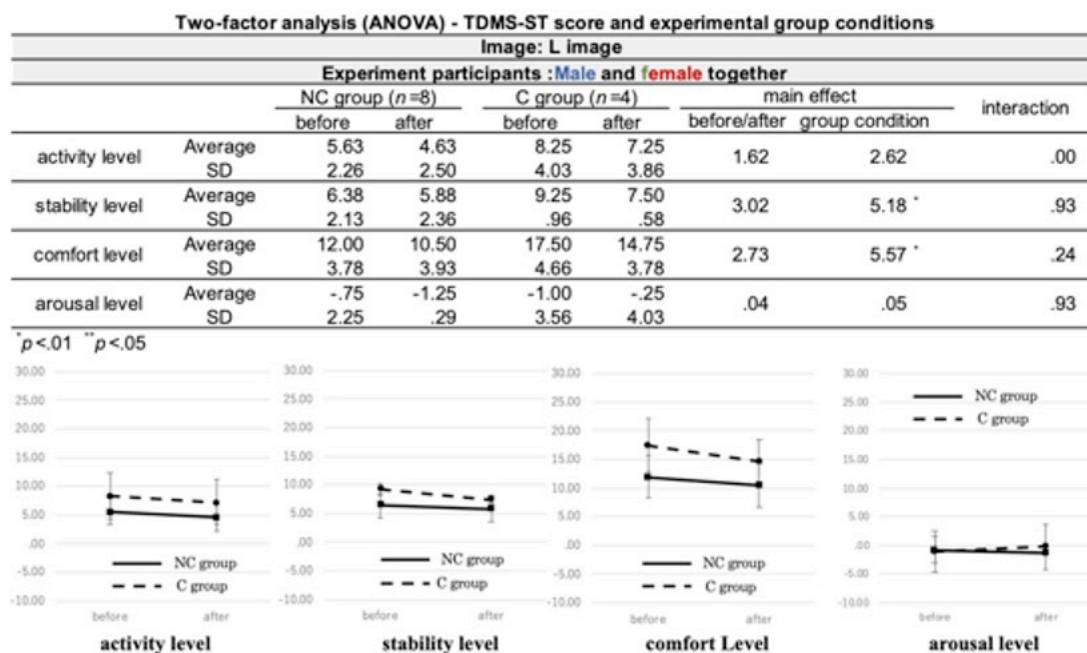
Two-factor analysis (ANOVA) - TDMS-ST score and experimental group conditions
Image: L image
Experiment participants : Male and female together

		NC group (n=8)		C group (n=4)		main effect		interaction
		before	after	before	after	before/after	group condition	
activity level	Average	5.63	4.63	8.25	7.25	1.62	2.62	.00
	SD	2.26	2.50	4.03	3.86			
stability level	Average	6.38	5.88	9.25	7.50	3.02	5.18 *	.93
	SD	2.13	2.36	.96	.58			
comfort level	Average	12.00	10.50	17.50	14.75	2.73	5.57 *	.24
	SD	3.78	3.93	4.66	3.78			
arousal level	Average	-.75	-1.25	-1.00	-.25	.04	.05	.93
	SD	2.25	.29	3.56	4.03			

*$p<.01$ **$p<.05$

Figure 10: ANOVA of TDMS-SD - L Images / Pair of Male and Female Participants

Discussion

From the analysis of variance on all the participants, the levels of activity, comfort, and arousal were high in the group who viewed and communicated about the "kawaii" images. The result of those were higher on all levels of short-term mood in the group of single participants who viewed. In this group, the participants felt a lively and energetic feeling after viewing the images with a high impression of "kawaii", and felt comfortable, cheerful, excited and lively. However, they did not become relaxed and calm. On the other hand, for the group that viewed images with few "kawaii" elements, the levels of activity, comfort, and arousal had no correlation with the presence or absence of communication, and the effect on mood changes was small. From this, it is suggested that by viewing "kawaii" images and sharing that emotion with people, the short-term mood can be made comfortable and cheerful. From this result, the act of sharing the feelings with others while viewing images related to "kawaii" activates and amplifies the mood of joy in the short term more than the case of not sharing the internalized feelings toward a "kawaii" subject. This suggests that the feeling of "kawaii" can be amplified by sharing it with others. When viewing an image with a low "kawaii" impression, there was no change in short-term mood after viewing the image regardless of communication, so it suggests it is only the object that gives a positive stimulus and creates a pleasant feeling. Furthermore, in the gender comparison, in the case of males, in the group with communication, the levels of activity, comfort, and arousal increased by viewing images with a high impression of "kawaii". However, there was no effect on the short-term mood for images with a low impression of "kawaii". This is almost the same result as the result of all the experiment participants. On the other hand, in the case of females, unlike both the analysis results of all the experimental participants and the analysis results of males, viewing images with a high impression of "kawaii" depending on the presence or absence of communication did not affect short-term mood. However, when viewing images with a low impression of "kawaii, the comfort level decreased. In a previous study by Kanai

et al. (2015), it was stated that women have higher empathy than men. Therefore, before the experiment, the result was predicted that positive effects in short-term mood would be created in females viewing and communicating about "kawaii" images. However, looking at the results, the effect on short-term mood before and after the task was less than that of males, depending on the presence or absence of communication. However, the negative reaction was seen only for viewing images with a low impression of "kawaii". From this result, it is not possible to conclude that female empathy has a strong effect when communicating when viewing "kawaii" images. Under the pair conditions, regarding the viewing of images with a high impression of "kawaii", the comfort level was higher after viewing the images than before viewing the images. When viewing images with a low "kawaii" impression, not only stability but also comfort was improved, and the scores of the experimental participants of the male and female (mixed) pairs were generally higher when compared with other pairs. It was found that communication is effective in creating a positive psychological state for mix-gendered pairs.

Conclusion

If it were simply just in praise of beautiful things and an expression of affection for adorable beings, the word "kawaii" would not have spread around the world. The word "kawaii" has a broad meaning and does not fit into a narrow category, and it is a word with ambiguous language boundaries that can convey various emotions. It's easy to understand each other as long as the word "kawaii" conveys empathy. With the use of SNS, platforms on which one can share emotions, the word "kawaii" is no longer unique to Japan, and the circle of empathy has expanded. The emotional expression "kawaii" derived from an unexpected place, and the variety and range of expressions has expanded. And many people are unconsciously beginning to recognize that the linguistic communication of "kawaii" is connected to psychological pleasure. The utterance of "kawaii" is accompanied by empathy and facilitates interpersonal relationships, resulting in a chain of positive emotions. Communicating with others by looking at specific images and speaking from those perspectives is thought to be effective in clinical psychology, such as in the treatment of depression and dementia. Communication related to "kawaii" image can be deeply related to memory and empathy. In communication with utterances, people perform complex tasks using past memories and the vocabulary and grammar they have learned. Not only that, observing the reaction of the other person and pondering the next utterance while being concerned about communication with others is a task that requires processing a large amount of data in the brain. There is no doubt that the short-term mood will be affected by the activation of the brain by organizing and verbalizing sympathetic feelings for an object by utterance and communicating with others. In the future, it is necessary to study from a broad perspective.

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Contact email: nunoma@ka2.so-net.ne.jp