International Journal of Linguistics, Literature and Translation

ISSN: 2617-0299 (Online); ISSN: 2708-0099 (Print)

DOI: 10.32996/ijllt

Journal Homepage: www.al-kindipublisher.com/index.php/ijllt



| RESEARCH ARTICLE

Are You Emojically a Mom? Age, Social Role, and Emojis in Saudi Mother-daughter WhatsApp Groups

Najah Ali Al-Jahdali

Assistant Professor of Cognitive Semantics at the Department of Modern Languages and Literatures, King Abdulaziz University (KAU), Jeddah, Kingdom of Saudi Arabia

Corresponding Author: Najah Ali Al-Jahdali, E-mail: naljahdali@kau.edu.sa

ABSTRACT

This descriptive linguistic study aims to check the effect of age (old/young) and social role (mother/daughter) on the kind of emojis and their intended meanings that Saudi mothers use while chatting with their daughters. The data has been collected from twenty Saudi mother-daughter WhatsApp groups' chat interactions. The study is qualitative in its approach and has used computer-mediated discourse analysis (CMDA) of 'coding and counting' (Herring 2004) on (58 screenshots) and has revealed (42 emoji types) of Saudi mothers used in different frequencies. A combination of multi-choice and open-ended questionnaires has been tailor-made to arrive at the subjective perspectives of ninety Saudi young females. The findings show that there are variations in the kind of emojis used and their intended meanings, signaling the two generations and social roles apart. The results signaled (7 Saudi mom emoji types) that are never used by Saudi young females at all. These emojis were found to be age-specific and social role specific. The rest of the emojis (35 emoji types) were found to be used by both groups but with differences in usage and intended meanings, marking again the differences in age and social role. Despite variations of emojis and their meanings, there were many factors that helped youngsters to understand the intended meanings of their mother's emojis: the accompanying text, frequent chatting with their mothers, and the literal representation of the emojis their mothers used. Even though accommodation is the process Saudi young females developed in order to understand their mother's emojis and their intended meanings, there were minor misunderstandings found. The reason has been attributed to what has been termed in this study as the 'emoji gap' that marks the effect of age and social role (Evans 2015, 2017; White 2017; Marko 2022). Saudi mother-daughter WhatsApp conversations revealed that they are approximate to the structure of face-to-face conversation in relation to their back-and-forth quasi-synchronous messages, topics discussed, the informal style, the intimate relation, and the Saudi dialects used accompanied with related emojis that agree with the content of the digital texts. In this study, emojis are proved to be a visual language that mirrors its users in relation to their age and social role in digital text.

KEYWORDS

Age, emoji, social role, instant messages, mother-daughter, WhatsApp group, computer-mediated communication, Saudi culture, digital text

| ARTICLE INFORMATION

ACCEPTED: 01 September 2023 **PUBLISHED:** 10 September 2023 **DOI:** 10.32996/ijllt.2023.6.9.2

1. Introduction

In every society, mothers are an essential part of their family. Their social role as caregivers requires them to have many parental responsibilities towards their children. These include providing love, taking care of their health, raising them with good social manners, preparing their meals, monitoring their educational progress, etc. Most of these responsibilities are usually carried out through physical daily face-to-face communication between the mother and her children. They are continuous and synchronous types of communication (Seemiller & Grace 2019). With the advancement of technology, communication has taken another form, which has become highly virtual and asynchronous. Computer-mediated communication (CMC) platforms such as WhatsApp,

Copyright: © 2023 the Author(s). This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC-BY) 4.0 license (https://creativecommons.org/licenses/by/4.0/). Published by Al-Kindi Centre for Research and Development, London, United Kingdom.

Snapchat, Twitter, TikTok, etc., are the new communication platforms that are used worldwide by all age groups, including parents and their children. In a study on the impact of social media on social connections among the members of Saudi families, Alolyan (2015) found that Saudi families spend long hours on social media, and that is one of the reasons why household communication has been transferred online. Saudi family members, despite their age difference, use devices such as iPads, smartphones, laptops, etc., to 'communicate' with each other even if they are in the same house. This kind of online communication is carried out by texting, using emojis, memes, stickers, sending pictures, videos, voice notes, etc. Youngsters are found to be more professional and faster in typing and using emojis than elders since they are the 'generation of the internet' (AlAjmi 2014). With this speedy technological progression, parents are trying their best to equalize themselves with the generation of their young children. They are trying to speak the language that their children use online, which includes emojis, as claimed by Elizabeth Plank. Emojis, as graphic symbols, represent different facial expressions, emotions, plants, animals, body gestures, body parts, and objects (Rodrigues et al. 2017). This makes it easy for different users of different age categories to choose from this vast variety available according to the meaning they intend to send. In her magazine article, Bennett (2015) refers to emojis used by mothers as emonji. She defines emomji as "the adorable adoption of emojis by mothers and sometimes dads too". This peculiar preference for certain emojis by mothers made it possible to distinguish them at least from their children's preferences. Benette mentioned some reasons why mothers prefer to use certain emojis with their children: to avoid public embarrassment for their children so they can lavish them with endless virtual kisses, to get in touch with their busy children to answer them back, to ornament their texts with symbolic affections, and to show extreme emotions. Benette also refers to emomii hiccups that are related to a generation gap in understanding the meaning behind emojis used. She provided an example of a list of successive emojis ($\stackrel{\text{def}}{=}$ * \(\begin{align*}{l} \begin{align*}{l} \begin{align*}{l} \left(\begin{align*}{l} \left(\begin{align*}{l} \begin{align*}{l} \left(\begin{align*}{l} \begin{align*}{l} \left(\begin{align*}{l} \begin{align*}{l} \begin{align*}{l} \left(\begin{align*}{l} within a text of 'Happy birthday'. As she stated, a young user would interpret this to express excitement; however, a mother would take it literally to denote "her child is praying for a poodle".2 This apparently shows that there exists some kind of difference between the use and interpretation of emoji in relation to two variables: age (old/young) and social role (mother/daughter). Kelly (2015) also mentions that youngsters are referring to their mother's use of emojis as mom emojis. She mentioned a case where her son uses the same emoji she uses but conveys a different meaning other than that used by her. This study will be confined to the kind and intended meanings of emojis Saudi mothers use with their daughters in twenty mother-daughter WhatsApp groups' instant messages. The choice of WhatsApp specifically is because it has been the preferred platform by Saudis in daily communication, and Saudis have been ranked 14 globally in using it (Albawardi 2018). It is an online platform that gives its users the opportunity to 'communicate' with each other through the instant messaging service of texting, voice messaging, sending pictures and videos, using emojis, memes, and stickers. Since emojis are widely used as a tool of digital written communication, this study will focus on emojis Saudi mothers use and their intended meanings in three main aspects: First, the study aims at describing the kind of emojis those mothers use and whether they are used, never used, or used with different meanings by Saudi young females. Secondly, it will look at their intended meanings and check whether those youngsters understand or misunderstand their intended meanings. The two aspects are for the purpose of testing if the age gap (old/young) and social role difference (mother/daughter) are the result of any probable differences. As a result, the study will refer to all the emojis used by Saudi mothers that are never used by their young daughters as Saudi mom emojis peculiar to this study.³ The third aspect aims at finding the kind of topics discussed among those mothers and their daughters, their relation with each other, the variety used, the style used, and whether their online communication approximates the systematic conversation of everyday face-to-face situations that are accompanied by the emojis used and their meanings in the digital text.

