

**Analysing the Relationship between Personality Traits and Use of Emoji in the
Workplace**

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Declaration

This thesis is entirely my own work and has not been previously submitted to this or any other third level institution.

Signed: _____

Date: _____

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Analysing the Relationship between Personality Traits and Use of Emoji in the Workplace

Abstract

The aim of this study was to investigate the relationship between personality, age and gender and the use of emoji in the workplace. To date, there is a gap in knowledge of how emoji are used in professional communication. The study hypothesised that those who were identified as being extroverted, agreeable and open to new experiences would use emoji more often in the workplace, as would females and younger people. Using the Ten Item Personality Inventory and a questionnaire related to the use of emoji, results from 151 adults indicated a slight correlation between extroversion and use of emoji in the workplace, as well as a stronger correlation between gender and age. Research on use of emoji is still in its infancy and these findings create a foundation for future studies on emoji use in the workplace.

Introduction

Computer mediated communication (CMC) refers to all modes of communication which use a computer as the medium (Derks, Fischer & Bos, 2008). This includes Email, Instant Message (IM) such as Facebook Messenger, Short Message Services (SMS) and Mobile Instant Messages (MIM) such as Whatsapp (Derks et al., 2008). CMC use has increased significantly in recent years, with Whatsapp reporting 1.2 billion active monthly users in January 2017, up from 700 million in January 2015 ('Number of monthly active WhatsApp users', 2017). CMC use has also increased in the workplace, with studies indicating that the rise in use of Social Networking Sites (SNS) correlates with an increase in CMC in workplace settings (Myers & Sadaghiani, 2010). As younger generations enter the workforce, the trend of increased usage of CMC is predicted to continue (Myers & Sadaghiani, 2010).

The present study aims to further understand CMC in the workplace, particularly in relation to the use of emoji, and how personality, age and gender may impact how one communicates through CMC in professional settings.

Literature review

Research on IM usage has identified many reasons for its rise in popularity, including its perceived lighthearted nature and informal means of connecting with friends and family (Church & Oliveira, 2013). SMS is now seen as a more formal means of messaging, while IM and MIM are used more casually among friends and peers (Church & Oliveira, 2013; Hu, Wood, Smith & Westbrooke, 2004). Within the workplace, this sentiment is echoed, with IM considered a less formal means of communicating, when compared to telephone or email (Shachaf, 2008; Cameron & Webster, 2005; Isaacs, Walendowski, Whittaker, Schiano & Kamm, 2002a).

CMC research has largely focused on the absence of nonverbal cues which are present in face to face communication (Derks et al., 2008; Liebman & Gergle, 2016;

Cesario & Higgins, 2008). Nonverbal cues can include body language, hand gestures and facial expressions (Walther, Low & Granka, 2005). Research has suggested that 93% of all face-to-face communication is nonverbal, with only 7% of communication relying on the words used (Burgoon, Guerrero & Floyd, 2010). As such, various methods within CMC have been adopted to help convey nonverbal cues (Wang, Wang, Lai & Huang, 2017). The use of punctuation such as full stops, question marks and exclamation points can utterly change the meaning of a message, adding a sense of enthusiasm, confusion or urgency (Dresner & Herring, 2010).

Emoticons have been adopted as another means of improving CMC communicating in the absence of nonverbal cues (Wang et al, 2017; Dresner & Herring, 2014). It is widely believed that the first emoticon was used in 1982 by scientist Scott Fahlman, to indicate in an online forum if something was a joke or not (Jibril & Abdullah 2013). He used ‘:-)’ as a smiling face to convey something was a joke, and ‘:-(‘ as a frowning face, to indicate the opposite. Emoticons can be described in Western culture as typographic symbols that are put together to appear as sideways faces, (Walther & D’Addario, 2001). While this understanding of emoticons has the most global reach (Dresner & Herring, 2010), other variations exist. In Japan, emoticons are viewed straight on, for example, ‘^_^’ as a neutral face (Katsuno & Yano, 2007).

Various recent studies have focused on the prevalence of emoticons in CMC to convey emotions (Tossell, Kortum, Shepard, Barg-Walkow, & Rahmati, 2012; Walther & D’Addario, 2001; Park, Barash, Fink & Cha, 2013). Tossell et al. (2012) found that males and females have different habits with regards to using emoticons to convey emotions, with females using more emoticons per message and males using a greater variety of emoticons. This present study will investigate if workplace CMC habits differ in terms of gender. Liebman and Gergle (2016) investigated the importance of emoticons in the development of relationships when communicating through CMC. Their research concluded that the more CMC cues used in messages, including emoticons, the higher the perceived affinity between participants. This adds to the research of the aforementioned Walther and D’Addario (2001) who found that emoticons serve as

phatic communication and help build bonds among participants. Given the importance of cues such as emotions in personal CMC, it is important to build the knowledge around the use of such cues in professional CMC. The present study will add to the knowledge gap of emoji use in the workplace.

Another recent study found that the expression of emotions is just one of the reasons people use emoticons, with other motives being functional and strategic (Lee, Hong, Kim, Oh & Lee, 2016). Functional use includes replacing text with emoticons and using emoticons as greetings. Strategic uses include impression management, self-representation and maintenance of social status. (Lee, et al, 2016). CMC communication in the workplace is primarily functional (Isaacs, Kamm, Schiano, Whittaker & Walendowski, 2002b) and impression management in the workplace is important (O'Sullivan, 2002). This present study will add to the knowledge of how nonverbal cues, specifically emoji, are used in the workplace.

In more recent years, emoticons have largely been replaced with emoji, (Pavalanathan & Eisenstein, 2015), small, two-dimensional pictographs (Figure 1). First introduced in Japanese electronic messaging and websites (Lu, Wei, Liu, Li, Wang, Huang & Mei, 2016), emoji have since become a part of the Unicode. The Unicode is an international standard for consistent encoding and representation of text and symbols across most writing systems ("The Unicode Consortium", 2018). As of June 2017, the Unicode includes a total of 2,666 emoji. This figure is rising with every release, with version 10.0 adding a further 56 and version 9.0 before it adding an additional 72 ("Unicode 10.0.0", 2017). Emoji have expanded the capabilities of emoticons in CMC by allowing for a greater range of facial expressions, such as eye rolling and shock (Figure 1.) Emoji are organized into eight categories; smileys and people, animals and nature, food and drink, activities, travel and places, objects, symbols and flags ('Unicode 10.0.0', 2017) (Figure 2). As the design of emoji has expanded to include more than facial expressions, their use has grown beyond that of just conveying emotions. Emoji can play a role in controlling conversation direction, in indicating the continuation or ending of a conversation, as well as encouraging playful behaviour (Kelly & Watts, 2015). As CMC

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evolves as described above and continues to replace face-to-face communication in the workplace, research is needed to understand the role emoji play in workplace communication.



Figure 1 - Example of emoji

Kelly and Watts (2015) investigated how these additional uses of emoji could contribute to the maintenance of bonds among friends. Participants of the study referred to using emoji to keep a conversation alive or to end one pleasantly. Ending conversations with emoji allows for development of personal relationships as it is a mutually accepted way of acknowledging a message without replying with text (Kelly & Watts, 2015). Over time, friends may find a particular emoji that they use most often when speaking to each other. This personalization has been described as responsiveness to the self and can enhance feelings of intimacy and closeness among friends communicating through CMC (Algoe, Haidt & Gable, 2008). This is particularly useful through CMC where communication lacks the social cues of face to face communication, such as facial expressions and open body language (Hampel, 2006). In the workplace, it is possible that colleagues are seeing each other less, due to use of CMC. As emoji can be used to build bonds among friends, it is important to understand how different people use emoji in the workplace, as they may serve a similar purpose.



Figure 2 - Example of emoji categories

Emoji have become commonplace in texting, in social media and even in advertising, and can now be found in almost half of all Instagram posts (Miller, Thebault-Spieker, Chang, Johnson, Terveen & Hecht, 2016). Further to this, in 2015 the Oxford

Dictionary named the 'tears of joy' emoji (Figure 3) as the word of the year, highlighting how ubiquitous the use of emoji has become (Wijeratne, Balasuriya, Sheth, & Doran, 2016). Given the pervasiveness of emoji use, as well as the varied role they play in personal conversations, it is important to further the knowledge on the use of emoji in work related CMC interactions.

