WhatsApp addiction: dominant factors affecting communication

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Abstract. WhatsApp has become the most favorite application in Indonesia. Many features in WhatsApp make users reluctant to switch to another application. Favorite features that make users fond of WhatsApp are voice calls, voice notes, and unlimited groups. While the main factor after analyzing using factor analysis, the dominant influence on dependence on WhatsApp is the relatively inexpensive communication costs and application features that facilitate communication.

1. Introduction
The survey conducted by dailysocial.id had 97.24% respondents using the WhatsApp application, 88.49% of respondents using LINE, 85.82% of respondents using BBM, 77.26% of respondents using Facebook Messenger, 35.59% of respondents using telegram, and 20.55% using other than aforementioned applications. Among these respondents, 68.30% of respondents joined the group can reach one to five groups, 19.96% joined in five to fifteen groups, 4.79% joined in fifteen to fifty groups. And 0.78% joined more than fifty WhatsApp groups.

WhatsApp is an instant messaging application which has the most users. Its function is to deliver messages from individuals to other individuals or other groups, and can also be used to share important information such as socialization of some particular topic. However, usage in a frequent period of time can make a person become individualist, refuse to socialize, and even reduce interpersonal communication with others.

2. Discussion
2.1. Factors affecting individual dependence on whatsapp conversation application
2.1.1. Basic needs factor.

The findings of the study show that 61.70% of respondents answered that the WhatsApp feature that backs up messages in the form of text which is then sent via e-mail is very helpful to keep conversations that are considered important. Some respondents admitted that this feature facilitated the task of the subjects of the respondents who needed transcripts of their interviewees. While 18.09% of respondents said they did not know and did not understand the feature, and also could not distinguish between the message back up feature in the form of text with the message back up feature found in the WhatsApp settings.

An interesting fact can be seen from 71.28% of respondents answered agreeing that the two-step verification feature in WhatsApp will make the account safe from acts of piracy or used by others with undesired intentions. While 1.06% answered that they did not agree because based on the confessor,
they did not know and did not understand the feature. Two-step verification is a verification code request if the account is logged in from another gadget and has been released from the WhatsApp application.

In connection with the blocking feature provided in WhatsApp, there are 7.45% of respondents with doubtful answers. Based on the results of interviews conducted, according to respondents who answered doubtfully, the blocked contact can still be disruptive because it can use another number or even through a conversation, and other social accounts to continue to contact the respondent. While there are 54.26% of respondents answered agree that the blocking feature is very helpful for respondents to avoid individuals who are very annoying or that the respondent does not like.

2.1.2. Psychological factor.
WhatsApp also provides a reader status filter which 53.19% of respondents answered agree. According to the respondents' assessment, the feature of muting friend's contact status was assessed as a feature that made it easier for users to use the chat application. Especially if the respondent has a friend who in a short time can repeatedly update the status of both writing, photos, and videos. This is considered very disturbing and will make the phone to slowing down the operating system. Furthermore, 13.83% of respondents answered doubtfully because they did not know how to activate the feature, and as many as 1 respondent or 1.06% with an answer disagree, thought WhatsApp should not provide the feature to share status because they consider WhatsApp as only for personal communication.

The Indonesian public likes to socialize through online groups. Based on research about groups that are not restricted to be followed, as many as 62.70% of respondents with answers agree, explain that with the unlimited group feature it is very easy for users to communicate with various groups at the same time. Sometimes in a project, the respondent must monitor the progress of the work in each field, and or must report the progress of the work that has been done to the person in charge. With the unlimited group feature on WhatsApp, respondents consider it as saving the energy, costs, and time. With unlimited number of groups, users can expand their network of friends.

Users of messaging application often feel disturbed by people who like to chat and are always eager for their messages to be replied immediately. WhatsApp has a “message has been read” report feature. Based on the diagram above, amounting to 54.26% of respondents stated that the presence of the feature to turn off the read report, they are not required to immediately respond. Respondents also claimed to be able to regulate their rhythm. And with these features, users claim to be able to manage conflicts and reduce prejudice. While 2.13% explained that they did not agree with the feature, because if the respondent turned off the read report, the respondent's also would not be able to know whether the message has been read by the recipient of the message or not.

The majority of 53.19% agreed and 45.74% of respondents strongly agreed to favor of the WhatsApp call voice feature. According to them, the voice note feature is very helpful if the respondent is lazy to type. Call voice feature is also an alternative for conflict management because with the tone and tone of voice it will be easier to understand and accept emotions from the other person, and more clearly convey problem-solving arguments and information delivery. Respondents liked the WhatsApp Web feature is more than 75%. According to the respondents, WhatsApp Web does not require respondents to download applications on the desktop, so it can save memory usage on the desktop as well. And WhatsApp Web makes it easy for respondents to communicate in an environment that prohibits cellphone use, such as in lecture halls.