2. Significance of the study

To the best of the researcher's knowledge, emojis used by mothers in mother-daughter WhatsApp groups have not been studied in any branch of linguistics in any language, let alone Saudi Arabic CMC. This study will contribute to the literature on CMC in relation to the influence of age (old/young) and social role (mother-daughter) on emoji use and their intended meanings in digital text.

3. Hypotheses

- 1. Saudi mother-daughter WhatsApp groups' interactions consist of mom emojis that mark them as 'moms'.
- 2. Saudi Mom emojis are age-specific (40+) and social role specific (mother) that are never used by their young daughters. Hence, those youngsters understand their intended meanings through the accompanied text only but will never use them in the same sense used by their mothers.
- 3. Saudi mother-daughter WhatsApp groups' interactions display an approximation of everyday face-to-face conversations in regards to their systematic conversational structure, the topics discussed, the intimate relation among its members, the variety used, and the informal style along with the emojis used and their meanings.

¹ https://www.washingtonpost.com/sf/opinions/2015/02/12/why-moms-love-emoji/

² https://www.washingtonpost.com/sf/opinions/2015/02/12/why-moms-love-emoji/

³ It is to be noted that there might be other emojis that were not collected in this study due to the limited number of WhatsApp groups and the collected data

4. Literature review

Due to the lack of nonverbal cues in CMC, emojis have been introduced to mimic such cues as they happen in face-to-face communication (Gawne & McCulloch, 2019). The young generation were the first to use them since they are regarded as fast learners and are more updated in technology. Adults had to learn these emojis later in their lives to catch up with the advancement of technology. Even though this attempt to disambiguate the nonverbal cues in CMC discourse has been made, there many reasons for variations of the use and interpretation of emojis. Examples are the absence of nonverbal cues (Riordan 2017a; Miller et al. 2016; Miller et al. 2017; Alshengeeti 2016), culture (Sampietro et al. 2022; Miller et al 2017; Tigwell et al. 2016), gender (Marko 2022; Jones et al. 2020; Chen et al. 2018; An et al. 2018; Prada et al. 2018; Al Rashdi 2018), different countries (Barbieri 2016), different interpersonal relationships (Gasper et al. 2015; 2016), different social online platforms (Chen et al. 2018; Kazmi et al. 2019; Marko 2022), etc. As this study focuses on age (old/young) and social role (mother/daughter) as factors contributing to differences of emoji use and their associated meanings, a brief literature review will be presented on both variables. As stated by Evans (2017), there are more than six billion emojis sent online daily. Despite their graphical system, emojis are not seen as a "universal language" (Herring and Dainas 2020). In their study on the interpretation of emoji functions in regards to age and gender, (Herring and Dainas 2020) found that there is no significant difference between the two genders. However, age-related differences were detected in the interpretation of the emoji used. Older people tend to interpret emojis literally while the younger generation tends to interpret them in abstract or conventionalized ways. Evans (2015) found that 54% of old British people over the age of 40 find it difficult to understand some emojis. In the contrary, he found that young British users prefer to express their emotions using emojis. He further claims that there are the older and younger generations who understand emojis in a totally different way. White (2017) justifies that it is because those youngsters spent most of their lives using emojis, and emojis became a part of their language. Studies such as (Phillips et al. 2015; Gallud et al. 2018; Garcia et al. 2022) claim there is no noteworthy difference between the young and old generations in the use of emojis; however, older people experience confusion in interpreting their meanings. In addition, they found that older people were found to use a rather small portion of emojis compared to youngsters. Marko (2022) found that emoji use marked a difference in relation to age. The Red heart emoji () was the mostly used by old people while the Camera with flash emoji (im) was the mostly used by youngsters. In addition, she found out that different heart emojis in her data are used more by females than males and are correlated with age. She justified her results which contradict (Chen et al. 2018) to differences between the two social platforms analysed (Googly Play and Instagram). Studying young generation (children, adolescents, and young adults) in different social platforms, Zilka (2021) found that those youngsters use a great variety of emojis. The explanation behind that is that they feel a strong connection between their emotions and emojis. Despite all the previously mentioned studies, findings of previous research on the correlation between age and the use of emojis are diverse. An et al. (2018), analysing emoji use in WeChat messages, found that people in the age range of (26-35) had the lowest rate of emoji use. They claimed that the reason behind that is the seriousness of messages than the other age groups. In their findings, they found that older people used more positive emojis, such as Thumbs Up (he), while younger people used emojis that expressed complex feelings, such as Facepalming emoji (🙎). In addition, they found that it is because of the relationship selected younger and elder people showed different sentiment levels toward the same emojis. In a psychological study made by Gross et al. (1997), it has been found that old generation have more control over their emotions and less negative emotional experiences compared to the young generation. This might explain why the old generation interpret messages more positively than the young generation (Tadic et al. 2015). Weird magazine has found that there is a "generational divide" in emoji use and that the younger generation understood and used emojis in a completely different way than older people.⁴ Shepherd (2021) lists a number of emojis that are considered old-age related and old fashion by youngsters. These are Thumbs up (👍), Red Heart (🧡), OK hand (💍), Check mark (), Pile of Poo (🚳), Loudly crying face (🔞), See-No-Evil (🙉), Clapping hands (🍎), Kiss mark (💋), Grimacing face (😩). 24% Zoomers consider Thumbs up emoji (har old-fashioned and cringeworthy", while 14% consider the Check mark () as "seriously uncool". 5 Even though these are subjective opinions and are non-linguistically studied, they are important to be considered in this study. As for the social role of the user, the social role is related to the role a person plays according to their social status in their society. It includes all the behaviours and characteristics expected from similar people in the same social role. Examples are a parent, a student, a teacher, a spouse, a daughter, etc. It is to the best of the researcher's knowledge; there are no studies done on the effect of the social role of a mother in the kind of emojis used and their intended meanings in the digital text. Even though the literature available is non-academic, it is of great benefit to present here. A study made on Tumblr by Idibon, a company that is interested in studying digital language, found out that mothers use plenty of emojis but prefer a few kinds among others. These are the (*) (*) (*) and (*) emojis. These emojis were found to have meanings those mothers understood and expressed in their own way, such as the Weary face emoji (a) that shows that "it's not easy being a mom." In a corpus linguistic data collection site that focused on collecting emojis related to mothers from Tumblr motherhood related blogs, the site dating back to 2015 referred to the emojis found as eMomji. Unfortunately, the site is not updated since 2015 and consequently the data is considered as old. The data used by mothers are: Heart eyes (😇), Two hearts (💞), Face with tears of joy (😂), Face with blush (🤭), Laughter

⁴ https://slate.com/technology/2016/08/how-do-olds-use-emoji.html

⁵ https://www.ladbible.com/news/uk-anyone-using-these-emojis-are-officially-old-according-to-youth-20210402

⁶ https://www.(washingtonpost.com/sf/opinions/2015/02/12/why-moms-love-emoji/

(*), Flying kiss (*), Christmas tree (*), Purple heart (*), Grinning face with big eyes (*), Blue heart (*), Baby (*), Santa (*), Weary face (*), Thaving presented all the related literature on social role which is scarce and non-linguistically studied, this study in an attempt to dig in the ground of this social variable in CMC for the first time. As for the digital texts, An et al. (2018), classified relationship type in WeChat according to two dimensions. The first, primary groups such as families and secondary groups such as colleagues. Results revealed that primary groups were small, informal, continuous, and intimate compared to secondary groups which were larger in number, formal, less personal and temporary. The second dimension is according to the generation: same generation and cross-generation. Results showed that people who belong to the same generation have similar age and cultural recognition to each other. Their findings are important to this study from the perspective of checking the digital text of Saudi mother-daughter in relation to: the style of texting, variety used, kind of intimacy, and topics talked about. This study considers mother-daughter chat as belonging to primary groups that are small in number, informal, continuous, and intimate.

