

# A study on Whatsapp Usage variation across age groups.

Design Research Seminar | 2019

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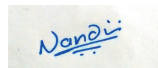
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## Declaration

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## 1. ABSTRACT

In the age of smartphones and internet connectivity reaching every person, digital communications have become an integral part of almost everyone's lives. Whatsapp is one such internet based messaging and communication platform available as a free application and widely used in India. In this report, a study of Whatsapp usage variation across age-groups has been presented.

Quantitative interviews were conducted across participants of different age groups ranging from 12 to 72 years to investigate the frequency of usage of messaging and also the various document sharing features and chat features provided by Whatsapp. Data is represented graphically, compared and analysed. This led to an brief overall understanding of how people from different age groups appropriate the use of the various features provided in Whatsapp Messenger.

## 2. INTRODUCTION

Whatsapp is a quick, simplified, secure, cost-effective messaging and calling application, now available across phones all over the world. Its compatibility on Android, iOS, Windows phones, Mac and Windows PC increases its reach even further. As of February 2018, WhatsApp has 1.5 billion monthly active users, with 200 million users in India alone. Getting membership on this application only requires contact number of the person and a data connection and this ease of use is one of the main reasons why whatsapp has been popular across geographies and ages. Hassle free sharing of PDFs, documents, spreadsheets, slideshows etc and syncing with the computers as well and allowing sharing even on a low internet connection, group chats facility allow sharing messages, photos, and videos with up to 256 people at once and ease of operation simply add to the many advantages offered by this application. This study is to understand how different age groups to whom whatsapp has reached, make use of the features offered by the messaging application.

## 2.1 INFORMATON SHARING FEATURES

The following features that are currently available in Whatsapp for Sharing Information (in both individual and group chats) were taken into consideration:

**Document**— To select a document from phone and share, usually pdfs, word files, excel files, etc.

**Gallery**- For sharing images/videos existing in the phone.

**Camera**— For clicking images/ recording videos on the spot and sending at the same time.

**Audio**— To record a message or send an existing audio from the phone.

**Location**— To send your live location or a nearby place.

**Contact**— To send contact information from the list of contacts existing in the phone to others over whatsapp

**Status**— to share text, photos, videos and animated GIFs that disappear in 24 hours. In order to send and receive status updates to and from contacts, both parties must have each other's phone numbers saved in the address book.

**Broadcast Lists**—to save lists of message recipients that can be repeatedly sent broadcast messages to, without having to select them each time. The recipients receives the message as a normal message.

**Whatsapp Voice Call**- To make a voice call to an existing contact on whatsapp to converse using internet connection.

**Whatsapp Video Call**- To make a video call to an existing contact on whatsapp to converse using internet connection with visuals and audio inputs.

## 2.2 CHAT FEATURES

The following features that are currently available in Whatsapp for Chatting (in both individual and group chats) are taken into consideration :

**Reply:** Allows one to respond to a particular message conversation, both in a group and in an individual chat. If reply text is touched on screen, it redirects the chat screen to when that particular message was sent.

**Pin Chat:** Users can pin up to three chats of their choice to the top of the chats list. Pinned chats will always stay at the top for easy access, especially for contacts with whom one chats daily.

**Starred Messages:** Lets users bookmark specific messages for future references. They are stored as separate list.

**Forward:** Lets single/multiple messages that are received to be shared to one or more recepients.

**Delete:** User can delete an entire conversation, or specific messages received. Sent messages can also be deleted for self or for everyone (message will be replaced with "This message was deleted" in the recipients' chats).

**Archive Chat:** Conversation is not deleted, but is hidden from the chats screen to better organize conversations. It can be retrieved anytime later.

## 3 The Dataset Formation

### 3.1 Participants

57 Whatsapp users with ages ranging from 12 years to 72 years were interviewed by meeting them personally and some over a phone call. Except 2, all other were Mumbai residents. 24 were female and 33 were male. All of them had continuous access to internet either through data plan or wifi. Whatsapp is a private messaging platform and hence, to ensure user's privacy, research questions format was kept objective and quantitative only.

