# 'When Strangers Meet'…an Exploration of the Experience of Intimacy in WhatsAppand Face-To-Face Interactions

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## Abstract

*The current study examined the impact of communication medium on relational intimacy between 120 previously unacquainted male and female participants, using an experimental design. Sixty pairs of male-female participants were grouped under either of the two conditions: WhatsApp mediated communication or Face-to-Face (FTF) communication. t test with independent means revealed no significant difference in intimacy between the two conditions (t = 1.228, p=.224, Cohen's d=0.314). Correlational analysis revealed a significant relationship between nonverbal cues and intimacy in the FTF condition (r = .70, p=.000) but not between textual cues and intimacy in the WhatsApp condition (r = .24, p=.207). Further, qualitative analysis revealed four features along which pairs with high and low intimacy differed. The outcomes of the study would enable in exploiting the features of WhatsApp effectively to enhance interpersonal communication, regardless of temporal or spatial barrier.*
***Key words:*** *WhatsApp, FTF, nonverbal cues, textual cues, intimacy*

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## Introduction:

Communication forms the essence of human existence. In today's times, FTF communication is being complemented heavily by communication through various media, like emails, Instant Messengers (IM), WhatsApp, etc. Research therefore is focussing on understanding the features of media, its impact on relationships, and the ways to enhance communication through media .For instance, Valkenburg and Peter, 2007 found that IM enhances well-being by mediating the time spent with friends and the quality of friendships. Wang and Wang (2011) found online communication to be positively related to adolescents' subjective well-being. Kumar and Sharma (2017) reported that around 66% of young adults in India believe that WhatsApp improved their relationship with friends. However, the positive impacts are not universal— Goodman-Deane,

Mieczakowski, Johnson, Goldhaber, and Clarkson (2016) found IM and text messaging to be restrictive and negatively associated with satisfaction in life and relationships. Sharma and Shukla (2016) found WhatsApp impacts academics, language, concentration and quality of relationships.

CMC also impacts various relational and interpersonal outcomes, such as liking, attraction, closeness, intimacy, etc. Sherman, Michikyan, and Greenfield (2013) found bonding between friends to be the greatest in in-person interaction, followed by video chat, audio chat, and IM. Okdie, Guadagno, Bernieri, Geers, and Mclarney-Vesotski (2011) found that inferences formed of the other individual during FTF interactions were more positive than CMC. Others have also found lower interpersonal outcomes in CMC (Bane, Cornsih, Erspamer, &

Kampan, 2010; Bente, Ruggenberg, Kramer, & Eschenburg, 2008).

Theorists (for e.g. Daft & Lengel, 1984) have contended that CMC leads to superficial interactions due to absence of nonverbal, social and contextual cues, and confusions due to turn-taking and referencing. In contrast, Walther (1992) highlights the ways in which individuals adapt the channel to overcome limitations caused by the absence of cues. Communicators convey socio-emotional and relational messages through typed language and time. CMC allows virtual immediacy (enables for communication irrespective of the spatial and temporal distance). More interestingly, it provides the scope for making conversations rich through emojis, emoticons and pictographs, format changes such as capitalization and italicizing of words, etc. Consequently, researchers have found no significant difference between CMC and FTF interactions on interpersonal attraction (Antheunis, Valkenburg, & Peter, 2007), expression of affinity (Walther et al., 2005) and level of satisfaction experienced by couples (Perry & Werner-Wilson, 2011).

Others have reported CMC to be even better than FTF— Hu, Wood, Smith, and Westbrook (2004) found the extent of IM usage to be positively associated with intimacy. The scope for interactive text in IM has made it ideal for informal, spontaneous and opportunistic communication, conducive to intimate exchanges. Characteristics of CMC such as anonymity and absence of nonverbal cues have been found to facilitate frequent and more intimate disclosures (Tidwell & Walther, 2002), which in turn leads to greater intimacy (Jiang, Bazarova, & Hancock, 2011).

However, studies have also reported mixed findings— Mallen, Day, and Green (2003) found satisfaction to be better in FTF interactions; however, found no significant difference between FTF and CMC in the level of emotional understanding and depth of processing. In another study, Ranney and Troop-Gordon (2015) found that while CMC resulted in lower positive affect than FTF, CMC participants experienced higher levels of perceived similarity and self-disclosure.

As is evident by now, research on communication medium and intimacy is divided in its findings. Considering the mixed results and paucity of comparative researches in the Indian setting, the present study seeks to examine the impact of the communication medium on relational intimacy between previously unacquainted Male-Female dyads. The current study also examines the relationship between richness of cues in conversations (textual cues in WhatsApp and nonverbal cues in FTF) and relational intimacy.

