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The importance of the Whatsapp family group: an exploratory analysis

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Abstract

Purpose – The purpose of this paper is to focus on WhatsApp, a mobile messaging service for smartphones that began in 2009. The study uses attachment theory, a social support perspective and one personality characteristic derived from the Big Five theory of personality (“openness to experience”) and attempts to predict how these variables influence the importance of the WhatsApp family group.

Design/methodology/approach – Research was conducted in Israel during the first semester of the 2015 academic year and encompassed 191 undergraduate communication students. Researchers used six questionnaires to gather personal details, WhatsApp use, WhatsApp importance, attachment, openness to experience, and social support.

Findings – The findings confirm that the personality characteristic of openness to experience and social support significantly predict the importance of WhatsApp family group. Findings present a complex and ambiguous relationship between the attachment variables and the importance of WhatsApp family group.

Originality/value – The literature has not yet dealt with the issue of WhatsApp groups. Hence, the current study highlights associations between WhatsApp family group and attachment theory, the personality characteristic of openness to experience, social support, and family frequency use.

Keywords Social support, Attachment, Openness to experience, Exploratory study, Parents’ use, WhatsApp

Paper type Research paper

Introduction: WhatsApp

Computer-mediated communication (CMC) is a form of communication transaction that takes place through the use of computer networks and enables people to communicate with one another through different media, including face-to-face, telephone, and internet communication. CMC has become a popular sphere for social interactions and it continues to grow parallel to ICT development and modernization (Sheldon *et al.*, 2011; Walther, 2011). The environment of CMC can be associated with the new theory of polymedia where the major concern shifts from the constraints each technological medium imposes to an emphasis upon the social, emotional, and moral consequences of choosing between the various media (Madianou and Miller, 2013).

Previous studies that explored the positive and negative effects of CMC have focussed on e-mail and instant messages (Chen *et al.*, 2004), the internet (Davis, 1989; Huang *et al.*, 2007), and text messaging (Harrison and Gilmore, 2012; Hosking *et al.*, 2009). Focussing on text messaging, Harrison and Gilmore (2012) suggest that mobile text messages have modified interpersonal interactions, as more people use text-based communication, rather than face-to-face encounters in order to be up-to-date with their friends, family members, social issues, and news. Past studies that dealt with messaging systems state that they are usually used by teenagers and young people to keep social connections and to contact distant friends and family. Further, these



platforms are popular because they are not complex, quick, and inexpensive (Barkhuus, 2006; Faulkner and Culwin, 2005; Grinter and Eldridge, 2001, 2003; Grinter *et al.*, 2006; Hall and Baym, 2011).

However, less attention has been given to newer CMC technologies such as WhatsApp (Sultan, 2014). Hence, this study focusses on WhatsApp, a mobile messaging service for smartphones that began in 2009. WhatsApp users can send each other text messages, images, video, and audio messages. WhatsApp enables individuals to socialize and stay connected using their smartphones without having to pay for a network operator's short message service (SMS) charges. Furthermore, WhatsApp is a closed platform in which one can see and accept posts and videos from people who are known, and part of one's contacts. In addition, people can create groups and belong to certain closed groups on WhatsApp. As was reported in DMR (2015), there were about 800 million users of WhatsApp in April 2015. WhatsApp has become the largest mobile text messaging service in the world and is very popular in South Africa, Malaysia, Argentina, Singapore, Hong Kong, and Spain.

Several studies that focus on WhatsApp were carried out recently. Sultan (2014), who investigated addiction to mobile text messaging, suggested that individuals who use WhatsApp turn to it for maintaining contact with family and friends, information, as well as for entertainment. In another study, O'Hara *et al.* (2014) showed that WhatsApp use is a major element in individuals' ways of dwelling with others, associating it with forms of commitment, faithfulness, and knowledge that can be presented while using WhatsApp. Further, Church and de Oliveira (2013), who compared WhatsApp and SMS use, showed that WhatsApp messages are exchanged more often, are more conversational, are used to communicate within closer social circles, and are used more often for group-based communication. The general feeling was that WhatsApp messages are immediate compared to SMS. A further study (Aharony, 2015) that focussed on the social capital that students gain from WhatsApp use, showed that well-being variables, as well as WhatsApp attitudes and intention to use, affect the social capital students gain while using WhatsApp.