Age brackets (in years): 10-20, 20-30, 30-40, 40-50, 50-60, 60+  
Each bracket had ~10 participants with ages almost evenly distributed between the end values of ages in that particular bracket to ensure smooth age distribution overall. Due to difficulty in finding enough participants using Whatsapp, 60+ has been kept a separate category in which 72 years was the eldest participant's age.

Certain readings have been recorded over a particular time period (eg. No. of messages in 2 weeks, etc). Managing all 57 participants on the same day for interviewing was not possible and hence, the start date of the two weeks time period, even though same for a majority of participants, is not the same for every participant. The time period however is constant for all for those readings.

### 3.2 Data collection

#### Part1: Sharing Methods Usage Frequency

A time period of one week was taken into consideration. The frequency of use of the following set of sharing methods was noted:

- Photo/Video
- Document
- Audio
- Location
- Contact
- Status
- Broadcast
- Whatsapp Voice Call
- Whatsapp Video Call

Every participant was asked to choose the frequency of using each sharing method for the time period of last one week i.e last 7 days with the help of a scale.(For both sending as well as receiving)

#### Scale :

- N: Never tried/ used till date
- 0: 0 times during the week
- 1: Once during the week
- 2: Twice during the week
- 3: Thrice during the week
- 4: Four times during the week
- 5: Five times during the week
- 5+: More than 5 times during the week

## **Part2: Usage of Chat Features**

The following chat features were taken into consideration and users were asked to answer if they use them or not

- Pin Chat
- Star
- Forward
- Delete
- Archive
- Mute
- Emojis
- Gifs

Participants were asked to answer 'Yes' if they knew about and used the chat feature. Blank meant they knew about the feature but never used. 'No' meant they are not aware of / not familiar to the usage of that particular chat feature.

## **Part3: The Number of:**

Participants were asked to count and tell the number of :

- Unread Messages (At the end of the day)
- Forwarded Received (In the last 5 days)
- Non- Forwarded Received (In the last 5 days)
- Personal Chats (In the last 2 weeks)
- Family Groups (In the last 2 weeks)
- Groups Other than family (In the last 2 weeks)

## **Link to the Excel sheet containing data**

<https://docs.google.com/spreadsheets/d/1g7Jt8tDqGtViQVxsda0Cfc45oh9IM7H9m-HANlummyA8/edit?usp=sharing>