WhatsApp Story was agreed as a powerful feature for building personal branding, there were 51.06% of respondents answered agreeing with the statement above. According to respondents, WhatsApp does not limit the frequency to change profiles, it also makes it easy to enlarge the profile picture. WhatsApp Story is also a popular feature in the application and is relatively faster to respond. WhatsApp Story also provides a filter feature to edit photos to make it better. Communication through the emoji symbol in WhatsApp gives its own pleasure, there are 58.51% of respondents like the emoji feature on WhatsApp. According to respondents, with the emoji, they don't need to write long
sentences. The emoji feature on WhatsApp is also preferred because in searching for the desired emoji it is very easy because it is grouped according to several categories. And for parents, the emoji feature is very simple and easy to understand.

2.1.3. Self actualization factor.
Everyone can be the admin, there are 56.38% of respondents with answers agree with the statement above. According to the respondent, the excess of admin will easily increase the number of group members, the group will also be more crowded and alive. And by providing an opportunity for all members to become an admin, it means giving all admins the opportunity to remind, even exclude group members who often break the rules.

The majority or almost 74.4% of respondents like the mention feature on WhatsApp. According to the respondents, they like it because the message that was then listed as someone's name meant it was special and personal. There are 2.13% of respondents answered that they did not agree with the bold italic feature. According to the confession, the respondent considered the feature not too important. While 58.51% of respondents considered the opposite. The feature can be useful to mark important points as an emphasis that this is the core of the sentence.

Half of the respondents, as much as 55.32%, favor the filters and stickers feature on WhatsApp. Respondents claimed that the filter can make the photo look better, good looking, and look fresher. As many as 54.26% of respondents agreed with the feature to change the conversation wallpaper. These features can be used to display favorite photos and will give a comfortable effect when using WhatsApp. While 1.06% of respondents felt using photos as conversation wallpapers made the appearance of the message become unclear and seemed excessive.

2.2. Factor analysis test
2.2.1. Kaiser-mayer-olkin (KMO) test.
The KMO Test (Kaiser-Mayer-Olkin Measure of Sampling Adequacy) and Barlett's Test shows the feasibility test of factor analysis. If the KMO and Barlett’s Test values are greater than 0.5, the process can proceed. The following are the results of the KMO test:

| Indicator                      | MSA Score (Anti Image Correlation) | MSA Score Criteria |
|--------------------------------|------------------------------------|--------------------|
| Factor 1                       | 0.772                              | 0.5                |
| Factor 2                       | 0.751                              | 0.5                |
| Factor 3                       | 0.759                              | 0.5                |

In the KMO and Barlett’s Test table above, the KMO Measure of Sampling Adequacy (MSA) figure is 0.731 which means it is greater than 0.5. The results of Barlett's Test also have a significance of 0.000, which means that the sample (variable) is sufficient to be analyzed further.

2.2.2. MSA Test. MSA test results (Measure of Sampling Adequacy) there are two factors that have values below 0.5, namely the first factor and the thirty factor. Because of this, the indicators are unpredictable and cannot be further analyzed or excluded from variables. After being removed, then the MSA is tested once again, the following results are found:
| Factor  | Value | Target |
|---------|-------|--------|
| 4       | 0.705 | 0.5    |
| 5       | 0.835 | 0.5    |
| 6       | 0.571 | 0.5    |
| 7       | 0.732 | 0.5    |
| 8       | 0.825 | 0.5    |
| 9       | 0.8   | 0.5    |
| 10      | 0.714 | 0.5    |
| 11      | 0.821 | 0.5    |
| 12      | 0.795 | 0.5    |
| 13      | 0.761 | 0.5    |
| 14      | 0.708 | 0.5    |
| 15      | 0.81  | 0.5    |
| 16      | 0.574 | 0.5    |
| 17      | 0.701 | 0.5    |
| 18      | 0.534 | 0.5    |
| 19      | 0.773 | 0.5    |
| 20      | 0.74  | 0.5    |
| 21      | 0.855 | 0.5    |
| 22      | 0.812 | 0.5    |
| 23      | 0.604 | 0.5    |
| 24      | 0.648 | 0.5    |
| 25      | 0.832 | 0.5    |
| 26      | 0.63  | 0.5    |
| 27      | 0.768 | 0.5    |
| 28      | 0.789 | 0.5    |
| 29      | 0.716 | 0.5    |
| 30      | 0.774 | 0.5    |
| 31      | 0.76  | 0.5    |
| 32      | 0.826 | 0.5    |
| 33      | 0.736 | 0.5    |
| 34      | 0.557 | 0.5    |
| 35      | 0.736 | 0.5    |
| 36      | 0.83  | 0.5    |
| 37      | 0.71  | 0.5    |
| 38      | 0.763 | 0.5    |
| 39      | 0.62  | 0.5    |
| 40      | 0.685 | 0.5    |
| 41      | 0.806 | 0.5    |
| 42      | 0.713 | 0.5    |

After the second MSA test, from the table above the entire indicator has a value of more than 0.5 which means that variables can be further analyzed.