So far, the literature has not yet dealt with the issue of WhatsApp groups. The current study will focus on a very unique type of groups: a WhatsApp family group[1]. Below is a print screen of a WhatsApp group.

The current study uses attachment theory, a social support perspective and one personality characteristic derived from the Big Five theory of personality ("openness to experience") and attempts to predict how these variables influence the importance of the WhatsApp family group. The importance of the WhatsApp family group is associated with respondents' feelings about the significance they attribute to WhatsApp family group in their daily routine.

The objectives of this study are: to what extent do the attachment variables explain the importance of a WhatsApp family group?; to what extent does the personality variable "openness to experience" explain the importance of the WhatsApp family group?; and to what extent does the social support perspective explain the importance of a WhatsApp family group?

Literature review

Attachment theory

One of the theories that may help us understand the importance of the WhatsApp family group is the aspect of attachment theory that focusses on the influence of early relationships between a child and caregiver on the child's personality and life style (Bowlby, 1969). The quality of a child's attachment impacts both the level of security

with which the child investigates the world and his/her future relationships in adolescence and adulthood (Bowlby, 1969). In other words, relationships experienced during infancy form working models that will impact relationships across his/her lifespan. Brennan *et al.* (1998) suggest that an attachment style can change from low to high based on two major factors: attachment anxiety and attachment avoidance. If needs and comfort are satisfied, the infant develops a secure bond toward the attachment figure that is followed by a positive view of the self and of others as dependable. However, if needs are not satisfied, the infant develops fears and expects rejection from attachment figures. Those who are high in attachment anxiety are characterized by a fearful preoccupation with relationships (Smith *et al.*, 1999). If the experience of neglect is repeated, the individual may feel that others are untrustworthy and undependable, and that the self is the autonomous and self-sufficient. As a result, s/he may avoid developing close relationships, assuming it may lead to further disappointment. These individuals are high in attachment avoidance, meaning that they avoid intimate relationships (Smith *et al.*, 1999).

Attachment theory was developed in order to explain infants' attachment to dominant caregivers. Over time, though, it has been adapted to explain adult relationships, as well as romantic partnerships, emotional functioning (Fraley and Shaver, 2000; Hazan and Shaver, 1987; Mikulincer and Shaver, 2007), and social self-efficacy (Wright and Perrone, 2010). Other studies associated attachment with interpersonal communication and social behavior in college-aged adults (Kenny and Rice, 1995), as well as interpersonal competency (Wei *et al.*, 2005).

Recently, various studies were conducted to explore the relationship between attachment theory, technology, and social network use. Buote *et al.* (2009) suggested that people with anxious or avoidant attachment responded differently to online and offline friendships. A study in 2009 found that only 24.2 percent of college students used a social networking site to communicate with a parent. Those students reported more loneliness, anxious attachment, and conflict with their parent (Gentzler *et al.*, 2011). A more recent study from 2011 revealed that texting and social networking site use with parents became more common. Further, students' social networking site use with parents was no longer linked to maladaptive outcomes (Ramsey *et al.*, 2013). Several studies have shown that individuals with high attachment anxiety interact more, while those with high attachment avoidance interact less when using a digital technology such as Facebook (Hart *et al.*, 2015; Lin, 2014; Oldmeadow *et al.*, 2012), text messages (Weisskirch, 2012; Weisskirch and Delevi, 2013), or sexting (Weisskirch and Delevi, 2011). In addition, researchers maintain that people with high attachment anxiety are more concerned about how others perceive them on Facebook (Oldmeadow *et al.*, 2012) and tend to seek for more feedback on Facebook (Hart *et al.*, 2015).

Assuming that attachment anxiety and attachment avoidance may predict the importance of the WhatsApp family group, the underlying assumptions of this study are:

- H1. High attachment anxiety will be positively associated with the importance of a WhatsApp family group.
- H2. High attachment avoidance will be negatively associated with the importance of a WhatsApp family group.