5. Data collection and Methodology

The data has been collected through screenshots of instant messages naturally occurring in twenty Saudi mother-daughter WhatsApp groups between November 2022 until January 2023. The researcher gathered them through her university students, friends, and relatives. The main purpose of collecting the data first-hand is to gather all the emojis as those mothers used naturally in their conversations with their daughters. The selection of mother-daughter WhatsApp groups and not sons is for the purpose of confining the scope of the research to the female gender only. Many studies proved gender-related differences in emoji use (Marko 2022; Bai et al. 2019; Tossell et al. 2012). The mothers' age ranged from (40 and above) representing Generation X (Gen X) and the daughters' age range was (15-25) representing Generation Z (Gen Z). Age is an important social variable that is taken into consideration to mark if there are any differences in emoji use and possible interpretations or misinterpretations from the younger side. Their social role confined to this study is (mother/daughter) role and not any other social roles such as their jobs, marital status, kind of study, etc. Both groups use WhatsApp and are familiar with the use of emojis. The data consisted of (58 screenshots). Saudi mothers used (42 emoji types) with different number of frequencies. It is not the focus of the study to analyse their frequencies; hence (42 emoji types) represent the one instance of use of each one of these emojis. Also, it is beyond this paper to study whether emojis are used stand-alone, in compositions, or in strings. The screenshots were numbered from (1-58) for future reference. Emojis varied in their use according to the user's program: Android or Apple. It is beyond the scope of this study to look at the differences between Android or Apple versions of emojis as in a study made by (Miller et al. 2016). They are presented as they were rendered at the time of data collection by WhatsApp. They are all written in different dialects of Saudi Arabic. A line-byline translation into English has been done to satisfy cosmopolitan readers. The methodology used for analysing these emojis is Herring (2004) 'coding and counting' method of computer-mediated discourse analysis (CMDA). A table of all the (42 emoji types) used by those mothers was formed (Appendix 1 Table 1). At this stage, feedback from Saudi young female informants was needed to check the three aspects of this study. This is an important step so as to identify any similarities or differences according to the scale of age, social role, emoji use, and their meanings. A questionnaire is the best option needed at this stage.

5.1 Design of Questionnaire

A qualitative experiment has been designed in the form of a questionnaire that included two methods: multi-choice questions and open-ended questions (Appendix 1). These two methods are the most suitable for this kind of study. The questionnaire consisted of two parts. Part One is confined to the (42 emoji types) used by Saudi mothers, followed by one open-ended question. Part Two is specified the intended meanings of the emojis used in the (58 screenshots) in the form of a table followed by open-ended questions. Questionnaires are needed as a main source to assure the validity of results that are hoped for in this study. Dörnyei (2007) argues that questionnaires are a "highly structural tool" that draws the answers to questions raised. The purpose of this mixed method approach is that with multi-choice questions, personal information can be gathered about these informants. Openended questions will give them a chance to know their subjective opinions because they will have the chance to write, clarify, and comment in their own words about an emoji, its use, and its interpretation or misinterpretation. This stage is important because the researcher will know needed information that is unreachable and cannot be known otherwise. The questionnaire is in Modern Standard Arabic (MSA) but has been translated into English for cosmopolitan readers.

5.2 Informants

To fulfil the requirements of this study, 90 young Saudi females in the (15-25) age range were chosen as informants. Choosing informants other than the real females in the screenshots was done on purpose, which is checking their knowledge of the emojis used and their ability/disability to understand the intended meanings. All of them assured me that they share a WhatsApp group with their mothers, and they have many other social WhatsApp groups related to their school, university, work, friends, etc. They were from different Saudi cities, including Riyadh, Jeddah, Abha, and Dammam. They are used here as a representation of Saudi (Gen Z) in general. They were divided into three groups: (A, B, and C). Each group has been provided with a selection of a specific

⁷ https://corplinguistics.wordpress.com/2015/02/

number of screenshots (Group A (1-20), Group B (21-40), and Group C (41-58)). (Example 1) below is an example of the screenshot provided in their questionnaire.

Example 1



Daughter: Mom.

Did you get my order?

Mom:

There are four purposes for why the screenshot data is provided to those informants: to give them the full time to have a detailed look at the screenshot. Secondly, to avoid random guessing when emojis are placed as stand-alone without any context. The researcher agrees with previous research that emojis are context-dependent, and their meanings will be understood accordingly (Al-Jahdali 2022, 2023; Daniel et al. 2018; Zhou et al. 2017). Thirdly, to check whether these emojis are age-specific and/or social role specific. Lastly, to check whether they are able to understand the intended meaning or whether misinterpretation might arise even with the availability of the digital text. The informants were given the questionnaire to complete in class. The researcher was there for any kind of clarification of any question. The questionnaires were then collected and were confirmed to be fully answered by the researcher herself and were ready for the descriptive linguistic analysis. For ethical considerations, the anonymity of all names, links, pictures, and identities of participants in the collected data and informants in this study has been applied.

5.3 Results of Questionnaires

5.3.1 Part One: Emoji Use

As this study is concerned with identifying emojis that are used by Saudi mothers only and never by young females (Table 1 Appendix 1), the first part of the questionnaire listed all the (42 emoji types) previously collected in the data along with a question that stated whether the informant uses this specific emoji or not in the form of 'Yes' or 'No' answer. There was a variation of Yes/No answers to the (42 emoji types) listed that is not the focus of this study. However, all the 90 informants answered 'No' to imply 'not using this emoji at all' on a list of (7 emoji types) out of the (42 emoji types). The (7 emoji types) are listed in (Table 1) below. At this stage, this list is preliminary considered as a list of *Saudi mom emoji types* peculiar to this study until proven otherwise according to the answers of the second part of the questionnaire.

Table 1. List of the preliminary (7 Saudi mom emoji types) not used at all by Saudi young females

Emojis used by Saudi

Percentage of agreement among the 90 Saudi

Emojis used by Saudi mothers only and never by their daughters	Percentage of agreement among the 90 Saudi young females			
(G	100%			
 	100%			
	100%			
86	100%			
4	100%			
	100%			
₹	100%			

A Yes/No question followed their answers on (Table 1 Appendix 1) that stated if there is any kind of difference between their use of emojis and their mother's. A justification is needed in both cases of a 'Yes' or 'No'. Answers to question (1) revealed 89 out of 90 informants choosing 'Yes' and one informant answering 'No'. The 89 informants assured that there is a notable difference between their use of emojis and their mother's. They provided five reasons for such differences: 1. Age difference, 2. differences in the way of thinking between the two generations, 3. the quantity of time spent on social media platforms (higher in youngsters), 4. more updates in technology than elders, 5. elders tend to use emojis literally. As for the one informant who stated that there is no difference between her use of emojis and her mother's, she justified that her mother (45 years old) is very close to her and out of excessive chatting between them she texts her as a 'youngster'. This finding proves that the variables of age and social role can be covered up if the mother is closely connected to her daughter to the extent that she uses emojis as a youngster and not as an old adult.