4. Data Analysis and Inferences

4.1 Forwarded vs Typed messages

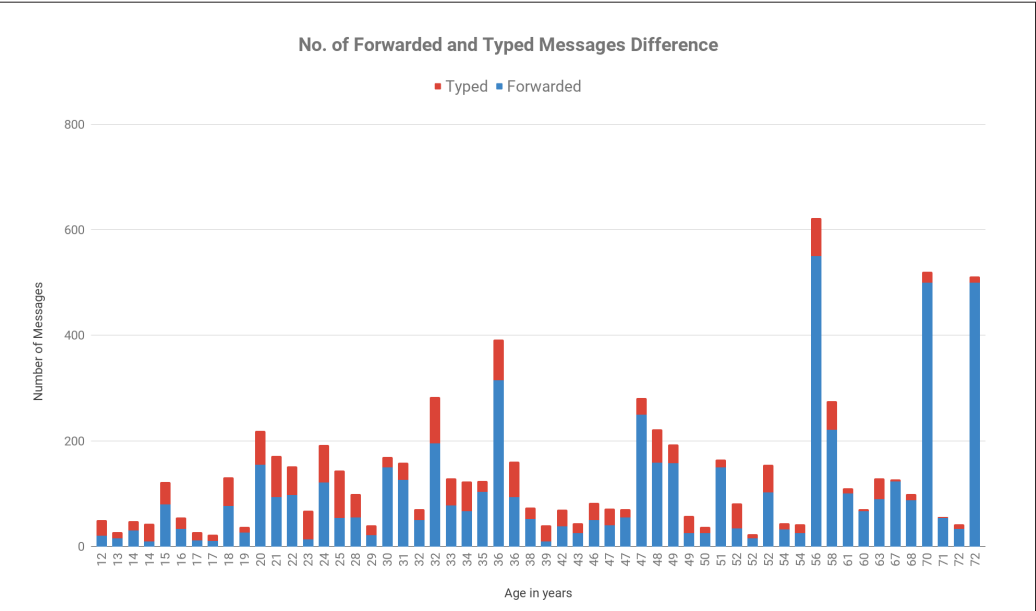


Table 1: Number of forwarded and typed messages difference

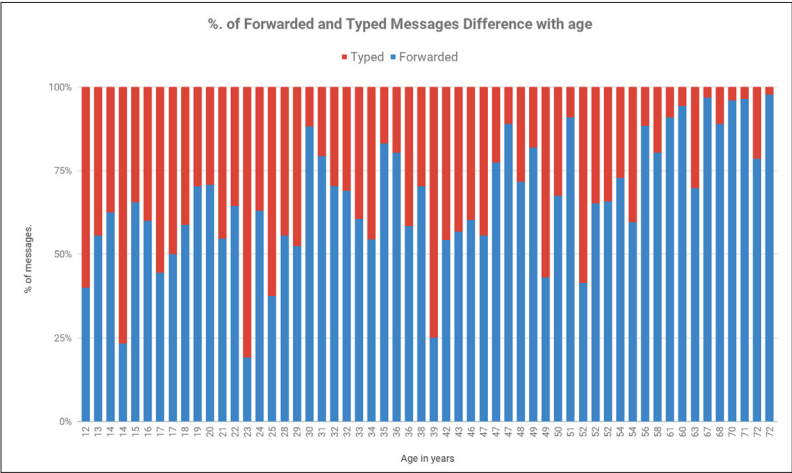


Table 2: % Comparison of forwarded and typed messages

As seen from Table 1 and Table 2, overall throughout the age groups, the number of forwarded messages recieved is higher than personally typed for most of the ages. No constant pattern exists accross all the participants.

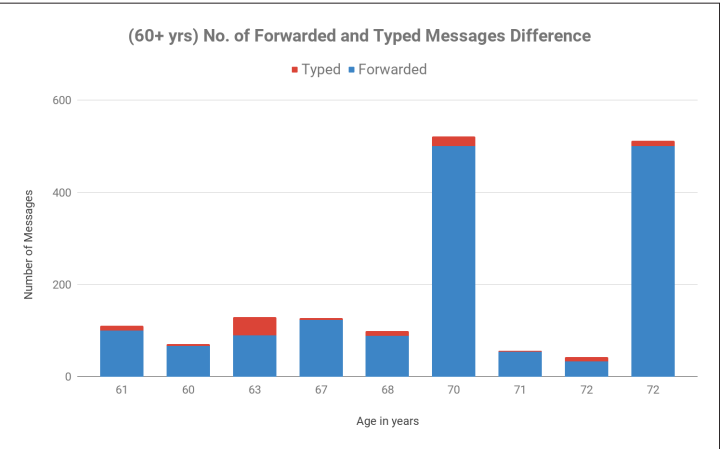


Table 3: No. of forwarded and typed messages difference (60+)