In a recent study investigating the use of emoji on various platforms, it was reported that when comparing email, text messages and social media messaging, emoticons and emoji were deemed most unsuitable for Email (Kaye, Wall & Malone, 2017). Given that Email is often used for more formal conversation (Shachaf, 2008; Cameron et al., 2002), it may be the case that emoji are seen as unsuitable for Email due to the business nature of the content. It has been reported that IM is replacing Email in many workplace interactions (Herbsleb et al, 2002). Given that emoji are deemed suitable for IM and IM is replacing other forms of workplace conversation such as Email where emoji are seen as unsuitable, it is increasingly important to understand how emoji are used in the workplace.



Figure 3 - 'Tears of Joy' emoji

Research on communication has also been concerned with the relationship between personality and communication, both face-to-face and CMC. In an offline, face-to-face setting, extroverts use more words and make more orthography mistakes than introverts (Kołodziejczyk & Celuch, 2015). It is possible that the use of more words offline, could translate to a greater use of emoji online. Goby (2006) investigated whether personality impacts choice of online or offline communication modes. Using the Myers-Briggs Type Indicator test (Briggs, 1976), significant differences were found to exist between extroverts and introverts, as well as between feeling and thinking types in their preference to communicate online or offline, with introverts and thinking types preferring CMC to face-to-face communication (Goby, 2006). In slight contrast to this, it

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has since been suggested that in relation to Facebook communication, extraversion is positively related to the use of the online communication features, with extroverts more likely to write public messages to others and to use the online chat function (Ryan, 2011). Several other studies have been conducted on personality traits and their relationship to the use of social media including Facebook, Youtube and blogs (Back, Stopfer, Vazire, Gaddis, Schmukle, Egloff & Gosling, 2010; Counts & Stecher, 2009), all indicating that personality can have a significant bearing on how individuals communicate online. Research so far has focused on personal use of CMC. This study will fill a gap in understanding how personality correlates with professional use of CMC.

Personality has also been found to have an influence on smartphone use, including influencing the use of CMC applications. Using the Ten Item Personality Inventory (TIPI) (Gosling, Rentfrow & Swann, 2003), it was found that the personality traits of extraversion, agreeableness, conscientiousness, emotional stability and openness have a large bearing on the use of CMC (Chittaranjan, Blom, Gatica-Perez, 2011). Introverts were found to use the Internet on their phones less often than extroverts, while the SMS application was used most by those who were identified as being disagreeable. The TIPI includes ten questions to determine the Big Five personality traits (Gosling et al, 2003). The results of this large-scale study suggest that the Big Five personality traits can influence various elements of CMC.

The present study will use the Ten Item Personality Index (Gosling et al., 2006), to investigate if there is a correlation between personality traits and emoji use in the workplace. Based on the research reviewed, it has been suggested that personality can influence one's style of communication, as well as preference of communication channel. With the continued rise in use of IM services such as Whatsapp, and the prevalence of emoji within this, the topic of personality and its influence on emoji use warrants further investigation. Further to this, with the increase in the use of IM in the workplace, there is a gap in the knowledge of how, if at all, personality influences the use of emoji in the workplace.

Research question: Does personality, age and gender influence one's use of emoji in workplace CMC?

Hypothesis 1: Those who score higher on the extroversion scale will be more likely to use more emoji in workplace communication.

Hypothesis 2: Those who score higher on the agreeableness scale will be more likely to use emoji in workplace communication.

Hypothesis 3: Those who score higher on the openness to new experience scale will be more likely to use more emoji in workplace communication.

Hypothesis 4: Younger generations will be more likely to use emoji in workplace communication.

Hypothesis 5: Females will be more likely to use emoji in workplace communication.

Method

Design

A correlational study was designed for this investigation. This study had one dependent and one independent variable, with the dependent variable being personality type and the independent variable being the use of emoji in the workplace. There were also a number of covariates associated with this study; age, gender, occupation and nationality.

Participants

A total of 151 adults participated in the study (n=151). Of the 151 participants, 58 were male and 93 were female. There was an age range of 18 to 58, with a median age of 30 years. The sample was varied, with the only restriction to participation being age, with all participants needing to confirm that they were over eighteen years old before proceeding to take part. Occupation of participants varied, while the majority of participants were Irish nationals (n=124). Participants were recruited using convenience sampling, with an online questionnaire used to collect the data.

Materials

A questionnaire was used to investigate the correlation between personality type and usage of emoji in the workplace. The Ten Item Personality Inventory (TIPI) (Gosling, et al., 2003) was used as the basis of the questionnaire (Appendix A). The TIPI is available online for use in research with no charge. The accompanying reliability scale is also available. This scale has been used in previous, similar research, investigating the correlation between personality and smartphone use (Chittaranjan et al., 2011). To understand participants' use of emoji, five questions pertaining to emoji habits were asked. These included how often emoji are used in personal communication, how often

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they are used in professional communication as well as whether emoji are considered more acceptable in IM or in email (Appendix B). The TIPI scale is measured using a 7-point Likert scale, where 1= strongly disagree and 7= strongly agree. The five emoji-based questions were designed in the same way, in order to maintain consistency.

In addition to the TIPI and the emoji questions, the final element of the questionnaire was demographic questions, including age, gender, occupation and nationality. These factors could all impact the results of the questionnaire, as is documented in previous research (Weiser, 2000; Lu, et al., 2016; Myers & Sadaghiani, 2010).

A Cronbach's Alpha test was carried out, to ensure reliability of a scale was formed from the sum of the five emoji based questions (Appendix C). The Cronbach's Alpha was 0.789, which indicates an acceptable level of reliability.

A pilot study was conducted. The pilot study comprised of five Irish adults, recruited through convenience sampling (n=5). Participants were mixed in gender and age, all had a similar occupation type and all were Irish nationals. Based on feedback from the pilot study, adjustments to the wording of the emoji questions were made, to improve the clarity. The design of the Likert scale was changed to improve readability. The information sheet was also edited to include more context on the aim and background of the study.

Procedure

To collect questionnaire results, the online survey tool 'Survey Monkey' was used. This tool is free to access and use online. A link to the final questionnaire on Survey Monkey was created and shared to online networks, from personal and professional accounts, for convenience sampling. Results were not stored online, but in a password protected Excel file on a password protected Macbook laptop. Only the researcher had access to the data.

In addition to the questionnaire, the Survey Monkey link included the information sheet, the consent form, the questionnaire itself and the debrief form. Before accessing the questionnaire, participants were directed to a consent sheet to confirm, via ticking a box; that they were over eighteen years old, that they were willing to share their data and understood that it would be securely stored in a password protected file, with only the researcher having access, and that they had read the information sheet which explained the background of the study. Once the survey was completed online, the participants were directed to the debrief sheet. The debrief sheet reiterated the purpose of the study, thanked participants and directed them to online support services, should they have felt in any way affected by the content of the study. All surveys were completed remotely on participants' own device.

In total, the survey received 171 responses. Responses which did not fulfil each of the consent items, as well as responses which only answered the consent items and no other questions were deleted from the dataset as they could not be analysed. This left n=151 responses.

The dataset was then coded in Excel, before being transferred to the statistical program SPSS to analyse the survey results. SPSS was used to investigate if a correlation existed between personality type and the use of emoji in the workplace. This program was free to access through the IADT computer lab.

Ethics

This study received ethical approval from the Department of Technology and Psychology Ethics Committee in IADT. While this study does not deal with at risk groups, does not mislead participants or does not cover topics of distress, in case of any risk to participants, the debrief sheet included the details of a support group for any issues the study may have raised.

Results

Hypotheses 1-3 – Personality

Use of emoji was computed as the sum of the emoji questions for n=151 participants (M=24.245, SD=6.52581) (Appendix D).

Scores for the Big Five personality traits of extraversion, agreeableness, conscientiousness, emotional stability and openness to new experiences, were calculated as per the Ten Item Personality Inventory (Gosling et al., 2010) see Table 1.

Table 1 - Statistics for the Big Five Personality Traits

Ten Item Personality Inventory

<u>Trait</u>	<u>Max</u>	<u>Min</u>	<u>Mean</u>	<u>Standard Deviation</u>
Extraversion	3	14	9.8757	3.09395
Agreeableness	5	15	10.3571	2.18336
Conscientiousness	6	14	11.0065	2.20960
Emotional Stability	2	14	10.0779	2.71893
Openness	6	14	11.1039	2.02974

Linear regression was used to explore the relationship between emoji use and the Big Five personality traits. In all five cases the assumption of linearity of residuals, normality of residuals and equal variance of residuals were checked with scatterplot graphs and histograms and found to be met (Appendix E).