5.3.2 Part Two: Intended Meanings

The second part of the questionnaire's focus is on the meanings of the (42 emoji types). (Table 2 Appendix 1) listed a specific number of screenshots according to the group specified (A, B, and C) and three questions followed along in the same table. The first column requests the meaning understood from the screenshot where the emoji appears, the second column asks if the informant uses the same emoji in the same sense she provided, and the third requires that she provides the meaning of her own in case of difference. The main reason for the three questions is to reveal whether the informant understands, misunderstands, or uses the emoji in a different meaning in the presence of the digital text. Again, there were variations of answers to the meanings of the emojis selected in the three groups. Since this study's focus is not on these variations that were highly revealed, their answers have provided an important finding. The finding showed that the preliminary (7 mom emoji types) selected as Saudi mom emojis were 100% understood according to their mother's use. The rest of the emojis (35 emoji types) revealed variations of answers according to each user, which were highly unpredictable and non-literal. Those youngsters, for example, use the Loudly Crying Face emoji (((a)) for extreme laughter; however, it resembles crying for their mother. To know the reasons behind any probable variations of answers to (Table 2 Appendix 1), questions 2, 3, 4, and 5 followed underneath the table. Question 2 stated if the screenshot text helped the informants in understanding the meaning intended. (Group A) revealed 30 informants out of 30 stating 'Yes'. (Group B) revealed 29 out of 30 replying with a 'Yes' with one out of 30 as 'No'. (Group C) revealed 29 replying with a 'Yes' out of 30 and 1 out of 30 by 'No'. The 88 informants in the three groups confirmed that the text highly contributed to helping them getting the intended meanings according to these mothers. They assured me that without the text, they would be at a loss. The justification for the two informants who misunderstood the intended meaning is that "the emoji has been placed wrongly in the text, and it does not imply the meaning as used by those young females". The two informants managed to understand the emoji after a short period of time with the help of the accompanied text. Question (3) is a Yes/No question that asks if there are any problems encountered in general in understanding the meanings as intended by their mother while chatting with them on WhatsApp. A justification is needed in both cases of a 'Yes' or 'No'. All the 90 informants answered by 'No'. They justified their answers by 1. frequent chat with their mother made them get used to understanding their mother's emojis and their meanings, 2. they find their mother's emojis easy because they are literal, and 3. the context highly contributed to getting the intended meaning even though most of them are not used in the same way. Question (4) asks if those informants use any term to refer to their mother's kind of emojis. 82 informants answered 'Yes', and they provided the term emoji ?al?ummahaat (emojis of moms). They said that they use it as an inside joke with their friends, and they never use it in public because it is 'disrespectful' to do so. Eight informants replied 'No', and they said that they know that the emojis used by their mother are different than theirs, but they have no term to refer to them.

5.3.3 Part Three: The structure of Saudi mother-daughter WhatsApp conversations

Question (5) asks the informants if the screenshots are a representation of mother-daughter chats and a justification is needed in the case of a 'Yes' or 'No'. All the 90 informants further confirmed to question (5) that all the (58 screenshots) appear to be mother-daughter chats. They provided two reasons: First, the topics talked about (checking on siblings, asking for tasks to be done, sending prayers, kissing, encouragement, etc.). Second, the emojis used showed deep affection, prayers, concern, missing them, approval, laughter, etc., that are peculiar to 'moms'. They further explained that the emojis in the digital texts were 'mom' emojis that are used in a totally different way than their use. All the answers to the questionnaires were entered into a spreadsheet, and a further division was made according to the informant's feedback and intended meanings.

6. Results and Discussion

As stated earlier, this study tests the effect of age and social role on three aspects: the kind of emojis used, their intended meanings, and the structure of the digital text and whether it resembles face-to-face communication. Due to the size of the data (58 screenshots), a few examples will be used in this section as a representation of the whole data.

6.1 Part One: Emoji use

The analysis of the collected data in this study revealed a total number of (42 emoji types) Saudi mothers used in different frequencies in the (58 screenshots). It has been found that face emojis were the highest (28/42), hands (7/42), hearts (3/42), flowers (2/42), a star (1/42), and an hourglass (1/42) (Table 1 Appendix 1). This use of emojis by Saudi mothers confirms that they rely on the literal representation of these emojis. They tend to use them as an assimilation to that of the real world. (Table 1 Appendix 1) listed all (42 emoji types) in a stand-alone form that is detached from the digital text for an important reason: checking whether these emojis are used or never used by those youngsters. Results showed a variation of answers to (35 emojis types) only (Table 1 Appendix 1). These variations proved that these emojis are used but with different meanings other than their mother's. They are not considered to be *Saudi mom emoji types* in this study because of the high variations of answers that are not the focus of this study. An example is the Smiling Face with Hearts emoji () which is only used by youngsters to accommodate their mother's use and meaning while chatting with them but using it with a different meaning than their mother's when chatting with their peers to denote "being cute". This proves that those youngsters are aware of the participant's age (old/young) and their social role (mother/friend) and use the emojis accordingly. On the other hand, all the 90 informants stated that they never use (7 emoji types)

even with their friends (Table 1). Accordingly, this study initially considers them as *Saudi mom emoji types* that will be further confirmed with the results of the second part of the questionnaire. Results of question (1) (Appendix 1) confirmed that 89 Saudi young females are aware and specified five reasons for differences of emoji use between their mother's and theirs': First, age difference (Evans 2015; Marko 2022). Second, differences in the way of thinking between the two generations (Evans 2015, 2017). Third, the quantity of time spent on social media platforms (higher in youngsters) (White 2017). Four, youngsters are more updated in technology than elders (White 2017). Lastly, elders tend to use emojis literally while youngsters use them with multiple meanings (Evans 2015, 2017; Was et al. 2021). There was one instance of a 'reverse emoji use' where the mother is the one using her daughter's emojis and not vice versa. The reason for such a case is the close social distance between the mother and her daughter. This again adds to that there is an effect of age and social role that is found in reversing emoji use that needs further studies. As a result, this study proves that there is an 'emoji gap' marking the two generations and social roles apart. It also agrees with the five reasons Saudi young females provided for such differences. The second part of the questionnaire is hoped to confirm or disapprove such results. Accordingly, this study agrees with the first hypothesis and proves its validity in that Saudi mother-daughter digital text contains emojis that mark them as 'moms'. These emojis are found initially to be of two kinds: *Saudi mom emojis* that are never used by their daughters and emojis that are used by both Saudi mothers and their daughters but with differences in meaning. This finding contributes to that age and social group influence the kind of emojis used.

6.2 Part Two: Intended meanings

Since this study proved that there are variations of the kind of emojis used between Saudi mothers and their daughters because of age and social role, this will consequently lead to variations in their intended meanings. This section will conduct a descriptive linguistic analysis of the meanings of the two kinds of emojis found in this study: the preliminary (7 Saudi mom emoji types) that are never used by their daughters and (35 emoji types) that are used by both Saudi mothers and their daughters but with differences in meaning. The researcher will rely on Emojipedia's meanings⁸ as a foundational basis of comparison against the intended meanings of all emoji types in this study. It is the only official source online for all emoji types and their meanings. The purpose of this is to check the approximation of Saudi mothers' intended meanings with Emojipedia and whether Saudi young females understand, misunderstand, or have their own intended meanings. Because of the limited space in this study, a comparative table of Emojipedia's meanings will be presented for the preliminary (7 Saudi mom emoji types) in (Table 2) below. A representative number of the (35 emoji types) will be presented as well in the discussion due to the limited space.