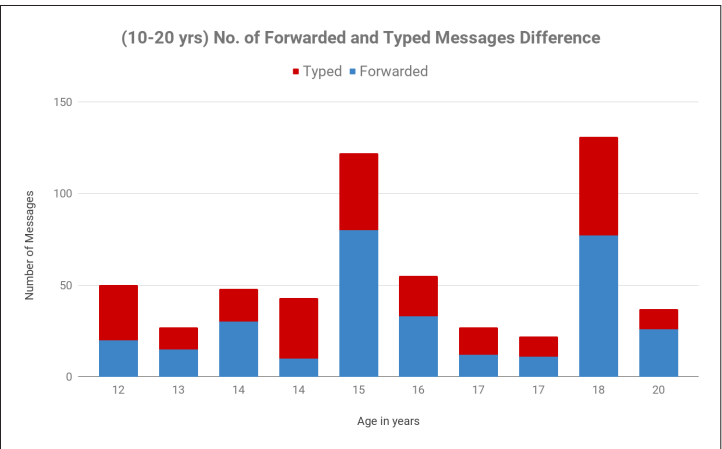


Table 4: No. of forwarded and typed messages difference (10-20 yrs)

Table 3 and Table 4 specifically show the difference between the number of forwarded and typed messages for 60+ yr olds and 10-20 year olds to help compare the two age groups. The difference between the number of forwarded and typed messages is more pronounced after the age of 55 years. For participants below 20 years of age this difference reduces. This indicates that in older age group, typing is not as much preferred as in the younger age groups.