Openness to experience

Another variable that may affect and predict the importance of the WhatsApp family group is openness to experience. "Openness to experience" is one of the five major

variables that are included in the Big Five inclusive model of personality. The model addresses the following personality traits: neuroticism, extraversion, agreeableness, openness to experience, and conscientiousness (Costa and McCrae, 1992). Various researchers have investigated the model, presenting its validity and reliability across age, gender, and cultural lines (McCrae and John, 1992). The current study focusses on one variable: openness to experience, that is associated with the complexity and depth of the individual's mental and experiential life. This characteristic is related to curiosity, creativity, preference for novelty (Wang *et al.*, 2012), as well as to cognitive flexibility (McCrae and Costa, 1997) and negatively associated with rigidity, uncertainty, and inflexibility (Hodson and Sorrentino, 1999; Whitbourne, 1986). Barrick and Mount (1991) add that those who scored high on openness to experience are imaginative, artistic, sensitive, open-minded, and experimental. In addition, they adjust quickly to dynamic environments (Devaraj *et al.*, 2008). Referring to internet use, previous studies show that openness to experience is a significant predictor of internet use (McElroy *et al.*, 2007), blogging (Guadagno *et al.*, 2008), Facebook (Aharony, 2013), the internet cloud (Aharony, 2014), and discovery tools (Aharony and Prebor, 2015). Based on a review of literature, the following hypothesis is developed:

H3. The more open to experience students are, the more they perceive the importance of a WhatsApp family group.

Social support

Social support can be defined as a behavior that involves human interaction through which people express, perceive, and receive emotional concern, instrumental help, or information (Dunkel-Schetter and Brooks, 2009). Social support is the availability of family and friends who can provide psychological and material resources (Cohen and Ashby, 1985). It can also be perceived as interactions between people which meet the needs of the individual. The literature presents three different types of social support: emotional, instrumental, and informational. Emotional support refers to empathy toward people we love (Wortman and Dunkel-Schetter, 1987) and creates a feeling of belonging that affords the opportunity to discuss feelings. Instrumental support addresses the transaction of goods or services (House, 1981), and informational support focusses on the exchange of information about the environment (Dunkel-Schetter and Brooks, 2009). Social support enables people to believe they are loved, esteemed, and valued (Cobb, 1976) and is associated with well-being and life satisfaction (Turner and Brown, 2010). Various studies have presented evidence that social support is related to good physical and mental health (Berkman and Glass, 2000; Kawachi and Berkman, 2001), reduces illness (Uchino, 2004), and moderates life stress (Cohen and Wills, 1985). This study assumes that social support may affect the importance of a WhatsApp family group. Thus, the following hypothesis was developed:

H4. The more social support students have, the higher the importance they give to a WhatsApp family group.

Method

Data collection

Research was conducted in Israel during the first semester of the 2015 academic year and encompassed 191 first year undergraduate communication students. Researchers got permission to enter four classes at a School of Communication of an Israeli college,

explaining the study's purpose, emphasizing to students that it will take them about 15 minutes to complete the questionnaire. The four classes had 210 students and 191 responses were received (full questionnaires), giving a reply percentage of 90.95 percent.

Data analysis

Of the participants, 50 (26.2 percent) were male and 141 (73.8 percent) were female. Their average age was 23.61 years.

Measures

Researchers used six questionnaires to gather personal details, WhatsApp use, WhatsApp importance, attachment, openness to experience, and social support (Appendix 1). The personal details questionnaire had three statements.

The WhatsApp use questionnaire was developed for the purpose of the current study and included six questions relating to WhatsApp use and intensity. Respondents had to circle the right answer.

The importance questionnaire was comprised of six statements rated on a five-point Likert scale (1 = strongest disagreement; 5 = strongest agreement) and was designed to present the extent to which the participant is satisfied with WhatsApp and the degree to which WhatsApp was integrated into his/her daily activities. This questionnaire is based on Ellison *et al.*'s (2007) work, in which users were asked about their satisfaction with Facebook, and on Aharony's (2015) study, in which users were asked about their satisfaction with WhatsApp. The internal reliability was examined by Cronbach's α and was 0.87, indicating good internal reliability.