Table (2) Comparison between Emojipedia's meanings and the meanings intended by Saudi mothers of the preliminary (7 *Saudi mom emoji types*)

Emoji	Emojipedia's meaning	Saudi Mother's meaning
Face Blowing a Kiss	May represent a kiss goodbye or good night and convey feelings of love and affection more generally.	Literal representation of face-to-face kissing, which is a form of showing deep love. It is used as a kiss goodbye or good night.
thumbs Up	A thumbs-up gesture indicating approval. In certain contexts, the use of the Thumbs Up emoji can be construed as being passive aggressive or sarcastic. Despite this possible use, it remains a popular means of quickly and earnestly expressing approval.	Literal representation of the gesture of raising thumbs up when agreeing on something or an idea. They do not use it in any negative sense.
Rose	Commonly used for <u>Valentine's Day</u> , <u>Mother's Day</u> , and other special occasions. May be more generally used to express such sentiments as love and romance. Also used as a symbol of <u>socialism</u> or as a red accent colour.	Showing deep love. Roses resemble the meaning of love to Gen X.
Palms Up Together	May be used to represent an open book in American Sign Language (ASL) or the gesture used by followers of Islam when praying. This gesture also appears similarly to one used to beg for money.	Literal representation of the gesture of raising the hands when praying.
Bouquet of Flowers	Commonly used for <u>Valentine's Day</u> , <u>Mother's Day</u> , and other special occasions. May also be more	Literal representation of sending others a bouquet of flowers as an expression of love and appreciation.

⁸ https://prod.emojipedia.org/

	generally used to express such sentiments as love, appreciation, and happiness.	Flowers are a symbol of love and appreciation to Gen X.
Clapping Hands	Two hands clapping emoji, which, when used multiple times, can be used as a round of applause.	Literal representation of the gesture of applause to show encouragement.
Rolling on the Floor Laughing	A yellow face with a big grin and scrunched, X-shaped eyes, tilted on its side as if rolling on the floor laughing (the internet acronym <i>ROFL</i>). Sheds two tears and tilts right on most platforms. Often conveys hysterical laughter more intense than	Literal representation of the gesture of tears falling off in situations of extreme laughter.

As Table (2) shows, Saudi mothers use all the preliminary (7 Saudi mom emoji types) literally, and their meanings are approximate to the definitions provided in Emojipedia except for some cultural differences (i.e., Valentine's Day). They do not have any other abstract meanings in all the frequencies of use in the data collected. For example, whenever Saudi mothers want to express kissing, they would use the Flying kiss emoji (③) (Example 2).





Mom: Roofa, (diminutive name for Rafa)

Bring my blanket and my pillow.

Gr

Daughter: Okay.

Palms up together emoji () has been found to be the highest used in the (58 screenshots). It is used as a literal representation of the gesture when praying. It is culture-specific because Saudi mothers constantly pray for their children, and it is considered as a blessing to receive by their children (Example 3).

Example 3



Mom: MashaAllah (God willed it) Tabaaraka Allah (God bless). ♥
On God's blessing. Go ahead ♦♦

Accordingly, this study confirms the (7 Saudi mom emoji types) as Saudi mom emojis peculiar to this study because Saudi young females never use them. They never use them with their age peers (young) because they will face mockery. Even though youngsters never use them, their literal representation, frequent chat, and the accompanied text make it easy for them to understand their intended meanings.

In comparing the meanings of the (35 emoji types) to Emojipedia, it has been found that Saudi mothers use face emojis and hand emojis literally to represent real facial and body gestures as they happen in face-to-face situations expect in minor cases of cultural differences. They express many emotions, such as laughing, being curious, praying, anger, frustration, approval, etc. (Example 4).

Example 4

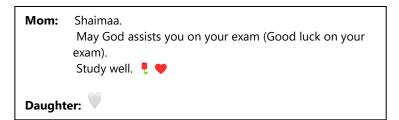


Mom: May God make her stop her stubbornness. 😩

As for showing love and appreciation, Saudi mothers use the Red Heart emoji () (as the body part responsible for the emotion of love) and the Red Rose emoji () (as the object that shows love and appreciation). Their use of hearts and flowers reflect their generation when they used to use these symbols to show such feelings (Example 5).

Example 5





The Star emoji (*) is used to replace the literal word 'star' (Example 6), while the Hourglass emoji (*) is used literally to stand for the instrument that measures time (Example 7). Also, mothers were found not to be satisfied with using single emojis but are more flexible with using instances of multiple emojis as they wish to show the extremity of an emotion or a kind of complex emotion not expressed with a single emoji (Example 7).

Example 6



Mom: I won't transfer any money.

hhhhhhhhhhhh

unless it is a five ** service.

Example 7



Mom: Ghaidaa.

Mom: When are you coming back? I need the driver. ☑

Daughter: It is going to be soon that I drive and you will be free. ②

Mom: Don't be late dear. I am in a hurry. ☑ ②

Daughter: Alright.

Where are you going?

Mom: To your grandma's.

Daughter: Is there a family gathering?

Mom: All of them. ❷ ❷

Daughter: I want to come.

In this study, understanding the intended meanings of all the (42 emoji types) Saudi mothers use for the 88 informants out of 90 highly depended on three factors: 1. the accompanying text, 2. frequent chat with their mothers, and 3. the literal representation

of emojis used by their mothers (this has been evidenced with the meanings found in Emojipedia). This proves that despite of variation of meanings, those youngsters managed to understand the meanings of these emojis. As for the case of the two informants, this study supports Miller et al. (2017) in that even with the presence of the text, interpretation of emojis may vary. For them, the Hourglass emoji (🛣) in (Example 7) has been placed "wrongly" in the text (as they view it from their emoji meaning perspective). For them, the Hourglass emoji (X) represents 'an hourglass body'; while for their mothers it represents its literal meaning which is 'time'. This proves that there are variations in the meaning of the same emoji and accordingly youngsters consider it as a 'mom emoji' if it was used in that sense. This also proves that youngsters have their abstract rather than literal meanings and this agrees with the findings of Evans (2015). Also, it has been found that even though those youngsters have their own emojis and their own meanings, they accommodate their mothers with their emojis and their related meanings. Accommodation is a process they developed to adjust their mothers in their use of an emoji and this process has made it possible for them to understand the intended meanings as well. This study contradicts the findings of Riordan (2017 b), who found that misunderstanding facial emojis is higher than non-facial emojis, and both are affected by the ambiguity of information. In this study, face emojis were used as a literal representation of real face-to-face gestures that helped youngsters understand their intended meanings. Also, the findings of this study found that Saudi youngsters are aware that their mothers have their own way of choosing certain emojis and connecting them with their own meanings. For the 82 informants, the term emoji ?al?ummahaat (emojis of moms) represents any emoji that they never use or use but with a different meaning. In their term, they refer to the social role rather than age. The social role of being a mother represents their age in an indirect way. They use the term as an inside joke among them but never use the term in public because they consider it 'disrespectful' to do so. They view these emojis as funny, old-fashioned, cringy, and are used only by mothers. 8 informants knew that their mothers use emojis that are considered 'mom emojis' but had no term to refer to them. The age gap and different social roles between (Gen X) and (Gen Z) are manifested in that there are (7 Saudi mom emoji types) along with their specific meanings never used by those youngsters and (35 emoji types) that are different in their use and intended meanings. This study consequently proves that age and social role have an effect not only on the kind of emojis but on the intended meanings as well. It also proves that it is not about the absence of nonverbal cues; it is about using the same emojis, which are regarded by the young generation as mom emojis, in a totally different way to imply a totally different meaning. Even though those youngsters find the (42 emoji types) as mom emojis, this study will confine the term to the (7 Saudi mom emoji types) only, which are not used at all by those youngsters. This study agrees with (Jeager & Ares 2017) in that there is no general agreement of the meanings of emojis even though these emojis appear on Emojipedia. The differences still arise for many reasons, among them age and social role, as proved in this study. This study has provided evidence for the second hypothesis that Saudi mom emojis are age-specific (40+) and social role specific (mother). However, they are not understood in relation to the accompanied text alone. Frequent chat and the literal representation of the used emojis contribute as factors of youngsters' comprehension as well. Through accommodation, Saudi young females have successfully prevented wrong interpretations. There were minor instances of emonji hiccups because of different choices of emojis and differences in literal versus abstract meanings. This difference in use and intended meanings made a new stream that classified their use of emojis as peculiar to their age and social role. We could say that by using emojis, it is assumed that ambiguity can be avoided because these emojis can help assimilate the absent nonverbal cues such as being happy, agreement, etc. However, this is not the case in this study. Age and social roles made a stream on its own. Having spent almost all their years using and expressing themselves with emojis, (Gen Z) has developed an intuition far better than the old generation, who spent their adolescent years without emojis (White 2017). Having known this, the reasons why mothers use emojis will definitely differ from their daughters'. This study agrees with (Zhou et al. 2017) in that emojis need to be integrated into the digital text in order to form a 'complete meaning'. This study has proved that emojis are text-dependant, and for the interpreter to understand the meaning, it is important to have an accompanying text. This proves also that emojis have no meaning in themselves (Kelly 2015) but are flexible to a variety of meanings according to the situation and the mood of both the user and the receiver. This study also agrees with (Bich-Carriere 2019) in that although emojis appear to resemble their visual similarity in real life, their interpretation might vary because of cultural background, technical differences and their own visual characteristics. This study adds that age and social role affect the intended meanings because of their literal rather than abstract representation.