4.2 Frequency of usage of Sharing options

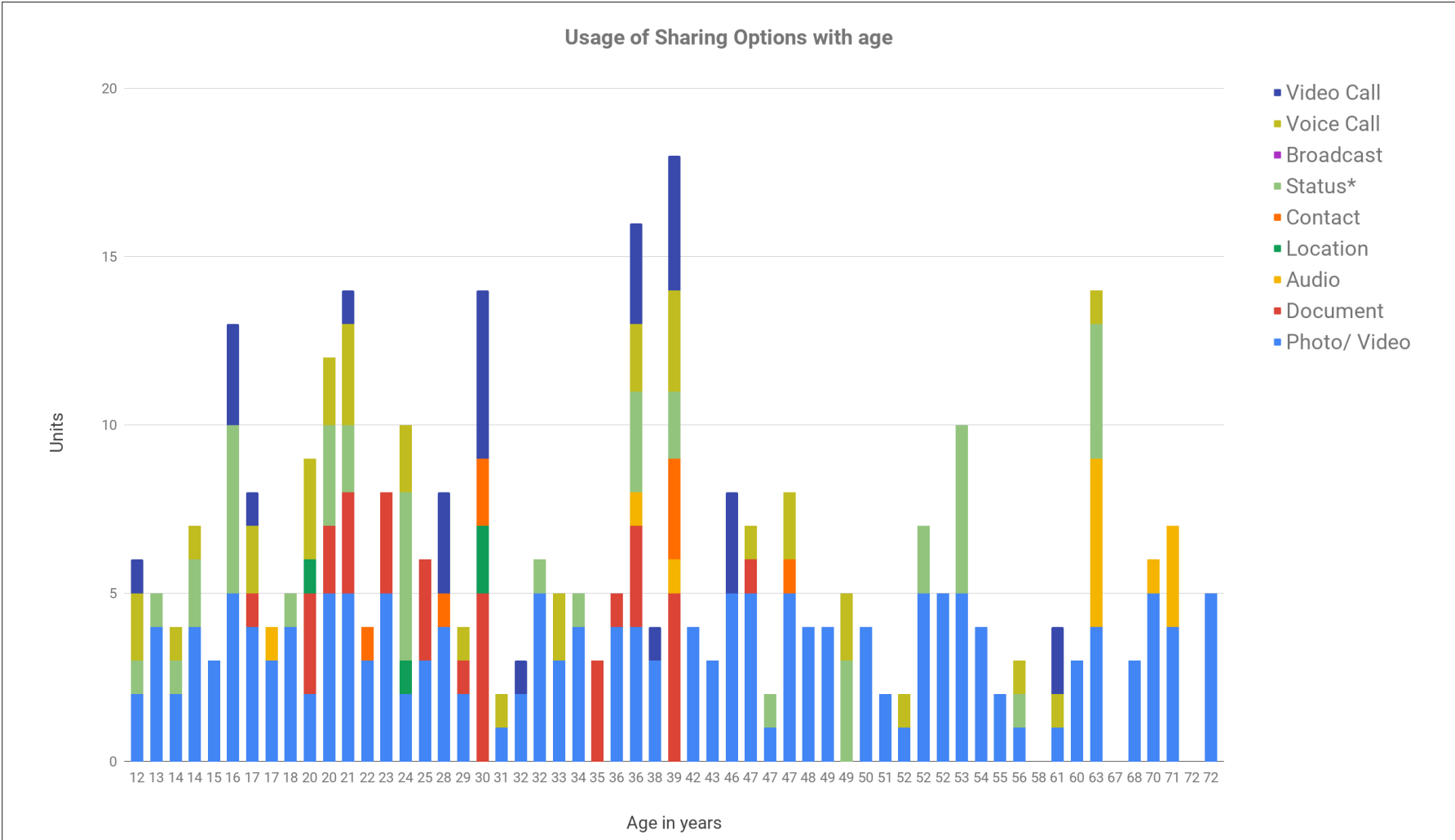


Table 5: Frequency of usage of Sharing options

The Table 5 shows the frequency of usage of sharing options available over a week. Photo/ Video sharing high for all age groups in comparison to other sharing options. Documents sharing more prominent in 15-50 years olds. No one was recorded using the broadcast feature.

The new feature of sharing status which lasts for a day seems quite popular throughout and is seen to be well used even in age groups above 50. For 60+ year old participants, audio usage is seen.