The regression model for extraversion was found to be significant, at $p=0.02$. The other personality traits were not found to be significant at $p=0.473$, $p=0.886$, $p=0.189$ and $p=0.073$, in order of the above table.

Hypothesis 4 – Age

To examine the impact of age on emoji use, an ANOVA was performed (Appendix F). Again, the assumption of linearity of residuals, normality of residuals and equal variance of residuals were checked with scatterplot graphs and histograms and found to be met (Appendix G). The dependent variable was emoji use and the independent variable was participants age, where $m=2.15$ and $SD=0.997$. Results show that there is a positive correlation between age and emoji use, $p=0.002$.

Hypothesis 5 – Gender

To examine the impact of gender on use of emoji in the workplace, a two-tailed independent t-test with separate variance was conducted. There was a significant difference in the scores for Male ($M=22.2$, $SD=6.91$) and Female participants ($M=25.5$, $SD=5.95$); $t(108) = -3.066$, $p=0.003$ (Appendix H).

Two-tailed independent t-tests were also carried out on nationality and occupation questions. Given that the majority of participants ($n=124$) were Irish nationals, nationality was examined as 'Irish or Non-Irish'. There was no significant correlation found between nationality and emoji use, where Irish ($M=24.0$, $SD=6.76$) and Non-Irish respondents ($M=25.3$, $SD=5.34$); $t(44) = -1.125$, $p=0.267$ (Appendix I).

Similarly, 72 participants identified their occupation as 'marketing/advertising', while the maximum for any other occupation type was 11 participants. For this reason, occupation was examined as 'Marketing/Advertising' or 'Other Occupations'. There was a statistically significant difference between the two occupation groups, where Marketing /Advertising ($M=25.8$, $SD=5.72$) and Other Occupations ($M=22.8$, $SD=6.98$); $t(147) = 2.808$, $p=0.006$ (Appendix J).

Discussion

The aim of the present study was to investigate if a correlation exists between personality type and the use of emoji in workplace CMC. In addition to personality, this study aimed to further understand the influence that demographics; age and gender, can have on the use of emoji in workplace CMC.

Personality Type

The first three hypotheses aimed to investigate if the personality traits of extraversion, agreeableness and openness to new experiences would be positively associated with a greater likelihood to use emoji in the workplace. These hypotheses have been partially supported. For the personality traits of agreeableness and openness to new experience, there was no correlation found with use of emoji in the workplace. This was an unexpected outcome, given the previous research on these personality traits and CMC use, which found that agreeableness and openness to new experiences had a strong relationship with the use of CMC application such as SMS, internet and phone calls (Chittaranjan et al, 2011).

Those who scored higher on the extroversion scale indicated that they more frequently use emoji in workplace communication than those who scored lower on the extroversion scale. Kołodziejczyk and Celuch (2015) found that extroverts use more words per sentence than introverts, while another recent study suggests that extroverts are more likely to post publicly on Facebook (Ryan, 2011). The present finding, that extroverts are more likely to use emoji in workplace communication than introverts are, further adds to the knowledge of the relationship between extroversion and communication. This could have implications within the workplace on how different personality types communicate and work together. Introverts have been previously shown to choose CMC over other types of offline conversation (Goby, 2006). It is interesting finding that though introverts may use IM more frequently in the workplace, they are less likely to use emoji in those messages.

However, it is important to note that while a correlation was observed between extroversion and emoji use, the r-square value was quite low. R-square value explains the percentage of the response variable variation which is explained by the linear model. With a score of 3.6%, while significant, the relationship between extroversion and emoji use in the workplace requires further investigation. Based on the research to date, the r-square value was expected to be higher. The personality scale or the sample size used may have impacted the results. A more robust and detailed scale may be needed to further understand the relationship between personality type and workplace CMC.

Age

The fourth hypothesis stated that younger generations would be more likely to use emoji in workplace CMC. This hypothesis has been supported by the current study. The beta coefficients suggested an average a 0.218 decrease on the 'Emoji Use' scale for every one year increase in age. This is a statistically significant finding and further adds to the research in this area. Occupation type may have impacted the correlation between age and emoji use. The largest occupation type was Advertising/Marketing. It is possible that this occupation type has a younger workforce, which resulted in a younger sample, as such, having an impact on the results. Previous research has stated that as younger generations continue to enter the workforce, CMC usage will continue to rise (Myers & Sadaghiani, 2010). If this is the case, understanding CMC habits will be of increased importance. If younger people are using more emoji than their older colleagues, this could cause issues to arise when using CMC. Being informed of how different people use CMC and how others may perceive certain cues, could improve workplace communication.

Gender

The fifth hypothesis was concerned with gender and exploring the differences between how males and females use emoji in the workplace. The hypothesis that

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females would use emoji more often in the workplace CMC than males was supported, with a statistically significant difference, $p=0.003$. This supports recent research which stated that while men use a greater variety of emoji, females use more emoji per message (Tossell et al., 2012). This study did not measure the volume of emoji used, but rather measured how often participants use emoji in their workplace communications, and so it further adds to the knowledge of emoji use. Gender balance in the workplace as well as gender balance at senior levels could have impacted the results. It is possible that age and seniority could be related. As such, if there are more senior men than senior women, there are potentially more younger women, meaning female use of emoji could be recorded as higher. This study analysed occupation type, but not levels of seniority within occupation.

Nationality and Occupation

The importance of culture on communication habits was noted in the literature review. While this study factored nationality in the design, nationality was not found to have an impact on the use of emoji. However, the sample was heavily skewed towards the Irish nationals, and as such, is not representative of the entire population. A cultural factor which was not accounted for was the habits of those working for a multinational company, where cultural and communication norms may have been adopted and reflected in emoji use in the workplace. Large corporations which have employees in different countries, speaking different languages can develop a corporate language, to avoid ambiguity of meaning (Feely & Harzing, 2003). This could translate to emoji use also, with habits forming within companies. Emoji may also be used more in companies where many languages are spoken, as they can be easily understood.

In addition to this, a significant difference was noted between Advertising/Marketing and Other Occupations. While this is an interesting finding, the skewing of the sample size towards Advertising/Marketing, means occupation or industry type requires further investigation before a conclusion can be drawn.

Limitations

While this study has supported many of the hypotheses and has garnered interesting insights, there are limitations which need to be considered when assessing the results.

Gosling's Ten Item Personality Inventory (Gosling et al., 2006) is a quick means of identifying the Big Five personality traits. While this scale has been used in many studies and has been deemed statistically valid, it is important to note that the accuracy has been questioned (Hofmans, Kuppens & Allik (2008). In particular, Hofmans et al found that measurement of the trait of openness to new experiences, which was a hypothesis in this study, was difficult using TIPI. For future research, a more comprehensive personality scale could be used to investigate if personality traits impact emoji use.

The sample size was also skewed in two respects; nationality and occupation type. While neither of these were hypotheses in this study, the skewed sample may have impacted the result of personality type and emoji use in the workplace. Due to the convenience sampling used, the sample was skewed towards the Advertising/Marketing industry. Research has shown that personality type can be a predictor for the type of industry a person will chose to work in, with extroverted people often working in jobs where interpersonal factors are important (Lounsbury, Moffitt, Gibson, Drost & Stevens, 2007), such as advertising, sales and management. As such the high number of participants who identified as working in Advertising/Marketing may have impacted the results. As noted above, occupation type may have also impacted the results of age and emoji use in the workplace, as age distribution across all occupation type may not have been even. A larger and more varied sample may have improved the study.

The final limitation of this study is the nature of the questionnaire. Participants may have assessed their use of emoji differently to others with similar habits. As such, as analysis of real workplace CMC conversations may have garnered more robust results.

Future research

Research on emoji use, both for personal and professional communication, is still in its infancy. As such, there are many opportunities for further research.

Within workplace CMC, there is a gap in the knowledge of the types of emoji used and how habits differ to that of personal communication. Previous research has found that there are many uses of emoji in personal conversations, including building bonds and ending conversations pleasantly (Kelly & Watts, 2015; Liebman & Gergle, 2016). Future research could analyse existing workplace CMC conversations and categorize the different types of emoji and the situations in which they are used. This could further explain why females were found to use emoji more often than males, as well as why some industries use them more than others.