## Hypotheses

**H1:** There would be no significant difference on Relational Intimacy and its subdimensions (viz. Involvement/Affection, Receptivity/Trust, and Similarity/Depth) in FTF communications and WhatsApp mediated communications.

**H2:** There would be a significant relationship between the usage of Textual cues and the level of Relational Intimacy and its subdimensions (viz. Involvement/Affection, Receptivity/Trust, and Similarity/Depth) in WhatsApp mediated communications.

**H3:** There would be a significant relationship between the usage of Nonverbal Cues and the level of Relational Intimacy and its subdimensions (viz. Involvement/Affection, Receptivity/Trust, and Similarity/Depth) in FTF communications.

## Method
## Participants

The study involved 120 undergraduate students (60 male; 60 female) between 17 to 23

years (Mean Age: 19.5 years), recruited through convenience sampling.

**Design**

The study followed an experimental design, wherein participants were randomly paired into male-female dyads and then randomly allotted to two experimental conditions— FTF interaction and WhatsApp mediated interaction, and given a task to engage in. Relational intimacy is the dependent variable on which the effects of variation in medium were studied.

**Procedure**

The dyads in the FTF condition were seated next to each other, while dyads in the WhatsApp condition were seated in separate halls and asked to upload the details of their respective partners to their WhatsApp contact list.

Thereafter, the participants were given the moral dilemma task. First 5 minutes was allotted for reading the task, after which 15 minutes was given for interaction in the FTF condition, and 25 minutes for the WhatsApp condition. The interaction in FTF condition was audio recorded after taking prior permission. Participants in the WhatsApp condition were requested to mail the chat. Post the interaction, the participants were asked to fill in the Relational Communication Scale, Nonverbal Cues Questionnaires (FTF) and Textual Cues Questionnaire (WhatsApp).

**Task**

The moral dilemma task (Savicki, Kelley, & Lingenfelter, 1996) was adapted to suit the Indian context. It involves a fictional moral-dilemma story revolving around four characters. The participants had to read it, discuss with their partners, arrive upon a consensus and rank each character from the most to the least appropriate. Few pointers for discussion were added to enable better interaction.

**Tools Used**

Relational communication scale (RCS). A 25-item version of RCS developed by Burgoon and Hale (1987) comprising three dimensions of relational intimacy: immediacy/affection, similarity/depth and receptivity/trust was used.

High reliability coefficients, i.e. 0.70 to 0.99 have been reported for global dimension and sub-dimensions of intimacy (Burgoon & Hale, 1987; Burgoon & Poire, 1999; Floyd &Voloudakis, 1999). Further, RCS has established construct validity and has been used for the study of relational intimacy in a wide range of contexts (Burgoon, Walther, & Beasler, 1992, etc.).

**Textual cues questionnaire.** Textual cues are components of messages like emoticons/emojis, typed laughter, extensive punctuation, letter repetition, capitalization, informal acronyms, etc. (Sherman et al., 2013; Snow, 2007) that enhance the richness of the text. To measure the extent to which partners used such textual cues in WhatsApp interaction, a 6-item 3-point Likert type rating scale was developed.

**Nonverbal cues questionnaire.** Nonverbal cues are subtle aspects in communication that complement verbal messages, such as touching, gestures, eye contact, smiling, relaxed posture, and leaning towards the other (Sherman et al., 2013; Snow, 2007). To measure the extent to which partners used nonverbal cues in FTF interaction, a 6-item 3-point Likert type rating scale was developed.

**Data Analysis and Results**

Data was analysed using SPSS version 16.0. t-test for independent samples was used to determine the significance of difference between WhatsApp and FTF conditions on relational intimacy and its various sub-dimensions. Correlational analyses were also undertaken to determine the relationship

between richness cues and the communication medium (i.e. nonverbal cues and FTF communication; and textual cues and WhatsApp communication).

**Table 1. Differences on Intimacy and its Dimensions across Two Conditions**

| *Intimacy Dimensions across Conditions* | *Mean* | *SD* | *t* | *df* | *P* | *Cohen's d* |
|---|---|---|---|---|---|---|
| Total Relational Intimacy | | | | | | |
| WhatsApp | 4.91 | .58 | | | | |
| | | | 1.228 | 58 | .224 | 0.314 |
| Face-to-face | 5.08 | .50 | | | | |
| Involvement/ Affection | | | | | | |
| WhatsApp | 5.02 | .66 | | | | |
| | | | 1.041 | 58 | .302 | 0.263 |
| Face-to-face | 5.19 | .63 | | | | |
| Receptivity/ Trust | | | | | | |
| WhatsApp | 5.32 | .61 | | | | |
| | | | 1.262 | 58 | .212 | 0.324 |
| Face-to-face | 5.51 | .56 | | | | |
| Similarity/ Depth | | | | | | |
| WhatsApp | 4.38 | .62 | | | | |
| | | | 1.359 | 58 | .179 | 0.347 |
| Face-to-face | 4.59 | .59 | | | | |

Table 1 indicates no significant difference between WhatsApp and FTF communication on relational intimacy or any of its subdimensions, leading us to accept hypothesis H1.