4.3 Usage of Chat Features

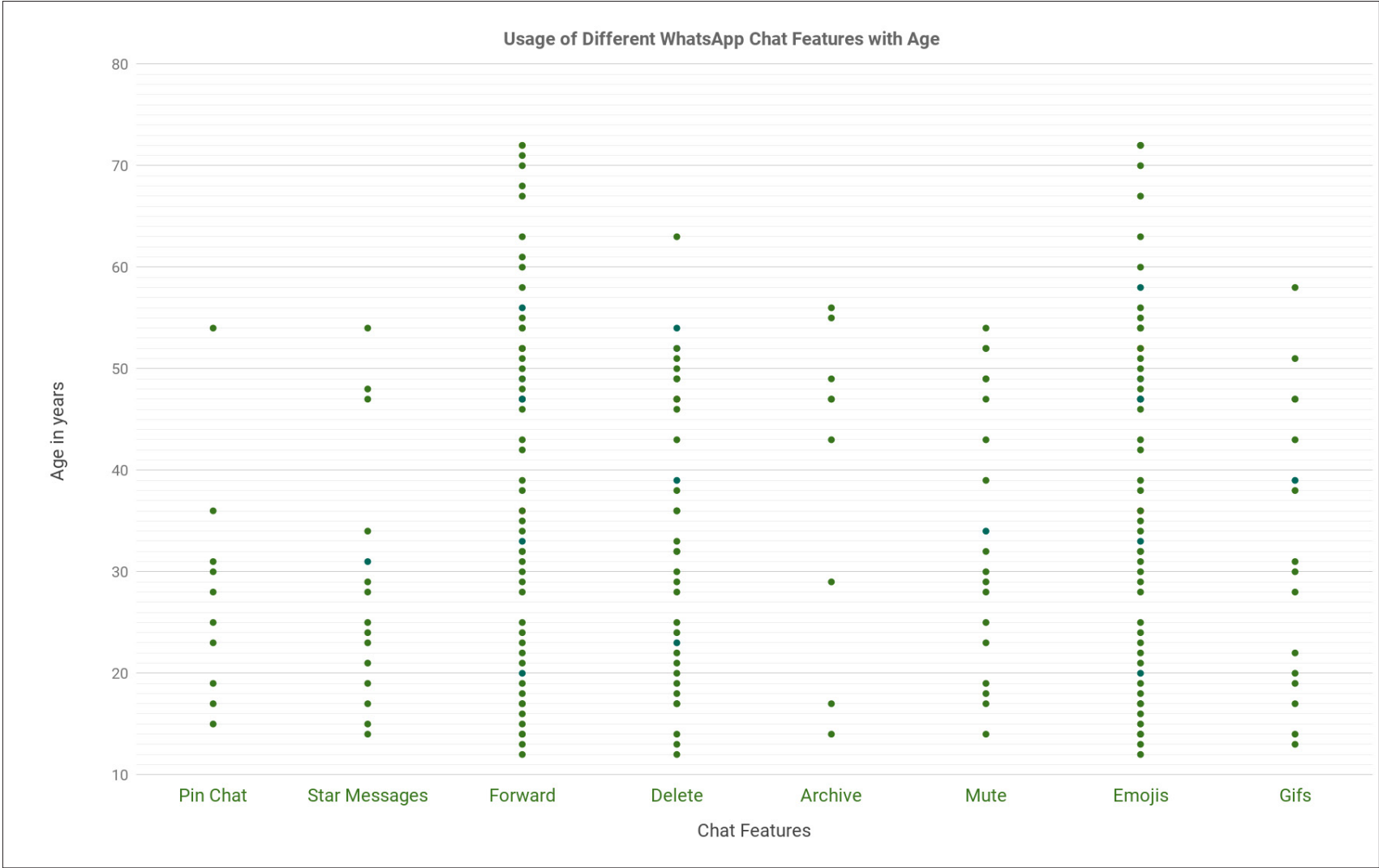


Table 6: Usage of Chat Features

The Table 6 shows the usage of chat features. Forwarding the messages is seen to be well accepted in all age groups. Using emojis is also popular throughout. Archive, Delete, Mute and Gifs do not extend much beyond 55 years.

Usage of Archive seems to be very less in comparison to other chat features. Pin Chat and Star Messages are very popular upto 35 years of age and a few are seen near 50s.