While this study investigated how frequently participants use emoji, it did not explore how participants perceive emoji when received. Research has shown that IM is considered as an informal method of communication in the workplace (Shachaf, 2008; Cameron & Webster, 2005; Walendowski, Whittaker et al., 2002). It is possible that emoji are considered in a similar way or could be perceived as unprofessional by some. Future research could investigate the different meanings extracted from emoji use and further add to knowledge of CMC use in the workplace.

Conclusion

The current findings have important theoretical implications, as they both support and add to previous research findings relating to personality type, gender, age and communication habits, (Chittaranjan et al, 2011; Goby, 2006; Ryan 2011; Myers & Sadaghiani, 2010; Tossell et al., 2012) highlighting that extroversion, age and gender have a relationship with emoji use in the workplace. It also adds to the recent research of Kaye et al. (2017) who found that emoji are considered more acceptable in IM than email communication. The findings also offer insight into workplace communication and how emoji are used in various industries, and how this differs based on age and gender. Coupled with the known increase in use of emoji in CMC (Miller et al., 2016), the findings of this study highlight the need for future research and understanding of how emoji use will impact workplace communication and relationships in the workplace.

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Appendix

Appendix A

I see myself as:

1. _____ Extraverted, enthusiastic.
2. _____ Critical, quarrelsome.
3. _____ Dependable, self-disciplined.
4. _____ Anxious, easily upset.
5. _____ Open to new experiences, complex.
6. _____ Reserved, quiet.
7. _____ Sympathetic, warm.
8. _____ Disorganized, careless.
9. _____ Calm, emotionally stable.
10. _____ Conventional, uncreative.

Appendix B

6. I frequently use Emoji in my personal conversations

Disagree strongly	Disagree moderately	Disagree a little	Neither agree or disagree	Agree a little	Agree moderately	Agree strongly
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. I frequently use Emoji in my work related conversations

Disagree strongly	Disagree moderately	Disagree a little	Neither agree or disagree	Agree a little	Agree moderately	Agree strongly
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. In work, I think Emoji are appropriate to use in Email

Disagree strongly	Disagree moderately	Disagree a little	Neither agree or disagree	Agree a little	Agree moderately	Agree strongly
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. In work, I think Emoji are appropriate to use in Instant Messenger

Disagree strongly	Disagree moderately	Disagree a little	Neither agree or disagree	Agree a little	Agree moderately	Agree strongly
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. In work, my use of Emoji depends on the content of the message

Disagree strongly	Disagree moderately	Disagree a little	Neither agree or disagree	Agree a little	Agree moderately	Agree strongly
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Personality and Emoji Use

Appendix C

Case Processing Summary					
		N	%		
Cases	Valid	151	98.1		
	Excluded ^a	3	1.9		
	Total	154	100.0		
a. Listwise deletion based on all variables in the procedure.					
Reliability Statistics					
Cronbach's Alpha	Alpha Based on Standardized Items	N of Items			
0.789	0.791	5			
Item Statistics					
	Mean	Std. Deviation	N		
I frequently use Emoji in my personal conversations	5.68	1.790	151		
I frequently use Emoji in my work related conversations	3.41	1.991	151		
In work, I think Emoji are appropriate to use in Email	3.68	1.834	151		
In work, I think Emoji are appropriate to use in Instant Messenger	5.43	1.573	151		
In work, my use of Emoji depends on the content of the message	6.04	1.645	151		
Inter-Item Correlation Matrix					
	Emoji in my personal conversations	Emoji in my work related conversations	Emoji are appropriate to use in Email	Emoji are appropriate to use in Instant Messenger	Emoji use depends on the content of the message
I frequently use Emoji in my personal conversations	1.000	0.461	0.249	0.331	0.360
I frequently use Emoji in my work related conversations	0.461	1.000	0.518	0.484	0.425
In work, I think Emoji are appropriate to use in Email	0.249	0.518	1.000	0.612	0.404
In work, I think Emoji are appropriate to use in Instant Messenger	0.331	0.484	0.612	1.000	0.465
In work, my use of Emoji depends on the content of the message	0.360	0.425	0.404	0.465	1.000
Item-Total Statistics					
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
I frequently use Emoji in my personal conversations	18.56	30.474	0.451	0.255	0.786
I frequently use Emoji in my work related conversations	20.83	25.739	0.638	0.417	0.725
In work, I think Emoji are appropriate to use in Email	20.56	27.834	0.588	0.447	0.742
In work, I think Emoji are appropriate to use in Instant Messenger	18.81	29.285	0.636	0.455	0.731
In work, my use of Emoji depends on the content of the message	18.21	30.138	0.540	0.298	0.758
Scale Statistics					
	Mean	Variance	Std. Deviation	N of Items	
	24.25	42.586	6.526	5	

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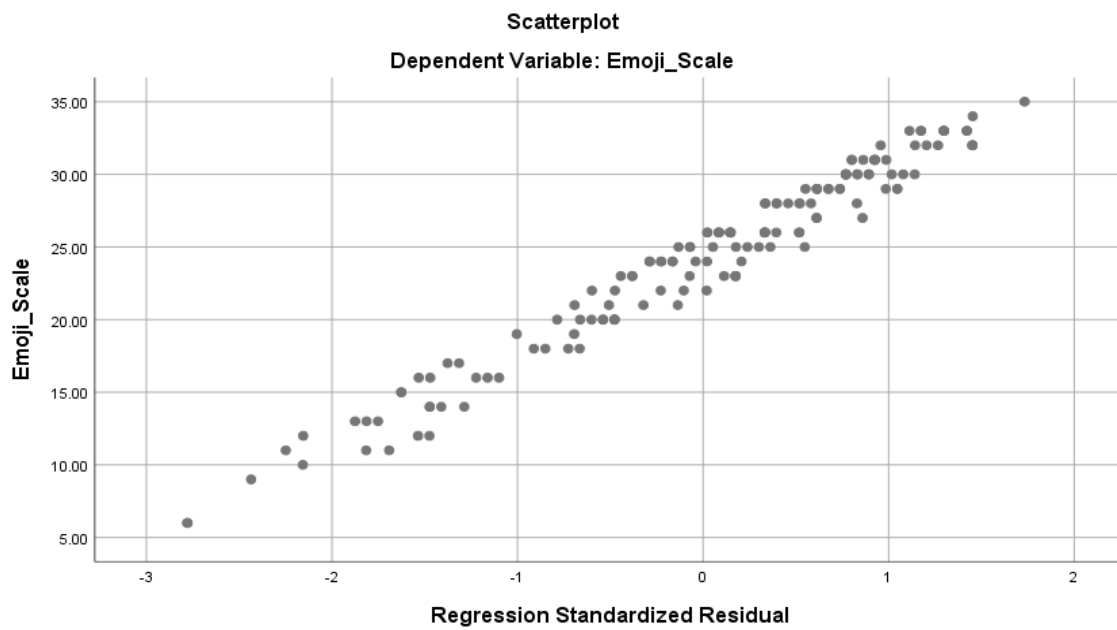
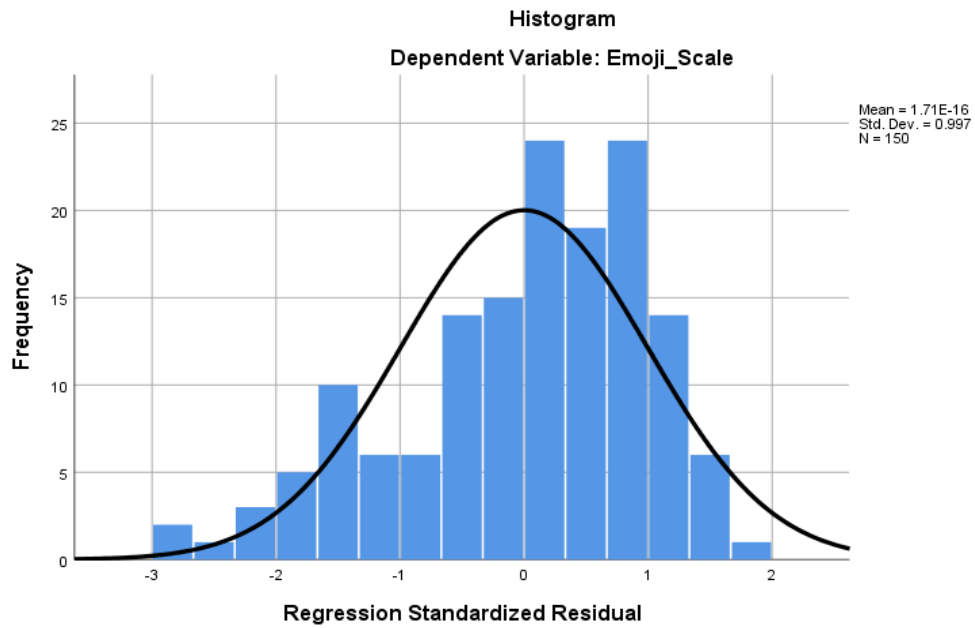
Appendix D