## Table 2. Correlations between Intimacy and Cues in Communication

| Intimacy Dimensions | Cue Index | P |
|---|---|---|
| **WhatsApp Condition - Textual Cues** | | |
| Total Relational Intimacy | .237 | .207 |
| Involvement/ Affection | .115 | .546 |
| Receptivity/ Trust | .270 | .149 |
| Similarity/ Depth | .285 | .127 |
| **FTF Condition - Nonverbal Cues** | | |
| Total Relational Intimacy | .700** | .000 |
| Involvement/ Affection | .546** | .002 |
| Receptivity/ Trust | .452* | .012 |
| Similarity/ Depth | .714** | .000 |

*p < 0.05, two-tailed; ** p < 0.01, two-tailed

Table 2 reveals a significant relationship between the use of richness cues and intimacy in the FTF condition but not in the WhatsApp condition. Therefore, hypothesis H2 is rejected, while hypothesis 3 is accepted.

Qualitative analysis of the transcripts of conversations in WhatsApp and FTF communications revealed four features along which the pairs with High and Low intimacy differed. These are:

**Informality of language.** Refers to the general informality in overall conversation and the extent to which the partners used fillers and swear words. Pairs with higher intimacy used more informal language throughout the conversation in both WhatsApp and FTF conditions. For instance, in FTF condition, conversations are replete with words like *"Uh…", "Umm", "Na", "Fuck"* and *"Bitch"*. However, between pairs with low intimacy conversations began formally with a *"ma'am"* and ended formally with *"thank you"* or *"it was a pleasure talking to you"*.

**Use of first-person plurals.** Refers to the extent to which the partners in the conversation used first-person plural pronouns i.e., us, we, our, and

ours. Whenever any action or opinion was stated, pairs with high intimacy used plural pronouns, thereby combining the inferences for both the conversational partners. For instance, statements like the following were prominent among the pairs with intimacy in the FTF condition— *"let us do this", "we can't blame him",* etc. Similarly, in the WhatsApp condition *"if we consider the overall situation", "ya we can", "shall we place Varun",* etc. were used.

**Self-disclosure.** Refers to the extent to which the partners revealed personal information such as values, opinions, likings/preferences, etc. Higher intimacy pairs disclosed information that was personally relevant and which would enable in building up a relationship e.g. hobbies, interests in field of study, preferred sport, etc. The pairs with low intimacy however, engaged in lesser self-disclosure.

**Similarity.** Refers to the extent to which the partners in the conversation explicitly called attention to similarity between them. Pairs with high intimacy were seen to agree with their partner and drew attention to similarity between each other. For instance, in FTF condition, a participant explicitly said, *"We have similar views".*

**Profile Picture.** The role of Profile Picture was quite striking. Participants who were high on intimacy reported that it had no impact on their impression of their partner, despite most of them taking efforts to see what the picture was. On the other hand, participants with low intimacy categorically reported the negative impact caused by the profile picture. For instance, one participant said, *"it was a bad picture".* Another participant said, *"something about his posture (especially his, 'About me' on WhatsApp), which has a cliché line, made me realise he would not be communicating too deeply".* It seems possible that the negative impression set a precedent for lower intimacy.

## Discussion

The results of the present study ($t$=1.228, $p$= .224, Cohen's $d$ = 0.314) reveal that the medium of communication had no impact on relational intimacy reported by male-female participant dyads.

Communicators deploy whatever communication cue systems they have at their disposal when motivated to form impressions and develop relationships. In CMC, where most nonverbal cues are unavailable, users adapt their language, style, and other cues to such purposes (Walther et al., 2005). For instance, it was seen that participants communicating through WhatsApp made use of the profile picture of their partners to form basic impressions, especially negative ones. Previous researches by Church and Oliveira (2013) and Ali and Kootbodien (2017) have shown the importance of the profile picture in enhancing the richness of cues available to communicators in WhatsApp.

Moreover, Lea and Spears (1995) held that seasoned communicators in CMC become adept at using and interpreting textual signs and paralinguistic codes. In the current study, 51% of the participants have been active WhatsApp users for more than 4 years. Around 50% of participants can rarely go a day without WhatsApp, and around 40% rely heavily upon WhatsApp for getting them through each day. It can be suggested that the current participants' familiarity and habituation to WhatsApp could be a reason why they were able communicate socioemotional and relational messages as effectively in WhatsApp as FTF interaction. These could be reasons why the medium of communication did not have any impact on relational intimacy.