2.2.2. Factor analysis and rotation.
2.2.2.1. Communalities.
Communalities obtained from processing 42 SPSS 21.0 programmed variables. The communalities table is used to determine the percent value formed by a new factor that explains the variance of the factor. The greater the communalities value of a factor contained in the extraction column in the form of a percentage that is close to 100%, then it is closely related to the factors that are formed. As well as cost-saving factors which have an extraction value of 0.659. This means that these factors can explain a factor of 65.9%. Likewise with other factors, all of which are more than 50%. Therefore, it can be concluded that all variables can explain the factors under study.

2.2.2.2. Total varian explained.
Total Variance Explained explains the percent value of variance that forms a factor. Seen by using eigenvalue that describe the interests or contributions of each indicator. The condition is that the eigenvalue must be more than 1 in order to summarize the factors that can be seen in the Initial Eigenvalues column. The 12 factors are then found.

1. The first factor variance is $11,162/42 \times 100\% = 26,575\%$
2. The second factor variance is $2,742/42 \times 100\% = 6,528\%$
3. The third factor variance is $2,664/42 \times 100\% = 6,342\%$
4. The fourth factor variance is $2,216/42 \times 100\% = 5,276\%$
5. The fifth factor variance is $1.84/42 \times 100\% = 4,381\%$
6. The sixth factor variance is $1.748/42 \times 100\% = 4,163\%$
7. The seventh factor variance is $1.586/42 \times 100\% = 3,775\%$
8. The eighth factor variance is $1.342/42 \times 100\% = 3,195\%$
9. The ninth factor variance is $1.323/42 \times 100\% = 3,149\%$
10. The tenth factor variance is $1.244/42 \times 100\% = 2,962\%$
11. The eleventh factor variance is $1.224/42 \times 100\% = 2,915\%$
12. The twelfth factor variance is $1.059/42 \times 100\% = 2,522\%

Therefore, the total obtained from the twelve factors can explain from $26.575\% + 6.528\% + 6.342\% + 5.276\% + 4.381\% + 4.163\% + 3.775\% + 3.195\% + 3.149\% + 2.962\% + 2.915\% + 2.522\% = 71,783\%$ of the 42 original indicators. After knowing the factors that are formed, the indicators are distributed to each variable by looking at the Rotated Component Matrix table which is the magnitude of the correlation between the factor score and the variable.

2.2.2.3. Rotated component matrix.
Thus, 42 variables have been reduced to 12 factors:

1. Factor 1 consists of indicators: Setting filter for the audience on WhatsApp status factor, message pin feature factor, favorite feature factor, easy to use factor, shortcut feature factor, filter and stickers on WhatsApp factor
2. Factor 2 consists of indicators: Message archives in text form feature factor, emoji feature factor, and group feature factor.
3. Factor 3 consists of indicators: Voice note feature factor, Quick Reply feature factor, profile display factor, and WhatsApp Story factor.
4. Factor 4 consists of indicators: Silencing the status of others factor, Turning off read report factor, and turning off the last status online factor.
5. Factor 5 consists of indicators: Facilitate communication factor, detect WhatsApp users factor, change video to GIF format feature factor, capability to be used for foreign communication factor, and wallpaper chatting factor.
6. Factor 6 consists of indicators: Factors of the WhatsApp Web feature, Factors of mention features, Factors of sharing photos, videos, documents.
7. Factor 7 consists of indicators: The regulatory factor cancels the WhatsApp notification, and the Settings factor obliterates certain individual / group notifications.
8. Factor 8 consists of indicators: The WhatsApp capability to make viral factor, two step verification feature factor, message back up feature factor, message archive via settings factor, and contact block feature factor.
9. Factor 9 consists of indicators: Facilitate the work with groups factor and without limit group factor.
10. Factor 10 consists of indicators: Hides profile photos setting factor, bold and italic feature factor, and the broadcasting feature factor.
11. Factor 11 consists of indicators: Message encryption feature factor, asks account information feature factor, and selects the content that you want to set up download factor.
12. Factor 12 consists of indicators: The cost-saving factor and selects the content you want to set up to download factor.

2.2.3. Culture of social communication through computer-mediated communication.

The presence of WhatsApp as the most popular conversation application with the most users makes this communication technology an inseparable part of human life. Many features are provided by WhatsApp so as to spoil and make it easier for humans to establish social interaction. WhatsApp connects each individual through intensive communication and deepens the exchange of information among people connected in the information database. The broad information obtained from communication with individuals also communicates in group WhatsApp. Whatsapp group is very popular and liked as an application feature. Each WhatsApp user has two to three groups. The group is preferred because it is formed through a friendship group and interpersonal relationships between group members. To achieve harmony, WhatsApp group needs to be coordinated by appointing the group coordinator.