The attachment questionnaire is based on Mikulincer and Shaver's (2007) short questionnaire for attachment style, and consisted of 17 statements rated on a seven-point Likert scale (1 = strongest disagreement; 7 = strongest agreement). Nine statements measure anxiety attachment level (items 4, 10, 11, 12, 13, 14, 15, 16, 17) and eight measure avoidant attachment level (items 1, 2, 3, 5, 6, 7, 8, 9). Cronbach's α for these measures were 0.70 and 0.76, respectively.

The openness to experience questionnaire was derived from the Big Five questionnaire (John *et al.*, 1991) and consisted of eight statements rated on a five-point Likert scale (1 = strongest disagreement; 5 = strongest agreement). Cronbach's α was 0.81. The perceived social support questionnaire is based on Zimet *et al.*'s (1988) questionnaire and contained 12 statements rated on a five-point Likert scale (1 = strongest disagreement; 5 = strongest agreement). Its Cronbach's α was 0.98.

Results

In order to examine whether there are differences between males and females, and between students who live at home and those who do not concerning the importance of a family WhatsApp, a 2×2 ANOVA was performed. The ANOVA did not reveal a significant difference between males and females, $F(1,175) = 0.90$, $p > 0.05$. The ANOVA revealed a significant difference between students who live at home and those who do not live at home, $F(1,175) = 3.88$, $p < 0.05$, $\eta^2 = 0.02$. It seems that the family WhatsApp importance is higher among students who do not live at home ($M = 3.35$, $SD = 1.16$) than among those who do ($M = 2.96$, $SD = 1.30$). It should be mentioned that the ANOVA did not reveal a significant interaction effect between gender X live at home, $F(1,175) = 1.70$, $p > 0.05$.

To examine the relationship between avoidant attachment, anxiety attachment, openness to experience, support, parents' frequency use and the dependent variable (family WhatsApp importance), researchers performed Pearson correlations, which are presented in Table I.

Table I presents significant correlations between openness to experience, support, and parents' frequency use and the dependent variable (importance of family WhatsApp). Most of the correlations are positive. Therefore, the higher the level of openness and support, the greater the family WhatsApp importance. Further, a significant negative correlation was found between parents' frequency of use and family WhatsApp importance. In other words, a lower parents' frequency of use, the higher the family WhatsApp importance. Regarding correlations between research variables, significant positive correlations were found between avoidance and anxiety, and openness and support. Hence, the more avoidant students are, the more anxious, and open to experience they are, the higher they perceive the benefit of family and friends' support. A significant positive correlation was also found between anxiety and openness. Thus, the more anxious students are, the more they are open to experience. A further positive correlation was found between openness to experience and family and friends' support. In other words, the more open students are, the more importance they attach to the family and friends' support.

Researchers also conducted a hierarchical regression analysis in which the dependent variable was family WhatsApp importance. The regression explained 30 percent of family WhatsApp importance. The predictors were entered as six steps: first, personal details (gender and place of living); second, attachment variables (avoidance and anxious). In addition, two *z*-squared scores of these variables were entered in order to examine whether there are non-linear correlations between them and family WhatsApp importance; third, personality characteristic (openness to experience); fourth, support; fifth, parents' frequency of use; sixth, interactions between personal details, attachment variables, and the research variables. In the regressions analysis, the entrance of the first-five steps was forced, while that of the interactions was entered according to their contribution to the explained variance. Table II presents the standardized and unstandardized coefficients of the hierarchical regression of family WhatsApp importance.

The first step introduced the personal variables that did not contribute significantly to the explained variance of family WhatsApp importance. However, the beta coefficient of place of residence (at home or not at home) was significant, $\beta = 0.14$, $p < 0.05$. This finding was already mentioned at the beginning of the results section, where the ANOVA revealed a significant difference between students who live at home and those who do not live at home, concerning family WhatsApp importance.