6.3 The structure of Saudi mother-daughter WhatsApp conversations

The third aspect of this study aims to check the kind of topics talked about between Saudi mothers and their daughters, their relation with each other, the used variety, the used style, and whether their online communication approximates the systematic conversation of everyday face-to-face situations that are accompanied with the emojis used and their meanings in the digital text. The descriptive linguistic analysis revealed dyadic WhatsApp mother-daughter chats that showed everyday casual conversations. Conversations took the form of short messages sent back-and-forth between the mother and her daughter at different times. The type of relation is intimate in that they made fun of situations, lots of kisses were sent, etc. The conversations consist of topics usually carried between a mother and her daughter, such as topics related to household chores, checking on their children, monitoring their early/late presence, asking for certain tasks to be done, expressing concern, etc. The conversations took the form of questions, comments, and answers between the participants that are similar to what happens in face-to-face conversations. The conversations were carried out smoothly despite being quasi-synchronous. They ranged from very informal styles of Saudi Arabic

to rare cases of formal style (when the mother is upset). There were instances of using diminutive names (Example 2), vocative expressions (Example 8), giving orders (Example 9), blaming in an aggressive tone (Example 10), and persuading that lunch would be delicious (Example 11). These are instances that approximate face-to-face communication.

Example 9



Mom: Did Yazan wake up? Give Yazan food.

Make sure he does not miss the exam. May God assists you my daughter (in your life). 😘

Example 10



Mom: Now tell me.

Why is it that when I walk into my room and cannot see my Gucci perfume? 🔯

How many times do I have to tell you to use it and put it back in its place?? 😩

Example 11



Daughter: This one.

Daughter: What's for lunch?

Mom: Hello.

You will like it inshallah (if God wills it).

It is important to say that the use of emojis is a social activity. It is very much connected to the social context between the participants in relation to their status, relation topic talked about, the mood of the sender, etc. The emojis used in all (58 screenshots) ranged from being intimate, formal, informal, aggressive, or compassionate according to the relationship between the mother and her daughter at the time of the chat. Also, all the emojis agreed with the content in the digital texts. Emojis were used within the text, in compositions, in strings, and stand-alone. There were instances of using multiple emojis in one line to show the extremity of an emotion. All of these different usages of the emojis have a social function: sending an exact message to the recipient. Messages varied from being happy, curious, upset, wondering, etc. In answering the question (5) in the questionnaire, all 90 informants assured that all the (58 screenshots) are clearly mother-daughter chats that approximate face-to-face communication often found in everyday situations. They provided two reasons: First, the topics discussed were apparently motherdaughter topics. Second, the 'mom' emojis used show affections, prayers, tasks asked for, etc., that packed and agreed with the content of a mother-daughter digital text. As a matter of fact, Saudi mother-daughter topics and emojis signaled the differences in the two variables of age and social role. Saudi young females would talk about totally different topics with their peers such as

going to movies, talking about celebrity news, etc. Consequently, this study supports Hypothesis (3) in that all the online conversations in this study have met the systematic structure of face-to-face communication and the use of emojis helped packing up the absence of nonverbal cues and gestures. It also agrees with (Gaspar et al., 2015, 2016) in that the use of emojis is related to interpersonal relationships in that more specific and vivid emojis are used in groups where participants are more compassionate and intimate about a particular topic. This study has also found that Saudi mothers use emojis for many reasons: to show their motherly affections, blame, concerns, and comments, to get in touch with their busy daughters, to avoid public embarrassment for their daughters in showering them with kisses, etc. This study proved that the digital text works in harmony with the emojis used and their intended meanings.

7. Conclusion

This research has provided additional information in the literature of CMC on the effect of age (old/young) and social role (mother/daughter) on the kind of emojis and their intended meanings Saudi mothers use with their daughters online. A total number of (42 emoji types) has been found to be used in (58 screenshots) collected from twenty Saudi mother-daughter WhatsApp groups. Saudi mothers used emojis of faces, hands, hearts, flowers, a star, and an hourglass. All the emojis were used as a literal representation, and their meanings are approximate to Emojipedia's meanings except for some cultural differences. The results have provided evidence that 90 young Saudi females (Gen Z, in this study) understood but would never use (7 emoji types) their mothers use (Gen X, in this study). This study terms them as Saudi mom emoji types specific to this study. Saudi youngsters term them as emoji ?al?ummahaat (emojis of moms), and they use it as an inside joke among them. They view it as funny, old fashioned, cringeworthy, and they do not use the term in public out of respect. They never use these emojis with their peers so that they do not face mockery. The rest of the emojis (35 emoji types) have been found to be used by both Saudi mothers and Saudi young females, with differences in meanings and usage that are beyond this study. The two kinds of emoji types prove that age and social role mark the two groups apart. Despite the variation of use and meaning, there were three factors that contributed to their understanding: the accompanied text, frequent chat with their mothers, and the literal representation of the emojis their mothers used. There were two informants who found difficulty in understanding an emoji even with the accompanied text. The reason was because of the different use of emoji between the two generations contributed to differences in meaning as well. This again proves that age and social role have an effect on the kind of emojis and their intended meanings. It has been found that Saudi mothers use emojis for many social reason reasons such as blaming, showing love, checking on their children, etc. This study found that there are five reasons why mothers have different emojis than their daughters': age difference, different thinking, less time spent on social media, less knowledge of technology, and literal use of emojis. Despite variations in the kind of emojis and their literal meanings, this study has found that those youngsters accommodate their mothers in their chat, and the chat is carried out smoothly. The digital text has been found to approximate face-to-face communication in its back-and-forth in varieties of Saudi Arabic questions, answers, comments, intimate style, and topics talked about. The emojis used in the digital text agrees with these comment, answers and topics talked about. This study adds to previous literature in that emojis are better understood within a text rather than stand-alone. The type of conversation held online took an approximate quasi-synchronous conversational level as they happen in face-to-face communication. The use of emojis and their intended meanings added that there is a notable difference between the two generations in relation to age and social role.