## Richness Cues and Medium of Communication

The current study, surprisingly, failed to find any relationship between use of textual cues and relational intimacy. This is

contrary to previous research that found the use of affective scripts and emoticons to predict relationship development online (Utz, 2000); and the use of textual cues such as emoticons, typed laughter, and excessive letter capitalization during conversations to be related to greater bonding experience (Sherman et al., 2013). In the present study, the impact of emoticons seems to have been outweighed by the content of verbal messages that accompanied them. One possible reason could be that emoticons nowadays are overused, possibly leading to a diminished effect. While they provide additional expression to the verbal messages, they do not translate into cues to intimacy/liking. Further, since the current participants are heavy WhatsApp users, to them emoticons serve to convey only basic emotional messages, and not affiliative messages. While making the conversation rich, they did not affect intimacy.

Unlike the WhatsApp condition, the relationship between nonverbal cues such as eye contact, gestures, touching, smiling relaxed posture and leaning towards the partner, and intimacy was very high, positive and significant ($r = .700$, $p < .01$). This finding is in line with the previous researches that have found various nonverbal cues to be related to intimacy (Burgoon & Poire, 1999).

The strong relationship between nonverbal cues and intimacy could be attributed to the relational meaning laden in these cues. Burgoon and Poire (1999) reported that nonverbal cues have consensually recognized relational meanings Conversational partners rely heavily on nonverbal messages to discern various messages and to verify the implied meaning of verbal messages. In fact, Mehrabian (1972) found that nonverbal messages account for the largest part of communication of an individuals' liking for the other i.e., the relative impact of words, tone of voice and body language was found to be 7%, 38% and 55% respectively.

**Features of Communication**

The present study also explored what aspects of conversation differs between high intimacy and low intimacy pairs and found four features— informality of language (use of fillers and cuss words), use of first-person plurals, similarity and self- disclosure. Of these, self-disclosure turned out to be the most prominent. Bargh, McKenna, and Fitzsimons (2002) found that disclosing qualities and aspects of one's true self was instrumental in leading to better bonds of empathy and understanding between individuals conversing. Therefore, it is possible that the pairs that self-disclosed the most experienced the highest level of understanding.

Considerable difference was also found in the extent to which the pairs used informal language. Previous research has found usage of back-channel responses (such as saying "uh-huh") to be positively correlated with rapport (Bernieri, Gillis, Davis, & Grahe, 1996). Greater conversational fluency has also been found to be associated with greater perceived intimacy (Burgoon &Poire, 1999). Therefore, it is possible that the presence of such features in the conversation created an air of informality and resulted in better rapport and intimacy. Usage of First-Person Plurals is also prominent in the pairs with higher intimacy. Previous research has showed the usage of first-person plurals to lead to increased intimacy between conversational partners (Burgoon & Hale, 1987). It is possible that when partners in conversation used 'Us'/ 'We'/ 'Ours'/ 'Our', it signalled a feeling of greater closeness, rather than when partners used first-person singular pronouns like 'I' or 'You'.

**Implications, Limitations, and Future Research**

The current study joins the league of research that has found mediated

communication to be as effective a medium as FTF communication. The present research would go a long way in making the medium of WhatsApp an asset rather than a liability, particularly in interpersonal interactions. The outcomes of the study would enable in exploiting the features of WhatsApp effectively to make better interpersonal communications, regardless of any barriers, temporal, spatial or otherwise. While more and more people tend to "meet" friends and significant others online, the current study could go a long way in fostering better communications in such situations. The present study also highlights the importance of WhatsApp Profile picture in affecting the impressions formed and cautions users to premeditate and carefully select a picture that is in accordance with the context. The study also reiterates the importance of nonverbal cues in FTF communication, and can enable individuals to adjust non-verbal cues to convey subtle meanings during conversations.

Despite the best efforts, the current study has a few limitations. Firstly, the small sample size might place some restriction on the capacity to generalize the outcomes of the study. Secondly, the participants in the study were asked to engage in conversations based on an allotted task. While, this ensured uniformity of task across conditions, it might have also limited the scope for natural expressions of intimacy or liking. Finally, a range of nonverbal cues could have been studied had the FTF conversations been video recorded.

Future research can replicate the study using other varieties of tasks and on larger samples. It would also prove useful to study gender-based differences in the experience of relational outcomes in CMC and FTF communications. Future research could examine in depth other textual cues that contribute to the richness in WhatsApp conversations. Comparisons could be made between romantic relationships that started through CMC i.e., through portals such as Tinder, and relationships that were formed through FTF interactions in terms of various relational outcomes.

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