Measures	Avoidant	Anxiety	Openness	Support	Parents' use	Importance
Avoidant						
Anxiety	0.51**					
Openness	0.31**	0.24**				
Support	0.26**	0.06	0.56**			
Parents' use	0.01	0.12	0.05	-0.11		
Importance	0.12	0.06	0.17*	0.31**	-0.40**	

Notes: $n = 191$. * $p < 0.05$; ** $p < 0.001$

Table I.
Pearson correlations
between a family
WhatsApp
importance and
research variables

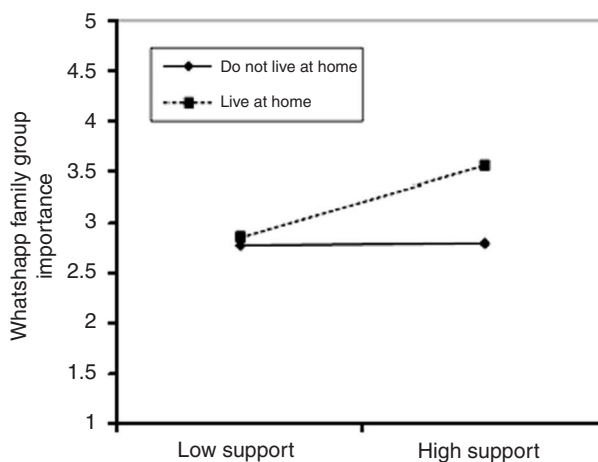
Table II.
Hierarchical
regression
coefficients of
family WhatsApp
importance

Predictors	<i>B</i>	β	<i>R</i> ²	ΔR^2
Gender	0.20	0.07	0.02	0.02
Live at home	0.40	0.14*		
Avoid	0.06	0.04	0.03	0.01
Anxious	-0.00	-0.00		
Non-linear avoid	-0.05	-0.06		
Non-linear anxious	0.02	-0.02		
Openness	0.05	0.03	0.03	0.00
Support	0.21	0.25**	0.08	0.05**
Parents' use	-0.48	-0.44***	0.26***	0.18***
NL anxious X Parents' use	0.30	0.17*	0.30***	0.04*
Support X Live at home	0.23	0.16*		

Notes: $n = 177$. * $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

The second step introduced the attachment variables and the third, the openness to experience variable. These two steps did not contribute significantly to the explained variance of family WhatsApp importance. The fourth step introduced the family and friends' support that contributed significantly by adding 5 percent to the explained variance of family WhatsApp importance. The β coefficient of support is positive; hence, the higher the family and friends' support, the higher family WhatsApp importance. The fifth step added the parents' frequency use that contributed significantly by adding 18 percent to the explained variance of family WhatsApp importance. The β coefficient of parents' frequency use is negative. Thus, the more the parents use the family WhatsApp, the lower the students perceive its importance. As the sixth step, researchers added the interactions between place of living X support, and anxious X parents' frequency use, that added percent to the explained variance of family WhatsApp importance. The interaction of place of living X support is presented in Figure 1.

A significant correlation was found for those who do not live at home. The correlation was between family and friends' support and family WhatsApp

**Figure 1.**
Interaction of place
of living X support

importance, $\beta = 0.32$, $p < 0.05$. It seems that among students who do not live at home, the higher the support from family and friends', the more the importance of family WhatsApp. This correlation was not found for students who live at home, $\beta = 0.05$, $p > 0.05$. Addressing the second interaction, Figure 2 presents the non-linear correlation between anxious X parents' frequency use.

Findings also reveal that there is no correlation between anxious and parents' frequency use among those students whose parents often use the family WhatsApp, $\beta = 0.14$, $p > 0.05$. However, among students whose parents do not use the family WhatsApp so frequently, a significant non-linear correlation was found between anxious X parents' frequency use, $\beta = 0.38$, $p < 0.05$. It seems that, especially among those students whose parents do not use the family WhatsApp frequently, when the level of anxiety is either low or high, there is more importance given to their family WhatsApp.