8. Limitations of the study

Even though this study is a descriptive linguistic study on how age and social role have an effect on the kind of emojis and their intended meanings, it has some limitations. The data has been collected and analysed in relation to a limited number of Saudi mother-daughter group chats on the platform WhatsApp. Further studies could be done on a larger scale of data and other social platforms such as Twitter, Instagram, etc., which will consequently add to CMC literature. This study also was confined to the female gender only and to the social role of (mother/daughter). Further research is hoped for the male gender and different social roles such as (father/son), (father/daughter), (teacher/student), etc., to check any possibilities of similarities or differences. There was one case of 'reverse emoji use' proven by a (45 years old) mother who used emojis as a youngster out of social closeness with her daughter. More studies are needed to prove such a case. Cultural studies are also important to be considered since this study focused on the Saudi culture in relation to emoji use and their related meanings. The results of this study can be used to confirm or contradict universal (mother/daughter) online communication in relation to emoji use and their intended meanings. A question needs to be answered in relation to Emojipedia: Since there are emojis that have variations of meanings in youngsters, is there any need to list them in an Emojipedia related to 'emoji slang'? This will apparently add to the social variables of age and identity to other users in the digital text.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflict of interest.

Publisher's Note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers.

References:

- [1] Alajmi, S. (2014). Alarabtini: Alkitabah belarabiyah belahrof allatinyyah [Latinised Arabic: Writing Arabic with Latin alphabet]. In *Loghat alshabab alaraby fi wasayel altawasolalhadithah [Arab Youth's Language in New Social Media]*, (1), 7-26. Riyadh: King AbdullahBin Abdulaziz International Center for the Arabic Language.
- [2] Albawardi, A. (2018). The translingual digital practices of Saudi females on WhatsApp. *Discourse, Context, and Media,* (25), 68–77. doi 10.1016/j.dcm.2018.03.009
- [3] Al-Jahdali, N. (2022). Laughing Online: A Morpho-Semantic Study on Typed Laughter-Derived Expressions Used in Hijazi Twitter and WhatsApp Instant Messages. *International Journal of Linguistics*, 14(4), 88-119. doi:10.5296/ijl.v14i4.20160
- [4] Al-Jahdali, N. (2023). Emojis on Board: The Communicative Functions of Emojis in Saudi Females' WhatsApp Groups Interactions. *International Journal of Linguistics, Literature and Translation, 6*(6), 88–104. https://doi.org/10.32996/ijllt.2023.6.6.10
- [5] Alolyan, A. (2015). The perceived impact of the internet on family and social relations in the Kingdom of Saudi Arabia. *Ph.D. thesis,* The Manchester Metropolitan University.
- [6] Al Rashdi, F. (2018). Functions of emojis in WhatsApp interaction among Omanis. Discourse, Context & Media (26), 117–126.
- [7] Alshenqeeti, H. (2016). Are emojis creating a new or old visual language for new generations? A socio-semiotic study. *Advances in Language and Literary Studies*. (7), 56-69.
- [8] An, J., Li, T., Teng, Y., & Zhang, P. (2018). Factors influencing emoji usage in smartphone mediated communications. In G. Chowdhury, J. McLeod, V. Gillet, & P. Willett (Eds.), *Transforming digital worlds*. 423–428. Springer International Publishing.
- [9] Bai, Q., Dan, Q., Mu, Z., & Yang, M. (2019). A systematic Review of emoji: Current research and future perspectives. *Frontiers in Psychology*, 10, 2221. https://doi.org/ 10.3389/fpsyg.2019.02221
- [10] Barbieri, F., Kruszewski, G., Ronzano, F., & Saggion, H. (2016). How cosmopolitan are emojis? Exploring emojis usage and meaning over different languages with distributional semantics. *Proceedings of the 24th ACM International Conference on Multimedia*, 531-535. https://dl.acm.org/doi/10.1145/2964284.2967278
- [11] Bich-Carriere, L. (2019). Say it with a smiling face with smiling eyes: judicial use and legal challenges with emoji interpretation. *Canada International Journal of Semiotics Law* 32, 283–319. doi: 10.1007/s11196-018- 9594-5
- [12] Chen, Z., Lu, X., Ai, W., Huoran, L., & Liu, X. (2018). Through a gender lens: Learning usage patterns of emojis from large-scale Android users. *Proceedings of the 2018 World Wide Web Conference*, 1-10.
- [13] Daniel, T., & Camp, A. (2018). Emojis affect processing fluency on social media. *Psychology of Popular Media Culture* 9(2). doi: 10.1037/ppm0000219
- [14] Dörnyei, Z. (2007). Research Methods in Applied Linguistics. Oxford University Press, New York.
- [15] Emojipedia (n.d.). https://emojipedia.org , accessed February 14, 2023
- [16] Evans, V. (2015). Emoji is 'fastest growing new language ever' but over 40s are lost in translation, new study reveals. Vyvevans.net. https://www.vyvevans.net/talktalkmobile
- [17] Evans, V. (2017). The Emoji Code: The Linguistics Behind Smiley Faces and Scaredy Cats. New York, NY: Picador.
- [18] Gallud, J., Fardoun, H., Andres, F., & Safa, N. (2018). A study on how older people use emojis. In *Proceedings of the XIX international conference on human computer interaction*, 1–4. https://doi.org/10.1145/3233824.3233861
- [19] Garcia, C., Țurcan, A., Howman, H. & Filik, R. (2022). Emoji as a tool to aid the comprehension of written sarcasm: Evidence from younger and older adults. *Computers in Human Behaviour*, 126. https://doi.org/10.1016/j.chb.2021.106971
- [20] Gasper, R., Barnett, J., & Seibt, B. (2015). Crisis as seen by the individual: the norm deviation approach: PsyChology, 6, 103-135.
- [21] Gasper, R., Pedro, C., Panagiotopoulos, P., & Seibt, B. (2016). Beyond positive or negative: qualitative sentiment analysis of social media reactions to unexpected stressful events. *Computer Human Behaviour*, 56, 179-191.
- [22] Gawne, L., & McCulloch, G. (2019). Emoji as digital gestures. Language@internet, 17(2). http://www.languageatinternet.org/articles/2019/gawne
- [23] Gross, J., Carstensen, L., Tsai, J., Skorpen, C., & Hsu, A. (1997). Emotion and aging: Experience, expression, and control. *Psychology and Aging*, 12(4), 590-599.
- [24] Herring, S. (2004). Computer-mediated discourse analysis: An approach to researching online behaviour. In Sasha, B., Kling, R. & J. Gray (Eds.), Designing for virtual communities in the service of learning. New York: Cambridge University Press. pp. 338 - 376. http://ella.slis.indiana.edu/~herring/cmda.pdf
- [25] Herring, S., & Dainas, A. (2020). Gender and age influences on interpretation of emoji functions. ACM Transactions on Social Computing, 3(2), article 10.
- [26] Jones, L., Wurm, L., Norville, G., & Mullins, K. (2020). Sex differences in emoji use, familiarity, and valence. *Computers in Human Behaviour, 108*, 1-10.
- [27] Kazmi, A., Arooj, R., Anjum, U., & Khan, M. (2019). A Picture is Worth a Thousand Words, and so is an Emojis?' Emojisfication of Language: A Pragmatic Analysis of Facebook Discourse. *PLLS 2019 Proceedings*.
- [28] Kelly, C. (2015). Title: Do you know what I mean > :(A linguistic study of the understanding of the emoticons and emojis in text messages. A Bachelor Thesis, Halmstad University.
- [29] Marko, K. (2022). "You're a Rockstar heart eyes "-What the functions of emoji reveal about the age and gender of their users on Instagram. Language@Internet. (20)
- [30] Miller, H., Thebault-Spieker, J., Chang, S. Johnson, I., Terveen, L. & Hecht, B. (2016). "Blissfully happy" or "ready to fight": Varying interpretations of emoji. *International AAAI Conference on Web and Social Media*. 259–268.
- [31] Miller, H., Kluver, D., Thebault-Spieker, J., Terveen, L., & Hecht. B. (2017). Understanding emoji ambiguity in context: The role of text in emoji-related miscommunication. In *Proceedings of the International Conference on Web and Social Media* (ICWSM'17). AAAI Press. 152–161.
- [32] Phillips, L. H., Allen, R., Bull, R., Hering, A., Kliegel, M., & Channon, S. (2015). Older adults have difficulty in decoding sarcasm. *Developmental Psychology*, 51, 1840–1852.