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Emoji_Scale	151	6.00	35.00	24.2450	6.52581
Valid N (listwise)	151				

Frequencies					
Statistics					
Emoji_Scale					
N	Valid	151			
	Missing	3			
Emoji_Scale					
	Frequency	Percent	Valid Percent	Cumulative Percent	
Valid	6.00	2	1.3	1.3	1.3
	9.00	1	0.6	0.7	2.0
	10.00	1	0.6	0.7	2.6
	11.00	3	1.9	2.0	4.6
	12.00	3	1.9	2.0	6.6
	13.00	3	1.9	2.0	8.6
	14.00	4	2.6	2.6	11.3
	15.00	2	1.3	1.3	12.6
	16.00	5	3.2	3.3	15.9
	17.00	2	1.3	1.3	17.2
	18.00	4	2.6	2.6	19.9
	19.00	2	1.3	1.3	21.2
	20.00	8	5.2	5.3	26.5
	21.00	4	2.6	2.6	29.1
	22.00	5	3.2	3.3	32.5
	23.00	8	5.2	5.3	37.7
	24.00	9	5.8	6.0	43.7
	25.00	9	5.8	6.0	49.7
	26.00	16	10.4	10.6	60.3
	27.00	3	1.9	2.0	62.3
	28.00	9	5.8	6.0	68.2
	29.00	11	7.1	7.3	75.5
	30.00	12	7.8	7.9	83.4
	31.00	8	5.2	5.3	88.7
	32.00	7	4.5	4.6	93.4
	33.00	8	5.2	5.3	98.7
	34.00	1	0.6	0.7	99.3
	35.00	1	0.6	0.7	100.0
	Total	151	98.1	100.0	
Missing	99999.00	3	1.9		
Total		154	100.0		

Appendix E

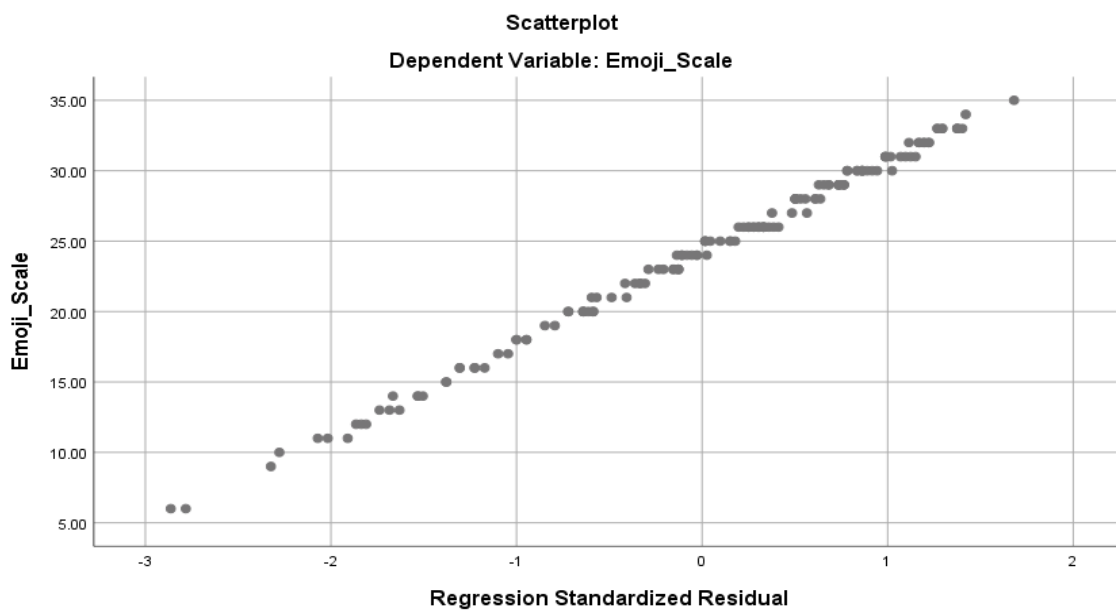
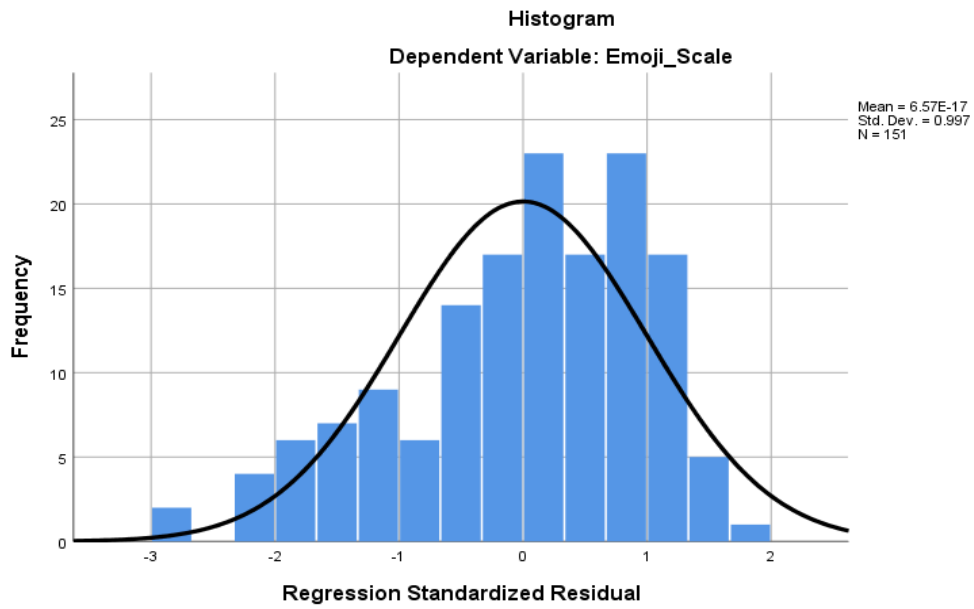
Variables Entered/Removed ^a						
Model	Variables Entered	Variables Removed	Method			
1	Extra ^b		Enter			
a. Dependent Variable: Emoji_Scale						
b. All requested variables entered.						
Model Summary ^b						
Model	R	R Square	Adjusted R Square	Error of the Estimate		
1	.189 ^a	0.036	0.029	6.42797		
a. Predictors: (Constant), Extra						
b. Dependent Variable: Emoji_Scale						
ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	226.813	1	226.813	5.489	.020 ^b
	Residual	6115.187	148	41.319		
	Total	6342.000	149			
a. Dependent Variable: Emoji_Scale						
b. Predictors: (Constant), Extra						
Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coeff	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	20.286	1.751		11.585	0.000
	Extra	0.397	0.170	0.189	2.343	0.020
a. Dependent Variable: Emoji_Scale						
Residuals Statistics ^a						
	Minimum	Maximum	Mean	Std. Deviation	N	
Predicted Value	21.4785	25.8509	24.2000	1.23379	150	
Residual	-17.86345	11.13655	0.00000	6.40637	150	
Std. Predicted Change	-2.206	1.338	0.000	1.000	150	
Std. Residual Change	-2.779	1.733	0.000	0.997	150	