Discussion

Based on the premise of the attachment theory, openness to experience perspective and social support paradigm, the present study examined to which extent these variables explain the importance students' attribute to a family WhatsApp group.

Addressing the study's hypotheses, two were rejected and two were confirmed.

H1 and *H2*, focussing on the attachment variables (avoidance and anxious), were rejected. Based on the literature (Hart *et al.*, 2015; Lin, 2014; Oldmeadow *et al.*, 2012), researchers assumed that students who are high in anxiety will attribute a great importance to WhatsApp family group, while those who are high in avoidance will attribute a small importance to it. Hence, it was quite surprising to find out that neither attachment anxiety nor attachment avoidance were associated with the importance of WhatsApp family group. Perhaps we can associate this finding with Ramsey *et al.*'s, (2013), who maintained that students' social networking site use with parents was no longer related to maladaptive outcomes. However, it should be noted that the second interaction in the study revealed that, especially among those students whose parents do not use the family WhatsApp so frequently, when the level of anxiety is either extremely low or extremely high, the importance attributed to family WhatsApp is higher as well. Thus, there is a relationship between the

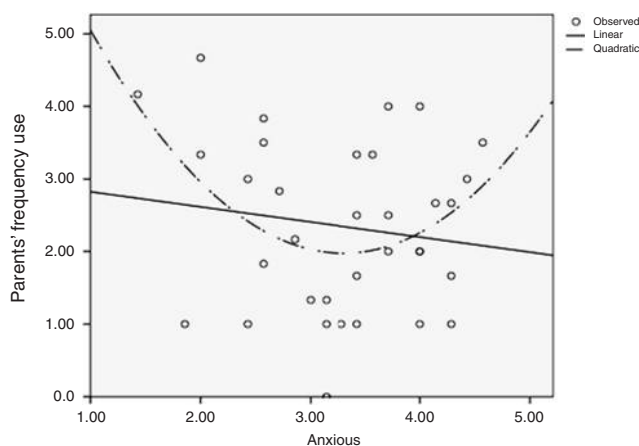


Figure 2.
Non-linear correlation between anxious X parents' frequency use

attachment variable of anxiety, parents' frequency use, and family WhatsApp importance, particularly among students who are extreme in their anxiety scale. Among those who are high in anxious, the fact that parents do not use the group so intensively is associated with their feelings of fear or separation anxiety. Therefore, this causes them to attribute a high importance to the family group. On the other hand, among students who are low in anxious and therefore more secure, the fact that the parents do not intensively use the group does not prevent them from understanding its advantages and unique importance.

H3, that focussed on openness to experience, was accepted and shows that the more open to experience students are, the higher they perceive the importance of WhatsApp family group. This finding is in line with previous studies showing that openness to experience is positively associated with internet use (Aharony, 2013, 2014; Guadagno *et al.*, 2008; McElroy *et al.*, 2007). For students who are curious, experimental, and prefer novelty, it appears they would like to take advantage of this newer technological platform in order to keep in touch with their families; therefore, they highly estimate its importance. In addition, when examining the correlations in the study, findings indicate that the more open to experience students are, the higher they perceive the support of family and friends. Hence, it is not surprising to find that these individuals, who are open, curious, flexible, and easygoing, esteem social support more highly.

Results pertaining to *H4* were also accepted, indicating that the higher the social support students have, the higher they perceive the importance of WhatsApp family group. This finding indicates the importance of social support, as it enables individuals to feel that they are loved, esteemed, and valued (Cobb, 1976). Thus, those students acknowledge the importance of WhatsApp family group as a platform where they can be loved, and receive support, security, and comfort.

There are some several additional, interesting findings that emerged from the results. The first showed that the family WhatsApp importance is higher among students who do not live at home compared to those who do. Further, one of the interactions in the study added that among students who do not live at home, the higher their family and friends' support, the higher the importance of family WhatsApp. In other words, students who do not live with their parents take advantage of this platform in order to get support, and keep in touch, with their family, so their perception about family WhatsApp importance is higher.