4.4 Unfamiliarity of Whatsapp File sharing features

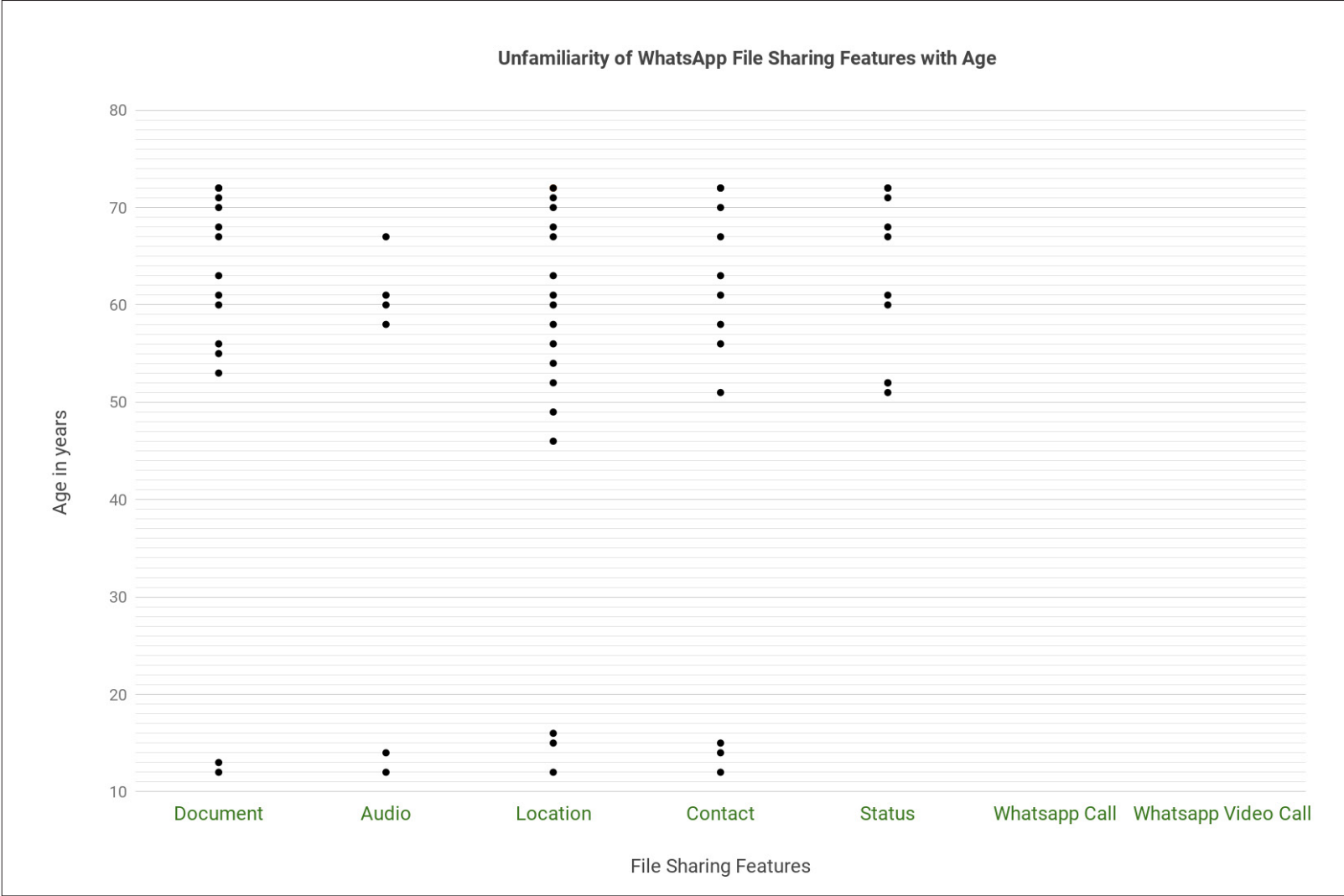


Table 7: Unfamiliarity of Whatsapp File sharing features.

The Table 7 shows the unfamiliarity of Whatsapp File sharing features amongst different age groups. As seen clearly, participants between ages 19-45 knew about the existence and the usage of the various existing file sharing features . Sharing

Location and Document seemed to be two of the most unfamiliar sharing features as many of the participants above 50 years of age were not aware of their existence and/or usage. Voice call and Video call on the other hand were known to everyone in the participants.