- [33] Prada, M., Rodrigues, D. L., Garrido, M. V., Lopes, D., Cavalheiro, B., & Gaspar, R. (2018). Motives, frequency and attitudes toward emoji and emoticon use. *Telematics and Informatics*, 35(7), 1925–1934. https://doi.org/10.1016/j.tele.2018.06.005
- [34] Riordan, M. (2017a). Emojis as tools for emotion work: Communicating affect in text messages. *Journal of Language and Social Psychology*, 36(5), 549-567.
- [35] Riordan, M. (2017b). The communicative role of non-face emojis: affect and disambiguation. *Computers in Human Behaviour*. 76, 75–86. doi: 10.1016/j.chb.2017.07.009
- [36] Rodrigues, D., Prada, M., Rui, G., Garrido, M.V., & Lopes, D. (2017). Lisbon emoji and emoticon database (LEED): norms for emoji and emoticons in seven evaluative dimensions. *Behavior Research Methods* (50), 1-14. https://link.springer.com/article/10.3758/s13428-017-0878-6
- [37] Sampietro, A., Fedler, S. & Sienbenhaar, B. (2022). Do you kiss when you text? Cross-cultural differences in the use of the kissing emojis in three WhatsApp corpora. *Intercultural Pragmatics*. 19(2), 183-208
- [38] Seemiller, C., & Grace, M. (2019). Generation Z: a century in the making. Routledge, Taylor and Francis Group. https://doi.org/10.4324/9780429442476
- [39] Tadic, D., Wuthrich, V., & Rapee, R. (2015). Age differences in interpretation bias in community and comorbid depressed and anxious samples. *Cognition Therapy and Research*, 39(4), 459-472. https://doi.org/10.1007/s10608-015-9676-6
- [40] Tantawi. Y., & Rosson, M. (2019). The paralinguistics function of emojis in Twitter communication. In *Proceedings of the 7th Conference on CMC and Social Media Corpora for the Humanities (Cergy), 68-72*
- [41] Tigwell, G. &, Flatla, D. (2016). Oh, that's what you meant!: reducing emoji misunderstanding. In: *Proceedings of the 18th International Conference on Human-Computer Interaction with Mobile Devices and Services Adjunct*. ACM
- [42] Tossell, C., Kortum, P., Shepard, C., Barg-Walkow, L., Rahmati, A., & Zhong, L. (2012). A longitudinal study of emoticon use in text messaging from smartphones. *Computers in Human Behaviour*. 28 (2), 659–663. doi: 10.1016/j.chb.2011.11.012
- [43] Was, C. & Hamrick, P. (2021). What Did They Mean by That? Young Adults' Interpretations of 105 Common Emojis. *Frontiers in Psychology*. doi: 10.3389/fpsyg.2021.655297.
- [44] White, J. E. (2017). Meet Generation Z: Understanding and reaching the new post-Christian world. Baker Books.
- [45] Zhou, R., Hentschel, J., & Kumar, N. (2017). Goodbye text, hello emoji: mobile communication on WeChat in China, in the Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems. doi: 10.1145/3025453.3025800
- [46] Zilka, G. (2021). Attitudes, emotions, and the use of emojis in social networking apps by children, adolescents, and young adults. *Interchange*, 1-19. https://doi.org/10.1007/s10780-021-09439-z

Appendix 1

Dear participant

This questionnaire aims to "know and select the emojis used and their meanings between Saudi mother-daughter in group conversations in WhatsApp application."

This questionnaire contains two parts. Each part contains sub-questions. Please take your time to read the questions and then answer them accordingly.

Name:

Age:

Education level:

Part One: Kindly look at the emojis in Table (1) below, and then answer whether you use them or not:

		(Table 1)		
Emoji	Do you use it?	Emoji	Do you use it	?
	Yes	No 🥦	Yes	No
4	Yes	No 🐯	Yes	No
*	Yes	No 😂	Yes	No
•	Yes	No 😳	Yes	No
D	Yes	No 🐸	Yes	No
00	Yes	No 6	Yes	No
~	Yes	No 🔴	Yes	No
=	Yes	No 🕰	Yes	No
€	Yes	No 🔘	Yes	No
×	Yes	No 🤣	Yes	No
60	Yes	No 🔣	Yes	No
9	Yes	No 🤨	Yes	No
	Yes	No 😚	Yes	No
<u></u>	Yes	No 😥	Yes	No
8	Yes	No 🙉	Yes	No
6 0	Yes	No 💔	Yes	No
₩ ^T	Yes	No 😕	Yes	No
9	Yes	No 🙏	Yes	No
*	Yes	No 🤗	Yes	No
w	Yes	No 😥	Yes	No
••	Yes	No 🥳	Yes	No

1-Do you think that there is any difference between the emojis you use and the ones your mother uses? Yes

No

In case of a (Yes) or (No), what is/are the reason/s?-----

Part Two: Please look at the attached WhatsApp conversations and pay attention to the emoji used in the examples provided in Table (2) below, and then answer the questions that follow. (If there is more than one emoji in the same example, please write the meaning of each emoji as you understand it/them):

1. In table (2), please answer all the boxes:

(Table 2)

The emoji, as shown in screenshot number	The intended meaning, as you understood from the text in the screenshot	Do you use the same emoji in the same sense?		If the emoji is used in another sense, the meaning you use it in is		
(1)		Yes	No			
(2)		Yes	No			
(3)		Yes	No			
(4)		Yes	No			
(5)		Yes	No			
(6)		Yes	No			
(7)		Yes	No			
(8)		Yes	No			
(9)		Yes	No			
(10)		Yes	No			
(11)		Yes	No			
(12)		Yes	No			
(13)		Yes	No			
(14)		Yes	No			
(15)		Yes	No			
(16)		Yes	No			
(17)		Yes	No			

(19)		Yes	No		
(20)		Yes	No		
2. Did the text in the screensh Yes No Why?					
3. In general, do you have any Yes No Why?				 	
4. Do you use any term to ref Yes No	fer to the emojis your m	other uses?			
In case of Yes, Name it.				 	
Do you use this term? Yes No When? Why?				 	
5. Do the screenshots show the Yes No Why?					

Yes

No

(18)

Thank you for your cooperation.