Another interesting and important finding indicates that the higher parents' frequency use of the family WhatsApp, the lower the importance of family WhatsApp. This implies that although students like to communicate with their family via WhatsApp, they have certain limits. If they feel that their parents are too active on this platform, they change their attitude and attribute less importance to the family group. This finding is in line with the sixth stage of Erikson's (1950) socio-emotional theory, that describes young adults' accomplishments of gaining more intimacy and long-term commitments with someone other than a family member. Successful completion of this stage can lead to comfortable relationships and a sense of commitment, safety, and care within a relationship. Therefore, we can understand why young adults prefer having their intimacy without having their parents in their own "playground." The current finding may also be associated with Kiss (2013), who noted that young people leave Facebook and choose other social network sites because it is no longer a platform for them because of the presence of their parents and grandparents.

Conclusions and limitations

The current study highlights associations between WhatsApp and attachment theory, the personality characteristic of openness to experience, social support, and family frequency use. Further, it makes a number of theoretical contributions:

- It expands the current research about a popular communication tool: WhatsApp, by examining it within the special context of a family group. This focus enables researchers to follow the unique dynamics that take place in a novel CMC environment.
- The findings confirm that the personality characteristic of openness to experience and social support significantly predict the importance of WhatsApp family group. These results emphasize the importance of personality characteristics and social support when examining CMC environments, as it suggests that people may behave differently on various CMC platforms, due to their personality characteristics or due to social support they receive.
- Findings present an interesting relationship between the attachment variables and the importance of WhatsApp family group.

This study has several limitations. The first is that in order to gain a broader perspective about WhatsApp importance, it is recommended that a future study that includes a larger number of students from other disciplines be conducted. Second, as the current study focussed on Israeli students, we suggest that in order to gain an international perspective, the study should be carried out in other countries as well. Moreover, a future study may also use qualitative methods such as open questions or interviews to supplement the quantitative analysis, and thereby enrich the findings by adding other dimensions to the process.

Note

1. A WhatsApp family group consists of a group whose members belong to the same family.

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Appendix 1. Whatsapp questionnaire

Personal Details

1. Gender
2. Education
 - a. Bachelor's
 - b. Master's
 - c. Doctorate
3. Age

Whatsapp intensity

Please answer the following questions:

1. Do you participate in a family group?
 - a. Yes
 - b. No
2. Who from your family participates in the family group:
 - a. Parents
 - b. Grandparents
 - c. Sisters and brothers
 - d. Sisters' and brothers' partners
 - e. Aunts and uncles
 - f. Cousins
3. Who usually begins a conversation on WhatsApp?
 - a. You
 - b. Parents

- c. Brothers/sisters
 - d. Sisters' and brothers' partners
 - e. Aunts and uncles
 - f. Cousins
 - g. Someone else
4. To what extent do your parents use the family *WhatsApp*?
 - a. Very much
 - b. A lot
 - c. Average
 - d. Less than average
 - e. Little
 5. Do you live at home?
 - a. Yes
 - b. No
 6. In the past week, on average, approximately how many minutes per day have you spent on the family *WhatsApp*?
 - a. 1-30
 - b. 31-60
 - c. 1-2 hours
 - d. More than 2 hours
 - e. More than 3 hours

Family WhatsApp importance

Below are statements concerning the family *WhatsApp*. Please mark with an X the column which describes your level of agreement with the following statements (1 = not at all; 5 = at a very high level).

Statements	Level of agreement				
	1. Not at all	2. Slightly	3. Average level	4. More than Average	5. At a Very High Level
1. <i>WhatsApp</i> family is part of my every-day activity					
2. I am proud to tell people I'm on <i>WhatsApp</i> family					
3. <i>WhatsApp</i> family has be-come part of my daily routine.					
4. I feel out of touch when I haven't logged onto <i>WhatsApp</i> family for a while					
5. I feel I am part of the <i>WhatsApp</i> family community					
6. I would be sorry if <i>WhatsApp</i> family shut down					

Table A1.
Family WhatsApp
importance
questionnaire

Attachment questionnaire

Please read each of the following statements and rate the extent to which it describes your feelings about romantic relationships. Please think about all your relationships (past and present) and respond in terms of how you generally feel in these relationships. If you have never been involved in a romantic relationship, answer in terms of how you think you would feel.