### 4.5 Unfamiliarity of Whatsapp Chat Features

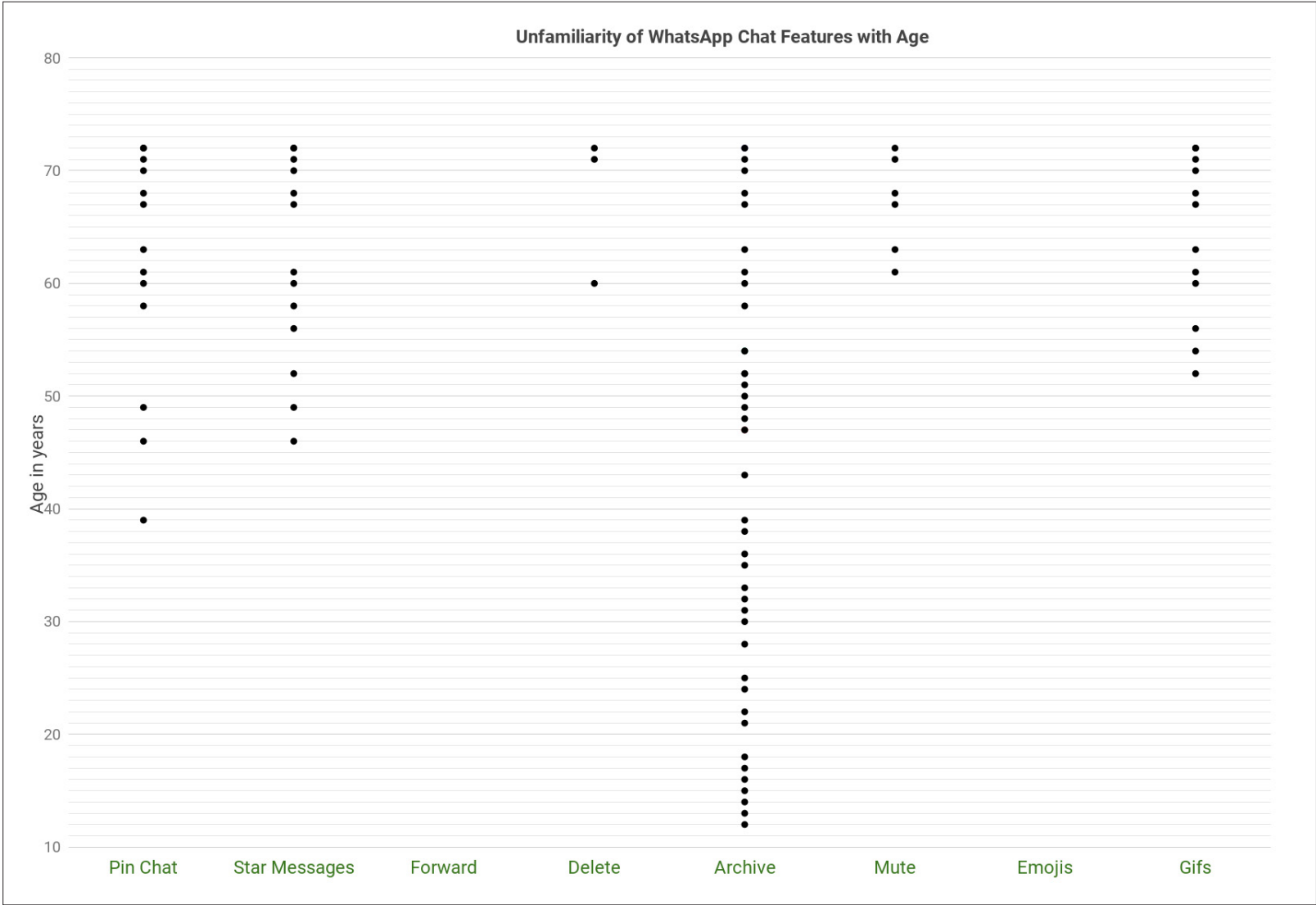


Table 8: Unfamiliarity of Whatsapp Chat Features

The Table 8 shows the unfamiliarity of Whatsapp Chat features amongst different age groups. As seen clearly ‘Archive’ seems to be the most unfamiliar feature across all age groups as many of the participants reported them not knowing about

the feature. Beyond 45 years, the number of unfamiliar Chat features is high clearly. Emojis, Forward and Delete seem to be known and used by almost all, hence hardly any unfamiliarity was reported.

## 5. CONCLUSION AND FUTURE WORK

The study presented above gives an overall idea on the surface about how the usage of Chat features and Document sharing features provided in the Whatsapp Messenger varies across age. Heavy use of Forwards and Emojis was reported across all age groups. Age groups above 55 had low preference for typing and chatting and unfamiliarity of the various features other than forwarding was particularly high after 50 years of age.

There are many ways the study could have been richer and more accurate. A greater number of people, from various parts of the country would make the participant set more meaningful. Also, effect of gender and profession plays a huge part alongside age in case of the usage of a messaging application like Whatsapp. Many more factors like preferred language for communicating on whatsapp, etc can be considered for studying and building up on this work.

## 6. REFERENCE

Avi Rosenfeld<sup>1</sup>, Sigal Sina<sup>2</sup>, David Sarne<sup>2</sup>

Or Avidov<sup>2</sup>, Sarit Kraus<sup>2</sup>: A Study of WhatsApp Usage Patterns and Prediction Models without Message Content. *Department of Information Systems Jerusalem College of Technology, Israel*

*<sup>2</sup>Department of Computer Science Bar-Ilan University, Israel*