According to [1] said that the role of leaders is responsible for forming structures, creating policies or regulations in online communities, filtering messages that are not in accordance with regulations, marketing, and managing membership lists. So that the forum for discussion in a community can be organized and more orderly. This needs to be done so that the group is harmonious and able to last a long time and not many conflicts. Basically, there are two models of virtual social group membership, namely intra and inter group groups. intra-group is a person's membership in intra-group units that are centered on a particular server that is similar to a group of members in a particular institution.

These intra groups are usually referred to as intranets, while autonomously govern themselves, have rules that are agreed upon internally, have greeting languages that are known to themselves and have the ability to protect themselves all interests, needs, and rules they want. Every member in this system must comply with the existing rules both sanctions and rewards that are determined by their social system which is regulated in the existing server centers [2].

The uses and gratifications approach provides an alternative to looking at the relationship between media content and audience, and categorizing media content according to its function. although there are still doubts about the existence of one or several models of uses and gratifications, Katz (Effendy, 2000: 290) describes the logic underlying the approach of uses and gratifications: (1) a person's social psychological condition will cause (2) needs, which creates (3) expectations of (4) mass media or other sources, which leads to (5) differences in media user patterns (or involvement in other activities) which will ultimately result in (6) fulfillment of needs and (7) other consequences, including those not expected before. In addition to the basic elements mentioned above, the uses and gratifications approach often incorporates elements of motives to satisfy needs and functional alternatives to meet needs [2]. WhatsApp users with unstable psychological conditions make this application as a technology that can help reduce stress and get out of trouble. WhatsApp features to open yourself without limits through conversation or chat. Whatsapp provides voice communication packages both voice notes and call voice. both of these packages spoil the communication of WhatsApp users, besides being cheap communication, through WhatsApp calls is much clearer. The possibility of receiving information errors is getting smaller, besides what WhatsApp users can share information...
more broadly and deeper. Sharing information more broadly about the variety of material or topics being discussed, while the depth of information relates to messages that are exchanged in detail.

Computer-Mediated Communication terminology is described as computer-mediated communication. This terminology is also explained by December (1997), that CMC is a process of human communication through computers that involve audiences, contained in certain contexts, where the process utilizes the media for specific purposes. In the case of communication mediated by technology, the technology meant here is not like technology in general. Because for a long time, communication between people has been mediated by technology, such as television, telephone, and so on. In CMC, technology is more specific and technically the technology is designed, created, used to enable the exchange of data and information (Thurlow et al., 2004, 19). Cantoni and Tardini (2006: 43) define CMC as an interaction between individuals that occurs through computers (Nasrullah, 2014.79). WhatsApp is a real product of CMC technology where people are able to communicate indefinitely, and without time limit. Interpersonal communication does not have to be physically present, but can be facilitated through CMC. WhatsApp application provides space to communicate more personally, by providing a feature to send images and voice messages directly. Communicating directly creates space in the atmosphere of closeness and high emotional attachment among those involved in communication. The compatibility of communication material influences the strength and persistence of communication between two or more people even though it is through an intermediary medium namely the CMC in the form of WhatsApp application.

WhatsApp answers the difficulties of many people about the high cost of communication if the interaction is done via telephone with an expensive pulse package, preferring through the chat application the costs incurred are not too large, can even be used in a monthly period, as long as the data plan is available. The low cost of communication makes many WhatsApp users reluctant to switch to other applications, the dominance of WhatsApp charm is not only the magnet of the adult group but also the millennial generation.

3. Conclusions

After processing and analyzing the data in stages on 44 indicators of individual dependence on the WhatsApp messaging application by taking respondents from the Faculty of Social and Political Sciences, Universitas Diponegoro. Thus, in this study, the following conclusions and suggestions are obtained. From the results of research on 94 respondents related to the factors underlying individual dependence on WhatsApp conversation applications, the following conclusions can be drawn. Overall, there are 44 factors underlying individual dependence on WhatsApp conversation applications. Of the 44 factors after being extracted into 12 factors, including: Factor 1 consists of indicators: Filter the audience on WhatsApp status setting feature factor, Message pin feature factor, Favorite feature factor, Easy to use factor, shortcut feature factor, Filter and stickers on WhatsApp factor. Factor 2 consists of indicators: Message archives in text form feature factor, emoji feature factor, and group feature factor. Factor 3 consists of indicators: Voice note feature factor, Quick Reply feature factor, profile display factor, and WhatsApp Story factor. Factor 4 consists of indicators: Silencing the status of others factor, Turning off read report, and turning off the last status online factor.

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