Please mark with an X the column which describes your level of agreement with the following statements (1 = not at all; 7 = at a very high level).

Statements	1. Not at all	2. Slightly	3. Slightly average	4. Average level	5. More than Average	6. High level	7. At a Very High Level
1. I find it relatively easy to get close to others.							
2. I find it difficult to allow myself to depend on others.							
3. I am comfortable when others depend on me							
4. I do not worry about being abandoned by someone close							
5. I find that others are reluctant to get as close as I would like							
6. I am somewhat uncomfortable being close to others							
7. I find that people are never there when you need them							
8. I am nervous when anyone gets too close.							
9. Often, partners want me to be closer than I feel comfortable being							
10. My desire to merge sometimes scares people away							
11. In relationships, I often worry that my partner does not really love me							
12. Rarely, I am worried that my partner will live me							
13. Often, people don't get close to me because of my ambition for a complete merge							
14. I do not worry that my partner will not want to stay with me							
15. I want to merge completely with another person							
16. Rarely, the thought about being abounded occurs in my mind							
17. I am sure my partner loves me as I love him							

Table AII.
Attachment
questionnaire

Openness questionnaire

Here are a number of characteristics that may or may not apply to you. Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement (1 = strongly disagree; 5 = strongly agree).

I see Myself as Someone Who...	1. Disagree strongly	2. Disagree a little	3. Neither agree nor disagree	4. Agree a little	5. Agree strongly
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1. Is original, comes up with new ideas
2. Is curious about many different things
3. Is ingenious, a deep thinker
4. Has an active imagination
5. Is inventive
6. Prefers work that is routine
7. Likes to reflect, play with ideas
8. Is sophisticated in art, music, or literature

Table AIII.
Openness
questionnaire

Support questionnaire

Read the following statements and rate the extent to which it describes your feelings at the current moment. Please mark with an X the column which describes your level of agreement with the following statements (1 = not at all; 7 = at a very high level).

The
importance of
the Whatsapp
family group

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Statements	1. Not at all	2. Slightly	3. Slightly average	4. Average level	5. More than Average	6. High level	7. At a Very High Level
1. There is someone close to me, who I can turn to							
2. There is someone close to me who can take part in my sorrow or happiness							
3. My family tries to help me							
4. I receive emotional support from my family							
5. There is someone who encourages me a lot							
6. I have friends who really try to help me							
7. I can rely on my friends when I have problems							
8. I can discuss my problems with my family							
9. I have friends who take part in my sorrow and happiness							
10. I have a person, to whom my feelings are very important							
11. My family is ready to help me to make decisions							
12. I can discuss my problems with my friends							

Table AIV.
Support
questionnaire

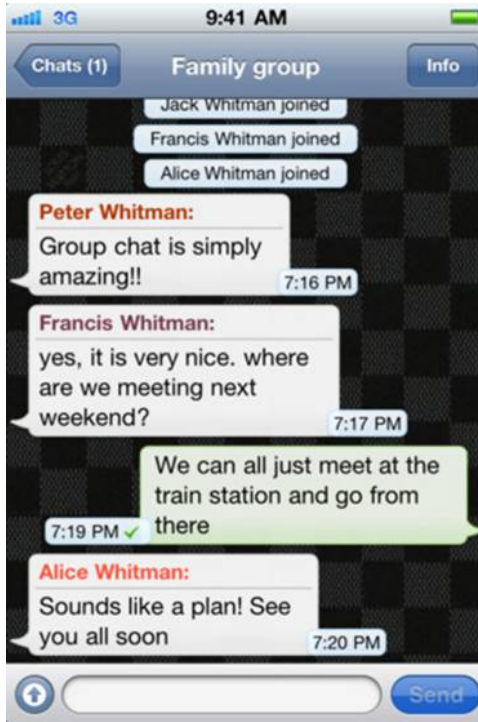


Figure A1.
An example for a
family group
WhatsApp chat

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