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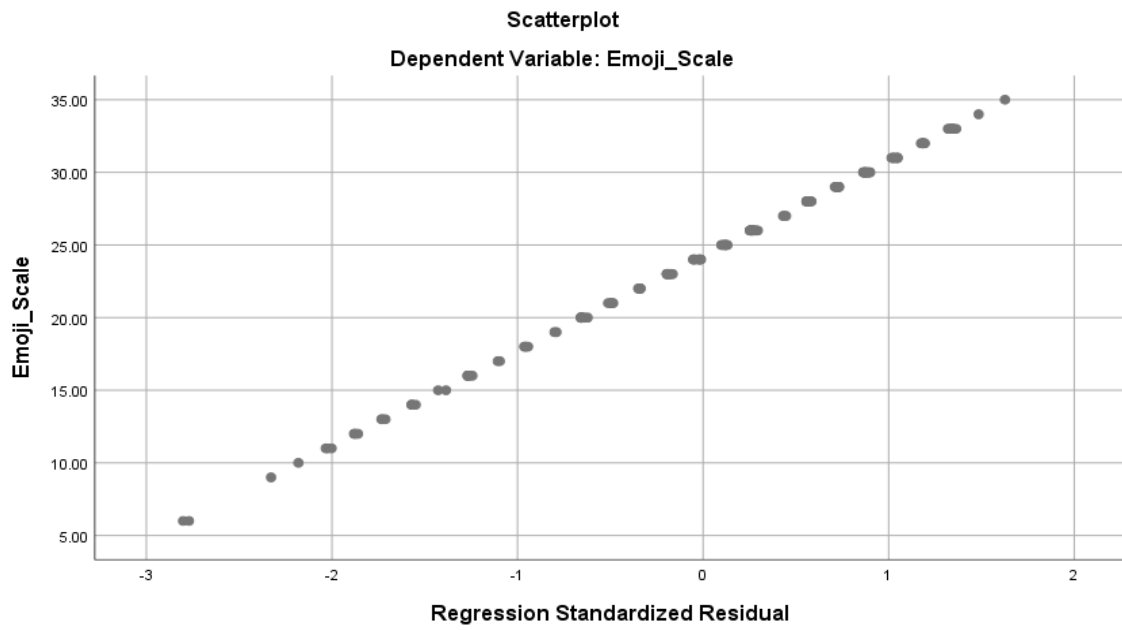
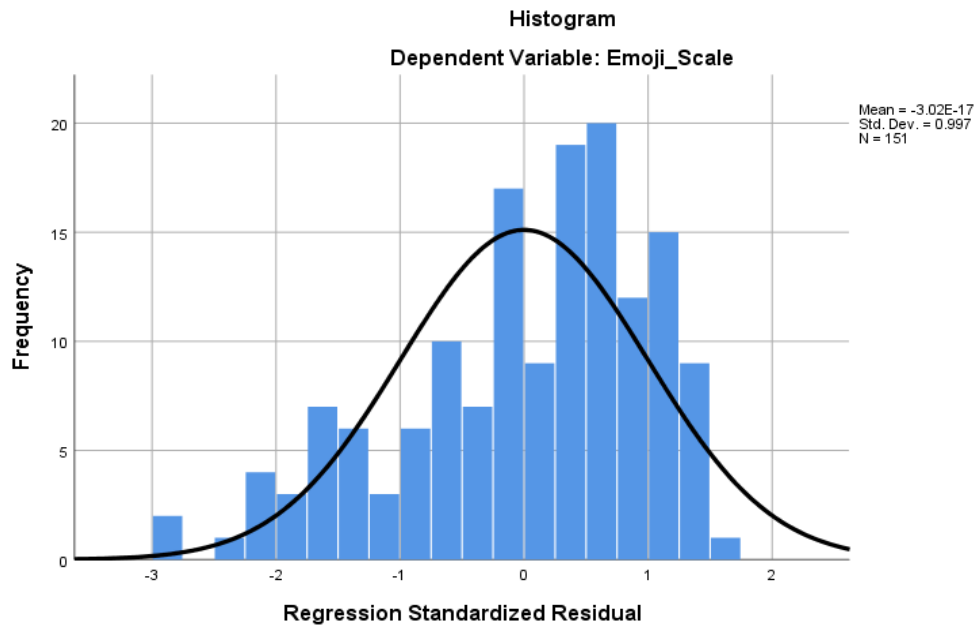
Variables Entered/Removed ^a						
Model	Variables Entered	Variables Removed	Method			
1	Agree ^b		Enter			
a. Dependent Variable: Emoji_Scale						
b. All requested variables entered.						
Model Summary ^b						
Model	R	R Square	Adjusted R Square	Error of the Estimate		
1	.059 ^a	0.003	-0.003	6.53634		
a. Predictors: (Constant), Agree						
b. Dependent Variable: Emoji_Scale						
ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	22.102	1	22.102	0.517	.473 ^b
	Residual	6365.832	149	42.724		
	Total	6387.934	150			
a. Dependent Variable: Emoji_Scale						
b. Predictors: (Constant), Agree						
Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coeff	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	22.429	2.580		8.693	0.000
	Agree	0.176	0.244	0.059	0.719	0.473
a. Dependent Variable: Emoji_Scale						
Residuals Statistics ^a						
	Minimum	Maximum	Mean	Std. Deviation	N	
Predicted Value	23.3080	24.8899	24.2450	0.38386	151	
Residual	-18.71412	10.98893	0.00000	6.51451	151	
Std. Predicted Change	-2.441	1.680	0.000	1.000	151	
Std. Residual	-2.863	1.681	0.000	0.997	151	



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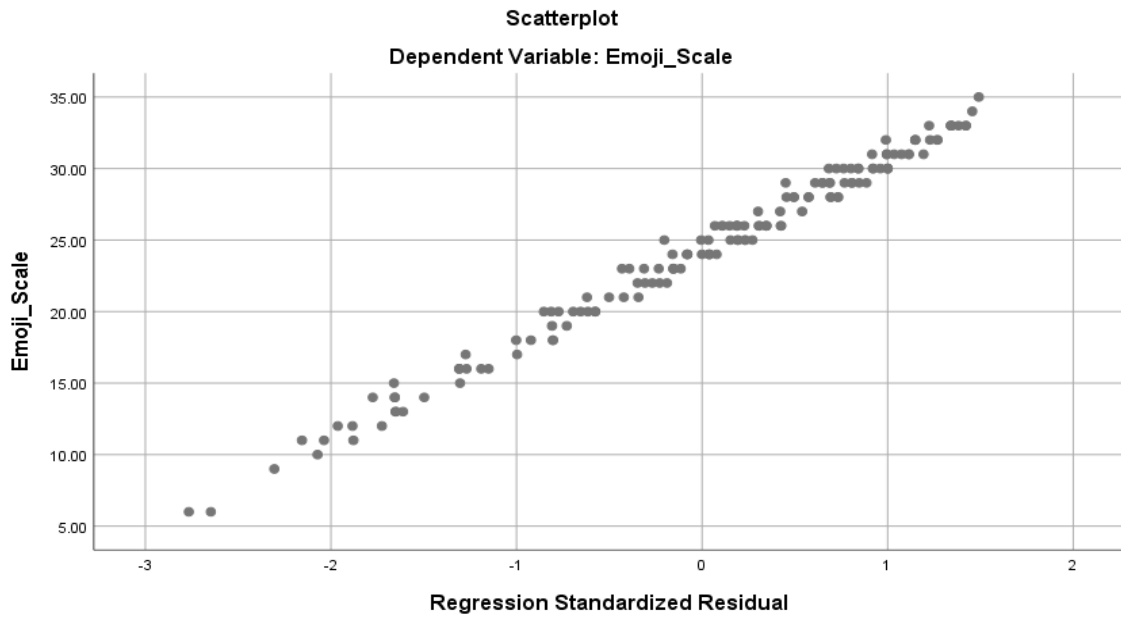
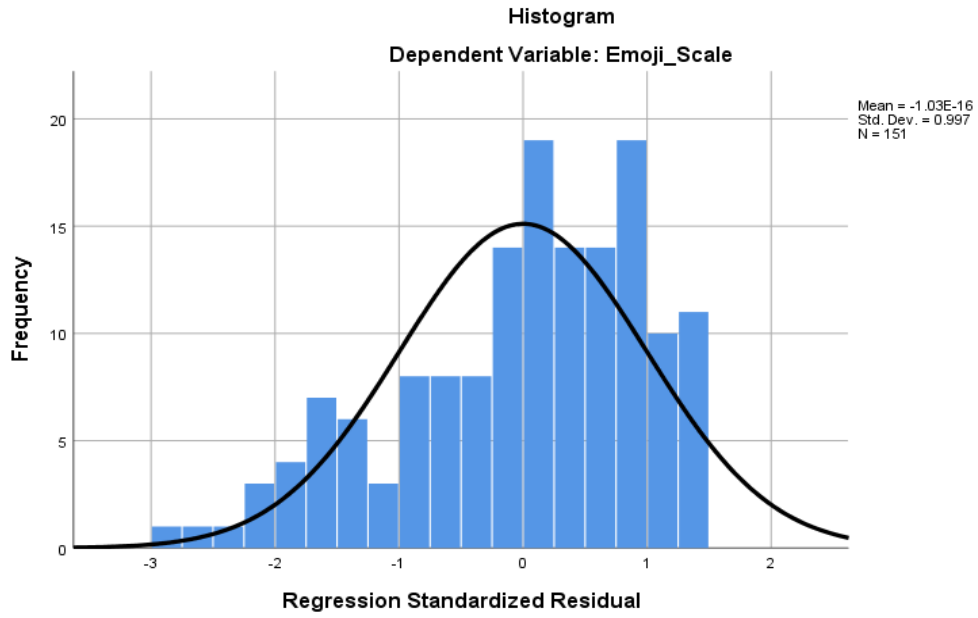
Variables Entered/Removed ^a						
Model	Variables Entered	Variables Removed	Method			
1	Con ^b		Enter			
a. Dependent Variable: Emoji_Scale						
b. All requested variables entered.						
Model Summary ^b						
Model	R	R Square	Adjusted R Square	Error of the Estimate		
1	.012 ^a	0.000	-0.007	6.54722		
a. Predictors: (Constant), Con						
b. Dependent Variable: Emoji_Scale						
ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	0.890	1	0.890	0.021	.886 ^b
	Residual	6387.043	149	42.866		
	Total	6387.934	150			
a. Dependent Variable: Emoji_Scale						
b. Predictors: (Constant), Con						
Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coeff	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	23.865	2.693		8.860	0.000
	Con	0.035	0.240	0.012	0.144	0.886
a. Dependent Variable: Emoji_Scale						
Residuals Statistics ^a						
	Minimum	Maximum	Mean	Std. Deviation	N	
Predicted Value	24.0720	24.3485	24.2450	0.07704	151	
Residual	-18.34852	10.65148	0.00000	6.52536	151	
Std. Predicted	-2.247	1.343	0.000	1.000	151	
Std. Residual	-2.802	1.627	0.000	0.997	151	
a. Dependent Variable: Emoji_Scale						



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Personality and Emoji Use

Variables Entered/Removed ^a						
Model	Variables Entered	Variables Removed	Method			
1	Emo ^b		Enter			
a. Dependent Variable: Emoji_Scale						
b. All requested variables entered.						
Model Summary ^b						
Model	R	R Square	Adjusted R Square	Error of the Estimate		
1	.108 ^a	0.012	0.005	6.50969		
a. Predictors: (Constant), Emo						
b. Dependent Variable: Emoji_Scale						
ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	73.902	1	73.902	1.744	.189 ^b
	Residual	6314.031	149	42.376		
	Total	6387.934	150			
a. Dependent Variable: Emoji_Scale						
b. Predictors: (Constant), Emo						
Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coeff	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	26.842	2.036		13.182	0.000
	Emo	-0.258	0.195	-0.108	-1.321	0.189
a. Dependent Variable: Emoji_Scale						
Residuals Statistics ^a						
	Minimum	Maximum	Mean	Std. Deviation	N	
Predicted Value	23.2327	26.3260	24.2450	0.70191	151	
Residual	-18.00604	9.70509	0.00000	6.48795	151	
Std. Predicted Change	-1.442	2.965	0.000	1.000	151	
Std. Residual Change	-2.766	1.491	0.000	0.997	151	



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Personality and Emoji Use

Variables Entered/Removed ^a			
Model	Variables Entered	Variables Removed	Method
1	Open ^b		Enter

a. Dependent Variable: Emoji_Scale
b. All requested variables entered.

Model Summary ^b				
Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	.146 ^a	0.021	0.015	6.47730

a. Predictors: (Constant), Open
b. Dependent Variable: Emoji_Scale

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	136.583	1	136.583	3.255	.073 ^b
	Residual	6251.351	149	41.955		
	Total	6387.934	150			

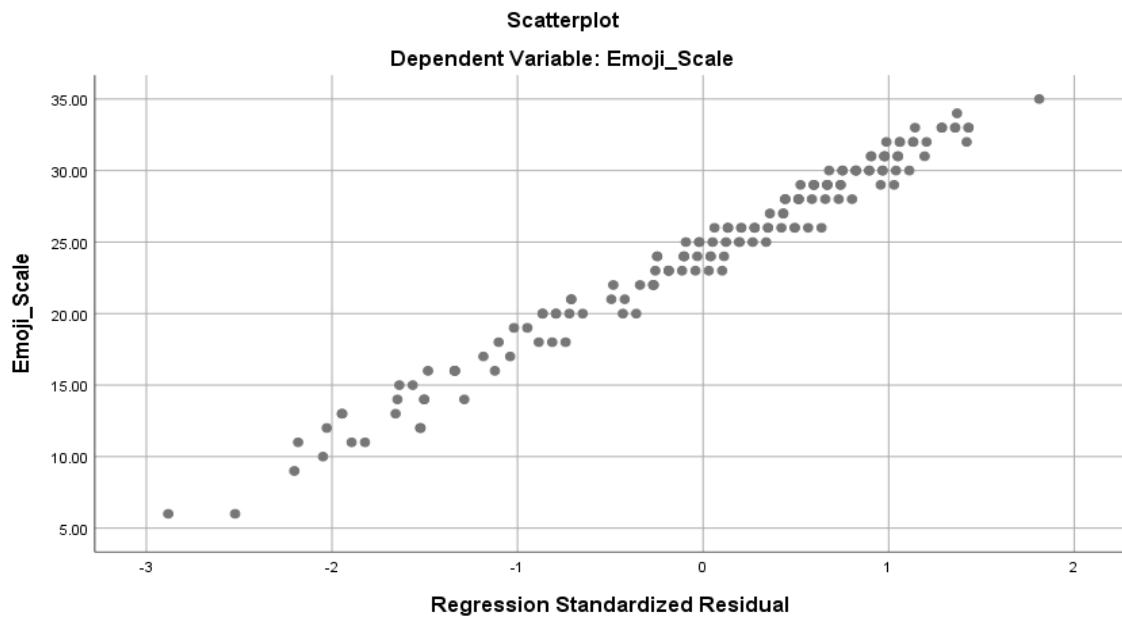
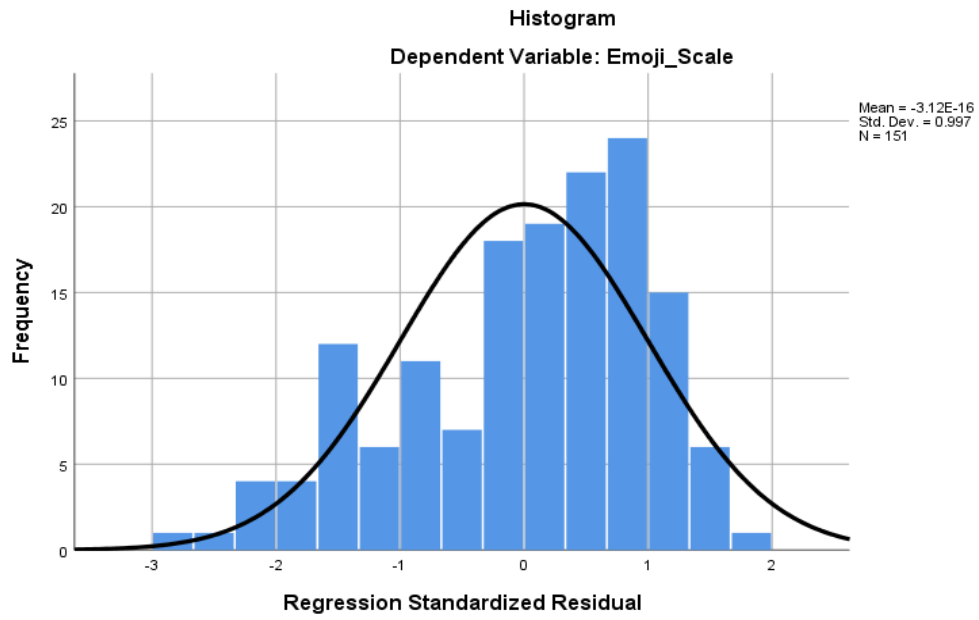
a. Dependent Variable: Emoji_Scale
b. Predictors: (Constant), Open

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coeff	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19.067	2.918		6.534	0.000
	Open	0.467	0.259	0.146	1.804	0.073

a. Dependent Variable: Emoji_Scale

Residuals Statistics ^a					
	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	21.8675	25.6023	24.2450	0.95423	151
Residual	-18.66859	11.73193	0.00000	6.45567	151
Std. Predicted Change	-2.492	1.422	0.000	1.000	151
Std. Residual Change	-2.882	1.811	0.000	0.997	151

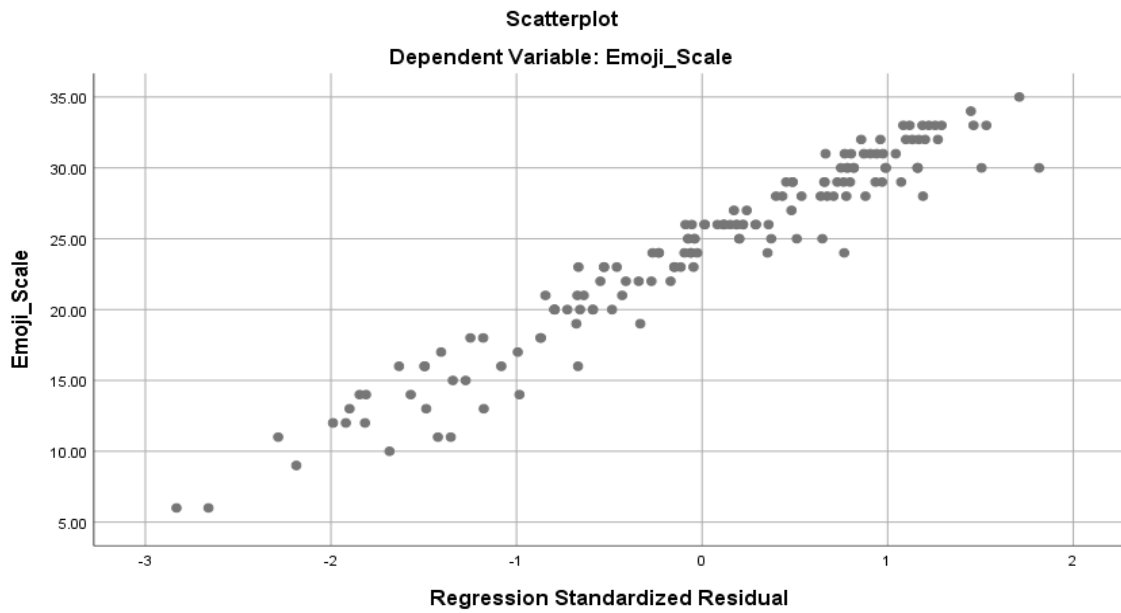
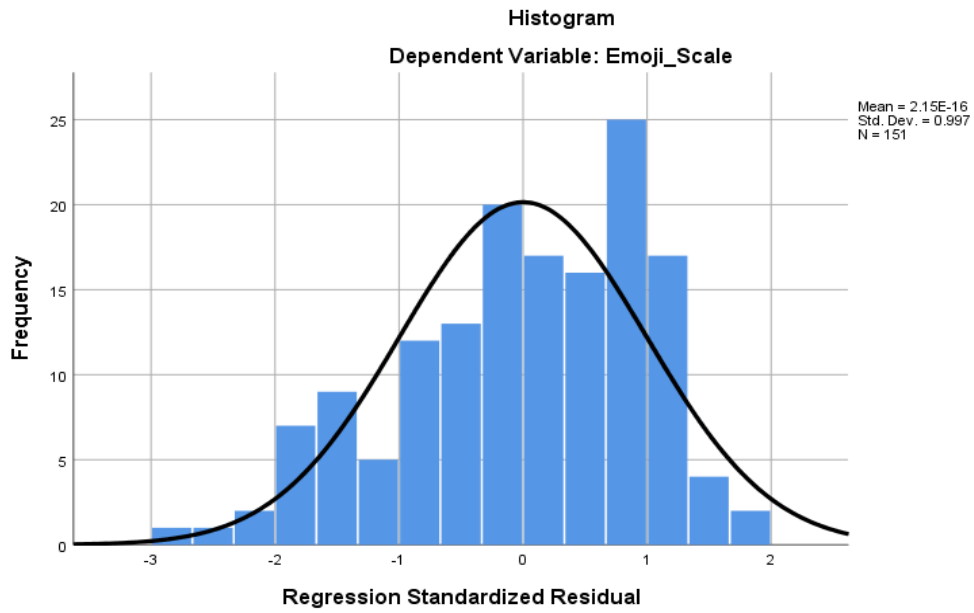
a. Dependent Variable: Emoji_Scale



Appendix F

Variables Entered/Removed ^a						
Model	Variables Entered	Variables Removed	Method			
1	What is your age? ^b		Enter			
a. Dependent Variable: Emoji_Scale						
b. All requested variables entered.						
Model Summary ^b						
Model	R	R Square	Adjusted R Square	Error of the Estimate		
1	.251 ^a	0.063	0.057	6.33729		
a. Predictors: (Constant), What is your age?						
b. Dependent Variable: Emoji_Scale						
ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	403.899	1	403.899	10.057	.002 ^b
	Residual	5984.035	149	40.161		
	Total	6387.934	150			
a. Dependent Variable: Emoji_Scale						
b. Predictors: (Constant), What is your age?						
Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coeff	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	31.150	2.238		13.921	0.000
	What is your	-0.218	0.069	-0.251	-3.171	0.002
a. Dependent Variable: Emoji_Scale						
Residuals Statistics ^a						
	Minimum	Maximum	Mean	Std. Deviation	N	
Predicted Value	18.4929	27.2223	24.2450	1.64093	151	
Residual	-17.94876	11.50708	0.00000	6.31614	151	
Std. Predicted	-3.505	1.814	0.000	1.000	151	
Std. Residual	-2.832	1.816	0.000	0.997	151	
a. Dependent Variable: Emoji_Scale						

Appendix G



Appendix H

Group Statistics				
What is your gender?	N	Mean	Std. Deviation	Std. Error Mean
Emojl_Scale Male	58	22.1724	6.91080	0.90743
Female	93	25.5376	5.95373	0.61737

Independent Samples Test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Error Difference	Confidence Interval of the Difference	
									Lower	Upper
Emojl_Scale	Equal variances assumed	2.946	0.088	-3.174	149	0.002	-3.36522	1.06026	-5.46031	-1.27013
	Equal variances not assumed			-3.066	107.686	0.003	-3.36522	1.09754	-5.54080	-1.18964

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Personality and Emoji Use

Appendix I

Group Statistics				
Irish	N	Mean	Std. Deviation	Std. Error Mean
Emojl_Scale Yes	124	23.9839	6.75950	0.60702
No	26	25.3462	5.34372	1.04799

Independent Samples Test										
		Levene's Test for Equality of Var		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Error Differenc	Confidence Interval of the Di	
									Lower	Upper
Emojl_Scale	Equal varian	0.899	0.345	-0.965	148	0.336	-1.36228	1.41108	-4.15075	1.42618
	Equal variances not assumed			-1.125	43.592	0.267	-1.36228	1.21110	-3.80374	1.07917

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Personality and Emoji Use

Appendix J

T-Test - Occupation (Marketing / Advertising vs. Others)										
Group Statistics										
Marketing		N	Mean	Std. Deviation	Std. Error Mean					
Emoji_Scale	Marketing / A	70	25.7714	5.71845	0.68348					
	Other occup	79	22.8481	6.97999	0.78531					
Independent Samples Test										
		Levene's Test for Equality of Var		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Error Difference	Confidence Interval of the Difference	
									Lower	Upper
Emoji_Scale	Equal variances assumed	4.162	0.043	2.775	147	0.006	2.92333	1.05362	0.84113	5.00552
	Equal variances not assumed			2.808	146.136	0.006	2.92333	1.04109	0.86579	4.98086